RID

Convention concerning International Carriage by Rail (COTIF)
Appendix C – Regulations concerning the International Carriage of Dangerous Goods by Rail (RID)

With effect from 1 January 2019

This text replaces the requirements of 1 January 2017.

Note by the Secretariat of OTIF:

The following are RID Contracting States (as at 1 May 2019):

Afghanistan, Albania, Algeria, Armenia, Austria, Azerbaijan, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Iran, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Monaco, Montenegro, Morocco, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Tunisia, Turkey, United Kingdom, Ukraine.

Until international traffic is resumed, Iraq's, Lebanon's and Syria's membership of OTIF is suspended.

Convention concerning International Carriage by Rail (COTIF)

Appendix C

Regulations concerning the International Carriage of Dangerous Goods by Rail (RID)

Article 1
Scope

§ 1 This Regulation shall apply

a) to the international carriage of dangerous goods by rail on the territory of the RID Contracting States,

b) to carriage complementary to carriage by rail to which the CIM Uniform Rules are applicable, subject to the international prescriptions governing carriage by another mode of transport,

as well as the activities referred to by the Annex to this Regulation.

§ 2 Dangerous goods barred from carriage by the Annex must not be accepted for international carriage.

Article 1bis
Definitions

For the purpose of this Regulation and its Annex, “RID Contracting State” means a Member State of the Organisation which has not made a declaration in respect of this Regulation in accordance with Article 42 § 1, first sentence, of the Convention.

Article 2
Exemptions

This Regulation shall not apply, in whole or in part, to the carriage of dangerous goods for which an exemption is provided in the Annex. Exemptions may only be provided when the quantity or the nature of the exempted carriage of goods or the packaging would guarantee the safety of the carriage.

Article 3
Restrictions

Each RID Contracting State shall retain the right to regulate or prohibit, for reasons other than safety during carriage, the international carriage of dangerous goods on its territory.

Article 4
Other prescriptions

The carriage to which this Regulation applies shall remain subject to the national or international prescriptions applicable in general to the carriage of goods by rail.

Article 5
Type of trains allowed. Carriage as hand luggage, registered luggage or in or on board vehicles

§ 1 Dangerous goods may only be carried in freight trains, except

a) dangerous goods which are acceptable for carriage in accordance with the Annex complying with the relevant maximum quantities and the special conditions of carriage in trains other than freight trains;

b) dangerous goods which are carried, under the special conditions of the Annex, as hand luggage, registered luggage or in or on board vehicles within the meaning of Article 12 of the CIV Uniform Rules.

§ 2 Dangerous goods may only be taken as hand luggage or carried or be handed over for carriage as registered luggage or in or on board vehicles if they meet the special conditions of the Annex.

Article 6
Annex

The Annex shall form an integral part of this Regulation.

* * *

The text of the Annex will be that drawn up by the Expert Committee for the Carriage of Dangerous Goods, at the time of entry into force of the Protocol of 3 June 1999 modifying the Convention concerning International Carriage by Rail (COTIF) of 9 May 1980, in accordance with Article 19 § 4 of the latter.

Note by the Secretariat of OTIF:

In the text that follows, "RID" refers to the Annex to Appendix C of COTIF in accordance with Article 6. In certain exceptional cases where the text of Appendix C reproduced above is referred to, reference will be made specifically to "Appendix C of COTIF" (e.g. in 1.1.2, 1.5.1.3).

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Unofficial part of RID

Requirements for the testing of plastics receptacles 1

Part 1 General requirements

Chapter 1.1 Scope and applicability

1.1.1 Structure

RID is grouped into seven parts. Each part is subdivided into chapters and each chapter into sections and sub-sections (see table of contents).

Within each part the number of the part is included with the numbers of the chapters, sections and sub-sections, for example Part 4, Chapter 2, Section 1 is numbered "4.2.1".

1.1.2 Scope

1.1.2.1 For the purposes of Article 1 of Appendix C, RID specifies:

(a) dangerous goods which are barred from international carriage;

(b) dangerous goods which are authorized for international carriage and the conditions attaching to them (including exemptions) particularly with regard to:

- classification of goods, including classification criteria and relevant test methods;
- use of packagings (including mixed packing);
- use of tanks (including filling);
- consignment procedures (including marking and labelling of packages and means of transport as well as documentation and information required);
- requirements concerning the construction, testing and approval of packagings and tanks;
- use of means of transport (including loading, mixed loading and unloading).

For carriage within the meaning of RID, in addition to Appendix C, the relevant provisions of the other Appendices to COTIF shall apply, in particular those of Appendix B for carriage performed on the basis of a contract of carriage.

1.1.2.2 For the carriage of dangerous goods in trains other than freight trains in accordance with Article 5 § 1 a) of Appendix C, the provisions of Chapters 7.6 and 7.7 shall apply.

1.1.2.3 For the carriage of dangerous goods as hand luggage, registered luggage or in or on board vehicles in accordance with Article 5 § 1b) of Appendix C, only the provisions of 1.1.3.8 shall apply.

1.1.2.4 (Deleted)

1.1.3 Exemptions

1.1.3.1 Exemptions related to the nature of the transport operation

The provisions laid down in RID do not apply to:

(a) the carriage of dangerous goods by private individuals where the goods in question are packaged for retail sale and are intended for their personal or domestic use or for their leisure or sporting activities, provided that measures have been taken to prevent any leakage of contents in normal conditions of carriage. When these goods are flammable liquids carried in refillable receptacles filled by, or for, a private individual, the total quantity shall not exceed 60 litres per receptacle. Dangerous goods in IBCs, large packagings or tanks are not considered to be packaged for retail sale;

(b) (Deleted)

(c) the carriage undertaken by enterprises which is ancillary to their main activity, such as deliveries to or returns from building or civil engineering sites, or in relation to surveying, repairs and maintenance, in quantities of not more than 450 litres per packaging, including intermediate bulk containers (IBCs) and large packagings, and within the maximum quantities specified in 1.1.3.6. Measures shall be taken to prevent any leakage of contents in normal conditions of carriage. These exemptions do not apply to Class 7. Carriage undertaken by such enterprises for their supply or external or internal distribution does not fall within the scope of this exemption;

(d) the carriage undertaken by the competent authorities for the emergency response or under their supervision, insofar as such carriage is necessary in relation to the emergency response, in particular carriage undertaken to contain and recover the dangerous goods involved in an incident or accident and move them to the nearest appropriate safe place;

(e) emergency transport intended to save human lives or protect the environment, provided that all measures are taken to ensure that such transport is carried out in complete safety;

(f) the carriage of uncleaned empty static storage vessels which have contained gases of Class 2, groups A, O or F, substances of Class 3 or Class 9 belonging to packing group II or III or pesticides of Class 6.1 belonging to packing group II or III, subject to the following conditions:

- All openings with the exception of pressure relief devices (when fitted) are hermetically closed;
- Measures have been taken to prevent any leakage of contents in normal conditions of carriage; and

– The load is fixed in cradles or crates or other handling devices or to the wagon or container in such a way that they will not become loose or shift during normal conditions of carriage.

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

NOTE: For radioactive material see also 1.7.1.4.

1.1.3.2 Exemptions related to the carriage of gases

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

(a) gases contained in the fuel tanks or cylinders of railway vehicles performing a transport operation and destined for their propulsion or for the operation of any of their equipment used or intended for use during carriage (e.g. refrigerating equipment);

NOTE: A container fitted with equipment for use during carriage, secured on a railway vehicle, is considered as an integral part of the railway vehicle and benefits from the same exemptions with regard to the fuel necessary to operate the equipment.

(b) (Deleted)

(c) gases of Groups A and O (according to 2.2.2.1), if the pressure of the gas in the receptacle or tank at a temperature of 20 °C does not exceed 200 kPa (2 bar) and if the gas is not a liquefied or a refrigerated liquefied gas. This includes every kind of receptacle or tank, e.g. also parts of machinery and apparatus;

NOTE: This exemption does not apply to lamps. For lamps see 1.1.3.10.

(d) gases contained in the equipment used for the operation of the vehicle (e.g. fire extinguishers), including in spare parts (e.g. inflated pneumatic tyres); this exemption also applies to inflated pneumatic tyres carried as a load;

(e) gases contained in the special equipment of wagons or vehicles carried as a load and necessary for the operation of this special equipment during transport (cooling systems, fish-tanks, heaters, etc.) as well as spare receptacles for such equipment or uncleaned empty exchange receptacles, transported in the same wagon or vehicle;

(f) gases contained in foodstuffs (except UN 1950), including carbonated beverages; and

(g) gases contained in balls intended for use in sports.

(h) (Deleted)

1.1.3.3 Exemptions related to the carriage of liquid fuels

The requirements of RID do not apply to the carriage of:

(a) Fuel contained in the tanks of railway vehicles performing a transport operation and destined for their propulsion or for the operation of any of their equipment used or intended for use during carriage (e.g. refrigerating equipment).

NOTE: A container fitted with equipment for use during carriage, secured on a railway vehicle, is considered as an integral part of the railway vehicle and benefits from the same exemptions with regard to the fuel necessary to operate the equipment.

(b) (Deleted)

(c) (Deleted)

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

NOTE: For radioactive material see also 1.7.1.4.

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

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

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

1.1.3.5 Exemptions related to empty uncleaned packagings

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

1.1.3.6 Total maximum permissible quantity per wagon or large container

1.1.3.6.1 (Reserved)

1.1.3.6.2 (Reserved)

1.1.3.6.3 Where, in accordance with 1.1.3.1 (c), dangerous goods of the same transport category are carried in the same wagon or large container, the maximum total quantity is indicated in column (3) of the table below:

Transport category	Substances or articles packing group or classification code/group or UN No.	Maximum total quantity per wagon or large container
0	Class 1: 1.1 L, 1.2 L, 1.3 L and UN No. 0190 Class 3: UN No. 3343 Class 4.2: Substances belonging to packing group I Class 4.3: UN Nos. 1183, 1242, 1295, 1340, 1390, 1403, 1928, 2813, 2965, 2968, 2988, 3129, 3130, 3131, 3132, 3134, 3148, 3396, 3398 and 3399 Class 5.1: UN No. 2426 Class 6.1: UN Nos. 1051, 1600, 1613, 1614, 2312, 3250 and 3294 Class 6.2: UN Nos. 2814 and 2900 Class 7: UN Nos. 2912 to 2919, 2977, 2978 and 3321 to 3333 Class 8: UN No. 2215 (MALEIC ANHYDRIDE, MOLTEN) Class 9: UN Nos. 2315, 3151, 3152 and 3432 and articles containing such substances or mixtures and empty uncleaned packagings, except those classified under UN No. 2908, having contained substances classified in this transport category	0
1	Substances and articles belonging to packing group I and not classified in transport category 0 and substances and articles of the following classes: Class 1: 1.1 B to 1.1 J[(a)], 1.2 B to 1.2 J, 1.3 C, 1.3 G, 1.3 H, 1.3 J, 1.5 D[(a)] Class 2: groups T, TC[(a)], TO, TF, TOC[(a)] and TFC aerosols: groups C, CO, FC, T, TF, TC, TO, TFC and TOC chemicals under pressure: UN Nos. 3502, 3503, 3504 and 3505 Class 4.1: UN Nos. 3221 to 3224 Class 5.2: UN Nos. 3101 to 3104	20
2	Substances belonging to packing group II and not classified in transport categories 0, 1 or 4 and substances and articles of the following classes: Class 1: 1.4B to 1.4G and 1.6N Class 2: group F aerosols: group F chemicals under pressure: UN No. 3501 Class 4.1: UN Nos. 3225 to 3230, 3531 and 3532 Class 4.3: UN No. 3292 Class 5.1: UN No. 3356 Class 5.2: UN Nos. 3105 to 3110 Class 6.1: UN Nos. 1700, 2016 and 2017 and substances belonging to packing group III Class 9: UN Nos. 3090, 3091, 3245, 3480 and 3481	333

Transport category	Substances or articles packing group or classification code/group or UN No.	Maximum total quantity per wagon or large container
3	Substances belonging to packing group III and not classified in transport categories 0, 2 or 4 and substances and articles of the following classes: Class 2: groups A and O aerosols: groups A and O chemicals under pressure: UN No. 3500 Class 3: UN No. 3473 Class 4.3: UN No. 3476 Class 8: UN Nos. 2794, 2795, 2800, 3028, 3477 and 3506 Class 9: UN Nos. 2990 and 3072	1000
4	Class 1: 1.4S Class 2: UN Nos. 3537 to 3539 Class 3: UN No. 3540 Class 4.1: UN Nos. 1331, 1345, 1944, 1945, 2254, 2623 and 3541 Class 4.2: UN Nos. 1361 and 1362 packing group III and UN No. 3542 Class 4.3: UN No. 3543 Class 5.1: UN No. 3544 Class 5.2: UN No. 3545 Class 6.1: UN No. 3546 Class 7: UN Nos. 2908 to 2911 Class 8: UN No. 3547 Class 9: UN Nos. 3268, 3499, 3508, 3509 and 3548 and empty, uncleaned packagings having contained dangerous goods, except for those classified in transport category 0	unlimited

(a) For UN Nos. 0081, 0082, 0084, 0241, 0331, 0332, 0482, 1005 and 1017, the total maximum quantity per wagon or large container shall be 50 kg.

In the above table, "maximum total quantity per wagon or large container" means:

– for articles, total mass in kilograms of the articles without their packagings (for articles of Class 1, net mass in kilograms of the explosive substance; for dangerous goods in machinery and equipment specified in RID, the total quantity of dangerous goods contained therein in kilograms or litres as appropriate);
– for solids, liquefied gases, refrigerated liquefied gases and dissolved gases, net mass in kilograms;
– for liquids, the total quantity of dangerous goods contained in litres;
– for compressed gases, adsorbed gases and chemicals under pressure, the water capacity of the receptacle in litres.

1.1.3.6.4 Where dangerous goods of different transport categories are carried in the same wagon or large container, the sum of

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

shall not exceed a calculated value of "1 000".

1.1.3.6.5 For the purposes of this sub-section, dangerous goods exempted in accordance with 1.1.3.1 (a) and (d) to (f), 1.1.3.2 to 1.1.3.5, 1.1.3.7, 1.1.3.8, 1.1.3.9 and 1.1.3.10 shall not be taken into account.

1.1.3.7 Exemptions related to the carriage of electric energy storage and production systems

The provisions laid down in RID do not apply to electric energy storage and production systems (e.g. lithium batteries, electric capacitors, asymmetric capacitors, metal hydride storage systems and fuel cells):

(a) installed in a railway vehicle, performing a transport operation and destined for its propulsion or for the operation of any of its equipment;

(b) contained in equipment for the operation of this equipment used or intended for use during carriage (e.g. a laptop);

(c) (Deleted)

1.1.3.8 Application of exemptions in the carriage of dangerous goods as hand luggage, registered luggage or in or on board vehicles

NOTE 1: Further restrictions in the carriers' conditions of carriage under private law are not affected by the following requirements.

2: For piggyback transport in mixed trains (combined passenger and freight transport) see Chapter 7.7.

For the carriage of dangerous goods as hand luggage, registered luggage or in or on board vehicles, the exemptions in accordance with 1.1.3.1, 1.1.3.2 (c) to (g), 1.1.3.4, 1.1.3.5, 1.1.3.7 and 1.1.3.10 shall apply.

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

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

1.1.3.10 Exemptions related to the carriage of lamps containing dangerous goods

The following lamps are not subject to RID provided that they do not contain radioactive material and do not contain mercury in quantities above those specified in special provision 366 of Chapter 3.3:

(a) Lamps that are collected directly from individuals and households when carried to a collection or recycling facility;

NOTE: This also includes lamps brought by individuals to a first collection point, and then carried to another collection point, intermediate processing or recycling facility.

(b) Lamps each containing not more than 1 g of dangerous goods and packaged so that there is not more than 30 g of dangerous goods per package, provided that:

(i) the lamps are manufactured according to a certified quality management system;

NOTE: ISO 9001 may be used for this purpose.

and

(ii) each lamp is either individually packed in inner packagings, separated by dividers, or surrounded with cushioning material to protect the lamps and packed into strong outer packagings meeting the general provisions of 4.1.1.1 and capable of passing a 1.2 m drop test;

(c) Used, damaged or defective lamps each containing not more than 1 g of dangerous goods with not more than 30 g of dangerous goods per package when carried from a collection or recycling facility. The lamps shall be packed in strong outer packagings sufficient for preventing release of the contents under normal conditions of carriage meeting the general provisions of 4.1.1.1 and that are capable of passing a drop test of not less than 1.2 m;

(d) Lamps containing only gases of Groups A and O (according to 2.2.2.1) provided they are packaged so that the projectile effects of any rupture of the lamp will be contained within the package.

NOTE: Lamps containing radioactive material are addressed in 2.2.7.2.2.2 (b).

1.1.4 Applicability of other regulations

1.1.4.1 General

1.1.4.1.1 International carriage on the territory of an RID Contracting State may be subject to regulations or prohibitions imposed in accordance with Article 3 of Appendix C for reasons other than safety during carriage. Such regulations or prohibitions shall be published in an appropriate form.

1.1.4.1.2 (Reserved)

1.1.4.1.3 (Reserved)

1.1.4.2 Carriage in a transport chain including maritime or air carriage

1.1.4.2.1 Packages, containers, bulk containers, portable tanks, tank-containers and MEGCs and wagons containing a full load made up of packages containing one and the same substance or article, which do not entirely meet the requirements for packing, mixed packing, marking, labelling of packages or placarding and orange plate marking, of RID, but are in conformity with the requirements of the IMDG Code or the ICAO Technical Instructions shall be accepted for carriage in a transport chain including maritime or air carriage subject to the following conditions:

(a) If the packages are not marked and labelled in accordance with RID, they shall bear marks and danger labels in accordance with the requirements of the IMDG Code or the ICAO Technical Instructions;

(b) The requirements of the IMDG Code or the ICAO Technical Instructions shall be applicable to mixed packing within a package;

(c) For carriage in a transport chain including maritime carriage, if the containers, bulk containers, portable tanks, tank-containers or MEGCs or wagons containing a full load made up of packages containing one and the same substance or article are not marked and placarded in accordance with Chapter 5.3 of RID, they shall be marked and placarded in accordance with Chapter 5.3 of the IMDG Code. For empty, uncleaned portable tanks, tank-containers and MEGCs, this requirement shall apply up to and including the subsequent transfer to a cleaning station.

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

1.1.4.2.2 (Reserved)

1.1.4.2.3 (Reserved)

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

1.1.4.3 Use of IMO type portable tanks approved for maritime transport

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

1.1.4.4 Piggyback transport

1.1.4.4.1 Dangerous goods may also be carried in piggyback transport under the following conditions:

Road vehicles and their contents handed over for transport in piggyback transport shall meet the provisions of ADR.

The following shall not be permitted:

– explosives of Class 1, compatibility group A (UN Nos. 0074, 0113, 0114, 0129, 0130, 0135, 0224 and 0473);
– self-reactive substances of Class 4.1 requiring temperature control (UN Nos. 3231 to 3240);
– polymerizing substances of Class 4.1 requiring temperature control (UN Nos. 3533 and 3534);
– organic peroxides of Class 5.2 requiring temperature control (UN Nos. 3111 to 3120);
– sulphur trioxide of Class 8 at least 99.95% pure, without inhibitor, carried in tanks (UN No. 1829).

1.1.4.4.2 Placards, marks or orange-coloured plates on wagons carrying road vehicles

It is not necessary to affix placards, marks or orange-coloured plates to carrying wagons in the following cases:

(a) when road vehicles bear the placards, marks or orange-coloured plates in accordance with chapters 5.3 or 3.4 of ADR;

(b) when placards, marks or orange-coloured plates are not required for road vehicles (e.g. in accordance with 1.1.3.6 or the Note to 5.3.2.1.5 of ADR).

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[1] The International Maritime Organization (IMO) has issued "Guidance on the Continued Use of Existing IMO Type Portable Tanks and Road Tank Vehicles for the Transport of Dangerous Goods" as circular CCC.1/Circ.3. The text of this guidance can be found on the IMO website at: www.imo.org.

1.1.4.4.3 Carriage of trailers carrying packages

If a trailer becomes separated from its tractor unit, the orange-coloured plates shall also be affixed to the front of the trailer or the corresponding placards shall also be affixed to both sides of the trailer.

1.1.4.4.4 Repetition of placards, marks or orange-coloured plates on wagons carrying road vehicles

If the affixed placards, marks or orange-coloured plates in accordance with 1.1.4.4.2 are not visible from outside the carrying wagon, they shall be affixed to both sides of the carrying wagon.

1.1.4.4.5 Information in the transport document

For carriage in piggyback transport in accordance with this sub-section, the following shall be entered in the transport document:

"CARRIAGE IN ACCORDANCE WITH 1.1.4.4."

For the carriage of tanks or dangerous goods in bulk for which ADR prescribes an orange-coloured plate with the hazard identification number, the hazard identification number shall be entered in the transport document before the letters "UN" preceding the UN number (see 5.4.1.1.1 (a)).

1.1.4.4.6 All the other provisions of RID remain unaffected.

1.1.4.5 Carriage other than by rail

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

1.1.4.5.2 Unless this would contravene the international Conventions governing the carriage of dangerous goods by the mode of transport used for conveying the wagon on the said section of the journey, the RID Contracting States may agree to apply the requirements of RID to this section of the journey, supplemented, if they consider it necessary, by additional requirements.

These agreements shall be notified to the Secretariat of OTIF by the RID Contracting State that initiated the agreement. The Secretariat of OTIF shall bring them to the attention of all RID Contracting States.[2]

1.1.4.6 Consignments into or through the territory of an SMGS Contracting State

If carriage in accordance with SMGS Annex 2 follows carriage in accordance with RID, the provisions of SMGS Annex 2 shall apply to this section of the journey.

In this case, the marks for packages, overpacks, tank-wagons and tank-containers prescribed in RID and the information in the transport document[3] and in the documents attached to the transport document prescribed in RID shall also, in addition to the languages prescribed in RID, be in Chinese or Russian, unless any agreements concluded between the countries concerned in the transport operation provide otherwise.

1.1.5 Application of standards

Where the application of a standard is required and there is any conflict between the standard and the provisions of RID, the provisions of RID take precedence. The requirements of the standard that do not conflict with RID shall be applied as specified, including the requirements of any other standard, or part of a standard, referenced within that standard as normative.

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[2] Agreements concluded in accordance with this sub-section may be consulted on the OTIF website (www.otif.org).

[3] The International Rail Transport Committee (CIT) publishes the "CIM/SMGS Consignment Note Manual (GLV-CIM/SMGS)", which contains the model uniform consignment note in accordance with the CIM and SMGS contract of carriage and its implementing provisions (see www.cit-rail.org).

Chapter 1.2 Definitions and units of measurement

1.2.1 Definitions

NOTE 1: This section contains all general or specific definitions.

2: Terms contained within a definition in this section which are defined separately are printed in italics.

For the purposes of RID:

A

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

"ADR" means the European Agreement concerning the International Carriage of *Dangerous Goods* by Road, including all special agreements signed by those states involved in the transport operation;

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

"Animal material" means animal carcasses, animal body parts, foodstuffs or feedstuffs derived from animals;

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

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

"Approval"

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

"Unilateral approval", for the carriage of radioactive material, means an approval of a *design* which is required to be given by the *competent authority* of the country of origin of the *design* only.

If the country of origin is not an RID Contracting State, the approval shall require validation by the *competent authority* of an RID Contracting State (see 6.4.22.8);

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

B

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

"Battery-wagon" means a *wagon* containing elements which are linked to each other by a manifold and permanently fixed to this *wagon*. The following elements are considered to be elements of a battery-wagon: *cylinders*, *tubes*, *bundles of cylinders* (also known as frames), *pressure drums* as well as *tanks* destined for the carriage of *gases* as defined in 2.2.2.1.1 with a capacity of more than 450 litres;

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

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

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

A bulk container is:

– of a permanent character and accordingly strong enough to be suitable for repeated use,
– specially designed to facilitate the *carriage* of goods by one or more means of transport without intermediate reloading,
– fitted with devices permitting its ready handling,
– of a capacity of not less than 1.0 m^3.

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

NOTE: This definition only applies to *bulk containers* meeting the requirements of Chapter 6.11.

"Closed bulk container" means a totally closed *bulk container* having a rigid roof, sidewalls, end walls and floor (including hopper-type bottoms). The term includes *bulk containers* with an opening roof, side or end wall that can be closed during *carriage*. Closed *bulk containers* may be equipped with openings to allow for the exchange of vapours and gases with air and which under normal conditions of carriage prevent the release of solid contents as well as the penetration of rain and splash water;

"Flexible bulk container" means a flexible *container* with a capacity not exceeding 15 m^3 and includes liners and attached handling devices and service equipment;

"Sheeted bulk container" means an open top *bulk container* with rigid bottom (including hopper-type bottom), side and end walls and a non-rigid covering;

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

C

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

NOTE: For *portable tanks*, see Chapter 6.7.

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

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

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

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

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

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

"CGA" means the Compressed Gas Association (CGA, 14501 George Carter Way, Suite 103, Chantilly VA 20151, United States of America);

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

"Closed bulk container", see *"Bulk container"*;

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

"Closed wagon" means a *wagon* with fixed or movable sides or roof;

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

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

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

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

NOTE: The term "*inner packaging*" used for *combination packagings* shall not be confused with the term "*inner receptacle*" used for *composite packagings*.

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

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

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

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

"Composite packaging" means a *packaging* consisting of an *outer packaging* and an *inner receptacle* so constructed that the *inner receptacle* and the *outer packaging* form an integral packaging. Once assembled it remains thereafter an integrated single unit; it is filled, stored, carried and emptied as such;

NOTE: The term "*inner receptacle*" used for *composite packagings* shall not be confused with the term "*inner packaging*" used for *combination packagings*. For example, the inner of a 6HA1 *composite packaging* (plastics material) is such an *inner receptacle* since it is normally not designed to perform a containment function without its *outer packaging* and is not therefore an *inner packaging*.

Where a material is mentioned in brackets after the term "*composite packaging*", it refers to the *inner receptacle*.

"Compressed Natural Gas (CNG)" means a compressed *gas* composed of natural gas with a high methane content assigned to UN No. 1971;

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

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

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

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

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

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

– of a permanent character and accordingly strong enough to be suitable for repeated use;
– specially designed to facilitate the *carriage* of goods, by one or more means of transport, without breakage of load;
– fitted with devices permitting its ready stowage and handling, particularly when being transloaded from one means of transport to another;
– so designed as to be easy to fill and empty
– having an internal volume of not less than 1 m^3, except for containers for the carriage of radioactive material.

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

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

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

In addition:

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

"Large container" means

(a) a *container* which does not meet the definition of a *small container*;
(b) in the meaning of the *CSC*, a *container* of a size such that the area enclosed by the four outer bottom corners is either
  (i) at least 14 m^2 (150 square feet) or
  (ii) at least 7 m^2 (75 square feet) if fitted with top corner fittings;

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

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

"Small container" means a *container* which has an internal volume of not more than 3 m^3;

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

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

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

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

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

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

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

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

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

D

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

"Dangerous reaction" means:

(a) combustion or evolution of considerable heat;
(b) evolution of flammable, asphyxiant, oxidizing or toxic *gases*;
(c) the formation of corrosive substances;
(d) the formation of unstable substances; or
(e) dangerous rise in pressure (for *tanks* only);

"Demountable tank" means a *tank* designed to fit the special apparatus of the *wagon* but which can only be removed from it after dismantling their means of attachment;

"Design", for the carriage of radioactive material, means the description of fissile material excepted under 2.2.7.2.3.5 (f), special form radioactive material, low dispersible radioactive material, *package* or *packaging* which enables such an item to be fully identified. The description may include specifications, engineering drawings, reports demonstrating compliance with regulatory requirements, and other relevant documentation;

"Design life", for composite cylinders and tubes, means the maximum life (in number of years) for which the *cylinder* or *tube* is designed and approved in accordance with the applicable standard;

"Diameter" (for *shells* of *tanks*) means the internal diameter of the *shell*;

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

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

E

"ECM", see *"Entity in charge of maintenance"*;

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

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

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

"Entity in charge of maintenance (ECM)" means the entity in accordance with the Uniform Rules concerning the Technical Admission of Railway Material used in International Traffic (ATMF – Appendix G to COTIF) and certified in accordance with Annex A[4] thereto, that is in charge of the maintenance of a *wagon*;

"Exclusive use", for the carriage of radioactive material, means the sole use, by a single *consignor*, of a *wagon* or of a *large container*, in respect of which all initial, intermediate and final loading, shipment and unloading are carried out in accordance with the directions of the *consignor* or *consignee*, where so required by RID;

F

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

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

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

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

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

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[4] Appendix G is harmonised with the European legislation, particularly Directives 2004/49/EC (Articles 3 and 14 a) and 2008/57/EC (Articles 2 and 33) on the elements related to ECM. Annex A to ATMF is equivalent to Regulation (EU) 445/2011 and deals with the certification system of entities in charge of the maintenance of freight wagons.

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

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

"Flexible bulk container", see *"Bulk container"*;

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

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

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

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

NOTE 1: The corresponding term for radioactive material is *"exclusive use"*.

2: This definition covers the term "wagon load" used in the other Appendices to COTIF and in other railway regulations.

G

"Gas" means a substance which:

(a) at 50 °C has a vapour pressure greater than 300 kPa (3 bar); or

(b) is completely gaseous at 20 °C under standard pressure of 101.3 kPa;

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

"GHS" means the seventh revised edition of the Globally Harmonized System of Classification and Labelling of Chemicals, published by the United Nations as document ST/SG/AC.10/30/Rev.7;

H

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

"Hermetically closed tank" means a *tank* that:

– is not equipped with *safety valves*, bursting discs, other similar safety devices or *vacuum valves* or *self-operating ventilation valves*; or

– is equipped with *safety valves* preceded by a bursting disc according to 6.8.2.2.10, but is not equipped with *vacuum valves* or *self-operating ventilation valves*.

A *tank* intended for the *carriage* of *liquid substances* with a *calculation pressure* of at least 4 bar or intended for the *carriage* of *solid substances* (powdery or granular) regardless of its *calculation pressure* is also considered hermetically closed if it:

– is equipped with *safety valves* preceded by a bursting disc according to 6.8.2.2.10 and *vacuum valves* or *self-operating ventilation valves*, in accordance with the requirements of 6.8.2.2.3; or,

– is not equipped with *safety valves*, bursting discs or other similar safety devices, but is equipped with *vacuum valves* or *self-operating ventilation valves*, in accordance with the requirements of 6.8.2.2.3.

"Holding time" means the time that will elapse from the establishment of the initial filling condition until the pressure has risen due to heat influx to the lowest set pressure of the pressure limiting device(s) of *tanks* intended for the carriage of refrigerated liquefied *gases*;

NOTE: For *portable tanks*, see 6.7.4.1.

I

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

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

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

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

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

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

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

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

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

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

(a) has a capacity of:
  (i) not more than 3.0 m^3 for *solids* and *liquids* of *packing groups* II and III;
  (ii) not more than 1.5 m^3 for *solids* of *packing group* I when packed in *flexible*, *rigid plastics*, *composite*, *fibreboard* and *wooden IBCs*;
  (iii) not more than 3.0 m^3 for *solids* of *packing group* I when packed in *metal IBCs*;
  (iv) not more than 3.0 m^3 for radioactive material of Class 7;
(b) is designed for mechanical handling;
(c) is resistant to the stresses produced in handling and transport as determined by the tests specified in Chapter 6.5

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

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

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

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

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

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

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

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

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

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

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

(a) Cleaning;

(b) Removal and reinstallation or replacement of *body* closures (including associated gaskets), or of *service equipment*, conforming to the original manufacturer's specifications, provided that the leaktightness of the *IBC* is verified; or

(c) Restoration of *structural equipment* not directly performing a dangerous goods containment or discharge pressure retention function so as to conform to the design type (e.g. the straightening of legs or lifting attachments), provided that the containment function of the IBC is not affected;

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

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

J

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

L

"Large container", see *"Container"*;

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

(a) is designed for mechanical handling;

(b) exceeds 400 kg net mass or 450 litres capacity but has a volume of not more than 3.0 m^3;

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

(a) Is produced as a UN type from a non-UN type; or

(b) Is converted from one UN design type to another UN design type.

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

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

"Large salvage packaging" means a special *packaging* which

(a) is designed for mechanical handling; and

(b) exceeds 400 kg net mass or 450 litres capacity but has a volume of not more than 3 m^3;

into which damaged, defective, leaking or non-conforming *dangerous goods packages*, or *dangerous goods* that have spilled or leaked are placed for purposes of *carriage* for recovery or disposal;

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

NOTE: For *portable tanks*, see Chapter 6.7.

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

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

"Liquefied Natural Gas (LNG)" means a refrigerated liquefied *gas* composed of natural gas with a high methane content assigned to UN No. 1972;

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

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

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

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

(a) has a melting point or initial melting point of 20 °C or less at a pressure of 101.3 kPa, or

(b) is liquid according to the ASTM D 4359-90 test method or

(c) is not pasty according to the criteria applicable to the test for determining fluidity (penetrometer test) described in 2.3.4;

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

– *Carriage* of *liquids* according to the above definition, or

– *Solids* handed over for *carriage* in the molten state.

"Loader" means any *enterprise* which:

(a) Loads packaged *dangerous goods*, *small containers* or *portable tanks* into or onto a *wagon* or a *container*; or

(b) Loads a *container*, *bulk-container*, *MEGC*, *tank-container*, *portable tank* or *road vehicle* onto a *wagon*;

"Loading" means all actions carried out by the *loader*, in accordance with the definition of *loader*;

M

"Management system", for the *carriage* of radioactive material, means a set of interrelated or interacting elements (system) for establishing policies and objectives and enabling the objectives to be achieved in an efficient and effective manner;

"Manual of Tests and Criteria" means the sixth revised edition of the United Nations Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria, published by the United Nations Organization (ST/SG/AC.10/11/Rev.6 and Amend.1);

"Mass of package" means gross mass of the *package* unless otherwise stated;

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

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

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

"Maximum permissible gross mass"

(a) (for IBCs) means the mass of the *IBC* and any *service* or *structural equipment* together with the maximum net mass;

(b) (for *tanks*) means the tare of the *tank* and the heaviest load authorized for *carriage*;

NOTE: For *portable tanks*, see Chapter 6.7.

"Maximum working pressure (gauge pressure)" means the highest of the following three pressures that may occur at the top of the *tank* in the operating position:

(a) the highest effective pressure allowed in the *tank* during filling (maximum *filling pressure* allowed);

(b) the highest effective pressure allowed in the *tank* during discharge (maximum *discharge pressure* allowed); and

(c) the effective gauge pressure to which the *tank* is subjected by its contents (including such extraneous *gases* as it may contain) at the maximum working temperature.

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

For tanks equipped with *safety valves* (with or without bursting disc) other than tanks for the carriage of compressed, liquefied or dissolved *gases* of Class 2., the *maximum working pressure (gauge pressure)* shall however be equal to the prescribed opening pressure of such *safety valves* (see also *"Calculation pressure"*, *"Discharge pressure", "Filling pressure"* and *"Test pressure"*);

NOTE 1: *Maximum working pressure* is not applicable to gravity-discharge *tanks* according to 6.8.2.1.14 (a).

2: For *portable tanks*, see Chapter 6.7.

3: For closed cryogenic receptacles, see Note to 6.2.1.3.6.5.

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

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

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

"Mild steel" means a steel having a minimum tensile strength between 360 N/mm^2 and 440 N/mm^2;

NOTE: For *portable tanks*, see Chapter 6.7.

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

NOTE: For UN MEGCs, see Chapter 6.7.

N

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

"Neutron radiation detector" means a device that detects neutron radiation. In such a device, a gas may be contained in a hermetically sealed electron tube transducer that converts neutron radiation into a measureable electric signal;

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

(a) are not mentioned by name in Table A of Chapter 3.2, and

(b) exhibit chemical, physical and/or dangerous properties corresponding to the Class, classification code, *packing group* and the name and description of the *n.o.s. entry*;

O

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

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

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

"Open wagon" means a wagon with or without side boards and tailboards, the loading surfaces of which are open;

"Operator of a tank-container, portable tank or tank-wagon"[5] means any *enterprise* in whose name the *tank-container*, *portable tank* or *tank-wagon* is registered or approved for transport;

"OTIF" means the Intergovernmental Organization for International Carriage by Rail (OTIF, Gryphenhübeliweg 30, CH-3006 Bern);

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

[5] In the case of a *tank-wagon* the term "operator" is equivalent to the term "keeper" as defined in Article 2, n) of Appendix G to COTIF (ATMF) and in Article 3s of the Rail Safety Directive (Directive 2004/49/EC of the European Parliament and of the Council of 29 April 2004 on safety on the Community's railways and amending Council Directive 95/18/EC on the licensing of railway undertakings, and Directive 2001/14/EC on the allocation of railway infrastructure capacity and the levying of charges for the use of railway infrastructure and safety certification) and in Article 2s of Directive 2008/57/EC of the European Parliament and of the Council of 17 June 2008 on the interoperability of the rail system within the Community.

"Over-moulded cylinder" means a *cylinder* intended for the *carriage* of *LPG* with a water capacity not exceeding 13 litres made of a coated welded steel inner *cylinder* with an over-moulded protective case made from cellular plastic, which is non-removable and bonded to the outer surface of the steel *cylinder* wall;

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

Examples of *overpacks*:

(a) a loading tray such as a pallet, on which several *packages* are placed or stacked and secured by a plastics strip, shrink or stretch wrapping or other appropriate means; or

(b) an outer protective *packaging* such as a *box* or a *crate*;

P

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

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

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

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

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

Packing group I: Substances presenting high danger;

Packing group II: Substances presenting medium danger; and

Packing group III: Substances presenting low danger;

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

"Piggyback transport" means the *carriage* of *road vehicles* in combined road/rail transport. This definition also includes the rolling road (loading of *road vehicles* (accompanied or unaccompanied) onto wagons designed for this type of transport);

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

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

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

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

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

"Protective lining" (for *tanks*) means a lining or coating protecting the metallic *tank* material against the substances to be carried;

NOTE: This definition does not apply to a lining or coating used only to protect the substance to be carried.

Q

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

R

"Radiation detection system" means an apparatus that contains radiation detectors as components;

"Radiation level", for the carriage of radioactive material, means the corresponding dose rate expressed in millisieverts per hour or microsieverts per hour;

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

"Railway infrastructure" means all tracks and fixed equipment necessary for the movement of rail traffic and transport safety;

"Railway infrastructure manager" means any public body or *undertaking* responsible in particular for establishing or maintaining the *railway infrastructure*, and for managing the control and safety systems;

"Railway vehicle" means a vehicle suitable to circulate on its own wheels on railway lines with or without traction;

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

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

"Reconditioned packaging" means in particular

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

(b) plastics *drums* and *jerricans* that:
   (i) are cleaned to original materials of construction, with all former contents, external coatings and labels removed;
   (ii) have all non-integral gaskets replaced; and
   (iii) are inspected after cleaning with rejection of *packagings* with visible damage such as tears, creases or cracks, or damaged threads or closures or other significant defects;

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

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

"Reference steel" means a steel with a tensile strength of 370 N/mm^2 and an elongation at fracture of 27%;

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

"Remanufactured large packaging", see *"Large packaging"*;

"Remanufactured packaging" means in particular

(a) metal *drums* that:
   (i) are produced as a UN type complying with the requirements of Chapter 6.1 from a non-UN type;
   (ii) are converted from one UN type complying with the requirements of Chapter 6.1 to another UN type; or
   (iii) undergo the replacement of integral structural components (such as non-removable heads);

(b) plastics *drums* that:
   (i) are converted from one UN type to another UN type (e.g. 1H1 to 1H2); or
   (ii) undergo the replacement of integral structural components.

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

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

"Reused large packaging", see *"Large packaging"*;

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

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

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

"Road vehicle" means motor vehicle, articulated vehicle, trailer or semi-trailer within the meaning of *ADR*, by means of which *dangerous goods* are carried;

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

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

S

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

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

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

"Salvage pressure receptacle" means a pressure receptacle with a water capacity not exceeding 3 000 litres into which are placed damaged, defective, leaking or non-conforming pressure receptacle(s) for the purpose of carriage e.g. for recovery or disposal;

"SAPT" see *"Self-accelerating polymerization temperature"*;

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

"Self-accelerating polymerization temperature (SAPT)" means the lowest temperature at which polymerization may occur with a substance in the *packaging*, *IBC* or *tank* as offered for carriage. The *SAPT* shall be determined in accordance with the test procedures established for the self-accelerating decomposition temperature for self-reactive substances in accordance with Part II, section 28 of the Manual of Tests and Criteria;

"Self-operating ventilation valve" means a venting device on *shells* with bottom discharge which is connected to the bottom valve and in normal operation is only opened during loading or unloading for the ventilation of *shells*.

"Service equipment"

(a) of the *tank* means filling and discharge, breather, safety, heating and heat insulating devices and measuring instruments;

NOTE: For *portable tanks*, see Chapter 6.7.

(b) of the elements of a *battery-wagon* or of a *MEGC* means filling and discharge devices, including the manifold, safety devices and measuring instruments;

(c) of an *IBC* means the filling and discharge devices and any pressure-relief or venting, safety, heating and heat insulating devices and measuring instruments;

"Service life", for composite cylinders and tubes, means the number of years the *cylinder* or *tube* is permitted to be in service;

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

"Sheeted bulk container", see *"Bulk container"*;

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

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

"Shell" (for tanks) means the part of the *tank* which retains the substance intended for *carriage*, including openings and their closures, but does not include *service equipment* or external *structural equipment*;

NOTE: For portable tanks, see Chapter 6.7.

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

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

"Small receptacle containing gas (gas cartridge)" means a non-refillable *receptacle* having a water capacity not exceeding 1000 ml for *receptacles* made of metal and not exceeding 500 ml for receptacles made of synthetic material or glass, containing, under pressure, a *gas* or a mixture of *gases*. It may be fitted with a valve;

"Solid" means:

(a) a substance with a melting point or initial melting point of more than 20 °C at a pressure of 101.3 kPa, or

(b) a substance which is not liquid according to the ASTM D 4359-90 test method or which is pasty according to the criteria applicable to the test for determining fluidity (penetrometer test) described in 2.3.4;

"SMGS" means Agreement on International Goods Transport by Rail of the Organization for Cooperation between Railways (OSJD), Warsaw;

"SMGS Annex 2" means provisions for the carriage of dangerous goods as Annex 2 to *SMGS*;

"Structural equipment"

(a) for *tanks* of a *tank-wagon*, means the external or internal reinforcing, fastening or protective members of the *shell*;

(b) for *tanks* of a *tank-container*, means the external or internal reinforcing, fastening, protective or stabilizing members of the *shell*;

NOTE: For *portable tanks*, see Chapter 6.7.

(c) for elements of a *battery-wagon* or an *MEGC* means the external or internal reinforcing, fastening, protective or stabilizing members of the *shell* or *receptacle*;

(d) for *IBCs* other than *flexible IBCs* means the reinforcing, fastening, handling, protective or stabilizing members of the *body* (including the base pallet for *composite IBCs with plastics inner receptacle*);

"Swap body", see *"Container"*;

T

"Tank" means a *shell*, including its *service* and *structural equipment*. When used alone, the term *tank* means a *tank-container*, *portable tank*, *tank-wagon*, and *demountable tank* as defined in this Section, including *tanks* forming elements of *battery-wagons* or *MEGCs*;

NOTE: For *portable tanks*, see 6.7.4.1.

"Tank-container" means an article of transport equipment meeting the definition of a *container*, and comprising a *shell* and items of equipment, including the equipment to facilitate movement of the *tank-container* without significant change of attitude, used for the *carriage* of *gases*, *liquid*, powdery or granular substances and, when used for the *carriage* of *gases* as defined in 2.2.2.1.1, having a capacity of more than 0.45 m^3 (450 litres);

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

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

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

"Tank-wagon" means a *wagon* intended for the *carriage* of *liquids*, *gases*, powdery or granular substances, comprising a superstructure, consisting of one or more *shells* and an underframe fitted with its own items of equipment (running gear, suspension, buffing, traction, braking gear and inscriptions);

NOTE: *Tank-wagon* also includes *wagons* with *demountable tanks*.

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

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

NOTE: For *portable tanks*, see Chapter 6.7.

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

"Transport document" means the consignment note in accordance with the Contract of Carriage (see *CIM*), the wagon note in accordance with the General Contract of Use for Wagons (GCU)[6] or another transport document meeting the provisions of section 5.4.1;

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

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

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

U

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

"Unloading" means all actions carried out by the *unloader*, in accordance with the definition of *unloader*;

"Undertaking", see *"Enterprise"*;

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

"Unloader" means any *enterprise* which:

(a) Removes a *container*, *bulk-container*, *MEGC*, *tank-container*, *portable tank* or *road vehicle* from a *wagon*; or

(b) Unloads packaged *dangerous goods*, *small containers* or *portable tanks* out of or from a *wagon* or a *container*; or

(c) Discharges *dangerous goods* from a *tank* (*tank-wagon*, *demountable tank*, *portable tank* or *tank-container*) or from a *battery-wagon* or *MEGC* or from a *wagon*, *large container* or *small container* for *carriage in bulk* or a *bulk-container*.

"UN Model Regulations" means the Model Regulations annexed to the twentieth revised edition of the Recommendations on the Transport of Dangerous Goods published by the United Nations (ST/SG/AC.10/1/Rev.20);

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

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

V

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

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

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[6] Published by the GCU Bureau, Avenue Louise, 500, BE–1050 Brussels, www.gcubureau.org.

W

"Wagon" means a railway vehicle, not provided with a means of traction, which is intended to carry goods (see also *battery-wagon*, *closed wagon*, *open wagon*, *sheeted wagon* and *tank-wagon*);

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

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

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

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

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

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

1.2.2 Units of measurement

1.2.2.1 The following units of measurement[7] are applicable in RID:

Measurement of	SI Unit[8]	Acceptable alternative unit	Relationship between units
Length	m (metre)	–	–
Area	m^2 (square metre)	–	–
Volume	m^3 (cubic metre)	l[9] (litre)	1 l = 10^{-3} m^3
Time	s (second)	min (minute)	1 min = 60 s
		h (hour)	1 h = 3 600 s
		d (day)	1 d = 86 400 s
Mass	kg (kilogram)	g (gramme)	1g = 10^{-3} kg
		t (ton)	1 t = 10^3 kg
Mass density	kg/m^3	kg/l	1 kg/l = 10^3 kg/m^3
Temperature	K (kelvin)	°C (degree Celsius)	0 °C = 273.15 K
Temperature difference	K (kelvin)	°C (degree Celsius)	1 °C = 1 K
Force	N (newton)	–	1 N = 1 kg·m/s^2
Pressure	Pa (pascal)		1 Pa = 1 N/m^2
		bar (bar)	1 bar = 10^5 Pa
Stress	N/m^2	N/mm^2	1 N/mm^2 = 1 MPa
Work	J (joule)	kWh (kilowatt hours)	1 kWh = 3.6 MJ
Energy	J (joule)		1 J = 1 N·m = 1 W·s
Quantity of heat	J (joule)	eV (electronvolt)	1 eV = 0.1602·10^{-18}J
Power	W (watt)	–	1 W = 1 J/s = 1 N·m/s
Kinematic viscosity	m^2/s	mm^2/s	1 mm^2/s = 10^{-6} m^2/s
Dynamic viscosity	Pa·s	mPa·s	1 mPa·s = 10^{-3} Pa·s
Activity	Bq (becquerel)		
Dose equivalent	Sv (sievert)		

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[7] The following round figures are applicable for the conversion of the units hitherto used into SI Units.

Force

1 kg	= 9.807 N
1 N	= 0.102 kg

Stress

1 kg/mm^2	= 9.807 N/mm^2
1 N/mm^2	= 0.102 kg/mm^2

Pressure

1 Pa	= 1 N/m^2	= 10^{-5} bar	= 1.02·10^{-5} kg/cm^2	= 0.75·10^{-2} torr
1 bar	= 10^5 Pa	= 1.02 kg/cm^2	= 750 torr	
1 kg/cm^2	= 9.807·10^4 Pa	= 0.9807 bar	= 736 torr	
1 torr	= 1.33·10^2 Pa	= 1.33·10^{-3} bar	= 1.36·10^{-3} kg/cm^2	

Energy, Work, Quantity of heat

1 J	= 1 Nm	= 0.278·10^{-6} kWh	= 0.102 kgm	= 0.239·10^{-3} kcal
1 kWh	= 3.6·10^6 J	= 367·10^3 kgm	= 860 kcal	
1 kgm	= 9.807 J	= 2.72·10^{-6} kWh	= 2.34·10^{-3} kcal	
1 kcal	= 4.19·10^3 J	= 1.16·10^{-3} kWh	= 427 kgm	

Power

1 W	= 0.102 kgm/s	= 0.86 kcal/h
1 kgm/s	= 9.807 W	= 8.43 kcal/h
1 kcal/h	= 1.16 W	= 0.119 kgm/s

Kinematic viscosity

1 m^2/s	= 10^4 St (Stokes)
1 St	= 10^{-4} m^2/s

Dynamic viscosity

1 Pa·s	= 1 N·s/m^2	= 10 P (poise)	= 0.102 kg·s/m^2
1 P	= 0.1 Pa·s	= 0.1 N·s/m^2	= 1.02·10^{-2} kg·s/m^2
1 kg·s/m^2	= 9.807 Pa·s	= 9.807 N·s/m^2	= 98.07 P

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

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

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

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

NOTE: 10^{9} billion is United Nations usage in English. By analogy, so is 10^{-9} = 1 billionth.

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

(a) In the case of mixtures of solids or of liquids, and also in the case of solutions and of solids wetted by a liquid, a percentage mass based on the total mass of the mixture, the solution or the wetted solid;

(b) In the case of mixtures of compressed gases, when filled by pressure, the proportion of the volume indicated as a percentage of the total volume of the gaseous mixture, or, when filled by mass, the proportion of the mass indicated as a percentage of the total mass of the mixture;

(c) In the case of mixtures of liquefied gases and dissolved gases, the proportion of the mass indicated as a percentage of the total mass of the mixture.

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

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

Chapter 1.3 Training of persons involved in the carriage of dangerous goods

1.3.1 Scope and applicability

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

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

2: (Reserved)

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

1.3.2 Nature of the training

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

1.3.2.1 General awareness training

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

1.3.2.2 Function-specific training

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

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

The carrier's and railway infrastructure manager's personnel shall also be trained in matters specific to rail transport. This training shall be in the form of basic training and specialized training.

(a) Basic training for all personnel:

All personnel shall be trained in the meaning of the danger labels and of the orange-coloured plates. In addition, personnel shall be aware of the procedure for reporting irregularities.

(b) Specialized training for operational personnel directly involved in the carriage of dangerous goods:

In addition to the basic training described under (a), personnel shall be trained commensurate with their duties.

Personnel shall be trained on the subjects covered by the specialized training, which are divided into three categories in 1.3.2.2.2, on the basis of the groups in 1.3.2.2.1.

1.3.2.2.1 The following Table sets out the groups of personnel for the individual categories:

Category	Description of category	Personnel
1	Operations personnel involved directly in the transport of dangerous goods	Drivers and marshalling staff or personnel with an equivalent function
2	Personnel responsible for the technical control of wagons used for the transport of dangerous goods	Rolling stock technician or personnel with an equivalent function
3	Personnel responsible for guiding and controlling rail and marshalling services and management personnel of the railway infrastructure manager	Controllers, signallers, control centre personnel or personnel with an equivalent function

1.3.2.2.2 Special subjects to be covered by the specialized training shall be, at least:

(a) Drivers or personnel with an equivalent function of category 1:

– how to access the necessary information concerning the composition of the train, the presence of dangerous goods and where they are situated in the train;

– types of irregularity;

– dealing in critical situations with irregularities, taking measures relating to the protection of their own train and nearby traffic.

Marshallers or personnel with an equivalent function of category 1:

– meaning of the shunting labels in accordance with Models 13 and 15 (see 5.3.4.2);

– protective distances for goods of Class 1 in accordance with 7.5.3;

– types of irregularity.

(b) Wagon technician or personnel with an equivalent function of category 2:

– performance of inspections in accordance with Appendix 9 of the General Contract of Use for Wagons (GCU)[10] – Conditions for the technical transfer inspection of wagons;

– carrying out the checks described in 1.4.2.2.1 (only for personnel who perform the checks described in 1.4.2.2.1);

– recognition of irregularities.

(c) Traffic controller, signal box personnel, control centre personnel or personnel with an equivalent function of category 3:

– dealing with critical situations in the event of irregularities;

– internal emergency plans for marshalling yards in accordance with Chapter 1.11.

1.3.2.3 Safety training

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

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

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

1.3.3 Documentation

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

[10] Published by the GCU Bureau, Avenue Louise, 500, BE–1050 Brussels, www.gcubureau.org.

Chapter 1.4 Safety obligations of the participants

1.4.1 General safety measures

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

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

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

If an RID Contracting State considers that no lessening of safety is involved, it may in its domestic legislation transfer the obligations falling to a specific participant to one or several other participants, provided that the obligations of 1.4.2 and 1.4.3 are met. These derogations shall be communicated by the RID Contracting State to the Secretariat of OTIF which will bring them to the attention of the other RID Contracting States.

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

1.4.2 Obligations of the main participants

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

2: For radioactive materials see also 1.7.6.

1.4.2.1 Consignor

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

(a) ascertain that the dangerous goods are classified and authorized for carriage in accordance with RID;

(b) furnish the carrier with information and data in a traceable form and, if necessary, the required transport documents and accompanying documents (authorizations, approvals, notifications, certificates, etc.), taking into account in particular the requirements of Chapter 5.4 and of Table A of Chapter 3.2

(c) use only packagings, large packagings, intermediate bulk containers (IBCs) and tanks (tank-wagons, wagons with demountable tanks, battery-wagons, MEGCs, portable tanks and tank-containers) approved for and suited to the carriage of the substances concerned and bearing the marks prescribed by RID;

(d) comply with the requirements on the means of dispatch and on forwarding restrictions;

(e) ensure that even empty uncleaned and not degassed tanks (tank-wagons, wagons with demountable tanks, battery-wagons, MEGCs, portable tanks and tank-containers) or empty uncleaned wagons and containers for carriage in bulk are placarded, marked and labelled in accordance with Chapter 5.3 and that empty uncleaned tanks are closed and present the same degree of leakproofness as if they were full.

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

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

1.4.2.2 Carrier

1.4.2.2.1 In the context of 1.4.1, the carrier who takes over the dangerous goods at the point of departure shall in particular:

(a) ascertain that the dangerous goods to be carried are authorized for carriage in accordance with RID;

(b) ascertain that all information prescribed in RID related to the dangerous goods to be carried has been provided by the consignor before carriage, that the prescribed documentation is attached to the transport document or if electronic data processing (EDP) or if electronic data interchange (EDI) techniques are used instead of paper documentation, that data is available during transport in a manner at least equivalent to that of paper documentation;

(c) ascertain visually that the wagons and loads have no obvious defects, leakages or cracks, missing equipment, etc.;

(d) ascertain that the deadline for the next test for tank-wagons, battery-wagons, wagons with demountable tanks, portable tanks, tank-containers and MEGCs has not expired;

NOTE: Tanks, battery-wagons and MEGCs may however be carried after the expiry of this deadline under the conditions of 4.1.6.10 (in the case of battery-wagons and MEGCs containing pressure receptacles as elements), 4.2.4.4, 4.3.2.3.7, 4.3.2.4.4, 6.7.2.19.6, 6.7.3.15.6 or 6.7.4.14.6.

(e) verify that the wagons are not overloaded;

(f) ascertain that the placards, marks and orange-coloured plates prescribed for the wagons in Chapter 5.3 have been affixed;

(g) ascertain that the equipment prescribed in the instructions in writing is in the driver's cab.

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

The requirements of this paragraph are considered to have been complied with if Section 5[11] of IRS 40471-3 (Inspections of dangerous goods consignments) published by UIC is applied.

1.4.2.2.2 The carrier may, however, in the case of 1.4.2.2.1 (a), (b), (d), (e) and (f), rely on information and data made available to him by other participants. In the case of 1.4.2.2.1 (c) he may rely on what is certified in the "container/vehicle packing certificate" provided in accordance with 5.4.2.

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

1.4.2.2.4 If, during the journey, an infringement which could jeopardize the safety of the operation is observed, the consignment shall be halted as soon as possible bearing in mind the requirements of traffic safety, of the safe immobilisation of the consignment, and of public safety.

The transport operation may only be continued once the consignment complies with applicable regulations. The competent authority(ies) concerned by the rest of the journey may grant an authorization to pursue the transport operation.

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

1.4.2.2.5 The carrier shall ensure that the manager of the railway infrastructure being used is able to obtain at any time during carriage rapid and unrestricted access to the information allowing him to meet the requirements of 1.4.3.6 (b).

NOTE: The arrangements by which the data are provided shall be laid down in the rules for using the railway infrastructure.

1.4.2.2.6 The carrier shall provide the driver with the instructions in writing as prescribed in 5.4.3.

1.4.2.2.7 The carrier shall inform the driver of the dangerous goods on board and their position on the train before the train starts its journey.

The requirements of this paragraph are considered to have been complied with if appendices A and B of UIC Leaflet 472 ("Braking sheet and consist list for international freight trains")[12] are applied.

1.4.2.2.8 The carrier shall ensure that the information to be made available to the entity in charge of maintenance (ECM), either directly or via the operator of the tank-wagon, as defined in Article 15 § 3 of ATMF – Appendix G to COTIF – and in Article 5 of Annex A to ATMF also covers the tank and its equipment.

1.4.2.3 Consignee

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

1.4.2.3.2 A wagon or container may only be returned or reused once the requirements of RID concerning the unloading have been complied with.

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[11] Version of the IRS (International Railway Solution) applicable as from 1 January 2019.

[12] Version of the UIC leaflet applicable as from 1 July 2015.

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

1.4.3 Obligations of the other participants

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

1.4.3.1 Loader

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

(a) he shall hand the dangerous goods over to the carrier only if they are authorized for carriage in accordance with RID;

(b) he shall, when handing over for carriage packed dangerous goods or uncleaned empty packagings, check whether the packaging is damaged. He shall not hand over a package the packaging of which is damaged, especially if it is not leakproof, and there are leakages or the possibility of leakages of the dangerous substance, until the damage has been repaired; this obligation also applies to empty uncleaned packagings;

(c) he shall comply with the special requirements concerning loading and handling;

(d) he shall, when he hands dangerous goods over for carriage directly, comply with the requirements concerning placarding, marking and orange-coloured plates on the wagon or large container conforming to Chapter 5.3;

(e) he shall, when loading packages, comply with the prohibitions on mixed loading taking into account dangerous goods already in the wagon or large container and requirements concerning the separation of foodstuffs, other articles of consumption or animal feedstuffs.

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

1.4.3.2 Packer

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

(a) the requirements concerning packing conditions, or mixed packing conditions and,

(b) when he prepares packages for carriage, the requirements concerning marking and labelling of the packages.

1.4.3.3 Filler

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

(a) he shall ascertain prior to the filling of tanks that both they and their equipment are technically in a satisfactory condition;

NOTE: The filler shall establish procedures to check the correct functioning of the closures of the tank of a tank-wagon and to ensure the leaktightness of the closing devices before and after filling. Guidelines in the form of checklists for tank-wagons for liquids, issued by the European Chemical Industry Council (CEFIC), are available on the OTIF website (www.otif.org).

(b) he shall ascertain that the date of the next test for tank-wagons, battery-wagons, wagons with demountable tanks, portable tanks, tank-containers and MEGCs has not expired;

(c) he shall only fill tanks with the dangerous goods authorized for carriage in those tanks;

(d) he shall, in filling the tank, comply with the requirements concerning dangerous goods in adjoining compartments;

(e) he shall, during the filling of the tank, observe the maximum permissible degree of filling or the maximum permissible mass of contents per litre of capacity for the substance being filled;

(f) he shall, after filling the tank, ensure that all closures are in a closed position and that there is no leakage;

NOTE: The filler shall establish procedures to check the correct functioning of the closures of the tank of a tank-wagon and to ensure the leaktightness of the closing devices before and after filling. Guidelines in the form of checklists for tank-wagons for liquids, issued by the European Chemical Industry Council (CEFIC), are available on the OTIF website (www.otif.org).

(g) he shall ensure that no dangerous residue of the filling substance adheres to the outside of the tanks filled by him;

(h) he shall, in preparing the dangerous goods for carriage, ensure that the placards, marks, orange-coloured plates and labels as well as shunting labels are affixed on the tanks, on the wagons and on the containers in accordance with Chapter 5.3;

(i) he shall, before and after filling tank-wagons with a liquefied gas, observe the applicable special checking requirements;

(j) he shall, when filling wagons or containers with dangerous goods in bulk, ascertain that the relevant provisions of Chapter 7.3 are complied with.

NOTE: Guidelines in the form of checklists for tank-wagons for gases are available on the OTIF website (www.otif.org) to help the filler of gas tank-wagons fulfil his safety obligations, particularly with respect to the leaktightness of tank-wagons.

1.4.3.4 Tank-container/portable tank operator

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

(a) ensure compliance with the requirements for construction, equipment, tests and marking;

(b) ensure that the maintenance of shells and their equipment is carried out in such a way as to ensure that, under normal operating conditions, the tank-container/portable tank satisfies the requirements of RID until the next inspection;

(c) have an exceptional check made when the safety of the shell or its equipment is liable to be impaired by a repair, an alteration or an accident.

1.4.3.5 Tank-wagon operator

In the context of 1.4.1, the tank-wagon operator shall in particular[13]:

(a) ensure compliance with the requirements for construction, equipment, tests and marking;

(b) have an exceptional check made when the safety of the shell or its equipment is liable to be impaired by a repair, an alteration or an accident;

(c) ensure that the results of the activities as required in (a) and (b) are recorded in the tank record;

(d) ensure that the entity in charge of maintenance (ECM) assigned to the tank-wagon holds a valid certificate covering tank-wagons for dangerous goods;

(e) ensure that the information made available to the ECM as defined in Article 15 § 3 of ATMF – Appendix G to COTIF – and in Article 5 of Annex A to ATMF also covers the tank and its equipment.

1.4.3.6 Railway infrastructure manager

In the context of 1.4.1, the railway infrastructure manager has in particular the following obligations. The railway infrastructure manager

(a) shall ensure that internal emergency plans for marshalling yards are prepared in accordance with Chapter 1.11;

(b) shall ensure that he has rapid and unrestricted access to the following information at any time during carriage:

- composition of the train by indicating the number of each wagon and the wagon type if this is not included in the wagon number,
- UN numbers of the dangerous goods being carried in or on each wagon insofar as they are required to be shown in the transport document, or if only dangerous goods packed in limited quantities in accordance with Chapter 3.4 are being carried, information indicating their presence when marking of the wagon or large container in accordance with Chapter 3.4 is required,
- position of each wagon in the train (wagon order).

This information shall only be disclosed to those parties that require it for safety, security or emergency response purposes.

NOTE: The arrangements by which the data are provided shall be laid down in the rules for using the railway infrastructure.

1.4.3.7 Unloader

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

(a) ascertain that the correct goods are unloaded by comparing the relevant information on the transport document with the information on the package, container, tank, MEGC or wagon;

(b) before and during unloading, check whether the packagings, the tank, the wagon or container have been damaged to an extent which would endanger the unloading operation. If this is the case, ascertain that unloading is not carried out until appropriate measures have been taken;

NOTE: The unloader shall establish procedures to check the correct functioning of the closures of the tank of a tank-wagon and to ensure the leaktightness of the closing devices before and after unloading. Guidelines in the form of checklists for tank-wagons for liquids, issued by the European Chemical Industry Council (CEFIC), are available on the OTIF website (www.otif.org).

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[13] The tank-wagon operator may transfer the organisation of inspections according to Chapter 6.8 to an entity in charge of maintenance (ECM).

(c) comply with all relevant requirements concerning unloading and handling;

(d) immediately following the unloading of the tank, wagon or container:

(i) remove any dangerous residues which have adhered to the outside of the tank, wagon or container during the process of unloading; and

(ii) ensure the closure of valves and inspection openings;

NOTE: The unloader shall establish procedures to check the correct functioning of the closures of the tank of a tank-wagon and to ensure the leaktightness of the closing devices before and after unloading. Guidelines in the form of checklists for tank-wagons for liquids, issued by the European Chemical Industry Council (CEFIC), are available on the OTIF website (www.otif.org).

(e) ensure that the prescribed cleaning and decontamination of the wagons or containers is carried out; and

(f) ensure that the wagons and containers once completely unloaded, cleaned, degassed and decontaminated, no longer display placards, marks and orange-coloured plates that had been displayed in accordance with Chapter 5.3.

NOTE: Guidelines in the form of checklists for tank-wagons for gases are available on the OTIF website (www.otif.org) to help the unloader of gas tank-wagons fulfil his safety obligations, particularly with respect to the leaktightness of tank-wagons.

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

1.4.3.8 Entity in charge of maintenance (ECM)

In the context of 1.4.1, the entity in charge of maintenance (ECM) shall in particular ensure that:

(a) the maintenance of tanks and their equipment is carried out in such a way as to ensure that, under normal operating conditions, the tank-wagon satisfies the requirements of RID;

(b) the information as defined in Article 15 § 3 of ATMF – Appendix G to COTIF – and in Article 5 of Annex A to ATMF also covers the tank and its equipment;

(c) the maintenance activities concerning the tank and its equipment are recorded in the maintenance file.

Chapter 1.5 Derogations

1.5.1 Temporary derogations

1.5.1.1 The competent authorities of the RID Contracting States may agree directly among themselves to authorize certain transport operations in their territories by temporary derogation from the requirements of RID, provided that safety is not compromised thereby. The authority which has taken the initiative with respect to the temporary derogation shall notify such derogations to the Secretariat of OTIF which shall bring them to the attention of the RID Contracting States[14].

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

1.5.1.2 The period of validity of the temporary derogation shall not be more than five years from the date of its entry into force. The temporary derogation shall automatically cease as from the date of the entry into force of a relevant amendment to RID.

1.5.1.3 Transport operations on the basis of temporary derogations shall constitute transport operations in the sense of Appendix C of COTIF.

1.5.2 Military consignments

Derogations apply to military consignments, i.e. consignments with substances or articles of Class 1 belonging to the armed forces or for which the armed forces are responsible (see 5.2.1.5, sub-sections 5.2.2.1.8, 5.3.1.1.2 and 5.4.1.2.1(f) and 7.2.4, special requirement W2).

[14] The temporary derogations concluded under this Section may be consulted on the OTIF web site (www.otif.org).

Chapter 1.6 Transitional measures

1.6.1 General

1.6.1.1 Unless otherwise provided, the substances and articles of RID may be carried until 30 June 2019 in accordance with the requirements of RID[15] applicable up to 31 December 2018.

NOTE: For the information in the transport document, see 5.4.1.1.12.

1.6.1.2 (Deleted)

1.6.1.3 Substances and articles of Class 1, belonging to the armed forces of an RID Contracting State, that were packaged prior to 1 January 1990 in accordance with the requirements of RID[16] in effect at that time may be carried after 31 December 1989 provided the packagings maintain their integrity and are declared in the transport document as military goods packaged prior to 1 January 1990. The other requirements applicable as from 1 January 1990 for this class shall be complied with.

1.6.1.4 Substances and articles of Class 1 that were packaged between 1 January 1990 and 31 December 1996 in accordance with the requirements of RID[17] in effect at that time may be carried after 31 December 1996, provided the packagings maintain their integrity and are declared in the transport document as goods of Class 1 packaged between 1 January 1990 and 31 December 1996.

1.6.1.5 IBCs built in accordance with the requirements of marg. 405 (5) and 555 (3) in force before 1 January 1999, but which do not meet the requirements of marg. 405 (5) and 555 (3) in force after 1 January 1999, may still be used.

1.6.1.6 Intermediate bulk containers (IBCs) manufactured before 1 January 2003 in accordance with the requirements of marginal 1612 (1) applicable up to 30 June 2001 and which do not conform to the requirements of 6.5.2.1.1 regarding the height of letters, numerals and symbols applicable as from 1 July 2001 may continue to be used.

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

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

1.6.1.9 (Reserved)

1.6.1.10 (Deleted)

1.6.1.11 Type approvals for drums, jerricans and composite packagings made of high or medium molecular mass polyethylene, and for high molecular mass polyethylene IBCs, issued before 1 July 2007 in accordance with the requirements of 6.1.6 (a) in force up to 31 December 2006, but which are not in accordance with the requirements of 6.1.6.1 (a) applicable as from 1 January 2007, continue to be valid.

1.6.1.12 (Reserved)

1.6.1.13 (Deleted)

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

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

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[15] RID edition in force from 1 January 2017.

[16] RID edition in force from 1 May 1985.

[17] RID editions in force from 1 January 1990, 1 January 1993 and 1 January 1995.

IBCs manufactured, remanufactured or repaired between 1 January 2011 and 31 December 2016 and marked with the maximum permitted stacking load in accordance with 6.5.2.2.2 in force up to 31 December 2014 may continue to be used.

1.6.1.16 (Deleted)

1.6.1.17 (Deleted)

1.6.1.18 (Deleted)

1.6.1.19 (Deleted)

1.6.1.20 (Deleted)

1.6.1.21 (Reserved)

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

1.6.1.23 (Reserved)

1.6.1.24 (Deleted)

1.6.1.25 (Deleted)

1.6.1.26 Large packagings manufactured or remanufactured before 1 January 2014 and which do not conform to the requirements of 6.6.3.1 regarding the height of letters, numerals and symbols applicable as from 1 January 2013 may continue to be used. Those manufactured or remanufactured before 1 January 2015 need not be marked with the maximum permitted stacking load in accordance with 6.6.3.3. Such large packagings not marked in accordance with 6.6.3.3 may still be used after 31 December 2014 but must be marked in accordance with 6.6.3.3 if they are remanufactured after that date.

Large packagings manufactured or remanufactured between 1 January 2011 and 31 December 2016 and marked with the maximum permitted stacking load in accordance with 6.6.3.3 in force up to 31 December 2014 may continue to be used.

1.6.1.27 Means of containment integral to equipment or machinery containing liquid fuels of UN Nos. 1202, 1203, 1223, 1268, 1863 and 3475 constructed before 1 July 2013, which do not conform to the requirements of paragraph (a) of special provision 363 of Chapter 3.3 applicable as from 1 January 2013, may still be used.

1.6.1.28 (Deleted)

1.6.1.29 Lithium cells and batteries manufactured according to a type meeting the requirements of sub-section 38.3 of the Manual of Tests and Criteria, Revision 3, Amendment 1 or any subsequent revision and amendment applicable at the date of the type testing may continue to be carried, unless otherwise provided in RID.

Lithium cells and batteries manufactured before 1 July 2003 meeting the requirements of the Manual of Tests and Criteria, Revision 3, may continue to be carried if all other applicable requirements are fulfilled.

1.6.1.30 Labels which meet the requirements of 5.2.2.2.1.1 applicable up to 31 December 2014, may continue to be used until 30 June 2019.

1.6.1.31 (Deleted)

1.6.1.32 (Deleted)

1.6.1.33 Electric double layer capacitors of UN No. 3499, manufactured before 1 January 2014, need not be marked with the energy storage capacity in Wh as required by paragraph (e) of special provision 361 of Chapter 3.3.

1.6.1.34 Asymmetric capacitors of UN No. 3508, manufactured before 1 January 2016, need not be marked with the energy storage capacity in Wh as required by paragraph (c) of special provision 372 of Chapter 3.3.

1.6.1.35 (Reserved)

1.6.1.36 (Reserved)

1.6.1.37 (Deleted)

1.6.1.38 Contracting States may continue to issue training certificates for dangerous goods safety advisers conforming to the model applicable until 31 December 2016, instead of those conforming to the requirements of 1.8.3.18 applicable from 1 January 2017, until 31 December 2018. Such certificates may continue in use to the end of their five year validity."

1.6.1.39 (Deleted)

1.6.1.40 (Deleted)

1.6.1.41 Notwithstanding the requirements of RID applicable as from 1 January 2017, large packagings conforming to the packing group III performance level in accordance with special packing provision L 2 of packing instruction LP 02 of 4.1.4.3 applicable until 31 December 2016 may continue to be used until 31 December 2022 for UN No. 1950.

1.6.1.42 (Deleted)

1.6.1.43 Vehicles registered or brought into service before 1 July 2017, as defined in special provisions 388 and 669 of Chapter 3.3, and their equipment intended for use during carriage, which conform to the requirements of RID applicable until 31 December 2016 but containing lithium cells and batteries which do not conform to the provisions of 2.2.9.1.7 may continue to be carried as a load in accordance with the requirements of special provision 666 of Chapter 3.3.

1.6.1.44 Undertakings which participate in the carriage of dangerous goods only as consignors and which did not have to appoint a safety adviser on the basis of the provisions applicable until 31 December 2018 shall, by derogation from the provisions of 1.8.3.1 applicable from 1 January 2019, appoint a safety adviser no later than 31 December 2022.

1.6.1.45 Contracting States may, until 31 December 2020, continue to issue training certificates for dangerous goods safety advisers conforming to the model applicable until 31 December 2018, instead of those conforming to the requirements of 1.8.3.18 applicable from 1 January 2019. Such certificates may continue in use to the end of their five-year validity.

1.6.1.46 The carriage of machinery or equipment not specified in RID and which happen to contain dangerous goods in their internal or operational equipment and which are therefore assigned to UN Nos 3363, 3537, 3538, 3539, 3540, 3541, 3542, 3543, 3544, 3545, 3546, 3547 or 3548, which was exempted from the provisions of RID according to 1.1.3.1 (b) applicable until 31 December 2018, may continue to be exempted from the provisions of RID until 31 December 2022 provided that measures have been taken to prevent any leakage of contents in normal conditions of carriage.

1.6.1.47 Lithium cells and batteries not meeting the requirements of 2.2.9.1.7 (g) may continue to be carried until 31 December 2019.

1.6.2 Pressure receptacles and receptacles for Class 2

1.6.2.1 Receptacles built before 1 January 1997 and which do not conform to the requirements of RID applicable as from 1 January 1997, but the carriage of which was permitted under the requirements of RID applicable up to 31 December 1996, may continue to be transported after that date if the periodic test requirements in packing instructions P200 and P203 are complied with.

1.6.2.2 (Deleted)

1.6.2.3 Receptacles intended for the carriage of Class 2 substances constructed before 1 January 2003, may continue to bear, after 1 January 2003, the marks conforming to the requirements applicable until 31 December 2002.

1.6.2.4 Pressure receptacles designed and constructed in accordance with technical codes no longer recognized according to 6.2.5 may still be used.

1.6.2.5 Pressure receptacles and their closures designed and constructed in accordance with standards applicable at the time of their construction (see 6.2.4) according to the provisions of RID which were applicable at that time may still be used unless restricted by a specific transitional measure.

1.6.2.6 Pressure receptacles for substances other than those of Class 2, built before 1 July 2009 in accordance with the requirements of 4.1.4.4 in force up to 31 December 2008, but which do not conform to the requirements of 4.1.3.6 applicable as from 1 January 2009, may continue to be used, provided that the requirements of 4.1.4.4 in force up to 31 December 2008 are complied with.

1.6.2.7 (Deleted)

1.6.2.8 (Deleted)

1.6.2.9 The provisions of packing instruction P 200 (10), special packing provision v of 4.1.4.1 applicable until 31 December 2010 may be applied by RID Contracting States to cylinders constructed before 1 January 2015.

1.6.2.10 Refillable welded steel cylinders for the carriage of gases of UN Nos. 1011, 1075, 1965, 1969 or 1978, granted 15 year intervals for periodic inspection in accordance with packing instruction P 200 (10), special packing provision v of 4.1.4.1 as applicable until 31 December 2010 by the competent authority of the country (countries) of carriage, may continue to be periodically inspected according to those provisions.

1.6.2.11 Gas cartridges constructed and prepared for carriage before 1 January 2013 for which the requirements of 1.8.6, 1.8.7 or 1.8.8 for the conformity assessment of gas cartridges have not been applied may still be carried after this date, provided all the other applicable provisions of RID are met.

1.6.2.12 Salvage pressure receptacles may continue to be constructed and approved according to national regulations up to 31 December 2013. Salvage pressure receptacles constructed and approved in accordance with national regulations before 1 January 2014 may continue to be used with the approval of the competent authorities of the countries of use.

1.6.2.13 Bundles of cylinders manufactured before 1 July 2013 which are not marked in accordance with 6.2.3.9.7.2 and 6.2.3.9.7.3 applicable from 1 January 2013 or 6.2.3.9.7.2 applicable from 1 January 2015 may be used until the next periodic inspection after 1 July 2015.

1.6.2.14 Cylinders constructed before 1 January 2016 in accordance with 6.2.3 and a specification approved by the competent authorities of the countries of transport and use, but not in accordance with ISO 11513:2011 or ISO 9809-1:2010 as required in 4.1.4.1, packing instruction P 208 (1), may be used for the carriage of adsorbed gases provided the general packing requirements of 4.1.6.1 are met.

1.6.2.15 Bundles of cylinders periodically inspected before 1 July 2015 which are not marked in accordance with 6.2.3.9.7.3 applicable from 1 January 2015 may be used until the next periodic inspection after 1 July 2015.

1.6.3 Tank-wagons and battery-wagons

1.6.3.1 (Deleted)

1.6.3.2 (Deleted)

1.6.3.3 Tank-wagons whose shells were built before the entry into force of the requirements applicable as from 1 October 1978 may still be used if their wall thickness and items of equipment meet the requirements of Chapter 6.8.

1.6.3.3.1 (Deleted)

1.6.3.3.2 Tank-wagons which are intended for the carriage of gases of Class 2 and whose shells were built between 1 January 1965 and 31 December 1966 may still be used until 31 December 2019 if their items of equipment but not their wall thickness meet the requirements of Chapter 6.8.

1.6.3.3.3 Tank-wagons which are intended for the carriage of gases of Class 2 and whose shells were built between 1 January 1967 and 31 December 1970 may still be used until 31 December 2021 if their items of equipment but not their wall thickness meet the requirements of Chapter 6.8.

1.6.3.3.4 Tank-wagons which are intended for the carriage of gases of Class 2 and whose shells were built between 1 January 1971 and 31 December 1975 may still be used until 31 December 2025 if their items of equipment but not their wall thickness meet the requirements of Chapter 6.8.

1.6.3.3.5 Tank-wagons which are intended for the carriage of gases of Class 2 and whose shells were built between 1 January 1976 and 30 September 1978 may still be used until 31 December 2029 if their items of equipment but not their wall thickness meet the requirements of Chapter 6.8.

1.6.3.4 Tank-wagons constructed before 1 January 1988 in accordance with the requirements applicable up to 31 December 1987 and which do not conform to the requirements applicable from 1 January 1988 may still be used. This also applies to tank-wagons which do not bear the inscription of the shell materials in accordance with Appendix XI, 1.6.1, required from 1 January 1988.

1.6.3.5 Tank-wagons, constructed before 1 January 1993 in accordance with the requirements in force up to 31 December 1992 but which do not conform to the requirements applicable as from 1 January 1993 may still be used.

1.6.3.6 Tank-wagons constructed before 1 January 1995 in accordance with the requirements in force up to 31 December 1994 but which do not conform to the requirements applicable as from 1 January 1995 may still be used.

1.6.3.7 Tank-wagons intended for the carriage of flammable liquids with a flash-point from 55 °C to 60 °C constructed before 1 January 1997 in accordance with the requirements of Appendix XI, paragraphs 1.2.7, 1.3.8 and 3.3.3 applicable up to 31 December 1996 which do not conform to the requirements of those paragraphs in force from 1 January 1997 may continue to be used.

1.6.3.8 When, because of amendments to RID, some proper shipping names of gases have been modified, it is not necessary to modify the names on the plate or on the shell itself (see 6.8.3.5.2 or 6.8.3.5.3), provided that the names of the gases on the tank-wagons, battery-wagons and wagons with demountable tanks or on the plates (see 6.8.3.5.6 (b) or (c)) are adapted at the first periodic test thereafter.

1.6.3.9 (Reserved)

1.6.3.10 (Reserved)

1.6.3.11 Tank-wagons constructed before 1 January 1997 in accordance with the requirements in force up to 31 December 1996 but which do not, however, conform to the requirements of Appendix XI, 3.3.3 and 3.3.4 applicable as from 1 January 1997, may still be used.

1.6.3.12 (Deleted)

1.6.3.13 (Deleted)

1.6.3.14 Tank-wagons constructed before 1 January 1999 in accordance with the requirements of Appendix XI, 5.3.6.3 in force up to 31 December 1998 and which do not conform to the requirements of Appendix XI, 5.3.6.3 applicable as from 1 January 1999, may still be used.

1.6.3.15 (Deleted)

1.6.3.16 For tank-wagons and battery-wagons constructed before 1 January 2007 which do not conform to the requirements of 4.3.2, 6.8.2.3, 6.8.2.4 and 6.8.3.4 concerning the tank record, the retention of files for the tank record shall start at the latest at the next periodic inspection.

1.6.3.17 Tank-wagons intended for the carriage of substances of Class 3, packing group I having a vapour pressure of not more than 175 kPa (1.75 bar) (absolute) at 50 °C, constructed before 1 July 2007 in accordance with the requirements applicable up to 31 December 2006, to which tank code L1.5BN had been assigned in accordance with the requirements applicable up to 31 December 2006, may continue to be used for the carriage of the substances mentioned above, until 31 December 2022.

1.6.3.18 Tank-wagons and battery-wagons constructed before 1 January 2003 in accordance with the requirements in force up to 30 June 2001, but which do not, however, conform to the requirements applicable as from 1 July 2001, may still be used.

However, they shall be marked with the relevant tank code and if applicable the relevant alphanumeric codes of special provisions TC and TE in accordance with 6.8.4.

1.6.3.19 (Reserved)

1.6.3.20 Tank-wagons constructed before 1 July 2003 in accordance with the requirements in force up to 31 December 2002 but which do not, however, conform to the requirements of 6.8.2.1.7 applicable as from 1 January 2003 and special provision TE15 of 6.8.4 (b) applicable from 1 January 2003 to 31 December 2006 may still be used.

1.6.3.21 (Deleted)

1.6.3.22 Tank-wagons whose shells are made of aluminium alloys, constructed before 1 January 2003 in accordance with the requirements in force until 31 December 2002 and which do not comply with the requirements in force from 1 January 2003, may still be used.

1.6.3.23 (Deleted)

1.6.3.24 Tank-wagons intended for the carriage of gases of UN Nos. 1052, 1790 and 2073, constructed before 1 January 2003 in accordance with the requirements in force until 31 December 2002 and which do not comply with the requirements of 6.8.5.1.1 (b) in force from 1 January 2003, may still be used.

1.6.3.25 (Deleted)

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

1.6.3.27 (a) For tank-wagons and battery-wagons not fitted with automatic couplers

– for gases of Class 2 with classification codes containing the letter(s) T, TF, TC, TO, TFC or TOC, and

– for substances of classes 3 to 8 carried in the liquid state and to which tank code L15CH, L15DH or L21DH is assigned in column (12) of Table A of Chapter 3.2,

constructed before 1 January 2005 the devices defined in special provision TE 22 of 6.8.4 need to be capable of absorbing at least 500 kJ of energy at each end of the wagon.

Tank-wagons and battery-wagons for the carriage of these gases and substances fitted with automatic couplers, constructed before 1 July 2015 and which do not conform to the applicable requirements of special provision TE 22 of 6.8.4 in force from 1 January 2015, may continue to be used until 31 December 2020.

(b) Tank-wagons and battery-wagons not fitted with automatic couplers

– for gases of Class 2 with classification codes containing only the letter F, and

– for substances of classes 3 to 8 carried in the liquid state and to which tank code L10BH, L10CH or L10DH is assigned in column (12) of Table A of Chapter 3.2,

constructed before 1 January 2007 and which do not conform to the applicable requirements of special provision TE 22 of 6.8.4 in force from 1 January 2007, may still be used.

Tank-wagons and battery-wagons for the carriage of these gases and substances fitted with automatic couplers, constructed before 1 July 2015 and which do not conform to the applicable requirements of special provision TE 22 of 6.8.4 in force from 1 January 2015, may still be used.

1.6.3.28 Tank-wagons constructed before 1 January 2005 in accordance with the requirements applicable up to 31 December 2004 and which do not conform to the requirements of the second paragraph of 6.8.2.2.1, shall be refitted at the latest at the time of the next refurbishment or the next repair, where this is practicable and where the work carried out requires the attachments to be dismantled.

1.6.3.29 Tank-wagons constructed before 1 January 2005 and which do not conform to the requirements of 6.8.2.2.4 in force from 1 January 2005, may still be used.

1.6.3.30 (Reserved)

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

1.6.3.32 Tank-wagons

– for gases of Class 2 with classification codes containing the letter(s) T, TF, TC, TO, TFC or TOC, and

– for liquids of classes 3 to 8 to which tank code L15CH, L15DH or L21DH is assigned in column (12) of Table A of Chapter 3.2,

constructed before 1 January 2007 and which do not conform to the applicable requirements of special provision TE 25 of 6.8.4 (b) in force from 1 January 2007 may still be used.

Tank-wagons for the carriage of gases UN 1017 chlorine, UN 1749 chlorine trifluoride, UN 2189 dichlorosilane, UN 2901 bromine chloride and UN 3057 trifluoroacetyl chloride, whose wall thickness of the ends does not meet the requirements of special provision TE 25 (b), shall however be fitted with devices in accordance with special provision TE 25 (a), (c) or (d).

1.6.3.33 Tank-wagons and battery-wagons for gases of Class 2 constructed before 1 January 1986 in accordance with the requirements applicable up to 31 December 1985 and which do not conform to the requirements of 6.8.3.1.6 concerning the buffers, may still be used.

1.6.3.34 (Reserved)

1.6.3.35 (Deleted)

1.6.3.36 Tank-wagons constructed before 1 January 2011 in accordance with the requirements in force up to 31 December 2010, but which do not conform to the requirements of 6.8.2.1.29 applicable as from 1 January 2011, may still be used.

1.6.3.37 (Deleted)

1.6.3.38 Tank-wagons and battery-wagons designed and constructed in accordance with standards applicable at the time of their construction (see 6.8.2.6 and 6.8.3.6) according to the provisions of RID which were applicable at that time may still be used unless restricted by a specific transitional measure.

1.6.3.39 Tank-wagons constructed before 1 July 2011 in accordance with the requirements of 6.8.2.2.3 in force up to 31 December 2010 but which do not, however, conform to the requirements of 6.8.2.2.3, third paragraph, concerning the position of the flame trap or flame arrester may still be used.

1.6.3.40 (Deleted)

1.6.3.41 Tank-wagons constructed before 1 July 2013 in accordance with the requirements in force up to 31 December 2012, but which do not, however, meet the marking provisions of 6.8.2.5.2 or 6.8.3.5.6 applicable as from 1 January 2013, may continue to be marked in accordance with the requirements applicable up to 31 December 2012 until the next periodic inspection after 1 July 2013.

1.6.3.42 (Deleted)

1.6.3.43 Tank-wagons constructed before 1 January 2012 in accordance with the requirements in force up to 31 December 2012, but which do not however conform to the requirements of 6.8.2.6 relating to standards EN 14432:2006 and EN 14433:2006 applicable as from 1 January 2011, may still be used.

1.6.3.44 (Reserved)

1.6.3.45 Tank-wagons for refrigerated liquefied gases constructed before 1 July 2017 in accordance with the requirements in force up to 31 December 2016 but which do not conform to the requirements of 6.8.3.4.10, 6.8.3.4.11 and 6.8.3.5.4 applicable from 1 January 2017 may continue to be used until the next inspection after 1 July 2017. Until this time, to meet the requirements of 4.3.3.5 and 5.4.1.2.2 (d), the actual holding times may be estimated without recourse to the reference holding time.

1.6.3.46 Tank-wagons constructed before 1 July 2017 in accordance with the requirements in force up to 31 December 2016 but which do not however conform to the requirements of 6.8.2.1.23 applicable as from 1 January 2017 may still be used.

1.6.3.47 Tank-wagons constructed before 1 July 2019, fitted with safety valves meeting the requirements in force up to 31 December 2018 but which do not meet the requirements of 6.8.3.2.9 last sub-paragraph concerning their design or protection applicable from 1 January 2019 may continue to be used until the next intermediate or periodic inspection after 1 January 2021.

1.6.3.48 Notwithstanding the requirements of special provision TU 42 of 4.3.5 applicable from 1 January 2019, tank-wagons with a shell constructed of aluminium alloy, including those with protective lining, which were used before 1 January 2019 for the carriage of substances with a pH value less than 5.0 or more than 8.0, may continue to be used for the carriage of such substances until 31 December 2026.

1.6.3.49 Tank-wagons constructed before 1 July 2019 in accordance with the requirements in force up to 31 December 2018 but which do not conform to the requirements of 6.8.2.2.10 concerning the burst pressure of the bursting disc applicable as from 1 January 2019 may continue to be used.

1.6.3.50 Tank-wagons constructed before 1 July 2019 in accordance with the requirements of 6.8.2.2.3 in force up to 31 December 2018 but which however do not conform to the requirements of 6.8.2.2.3 last but one paragraph concerning the flame arresters on breather devices applicable from 1 January 2019 may continue to be used.

1.6.3.51 Tank-wagons constructed before 1 July 2019 in accordance with the requirements in force up to 31 December 2018 but which do not however conform to the requirements of 6.8.2.1.23 concerning the check of the welds in the knuckle area of the tank ends applicable as from 1 January 2019 may continue to be used.

1.6.3.52 Tank-wagons constructed before 1 July 2019 in accordance with the requirements in force up to 31 December 2018 but which however do not conform to the requirements of 6.8.2.2.11 applicable from 1 January 2019 may continue to be used.

1.6.3.53 Type approval certificates issued for tank-wagons and battery-wagons before 1 July 2019 in accordance with the requirements of 6.8.2.3.1 in force up to 31 December 2018 but which do not, however, conform to the requirements of 6.8.2.3.1 to show the distinguishing sign used on vehicles in international road traffic[18] of the state whose territory the approval was granted and a registration number applicable as from 1 January 2019 may continue to be used.

1.6.4 Tank-containers, portable tanks and MEGCs

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

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

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[18] Distinguishing sign of the state of registration used on motor vehicles and trailers in international road traffic, e.g. in accordance with the Geneva Convention on Road Traffic of 1949 or the Vienna Convention on Road Traffic of 1968.

1.6.4.3 Tank-containers constructed before 1 January 1995 in accordance with the requirements in force up to 31 December 1994 but which do not, however, conform to the requirements applicable as from 1 January 1995, may still be used.

1.6.4.4 Tank-containers intended for the carriage of flammable liquids with a flash-point from 55 °C to 60 °C constructed before 1 January 1997 in accordance with the requirements of Appendix X, paragraphs 1.2.7, 1.3.8 and 3.3.3 applicable up to 31 December 1996 which do not conform to the requirements of those paragraphs in force from 1 January 1997 may continue to be used.

1.6.4.5 When, because of amendments to RID, some proper shipping names of gases have been modified, it is not necessary to modify the names on the plate or on the shell itself (see 6.8.3.5.2 or 6.8.3.5.3), provided that the names of the gases on the tank-containers and MEGCs or on the plates (see 6.8.3.5.6 (b) or (c)) are adapted at the first periodic test thereafter.

1.6.4.6 Tank-containers constructed before 1 January 2007 in accordance with the requirements in force up to 31 December 2006 but which do not, however, conform to the requirements applicable as from 1 January 2007 regarding the marking of the external design pressure in accordance with 6.8.2.5.1, may still be used.

1.6.4.7 Tank-containers constructed before 1 January 1997 in accordance with the requirements in force up to 31 December 1996 but which do not, however, conform to the requirements of Appendix X, 3.3.3 and 3.3.4 applicable as from 1 January 1997, may still be used.

1.6.4.8 Tank-containers constructed before 1 January 1999 in accordance with the requirements of Appendix X, 5.3.6.3 applicable up to 31 December 1998 and which do not conform to the requirements of Appendix X, 5.3.6.3 in force from 1 January 1999, may still be used.

1.6.4.9 Tank-containers and MEGCs designed and constructed in accordance with a technical code which was recognized at the time of their construction according to the provisions of 6.8.2.7 which were applicable at that time may still be used.

1.6.4.10 (Deleted)

1.6.4.11 (Reserved)

1.6.4.12 Tank-containers and MEGCs constructed before 1 January 2003 in accordance with the requirements applicable up to 30 June 2001, but which do not, however, conform to the requirements applicable as from 1 July 2001, may still be used.

However, they shall be marked with the relevant tank code and if applicable the relevant alphanumeric codes of special provisions TC and TE in accordance with 6.8.4.

1.6.4.13 Tank-containers constructed before 1 July 2003 in accordance with the requirements in force up to 31 December 2002 but which do not, however, conform to the requirements of 6.8.2.1.7 applicable as from 1 January 2003 and special provision TE15 of 6.8.4 (b) applicable from 1 January 2003 to 31 December 2006 may still be used.

1.6.4.14 Tank-containers intended for the carriage of gases of UN Nos. 1052, 1790 and 2073, constructed before 1 January 2003 in accordance with the requirements in force until 31 December 2002 and which do not comply with the requirements of 6.8.5.1.1 (b) in force from 1 January 2003, may still be used.

1.6.4.15 (Deleted)

1.6.4.16 (Deleted)

1.6.4.17 (Deleted)

1.6.4.18 For tank-containers and MEGCs constructed before 1 January 2007 which do not conform to the requirements of 4.3.2, 6.8.2.3, 6.8.2.4 and 6.8.3.4 concerning the tank record, the retention of files for the tank record shall start at the latest at the next periodic inspection.

1.6.4.19 (Deleted)

1.6.4.20 Vacuum-operated waste tank-containers constructed before 1 July 2005 in accordance with the requirements applicable up to 31 December 2004 but which do not conform to the requirements of 6.10.3.9 applicable as from 1 January 2005, may still be used.

1.6.4.21 to
1.6.4.29 (Reserved)

1.6.4.30 Portable tanks and UN MEGCs which do not meet the design requirements applicable as from 1 January 2007 but which have been constructed according to a design approval certificate which has been issued before 1 January 2008 may continue to be used.

1.6.4.31 (Deleted)

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

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

1.6.4.34 (Deleted)

1.6.4.35 (Deleted)

1.6.4.36 (Deleted)

1.6.4.37 Portable tanks and MEGCs manufactured before 1 January 2012, that conform to the marking requirements of 6.7.2.20.1, 6.7.3.16.1, 6.7.4.15.1 or 6.7.5.13.1 applicable up to 31 December 2010, as relevant, may continue to be used if they comply with all other relevant requirements of RID applicable as from 1 January 2011 including, when applicable, the requirement of 6.7.2.20.1 (g) for marking the symbol "S" on the plate when the shell or the compartment is divided by surge plates into sections of not more than 7 500 litres capacity.

1.6.4.38 (Deleted)

1.6.4.39 Tank-containers and MEGCs designed and constructed in accordance with standards applicable at the time of their construction (see 6.8.2.6 and 6.8.3.6) according to the provisions of RID which were applicable at that time may still be used unless restricted by a specific transitional measure.

1.6.4.40 Tank-containers constructed before 1 July 2011 in accordance with the requirements of 6.8.2.2.3 in force up to 31 December 2010 but which do not, however, conform to the requirements of 6.8.2.2.3, third paragraph, concerning the position of the flame trap or flame arrester may still be used.

1.6.4.41 (Deleted)

1.6.4.42 Tank-containers constructed before 1 July 2013 in accordance with the requirements in force up to 31 December 2012, but which do not, however, meet the marking provisions of 6.8.2.5.2 or 6.8.3.5.6 applicable as from 1 January 2013, may continue to be marked in accordance with the requirements applicable up to 31 December 2012 until the next periodic inspection after 1 July 2013.

1.6.4.43 Portable tanks and MECGs manufactured before 1 January 2014 need not comply with the requirements of 6.7.2.13.1 (f), 6.7.3.9.1 (e), 6.7.4.8.1 (e) and 6.7.5.6.1 (d) concerning the marking of the pressure relief devices.

1.6.4.44 (Deleted)

1.6.4.45 (Deleted)

1.6.4.46 Tank-containers constructed before 1 January 2012 in accordance with the requirements in force up to 31 December 2012, but which do not however conform to the requirements of 6.8.2.6 relating to standards EN 14432:2006 and EN 14433:2006 applicable as from 1 January 2011, may still be used.

1.6.4.47 Tank-containers for refrigerated liquefied gases constructed before 1 July 2017 in accordance with the requirements in force up to 31 December 2016 but which do not conform to the requirements of 6.8.3.4.10, 6.8.3.4.11 and 6.8.3.5.4 applicable from 1 January 2017 may continue to be used until the next inspection after 1 July 2017. Until this time, to meet the requirements of 4.3.3.5 and 5.4.1.2.2 (d), the actual holding times may be estimated without recourse to the reference holding time.

1.6.4.48 Tank-containers constructed before 1 July 2017 in accordance with the requirements in force up to 31 December 2016 but which do not however conform to the requirements of 6.8.2.1.23 applicable as from 1 January 2017 may still be used.

1.6.4.49 Tank-containers constructed before 1 July 2019, fitted with safety valves meeting the requirements in force up to 31 December 2018 but which do not meet the requirements of 6.8.3.2.9 last sub-paragraph concerning their design or protection applicable from 1 January 2019 may continue to be used until the next intermediate or periodic inspection after 1 January 2021.

1.6.4.50 Notwithstanding the requirements of special provision TU 42 of 4.3.5 applicable from 1 January 2019, tank-containers with a shell constructed of aluminium alloy, including those with a protective lining, which were used before 1 January 2019 for the carriage of substances with a pH value less than 5.0 or more than 8.0, may continue to be used for the carriage of such substances until 31 December 2026.

1.6.4.51 Tank-containers constructed before 1 July 2019 in accordance with the requirements in force up to 31 December 2018 but which do not conform to the requirements of 6.8.2.2.10 concerning the burst pressure of the bursting disc applicable as from 1 January 2019 may continue to be used.

1.6.4.52 Tank-containers constructed before 1 July 2019 in accordance with the requirements of 6.8.2.2.3 in force up to 31 December 2018 but which however do not conform to the requirements of 6.8.2.2.3 last paragraph concerning the flame arresters on breather devices applicable from 1 January 2019 may continue to be used.

1.6.4.53 Tank-containers constructed before 1 July 2019 in accordance with the requirements in force up to 31 December 2018 but which do not however conform to the requirements of 6.8.2.1.23 concerning the check of the welds in the knuckle area of the tank ends applicable as from 1 January 2019 may continue to be used.

1.6.4.54 Tank-containers constructed before 1 July 2019 in accordance with the requirements in force up to 31 December 2018 but which however do not conform to the requirements of 6.8.2.2.11 applicable from 1 January 2019 may continue to be used.

1.6.5 (Reserved)

1.6.6 Class 7

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

Packages not requiring competent authority approval of design (excepted packages, Type IP-1, Type IP-2, Type IP-3 and Type A packages) shall meet the requirements of RID in full, except that packages that meet the requirements of the 1985 or 1985 (as amended 1990) Editions of IAEA Regulations for the Safe Transport of Radioactive Material (IAEA Safety Series No.6):

(a) May continue in carriage provided that they were prepared for carriage prior to 31 December 2003, and subject to the requirements of 1.6.6.3, if applicable;

(b) May continue to be used provided that:

(i) They were not designed to contain uranium hexafluoride;

(ii) The applicable requirements of 1.7.3 are applied;

(iii) The activity limits and classification in 2.2.7 are applied;

(iv) The requirements and controls for carriage in Parts 1, 3, 4, 5 and 7 are applied;

(v) The packaging was not manufactured or modified after 31 December 2003.

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

1.6.6.2.1 Packages requiring competent authority approval of the design shall meet the requirements of RID in full unless the following conditions are met:

(a) The packagings were manufactured to a package design approved by the competent authority under the provisions of the 1973 or 1973 (as amended) or the 1985 or 1985 (as amended 1990) Editions of IAEA Safety Series No.6;

(b) The package design is subject to multilateral approval;

(c) The applicable requirements of 1.7.3 are applied;

(d) The activity limits and classification in 2.2.7 are applied;

(e) The requirements and controls for carriage in Parts 1, 3, 4, 5 and 7 are applied;

(f) (Reserved)

(g) For packages that meet the requirements of the 1973 or 1973 (as amended) Editions of IAEA Safety Series No. 6:

(i) The packages retain sufficient shielding to ensure that the radiation level at 1 m from the surface of the package would not exceed 10 mSv/h in the accident conditions of carriage defined in the 1973 Revised or 1973 Revised (as amended) Editions of IAEA Safety Series No.6 with the maximum radioactive contents which the package is authorized to contain;

(ii) The packages do not utilize continuous venting;

(iii) A serial number in accordance with the provision of 5.2.1.7.5 is assigned to and marked on the outside of each packaging.

1.6.6.2.2 No new manufacture of packagings to a package design meeting the provisions of the 1973, 1973 (as amended), 1985, and 1985 (as amended 1990) Editions of IAEA Safety Series No.6 shall be permitted to commence.

1.6.6.3 Packages excepted from the requirements for fissile materials under the 2011 and 2013 editions of RID (2009 Edition of IAEA Safety Standard Series No.TSR-1)

Packages containing fissile material that is excepted from classification as "FISSILE" according to 2.2.7.2.3.5 (a) (i) or (iii) of the 2011 and 2013 editions of RID (paras. 417 (a) (i) or (iii) of the 2009 Edition of IAEA Regulations for the Safe Transport of Radioactive Material) prepared for carriage before 31 December 2014 may continue in carriage and may continue to be classified as non-fissile or fissile-excepted except that the consignment limits in Table 2.2.7.2.3.5 of these editions shall apply to the wagon. The consignment shall be carried under exclusive use.

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

Special form radioactive material manufactured to a design which had received unilateral approval by the competent authority under the 1973, 1973 (as amended), 1985 or 1985 (as amended 1990) Editions of IAEA Safety Series No. 6 may continue to be used when in compliance with the mandatory management system in accordance with the applicable requirements of 1.7.3. No new manufacture of such special form radioactive material shall be permitted to commence.

Chapter 1.7 General provisions concerning radioactive material

1.7.1 Scope and application

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

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

1.7.1.1 RID establishes standards of safety which provide an acceptable level of control of the radiation, criticality and thermal hazards to persons, property and the environment that are associated with the carriage of radioactive material. These standards are based on the IAEA Regulations for the Safe Transport of Radioactive material, 2012 Edition, IAEA Safety Standards Series No. SSR-6, IAEA, Vienna (2012). Explanatory material can be found in "Advisory Material for the IAEA Regulations for the Safe Transport of Radioactive Material (2012 Edition)", IAEA Safety Standards Series No. SSG-26, IAEA, Vienna (2014).

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

(a) Containment of the radioactive contents;

(b) Control of external radiation levels;

(c) Prevention of criticality; and

(d) Prevention of damage caused by heat.

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

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

(a) Routine conditions of carriage (incident free);

(b) Normal conditions of carriage (minor mishaps);

(c) Accident conditions of carriage.

1.7.1.4 The provisions laid down in RID do not apply to any of the following:

(a) Radioactive material that is an integral part of the means of transport;

(b) Radioactive material moved within an establishment which is subject to appropriate safety regulations in force in the establishment and where the movement does not involve public roads or railways;

(c) Radioactive material implanted or incorporated into a person or live animal for diagnosis or treatment;

(d) Radioactive material in or on a person who is to be transported for medical treatment because the person has been subject to accidental or deliberate intake of radioactive material or to contamination;

(e) Radioactive material in consumer products which have received regulatory approval, following their sale to the end user;

(f) Natural material and ores containing naturally occurring radionuclides (which may have been processed), provided the activity concentration of the material does not exceed 10 times the values specified in Table 2.2.7.2.2.1, or calculated in accordance with 2.2.7.2.2.2 (a) and 2.2.7.2.2.3 to 2.2.7.2.2.6. For natural materials and ores containing naturally occurring radionuclides that are not in secular equilibrium the calculation of the activity concentration shall be performed in accordance with 2.2.7.2.2.4;

(g) Non-radioactive solid objects with radioactive substances present on any surfaces in quantities not in excess of the limit set out in the definition for "contamination" in 2.2.7.1.2.

1.7.1.5 Specific provisions for the carriage of excepted packages

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

(a) The applicable provisions specified in 5.1.2.1, 5.1.3.2, 5.1.5.2.2, 5.1.5.2.3, 5.1.5.4, 5.2.1.10, 7.5.11 CW 33 (3.1), (5.1) to (5.4) and (6); and

(b) The requirements for excepted packages specified in 6.4.4.

except when the radioactive material possesses other hazardous properties and has to be classified in a class other than Class 7 in accordance with special provision 290 or 369 of Chapter 3.3, where the provisions listed in (a) and (b) above apply only as relevant and in addition to those relating to the main class.

1.7.1.5.2 Excepted packages are subject to the relevant provisions of all other parts of RID. If the excepted package contains fissile material, one of the fissile exceptions provided by 2.2.7.2.3.5 shall apply and the requirements of 7.5.11 CW 33 (4.3) shall be met.

1.7.2 Radiation protection programme

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

1.7.2.2 Doses to persons shall be below the relevant dose limits. Protection and safety shall be optimized in order that the magnitude of individual doses, the number of persons exposed and the likelihood of incurring exposure shall be kept as low as reasonably achievable, economic and social factors being taken into account within the restriction that the doses to individuals be subject to dose constraints. A structured and systematic approach shall be adopted and shall include consideration of the interfaces between carriage and other activities.

1.7.2.3 The nature and extent of the measures to be employed in the programme shall be related to the magnitude and likelihood of radiation exposures. The programme shall incorporate the requirements in 1.7.2.2, 1.7.2.4, 1.7.2.5 and 7.5.11 CW 33 (1.1). Programme documents shall be available, on request, for inspection by the relevant competent authority.

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

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

(b) is likely to exceed 6 mSv in a year, individual monitoring shall be conducted.

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

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

1.7.2.5 Workers (see 7.5.11, CW 33 Note 3) shall be appropriately trained in radiation protection including the precautions to be observed in order to restrict their occupational exposure and the exposure of other persons who might be affected by their actions.

1.7.3 Management system

1.7.3.1 A management system based on international, national or other standards acceptable to the competent authority shall be established and implemented for all activities within the scope of RID, as identified in 1.7.1.3, to ensure compliance with the relevant provisions of RID. Certification that the design specification has been fully implemented shall be available to the competent authority. The manufacturer, consignor or user shall be prepared:

(a) To provide facilities for inspection during manufacture and use; and

(b) To demonstrate compliance with RID to the competent authority.

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

1.7.4 Special arrangement

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

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

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

1.7.5 Radioactive material possessing other dangerous properties

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

1.7.6 Non-compliance

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

(a) The consignor, consignee, carrier and any organization involved during carriage who may be affected, as appropriate, shall be informed of the non-compliance by:
  (i) the carrier if the non-compliance is identified during carriage; or
  (ii) the consignee if the non-compliance is identified at receipt;

(b) The carrier, consignor or consignee, as appropriate shall:
  (i) take immediate steps to mitigate the consequences of the non-compliance;
  (ii) investigate the non-compliance and its causes, circumstances and consequences;
  (iii) take appropriate action to remedy the causes and circumstances that led to the non-compliance and to prevent a recurrence of similar circumstances that led to the non-compliance; and
  (iv) communicate to the competent authority(ies) on the causes of the non-compliance and on corrective or preventive actions taken or to be taken;

(c) The communication of the non-compliance to the consignor and competent authority(ies), respectively, shall be made as soon as practicable and it shall be immediate whenever an emergency exposure situation has developed or is developing.

Chapter 1.8 Checks and other support measures to ensure compliance with safety requirements

1.8.1 Administrative controls of dangerous goods

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

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

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

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

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

1.8.2 Mutual administrative support

1.8.2.1 The RID Contracting States shall agree on mutual administrative support for the implementation of RID.

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

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

1.8.3 Safety adviser

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

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

(a) the activities of which include the carriage of dangerous goods in means of transport belonging to the armed forces or for which the armed forces are responsible, or

(b) the activities of which concern quantities in each wagon not exceeding those referred to in 1.1.3.6, 1.7.1.4 and in Chapters 3.3, 3.4 and 3.5, or

(c) the main or secondary activities of which are not the carriage or the related packing, filling, loading or unloading of dangerous goods but which occasionally engage in the national carriage or the related packing, filling, loading or unloading of dangerous goods posing little danger or risk of pollution.

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

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

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

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

– the procedures for compliance with the requirements governing the identification of dangerous goods being transported;
– the undertaking's practice in taking account, when purchasing means of transport, of any special requirements in connection with the dangerous goods being transported;
– the procedures for checking the equipment used in connection with the carriage, packing, filling, loading or unloading of dangerous goods;
– the proper training of the undertaking's employees, including on the changes to the regulations, and the maintenance of records of such training;
– the implementation of proper emergency procedures in the event of any accident or incident that may affect safety during the carriage, packing, filling, loading or unloading of dangerous goods;
– investigating and, where appropriate, preparing reports on serious accidents, incidents or serious infringements recorded during the carriage, packing, filling, loading or unloading of dangerous goods;
– the implementation of appropriate measures to avoid the recurrence of accidents, incidents or serious infringements;
– the account taken of the legal prescriptions and special requirements associated with the carriage of dangerous goods in the choice and use of sub-contractors or third parties;
– verification that employees involved in the consigning, carriage, packing, filling, loading or unloading of dangerous goods have detailed operational procedures and instructions,
– the introduction of measures to increase awareness of the risks inherent in the carriage, packing, filling, loading and unloading of dangerous goods;
– the implementation of verification procedures to ensure the presence on board means of transport of the documents and safety equipment which must accompany transport and the compliance of such documents and equipment with the regulations;
– the implementation of verification procedures to ensure compliance with the requirements governing packing, filling, loading and unloading;
– the existence of the security plan indicated in 1.10.3.2.

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

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

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

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

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

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

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

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

– competence of the examining body;
– specifications of the form of the examinations the examining body is proposing, including, if necessary, the infrastructure and organisation of electronic examinations in accordance with 1.8.3.12.5, if these are to be carried out;
– measures intended to ensure that examinations are impartial;
– independence of the body from all natural or legal persons employing safety advisers.

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

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

1.8.3.12 Examinations

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

1.8.3.12.2 The competent authority or an examining body designated by the competent authority shall invigilate every examination. Any manipulation and deception shall be ruled out as far as possible. Authentication of the candidate shall be ensured. The use in the written test of documentation other than international or national regulations is not permitted. All examination documents shall be recorded and kept as a print-out or electronically as a file.

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

1.8.3.12.4 The written test shall consist of two parts:

(a) Candidates shall receive a questionnaire. It shall include at least 20 open questions covering at least the subjects mentioned in the list in 1.8.3.11. However, multiple choice questions may be used. In this case, two multiple choice questions count as one open question. Amongst these subjects particular attention shall be paid to the following subjects:

– general preventive and safety measures;
– classification of dangerous goods;
– general packing provisions, including tanks, tank-containers, tank-wagons, etc.;
– danger marking, labelling and placarding;
– information in the transport document;
– handling and stowage;
– crew, vocational training;
– documents to be carried on board and transport documents;
– instructions in writing;
– requirements concerning transport equipment.

(b) Candidates shall undertake a case study in keeping with the duties of the adviser referred to in 1.8.3.3, in order to demonstrate that they have the necessary qualifications to fulfil the task of adviser.

1.8.3.12.5 Written examinations may be performed, in whole or in part, as electronic examinations, where the answers are recorded and evaluated using electronic data processing (EDP) processes, provided the following conditions are met:

(a) The hardware and software shall be checked and accepted by the competent authority or by an examining body designated by the competent authority;

(b) Proper technical functioning shall be ensured. Arrangements as to whether and how the examination can be continued shall be made for a failure of the devices and applications. No aids shall be available on the input devices (e.g. electronic search function), the equipment provided according to 1.8.3.12.3 shall not allow the candidates to communicate with any other device during the examination;

(c) Final inputs of each candidate shall be logged. The determination of the results shall be transparent.

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

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

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

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

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

1.8.3.16 Validity and renewal of certificates

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

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

1.8.3.17 (Deleted)

1.8.3.18 Form of certificate

Certificate of training as safety adviser for the transport of dangerous goods

Certificate No: ……...

Distinguishing sign of the State issuing the certificate: ……..

Surname: ……...

Forename(s): ……

Date and place of birth: ……...

Nationality: ……

Signature of holder: ……

Valid until ..... for undertakings which transport dangerous goods and for undertakings which carry out related consigning, packing, filling, loading or unloading:

☐ by road

☐ by rail

☐ by inland waterway

Issued by: .....

Date: ……...

Signature: ……..

1.8.3.19 Extension of the certificate

Where an adviser extends the scope of his certificate during its period of validity by meeting the requirements of 1.8.3.16.2, the period of validity of a new certificate shall remain that of the previous certificate.

1.8.4 List of competent authorities and bodies designated by them

The RID Contracting States shall communicate to the Secretariat of OTIF the addresses of the authorities and bodies designated by them which are competent in accordance with national law to implement RID, referring in each case to the relevant requirement of RID and giving the addresses to which the relevant applications should be made.

The Secretariat of OTIF shall establish a list on the basis of the information received and shall keep it up-to-date. It shall communicate this list and the amendments thereto to the RID Contracting States.

1.8.5 Notifications of occurrences involving dangerous goods

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

1.8.5.2 The RID Contracting State shall in turn, if necessary, make a report to the Secretariat of OTIF with a view to informing the other RID Contracting States.

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

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

(a) requires intensive medical treatment,

(b) requires a stay in hospital of at least one day, or

(c) results in the inability to work for at least three consecutive days.

Loss of product means the release of dangerous goods

(a) of transport category 0 or 1 in quantities of 50 kg / 50 l or more,

(b) of transport category 2 in quantities of 333 kg / 333 l or more, or

(c) of transport category 3 or 4 in quantities of 1 000 kg / 1 000 l or more.

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

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

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

(a) Any release of radioactive material from the packages;

(b) Exposure leading to a breach of the limits set out in the regulations for protection of workers and members of the public against ionizing radiation (Schedule II of IAEA Safety Series No. 115 – "International Basic Safety Standards for Protection Against Ionizing Radiation and for Safety of Radiation Sources"); or

(c) Where there is reason to believe that there has been a significant degradation in any package safety function (containment, shielding, thermal protection or criticality) that may have rendered the package unsuitable for continued carriage without additional safety measures.

NOTE: See the requirements of 7.5.11 CW33 (6) for undeliverable consignments.

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

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

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

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

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

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

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

1. Mode

□ Rail Wagon number (optional):	□ Road Vehicle registration (optional): .....

2. Date and location of occurrence

Year: ..... Month: ..... Day: ..... Time: .....

Rail □ Station □ Shunting/marshalling yard □ Loading/unloading/transhipment site Location / Country: ..... or □ Open line Description of line: ..... Kilometres:	Road □ Built-up area □ Loading/unloading/transhipment site □ Open road Location / Country: .....

3. Topography

□ Gradient/incline
□ Tunnel
□ Bridge/Underpass
□ Crossing

4. Particular weather conditions

□ Rain
□ Snow
□ Ice
□ Fog
□ Thunderstorm
□ Storm

Temperature: ... °C

5. Description of occurrence

□ Derailment/Leaving the road
□ Collision
□ Overturning/Rolling over
□ Fire
□ Explosion
□ Loss
□ Technical fault

Additional description of occurrence:

.....

.....

.....

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.....

.....

6. Dangerous goods involved

UN Number[1]	Class	Packing Group	Estimated quantity of loss of products (kg or l)[2]	Means of containment[3]	Means of containment material	Type of failure of means of containment[4]

[1] For dangerous goods assigned to collective entries to which special provision 274 applies, also the technical name shall be indicated.

[2] For Class 7, indicate values according to the criteria in 1.8.5.3.

[3] Indicate the appropriate number
1 Packaging
2 IBC
3 Large packaging
4 Small container
5 Wagon
6 Vehicle
7 Tank-wagon
8 Tank-vehicle
9 Battery-wagon
10 Battery-vehicle
11 Wagon with demountable tanks
12 Demountable tank
13 Large container
14 Tank-container
15 MEGC
16 Portable tank

[4] Indicate the appropriate number
1 Loss
2 Fire
3 Explosion
4 Structural failure

7. Cause of occurrence (if clearly known)

□ Technical fault
□ Faulty load securing
□ Operational cause (rail operation)
□ Other: ……

8. Consequences of occurrence

Personal injury in connection with the dangerous goods involved:
□ Deaths (number: .....)
□ Injured (number: .....)

Loss of product:
□ Yes
□ No
□ Imminent risk of loss of product

Material/Environmental damage:
□ Estimated level of damage ≤ 50,000 Euros
□ Estimated level of damage > 50,000 Euros

Involvement of authorities:
□ Yes → □ Evacuation of persons for a duration of at least three hours caused by the dangerous goods involved
□ Closure of public traffic routes for a duration of at least three hours caused by the dangerous goods involved
□ No

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

1.8.6 Administrative controls for application of the conformity assessments, periodic inspections, intermediate inspections and exceptional checks described in 1.8.7

1.8.6.1 Approval of inspection bodies

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

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

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

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

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

1.8.6.3 Information obligation

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

1.8.6.4 Delegation of inspection tasks

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

1.8.6.4.1 Where an inspection body uses the services of any other entity (e.g. subcontractor, subsidiary), to carry out specific tasks connected with the conformity assessment, periodic inspection, intermediate inspection or exceptional checks, this entity shall be included in the accreditation of the inspection body, or it shall be accredited separately. In the case of separate accreditation, this entity shall be duly accredited according to standard EN ISO/IEC 17025:2005 and shall be recognised by the inspection body as an independent and impartial testing laboratory in order to perform testing tasks in accordance with its accreditation, or it shall be accredited according to standard EN ISO/IEC 17020:2012 (except clause 8.1.3). The inspection body shall ensure that this entity meets the requirements set out for the tasks given to it with the same level of competence and safety as laid down for inspection bodies (see 1.8.6.8) and the inspection body shall monitor it. The inspection body shall inform the competent authority about the above mentioned arrangements.

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

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

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

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

1.8.6.5 Information obligations for inspection bodies

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

(a) Except when the provisions of 1.8.7.2.4 apply, any refusal, restriction, suspension or withdrawal of type approval certificates;

(b) Any circumstance(s) affecting the scope of and conditions for the approval as granted by the competent authority;

(c) Any request for information on conformity assessment activities performed which they have received from competent authorities monitoring compliance according to 1.8.1 or 1.8.6.6;

(d) On request, conformity assessment activities performed within the scope of their approval and any other activity performed, including delegation of tasks.

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

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

1.8.6.8 The inspection body shall:

(a) Have a staff with an organisational structure, capable, trained, competent and skilled, to satisfactorily perform its technical functions;

(b) Have access to suitable and adequate facilities and equipment;

(c) Operate in an impartial manner and be free from any influence which could prevent it from doing so;

(d) Ensure commercial confidentiality of the commercial and proprietary activities of the manufacturer and other bodies;

(e) Maintain clear demarcation between actual inspection body functions and unrelated functions;

(f) Have a documented quality system;

(g) Ensure that the tests and inspections specified in the relevant standard and in RID are performed; and

(h) Maintain an effective and appropriate report and record system in accordance with 1.8.7 and 1.8.8.

The inspection body shall additionally be accredited according to the standard EN ISO/IEC 17020:2012 (except clause 8.1.3), as specified in 6.2.2.11 and 6.2.3.6 and TA 4 and TT 9 of 6.8.4.

An inspection body starting a new activity may be approved temporarily. Before temporary designation, the competent authority shall ensure that the inspection body meets the requirements of the standard EN ISO/IEC 17020:2012 (except clause 8.1.3). The inspection body shall be accredited in its first year of activity to be able to continue this new activity.

1.8.7 Procedures for conformity assessment and periodic inspection

NOTE: In this section, "relevant body" means a body assigned in 6.2.2.11 when certifying UN pressure receptacles, in 6.2.3.6 when approving non-UN pressure receptacles and in special provisions TA4 and TT9 of 6.8.4.

1.8.7.1 General provisions

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

The procedures in section 1.8.7 may be applied according to the Table in 6.2.2.11 when certifying UN pressure receptacles.

1.8.7.1.2 Each application for

(a) The type approval in accordance with 1.8.7.2 or;

(b) The supervision of manufacture in accordance with 1.8.7.3 and the initial inspection and test in accordance with 1.8.7.4; or

(c) The periodic inspection, intermediate inspection and exceptional checks in accordance with 1.8.7.5

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

1.8.7.1.3 The application shall include:

(a) The name and address of the applicant;

(b) For conformity assessment where the applicant is not the manufacturer, the name and address of the manufacturer;

(c) A written declaration that the same application has not been lodged with any other competent authority, its delegate or inspection body;

(d) The relevant technical documentation specified in 1.8.7.7;

(e) A statement allowing the competent authority, its delegate or inspection body access for inspection purposes to the locations of manufacture, inspection, testing and storage and providing it with all necessary information.

1.8.7.1.4 Where the applicant can demonstrate to the satisfaction of the competent authority or its delegated inspection body conformity with 1.8.7.6 the applicant may establish an in-house inspection service which may perform part or all of the inspections and tests when specified in 6.2.2.11 or 6.2.3.6.

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

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

1.8.7.2 Type approval

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

1.8.7.2.1 The applicant shall:

(a) In the case of pressure receptacles, place at the disposal of the relevant body representative samples of the production envisaged. The relevant body may request further samples if required by the test programme;

(b) In the case of tanks, battery-wagons or MEGCs, give access to the prototype for type testing.

1.8.7.2.2 The relevant body shall:

(a) Examine the technical documentation specified in 1.8.7.7.1 to verify that the design is in accordance with the relevant provisions of RID, and the prototype or the prototype lot has been manufactured in conformity with the technical documentation and is representative of the design;

(b) Perform the examinations and witness the tests specified in RID, to determine that the provisions have been applied and fulfilled, and the procedures adopted by the manufacturer meet the requirements;

(c) Check the certificate(s) issued by the materials manufacturer(s) against the relevant provisions of RID;

(d) As applicable, approve the procedures for the permanent joining of parts or check that they have been previously approved, and verify that the staff undertaking the permanent joining of parts and the non-destructive tests are qualified or approved;

(e) Agree with the applicant the location and testing facilities where the examinations and necessary tests are to be carried out.

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

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

This certificate shall contain:

(a) The name and address of the issuer;

(b) The name and address of the manufacturer and of the applicant when the applicant is not the manufacturer;

(c) A reference to the version of RID and standards used for the type examination;

(d) Any requirements resulting from the examination;

(e) The necessary data for identification of the type and variation, as defined by the relevant standard;

(f) The reference to the type examination report(s); and

(g) The maximum period of validity of the type approval.

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

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

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

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

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

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

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

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

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

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

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

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

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

1.8.7.3 Supervision of manufacture

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

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

1.8.7.3.3 The relevant body shall:

(a) Verify the conformity with the technical documentation specified in 1.8.7.7.2;

(b) Verify that the manufacturing process produces products in conformity with the requirements and the documentation which apply to it;

(c) Verify the traceability of materials and check the material certificate(s) against the specifications;

(d) As applicable, verify that the personnel undertaking the permanent joining of parts and the non-destructive tests are qualified or approved;

(e) Agree with the applicant on the location where the examinations and necessary tests are to be carried out; and

(f) Record the results of its survey.

1.8.7.4 Initial inspection and tests

1.8.7.4.1 The applicant shall:

(a) Affix the marks specified in RID; and

(b) Supply to the relevant body the technical documentation specified in 1.8.7.7.

1.8.7.4.2 The relevant body shall:

(a) Perform the necessary examinations and tests in order to verify that the product is manufactured in accordance with the type approval and the relevant provisions;

(b) Check the certificates supplied by the manufacturers of service equipment against the service equipment;

(c) Issue an initial inspection and test report to the applicant relating to the detailed tests and verifications carried out and the verified technical documentation;

(d) Draw up a written certificate of conformity of the manufacture and affix its registered mark when the manufacture satisfies the provisions; and

(e) Check if the type approval remains valid after provisions of RID (including referenced standards) relevant to the type approval have changed.

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

1.8.7.4.3 The certificate shall contain as a minimum:

(a) The name and address of the relevant body;

(b) The name and address of the manufacturer and the name and address of the applicant, if not the manufacturer;

(c) A reference to the version of the RID and standards used for the initial inspections and tests;

(d) The results of the inspections and tests;

(e) The data for identification of the inspected product(s), at least the serial number or for non refillable cylinders the batch number; and

(f) The type approval number.

1.8.7.5 Periodic inspection, intermediate inspection and exceptional checks

1.8.7.5.1 The relevant body shall:

(a) Perform the identification and verify the conformity with the documentation;

(b) Carry out the inspections and witness the tests in order to check that the requirements are met;

(c) Issue reports of the results of the inspections and tests, which may cover a number of items; and

(d) Ensure that the required marks are applied.

1.8.7.5.2 Reports of periodic inspections and tests of pressure receptacles shall be retained by the applicant at least until the next periodic inspection.

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

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

1.8.7.6.1 The applicant shall:

(a) Implement an in-house inspection service with a quality system for inspections and tests documented in 1.8.7.7.5 and subject to surveillance;

(b) Fulfil the obligations arising out of the quality system as approved and to ensure that it remains satisfactory and efficient;

(c) Appoint trained and competent personnel for the in-house inspection service; and

(d) Affix the registered mark of the inspection body where appropriate.

1.8.7.6.2 The inspection body shall carry out an initial audit. If satisfactory the inspection body shall issue an authorisation for a period not exceeding three years. The following provisions shall be met:

(a) This audit shall confirm that the inspections and tests performed on the product are in compliance with the requirements of RID;

(b) The inspection body may authorise the in-house inspection service of the applicant to affix the registered mark of the inspection body to each approved product;

(c) The authorisation may be renewed after a satisfactory audit in the last year prior to the expiry. The new period of validity shall begin with the date of expiry of the authorisation; and

(d) The auditors of the inspection body shall be competent to carry out the assessment of conformity of the product covered by the quality system.

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

(a) A minimum of two audits shall be carried out in a 12 month period;

(b) The inspection body may require additional visits, training, technical changes, modifications of the quality system, restrict or prohibit the inspections and tests to be done by the applicant;

(c) The inspection body shall assess any changes in the quality system and decide whether the modified quality system will still satisfy the requirements of the initial audit or whether a full reassessment is required;

(d) The auditors of the inspection body shall be competent to carry out the assessment of conformity of the product covered by the quality system; and

(e) The inspection body shall provide the applicant with a visit or audit report and, if a test has taken place, with a test report.

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

1.8.7.7 Documents

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

1.8.7.7.1 Documents for type approval

The applicant shall provide as appropriate:

(a) The list of standards used for the design and manufacture;

(b) A description of the type including all variations;

(c) The instructions according to the relevant column of Table A of Chapter 3.2 or a list of dangerous goods to be transported for dedicated products;

(d) A general assembly drawing or drawings;

(e) The detailed drawings, including the dimensions used for the calculations, of the product, the service equipment, the structural equipment, the marking and/or the labelling necessary to verify the conformity;

(f) The calculation notes, results and conclusions;

(g) The list of the service equipment with the relevant technical data and information on the safety devices including the calculation of the relief capacity if relevant;

(h) The list of material requested in the standard for manufacture used for every part, sub-part, lining, service and structural equipment and the corresponding material specifications or the corresponding declaration of conformity to RID;

(i) The approved qualification of permanent joining process;

(j) The description of the heat treatment process(es); and

(k) The procedures, descriptions and records of all relevant tests listed in the standards or RID for the type approval and for the manufacture.

1.8.7.7.2 Documents for the supervision of manufacture

The applicant shall make available as appropriate:

(a) The documents listed in 1.8.7.7.1;

(b) A copy of the type approval certificate;

(c) The manufacturing procedures including test procedures;

(d) The manufacturing records;

(e) The approved qualifications of permanent joining operators;

(f) The approved qualifications of the non destructive test operators;

(g) The reports of the destructive and non destructive tests;

(h) The heat treatment records; and

(i) The calibration records.

1.8.7.7.3 Documents for initial inspection and tests

The applicant shall make available as appropriate:

(a) The documents listed in 1.8.7.7.1 and 1.8.7.7.2;

(b) The material certificates of the product and any sub-parts;

(c) The declarations of conformity and material certificates of the service equipment; and

(d) A declaration of conformity including the description of the product and all the variations adopted from the type approval.

1.8.7.7.4 Documents for periodic inspections, intermediate inspections and exceptional checks

The applicant shall make available as appropriate:

(a) For pressure receptacles, the documents specifying special requirements when the manufacturing and periodic inspections and tests standards so require;

(b) For tanks,

  (i) the tank record; and

  (ii) one or more of the documents mentioned in 1.8.7.7.1 to 1.8.7.7.3.

1.8.7.7.5 Documents for the assessment of in-house inspection service

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

(a) The organisational structure and responsibilities;

(b) The relevant inspection and test, quality control, quality assurance and process operation instructions, and systematic actions that will be used;

(c) The quality records, such as inspection reports, test data, calibration data and certificates;

(d) The management reviews to ensure the effective operation of the quality system arising from the audits in accordance with 1.8.7.6;

(e) The process describing how customer and regulation requirements are met;

(f) The process for control of documents and their revision;

(g) The procedures for dealing with non-conforming products; and

(h) The training programmes and qualification procedures for relevant personnel.

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

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

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

1.8.8 Procedures for conformity assessment of gas cartridges

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

(a) The procedure in section 1.8.7 for non-UN pressure receptacles, with the exception of 1.8.7.5; or

(b) The procedure in sub-sections 1.8.8.1 to 1.8.8.7.

1.8.8.1 General provisions

1.8.8.1.1 The supervision of manufacture shall be carried out by an Xa body and the tests as required in 6.2.6 shall be carried out either by that Xa body or by an IS-body approved by that Xa body; for definition of Xa and IS bodies see definitions in 6.2.3.6.1. Conformity assessment shall be carried out by the competent authority, its delegate or its approved inspection body of an RID Contracting State.

1.8.8.1.2 By the application of 1.8.8, the applicant shall demonstrate, ensure and declare on his sole responsibility the conformity of gas cartridges with the provisions of 6.2.6 and all further applicable provisions of RID.

1.8.8.1.3 The applicant shall

(a) Carry out a design type examination of each type of gas cartridges (including materials to be used and variations of that type, e.g. volumes, pressures, drawings and closing and release devices) according to 1.8.8.2;

(b) Operate an approved quality system for design, manufacture, inspection and testing according to 1.8.8.3;

(c) Operate an approved testing regime according to 1.8.8.4 for the tests required in 6.2.6;

(d) Apply for the approval of his quality system for supervision of manufacture and for testing to one Xa body of his choice of the RID Contracting State; if the applicant is not established in an RID Contracting State he shall apply to one Xa body of an RID Contracting State prior to first transport into an RID Contracting State;

(e) If the gas cartridge is finally assembled from parts manufactured by the applicant by one or more other enterprise(s), provide written instructions how to assemble and fill the gas cartridges to meet the provisions of his type examination certificate.

1.8.8.1.4 Where the applicant and enterprises assembling or filling gas cartridges according to the instructions of the applicant, can demonstrate to the satisfaction of the Xa body conformity with the provisions of 1.8.7.6 excluding 1.8.7.6.1 (d) and 1.8.7.6.2 (b), they may establish an in-house inspection service which may perform part or all of the inspections and tests specified in 6.2.6.

1.8.8.2 Design type examination

1.8.8.2.1 The applicant shall establish technical documentation for each type of gas cartridges including the technical standard(s) applied. If he chooses to apply a standard not referenced in 6.2.6, he shall add the standard applied to the documentation.

1.8.8.2.2 The applicant shall retain the technical documentation together with samples of that type at the disposal of the Xa body during production and afterwards for a period of minimum five years starting from the last date of production of gas cartridges according to that type examination certificate.

1.8.8.2.3 The applicant shall after careful examination issue a design type certificate which shall be valid for a maximum period of ten years; he shall add this certificate to the documentation. This certificate authorises him to produce gas cartridges of that type for that period.

1.8.8.2.4 If within that period the relevant technical requirements of RID (including referenced standards) have changed so that the design type is no longer in conformity with them, the applicant shall withdraw his type examination certificate and inform the Xa body.

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

1.8.8.3 Supervision of manufacture

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

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

1.8.8.3.3 The Xa body shall:

(a) Verify the conformity of the design type examination of the applicant and conformity of the type of gas cartridges with the technical documentation specified in 1.8.8.2;

(b) Verify that the manufacturing process produces products in conformity with the requirements and the documentation which apply to it; if the gas cartridge is finally assembled from parts manufactured by the applicant by one or more enterprise(s), the Xa body shall also verify that the gas cartridges are in full conformity with all applicable provisions after final assembly and filling and that the instructions of the applicant are correctly applied;

(c) Verify that the personnel undertaking the permanent joining of parts and the tests are qualified or approved;

(d) Record the results of its surveys.

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

1.8.8.4 Leakproofness test

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

(a) Carry out the tests required in 6.2.6;

(b) Record the test results;

(c) Issue a certificate of conformity only for gas cartridges, which are in full compliance with the provisions of his design type examination and the applicable provisions of RID and have successfully passed the tests as required in 6.2.6;

(d) Retain the documentation as specified in 1.8.8.7 during production and afterwards for a period of minimum five years from the last date of production of gas cartridges belonging to one type approval for inspection by the Xa body at random intervals;

(e) Affix a durable and legible mark identifying the type of gas cartridge, the applicant and the date of production or batch number; where due to limited available space the mark cannot be fully applied to the body of the gas cartridge, he shall affix a durable tag with this information to the gas cartridge or place it together with a gas cartridge in an inner packaging.

1.8.8.4.2 The Xa body shall:

(a) Perform the necessary examinations and tests at random intervals, but at least shortly after starting of manufacture of a type of gas cartridges and thereafter at least once every three years, in order to verify that the procedure for design type examination of the applicant as well as that the manufacture and testing of the product are carried out in accordance with the design type certificate and the relevant provisions;

(b) Check the certificates supplied by the applicant;

(c) Carry out the tests as required in 6.2.6 or approve the program of testing and the in-house inspection service to carry out the tests.

1.8.8.4.3 The certificate shall contain as a minimum:

(a) The name and address of the applicant and, when the final assembly is not carried out by the applicant but by an enterprise or enterprises in accordance with the written instructions of the applicant, the name(s) and address(es) of these enterprises;

(b) A reference to the version of RID and the standard(s) used for manufacture and tests;

(c) The result of inspections and tests;

(d) The data for marking as required in 1.8.8.4.1 (e).

1.8.8.5 (Reserved)

1.8.8.6 Surveillance of the in-house inspection service

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

1.8.8.7 Documents

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

Chapter 1.9 Restrictions on carriage imposed by the competent authorities

1.9.1 An RID Contracting State may apply to the international carriage of dangerous goods by rail on its territory certain additional provisions not included in RID, provided that these additional provisions

- are in accordance with 1.9.2,
- do not conflict with the provisions of 1.1.2.1 (b),
- are contained in the RID Contracting State's domestic legislation applying equally to the domestic carriage of dangerous goods by rail on the territory of that RID Contracting State,
- do not result in the prohibition of carriage by rail of the dangerous goods covered by these provisions in the whole territory of the RID Contracting State.

1.9.2 The additional provisions referred to in 1.9.1 are:

(a) additional safety requirements or restrictions on carriage
- using certain structures such as bridges or tunnels[19],
- using combined transport installations such as transhipment installations, or
- where the transport operation begins or ends in ports, railway stations or other transport terminals.

(b) provisions according to which the carriage of certain dangerous goods on sections with special and local risks is prohibited, such as sections in residential areas, environmentally sensitive areas, economic centres or industrial zones containing hazardous installations, or to which special conditions, e.g. operational measures (reduced speed, specified journey times, prohibition on trains meeting each other, etc.) apply. Where possible, the competent authorities shall establish alternative routes which may be used for each prohibited route or each route subject to special provisions.

(c) exceptional provisions specifying the excluded or prescribed routeing or provisions to be observed for temporary storage resulting from extreme weather conditions, earthquake, accident, demonstrations, civil disorder or military hostilities.

1.9.3 Application of the additional provisions in accordance with 1.9.2 (a) and (b) presupposes that the competent authority provides evidence of the need for measures.[20]

1.9.4 The competent authority of the RID Contracting State applying on its territory any additional provisions within the scope of 1.9.2 (a) and (b) above shall notify the Secretariat of OTIF, in general in advance, of the additional provisions. The Secretariat of OTIF shall bring them to the attention of the RID Contracting States.

1.9.5 Notwithstanding with preceding paragraphs, RID Contracting States may lay down specific safety requirements for the international carriage of dangerous goods by rail, in so far as RID does not cover that area, in particular as regards

- the running of trains,
- operating rules for operations ancillary to transport such as marshalling and stabling,
- management of information concerning the dangerous goods transported,

provided they are contained in its national legislation and are also applicable to the national carriage of dangerous goods by rail in the territory of the said RID Contracting State.

These specific requirements shall not concern the areas covered by RID, in particular those listed in 1.1.2.1 (a) and 1.1.2.1 (b).

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[19] For carriage through the Channel Tunnel and through tunnels with similar characteristics, see also Annex II of Directive 2008/68/EC of the European Parliament and of the Council of 24 September 2008 on the inland transport of dangerous goods, published in the Official Journal of the European Union, L 260, 30 September 2008, p. 13.

[20] The Generic Guideline for the Calculation of Risk inherent in the Carriage of Dangerous Goods by Rail approved by the RID Committee of Experts on 24 November 2005 may be consulted on the OTIF website (www.otif.org).

Chapter 1.10 Security provisions

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

1.10.1 General provisions

1.10.1.1 All persons engaged in the carriage of dangerous goods shall consider the security requirements set out in this Chapter commensurate with their responsibilities.

1.10.1.2 Dangerous goods shall only be offered for carriage to carriers that have been appropriately identified.

1.10.1.3 Areas within temporary storage terminals, temporary storage sites, vehicle depots, berthing areas and marshalling yards used for temporary storage during carriage of dangerous goods shall be properly secured, well lit and, where possible and appropriate, not accessible to the general public.

1.10.1.4 Each crew member of a train carrying dangerous goods shall carry with them means of identification, which includes their photograph, during carriage.

1.10.1.5 Safety inspections in accordance with 1.8.1 shall cover appropriate security measures.

1.10.1.6 (Reserved)

1.10.2 Security training

1.10.2.1 The training and the refresher training specified in Chapter 1.3 shall also include elements of security awareness. The security refresher training need not be linked to regulatory changes only.

1.10.2.2 Security awareness training shall address the nature of security risks, recognising security risks, methods to address and reduce such risks and actions to be taken in the event of a security breach. It shall include awareness of security plans (if appropriate) commensurate with the responsibilities and duties of individuals and their part in implementing security plans.

1.10.2.3 Such training shall be provided or verified upon employment in a position involving dangerous goods transport and shall be periodically supplemented with refresher training.

1.10.2.4 Records of all security training received shall be kept by the employer and made available to the employee or competent authority, upon request. Records shall be kept by the employer for a period of time established by the competent authority.

1.10.3 Provisions for high consequence dangerous goods

NOTE: In addition to the security provisions of RID, competent authorities may implement further security provisions for reasons other than safety during carriage (see also Article 3 of Appendix C to COTIF). In order not to impede international and multimodal carriage by different explosives security marks, it is recommended that such marks be formatted consistent with an internationally harmonized standard (e.g. European Union Commission Directive 2008/43/EC).

1.10.3.1 Definition of high consequence dangerous goods

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

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

Table 1.10.3.1.2: List of high consequence dangerous goods

Class	Division	Substance or article	Quantity		
			Tank (*l*)[(c)]	Bulk (kg)[(d)]	Packages (kg)
1	1.1	Explosives	[(a)]	[(a)]	0
	1.2	Explosives	[(a)]	[(a)]	0
	1.3	Compatibility group C explosives	[(a)]	[(a)]	0
	1.4	Explosives of UN Nos. 0104, 0237, 0255, 0267, 0289, 0361, 0365, 0366, 0440, 0441, 0455, 0456 and 0500	[(a)]	[(a)]	0
	1.5	Explosives	0	[(a)]	0
2		Flammable, non-toxic gases (classification codes including only letters F or FC)	3000	[(a)]	[(b)]

Class	Division	Substance or article	Quantity		
			Tank (*l*)[c]	Bulk (kg)[d]	Packages (kg)
		Toxic gases (classification codes including letters T, TF, TC, TO, TFC or TOC) excluding aerosols	0	[a]	0
3		Flammable liquids of packing groups I and II	3000	[a]	[b]
		Desensitized explosives	0	[a]	0
4.1		Desensitized explosives	[a]	[a]	0
4.2		Packing group I substances	3000	[a]	[b]
4.3		Packing group I substances	3000	[a]	[b]
5.1		Oxidizing liquids of packing group I	3000	[a]	[b]
		Perchlorates, ammonium nitrate, ammonium nitrate fertilisers and ammonium nitrate emulsions or suspensions or gels	3000	3000	[b]
6.1		Toxic substances of packing group I	0	[a]	0
6.2		Infectious substances of Category A (UN Nos. 2814 and 2900, except for animal material)	[a]	0	0
8		Corrosive substances of packing group I	3000	[a]	[b]

[a] Not relevant

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

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

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

1.10.3.1.3 For dangerous goods of Class 7, high consequence radioactive material is that with an activity equal to or greater than a transport security threshold of 3 000 A_2 per single package (see also 2.2.7.2.2.1) except for the following radionuclides where the transport security threshold is given in Table 1.10.3.1.3 below.

Table 1.10.3.1.3: Transport security thresholds for specific radionuclides

Element	Radionuclide	Transport security threshold (TBq)
Americium	Am-241	0.6
Gold	Au-198	2
Cadmium	Cd-109	200
Californium	Cf-252	0.2
Curium	Cm-244	0.5
Cobalt	Co-57	7
Cobalt	Co-60	0.3
Caesium	Cs-137	1
Iron	Fe-55	8000
Germanium	Ge-68	7
Gadolinium	Gd-153	10
Iridium	Ir-192	0,8
Nickel	Ni-63	600
Palladium	Pd-103	900
Promethium	Pm-147	400
Polonium	Po-210	0.6
Plutonium	Pu-238	0.6
Plutonium	Pu-239	0.6
Radium	Ra-226	0.4
Ruthenium	Ru-106	3
Selenium	Se-75	2
Strontium	Sr-90	10
Thallium	Tl-204	200
Thulium	Tm-170	200
Ytterbium	Yb-169	3

1.10.3.1.4 For mixtures of radionuclides, determination of whether or not the transport security threshold has been met or exceeded can be calculated by summing the ratios of activity present for each radionuclide divided by the transport security threshold for that radionuclide. If the sum of the fractions is less than 1, then the radioactivity threshold for the mixture has not been met or exceeded.

This calculation can be made with the formula:

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

Where:

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

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

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

1.10.3.2 Security plans

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

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

(a) specific allocation of responsibilities for security to competent and qualified persons with appropriate authority to carry out their responsibilities;

(b) records of dangerous goods or types of dangerous goods concerned;

(c) review of current operations and assessment of security risks, including any stops necessary to the transport operation, the keeping of dangerous goods in the wagon, tank or container before, during and after the journey and the intermediate temporary storage of dangerous goods during the course of intermodal transfer or transshipment between units, as appropriate;

(d) clear statement of measures that are to be taken to reduce security risks, commensurate with the responsibilities and duties of the participant, including:

– training;

– security policies (e.g. response to higher threat conditions, new employee/employment verification, etc.);

– operating practices (e.g. choice/use of routes where known, access to dangerous goods in intermediate temporary storage (as defined in (c)), proximity to vulnerable infrastructure etc.);

– equipment and resources that are to be used to reduce security risks;

(e) effective and up to date procedures for reporting and dealing with security threats, breaches of security or security incidents;

(f) procedures for the evaluation and testing of security plans and procedures for periodic review and update of the plans;

(g) measures to ensure the physical security of transport information contained in the security plan; and

(h) measures to ensure that the distribution of information relating to the transport operation contained in the security plan is limited to those who need to have it. Such measures shall not preclude the provision of information required elsewhere in RID.

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

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

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

1.10.4 The provisions of 1.10.1, 1.10.2 and 1.10.3 do not apply when the quantities carried in packages in a wagon or large container do not exceed those referred to in 1.1.3.6.3, except for UN numbers 0029, 0030, 0059, 0065, 0073, 0104, 0237, 0255, 0267, 0288, 0289, 0290, 0360, 0361, 0364, 0365, 0366, 0439, 0440, 0441, 0455, 0456 and 0500 and except for UN numbers 2910 and 2911 if the activity level exceeds the A_2 value. In addition, the provisions of 1.10.1, 1.10.2 and 1.10.3 do not apply when the quantities carried in tanks or in bulk in a wagon or container do not exceed those referred to in 1.1.3.6.3. In addition the provisions of this Chapter do not apply to the carriage of UN No. 2912 RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-I) and UN No. 2913 RADIOACTIVE MATERIAL, SURFACE CONTAMINATED OBJECTS (SCO-I).

1.10.5 For radioactive material, the provisions of this Chapter are deemed to be complied with when the provisions of the Convention on Physical Protection of Nuclear Material[21] and the IAEA circular on "The Physical Protection of Nuclear Material and Nuclear Facilities"[22] are applied.

[21] INFCIRC/274/Rev.1, IAEA, Vienna (1980).

[22] INFCIRC/225/Rev.4 (Corrected), IAEA, Vienna (1999).

Chapter 1.11 Internal emergency plans for marshalling yards

Internal emergency plans shall be drawn up for the carriage of dangerous goods in marshalling yards.

The aim of emergency plans shall be that in the event of an accident or incident in marshalling yards, all those involved shall co-operate in a co-ordinated way and the consequences of the accident or incident for human life or for the environment shall be minimised to the greatest possible extent.

The requirements of this Chapter are considered to have been complied with if IRS 20201 (Carriage of dangerous goods – Emergency planning guidance for rail marshalling yards) published by UIC[23] is applied.

[23] Version of the IRS (International Railway Solution) applicable as from 1 January 2019.

Part 2 Classification

Chapter 2.1 General provisions

2.1.1 Introduction

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Articles are not assigned to packing groups. For packing purposes any requirement for a specific packaging performance level is set out in the applicable packing instruction.

2.1.2 Principles of classification

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

2.1.2.2 All dangerous goods entries are listed in Table A of Chapter 3.2 in the numerical order of their UN Number. This table contains relevant information on the goods listed, such as name, class, packing group(s), label(s) to be affixed, packing and carriage provisions. The substances listed by name in column (2) of Table A of Chapter 3.2 shall be carried according to their classification in Table A or under the conditions specified in 2.1.2.8.

NOTE: An alphabetical list of these entries is given in table B of Chapter 3.2.

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

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

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

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

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

2.1.2.8 A consignor who has identified, on the basis of test data, that a substance listed by name in column (2) of Table A of Chapter 3.2 meets classification criteria for a class that is not identified in column (3a) or (5) of Table A of Chapter 3.2, may, with the approval of the competent authority, consign the substance:

– Under the most appropriate collective entry listed in sub-sections 2.2.x.3 reflecting all hazards; or

– Under the same UN number and name but with additional hazard communication information as appropriate to reflect the additional subsidiary hazard(s) (documentation, label, placard) provided that the class remains unchanged and that any other carriage conditions (e.g. limited quantity, packaging and tank provisions) that would normally apply to substances possessing such a combination of hazards are the same as those applicable to the substance listed.

NOTE 1: The competent authority granting the approval may be the competent authority of any RID Contracting State who may also recognize an approval granted by the competent authority of a country which is not an RID Contracting State provided that this approval has been granted in accordance with the procedures applicable according to RID, ADR, ADN, the IMDG Code or the ICAO Technical Instructions.

2: When a competent authority grants such approvals, it should inform the United Nations Sub-Committee of Experts on the Transport of Dangerous Goods accordingly and submit a relevant proposal of amendment to the Dangerous Goods List of the UN Model Regulations. Should the proposed amendment be rejected, the competent authority should withdraw its approval.

3: For carriage in accordance with 2.1.2.8, see also 5.4.1.1.20.

2.1.3 Classification of substances, including solutions and mixtures (such as preparations and wastes), not mentioned by name

2.1.3.1 Substances including solutions and mixtures not mentioned by name shall be classified according to their degree of danger on the basis of the criteria mentioned in sub-section 2.2.x.1 of the various classes. The danger(s) presented by a substance shall be determined on the basis of its physical and chemical characteristics and physiological properties. Such characteristics and properties shall also be taken into account when such experience leads to a more stringent assignment.

2.1.3.2 A substance not mentioned by name in Table A of Chapter 3.2 presenting a single hazard shall be classified in the relevant class under a collective entry listed in sub-section 2.2.x.3 of that class.

2.1.3.3 A solution or mixture meeting the classification criteria of RID composed of a single predominant substance mentioned by name in Table A of Chapter 3.2 and one or more substances not subject to RID or traces of one or more substances mentioned by name in Table A of Chapter 3.2, shall be assigned the UN number and proper shipping name of the predominant substance mentioned by name in Table A of Chapter 3.2 unless:

(a) The solution or mixture is mentioned by name in Table A of Chapter 3.2;

(b) The name and description of the substance mentioned by name in Table A of Chapter 3.2 specifically indicate that they apply only to the pure substance;

(c) The class, classification code, packing group, or physical state of the solution or mixture is different from that of the substance mentioned by name in Table A of Chapter 3.2; or

(d) The hazard characteristics and properties of the solution or mixture necessitate emergency response measures that are different from those required for the substance mentioned by name in Table A of Chapter 3.2.

In those other cases, except the one described in (a), the solution or mixture shall be classified as a substance not mentioned by name in the relevant class under a collective entry listed in sub-section 2.2.x.3 of that class taking account of the subsidiary hazards presented by that solution or mixture, if any, unless the solution or mixture does not meet the criteria of any class, in which case it is not subject to RID.

2.1.3.4 Solutions and mixtures containing a substance belonging to one of the entries mentioned in 2.1.3.4.1 or 2.1.3.4.2 shall be classified in accordance with the provisions of these paragraphs.

2.1.3.4.1 Solutions and mixtures containing one of the following substances mentioned by name shall always be classified under the same entry as the substance they contain, provided they do not have the hazard characteristics as indicated in 2.1.3.5.3:

– Class 3

UN 1921 PROPYLENEIMINE, STABILIZED

UN 3064 NITROGLYCERIN SOLUTION IN ALCOHOL with more than 1% but not more than 5% nitroglycerin

– Class 6.1

UN 1051 HYDROGEN CYANIDE, STABILIZED, containing less than 3% water

UN 1185 ETHYLENEIMINE, STABILIZED

UN 1259 NICKEL CARBONYL

UN 1613 HYDROCYANIC ACID, AQUEOUS SOLUTION (HYDROGEN CYANIDE, AQUEOUS SOLUTION), with not more than 20% hydrogen cyanide

UN 1614 HYDROGEN CYANIDE, STABILIZED, containing not more than 3% water and absorbed in a porous inert material

UN 1994 IRON PENTACARBONYL

UN 2480 METHYL ISOCYANATE

UN 2481 ETHYL ISOCYANATE

UN 3294 HYDROGEN CYANIDE, SOLUTION IN ALCOHOL, with not more than 45% hydrogen cyanide

– Class 8

UN 1052 HYDROGEN FLUORIDE, ANHYDROUS

UN 1744 BROMINE or UN 1744 BROMINE SOLUTION

UN 1790 HYDROFLUORIC ACID with more than 85% hydrogen fluoride

UN 2576 PHOSPHORUS OXYBROMIDE, MOLTEN

2.1.3.4.2 Solutions and mixtures containing a substance belonging to one of the following entries of Class 9:

UN 2315 POLYCHLORINATED BIPHENYLS, LIQUID;
UN 3151 POLYHALOGENATED BIPHENYLS, LIQUID;
UN 3151 HALOGENATED MONOMETHYLDIPHENYLMETHANES, LIQUID;
UN 3151 POLYHALOGENATED TERPHENYLS, LIQUID;
UN 3152 POLYHALOGENATED BIPHENYLS, SOLID;
UN 3152 HALOGENATED MONOMETHYLDIPHENYLMETHANES, SOLID;
UN 3152 POLYHALOGENATED TERPHENYLS, SOLID or
UN 3432 POLYCHLORINATED BIPHENYLS, SOLID

shall always be classified under the same entry of Class 9, provided that:

– they do not contain any additional dangerous component other than components of packing group III of classes 3, 4.1, 4.2, 4.3, 5.1, 6.1 or 8; and
– they do not have the hazard characteristics as indicated in 2.1.3.5.3.

2.1.3.5 Substances not mentioned by name in Table A of Chapter 3.2, having more than one hazard characteristic and solutions or mixtures meeting the classification criteria of RID and containing several dangerous substances shall be classified under a collective entry (see 2.1.2.5) and packing group of the appropriate class in accordance with their hazard characteristics. Such classification according to the hazard characteristics shall be carried out as follows:

2.1.3.5.1 The physical and chemical characteristics and physiological properties shall be determined by measurement or calculation and the substance, solution or mixture shall be classified according to the criteria mentioned in sub-section 2.2.x.1 of the various classes.

2.1.3.5.2 If this determination is not possible without disproportionate cost or effort (as for some kinds of wastes), the substance, solution or mixture shall be classified in the class of the component presenting the major hazard.

2.1.3.5.3 If the hazard characteristics of the substance, solution or mixture fall within more than one class or group of substances listed below then the substance, solution or mixture shall be classified in the class or group of substances corresponding to the major hazard on the basis of the following order of precedence:

(a) Material of Class 7 (apart from radioactive material in excepted packages for which, except for UN 3507 URANIUM HEXAFLUORIDE, RADIOACTIVE MATERIAL, EXCEPTED PACKAGE, special provision 290 of Chapter 3.3 applies, where the other hazardous properties take precedence);
(b) Substances of Class 1;
(c) Substances of Class 2;
(d) Liquid desensitized explosives of Class 3;
(e) Self-reactive substances and solid desensitized explosives of Class 4.1;
(f) Pyrophoric substances of Class 4.2;
(g) Substances of Class 5.2;
(h) Substances of Class 6.1 meeting the inhalation toxicity criteria of packing group I (substances meeting the classification criteria of Class 8 and having an inhalation toxicity of dust and mist (LC_{50}) in the range of packing group I and a toxicity through oral ingestion or dermal contact only in the range of packing group III or less, shall be allocated to Class 8);
(i) Infectious substances of Class 6.2.

2.1.3.5.4 If the hazard characteristics of the substance fall within more than one class or group of substances not listed in 2.1.3.5.3 above, the substance shall be classified in accordance with the same procedure but the relevant class shall be selected according to the precedence of hazards table in 2.1.3.10.

2.1.3.5.5 If the substance to be carried is a waste, with a composition that is not precisely known, its assignment to a UN number and packing group in accordance with 2.1.3.5.2 may be based on the consignor's knowledge of the waste, including all available technical and safety data as requested by safety and environmental legislation in force[1].

In case of doubt, the highest danger level shall be taken.

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[1] Such legislation is for instance the Commission Decision 2000/532/EC of 3 May 2000 replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste and Council Decision 94/904/EC establishing a list of hazardous wastes pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous wastes (Official Journal of the European Communities No. L 226 of 6 September 2000, page 3), as amended; and Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives (Official Journal of the European Union No. L 312 of 22 November 2008, pages 3-30), as amended.

If however, on the basis of the knowledge of the composition of the waste and the physical and chemical properties of the identified components, it is possible to demonstrate that the properties of the waste do not correspond to the properties of the packing group I level, the waste may be classified by default in the most appropriate n.o.s. entry of packing group II. However, if it is known that the waste possesses only environmentally hazardous properties, it may be assigned to packing group III under UN Nos. 3077 or 3082.

This procedure may not be used for wastes containing substances mentioned in 2.1.3.5.3, substances of Class 4.3, substances of the case mentioned in 2.1.3.7 or substances which are not accepted for carriage in accordance with 2.2.x.2.

2.1.3.6 The most specific applicable collective entry (see 2.1.2.5) shall always be used, i.e. a general n.o.s. entry shall only be used if a generic entry or a specific n.o.s. entry cannot be used.

2.1.3.7 Solutions and mixtures of oxidizing substances or substances with an oxidizing subsidiary hazard may have explosive properties. In such a case they are not to be accepted for carriage unless they meet the requirements for Class 1. For solid ammonium nitrate based fertilizers, see also 2.2.51.2.2, thirteenth and fourteenth indent and Manual of Tests and Criteria, Part III, Section 39.

2.1.3.8 Substances of classes 1 to 6.2, 8 and 9, other than those assigned to UN Nos. 3077 and 3082, meeting the criteria of 2.2.9.1.10 are additionally to their hazards of classes 1 to 6.2, 8 and 9 considered to be environmentally hazardous substances. Other substances meeting the criteria of no other class, but those of 2.2.9.1.10 are to be assigned to UN Nos. 3077 and 3082 as appropriate.

2.1.3.9 Wastes which do not meet the criteria for classification in classes 1 to 9 but are covered by the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal may be carried under UN Nos. 3077 or 3082.

2.1.3.10 Table of precedence of hazards

Class and packing group	4.1 II	4.1 III	4.2 II	4.2 III	4.3, I	4.3 II	4.3 III	5.1 I	5.1 II	5.1 III	6.1 I DERMAL	6.1 I ORAL	6.1 II	6.1 III	8 I	8 II	8 III	9
3 I	SOL LIQ 4.1 3 I	SOL LIQ 4.1 3 I	SOL LIQ 4.2 3 I	SOL LIQ 4.2 3 I	4.3 I	4.3 I	4.3 I	SOL LIQ 5.1 I 3 I	SOL LIQ 5.1 I 3 I	SOL LIQ 5.1 I 3 I	3 I	3 I	3 I	3 I	3 I	3 I	3 I	3 I
3 II	SOL LIQ 4.1 3 II	SOL LIQ 4.1 3 II	SOL LIQ 4.2 3 II	SOL LIQ 4.2 3 II	4.3 I	4.3 II	4.3 II	SOL LIQ 5.1 I 3 I	SOL LIQ 5.1 II 3 II	SOL LIQ 5.1 II 3 II	3 I	3 I	3 II	3 II	8 I	3 II	3 II	3 II
3 III	SOL LIQ 4.1 3 II	SOL LIQ 4.1 3 III	SOL LIQ 4.2 3 II	SOL LIQ 4.2 3 III	4.3, I	4.3 II	4.3 III	SOL LIQ 5.1 I 3 I	SOL LIQ 5.1 II 3 II	SOL LIQ 5.1 III 3 III	6.1 I	6.1 I	6.1 II	3 III *)	8 I	8 II	3 III	3 III
4.1 II			4.2 II	4.2 II	4.3 I	4.3 II	4.3 II	5.1 I	4.1 II	4.1 II	6.1 I	6.1 I	SOL LIQ 4.1 II 6.1 II	SOL LIQ 4.1 II 6.1 III	8 I	SOL LIQ 4.1 II 8 II	SOL LIQ 4.1 II 8 II	4.1 II
4.1 III			4.2 II	4.2 III	4.3 I	4.3 II	4.3 III	5.1 I	4.1 II	4.1 III	6.1 I	6.1 I	6.1 II	SOL LIQ 4.1 III 6.1 III	8 I	8 II	SOL LIQ 4.1 III 8 III	4.1 III
4.2 II					4.3 I	4.3 II	4.3 II	5.1 I	4.2 II	4.2 II	6.1 I	6.1 I	4.2 II	4.2 II	8 I	4.2 II	4.2 II	4.2 II
4.2 III					4.3 I	4.3 II	4.3 III	5.1 I	5.1 II	4.2 III	6.1 I	6.1 I	6.1 II	4.2 III	8 I	8 II	4.2 III	4.2 III
4.3 I								5.1 I	4.3 I	4.3 I	6.1 I	4.3 I	4.3 I	4.3 I	4.3 I	4.3 I	4.3 I	4.3 I
4.3 II								5.1 I	4.3 II	4.3 II	6.1 I	4.3 I	4.3 II	4.3 II	8 I	4.3 II	4.3 II	4.3 II
4.3 III								5.1 I	5.1 II	4.3 III	6.1 I	6.1 I	6.1 II	4.3 III	8 I	8 II	4.3 III	4.3 III
5.1 I											5.1 I	5.1 I	5.1 I	5.1 I	5.1 I	5.1 I	5.1 I	5.1 I
5.1 II											6.1 I	5.1 I	5.1 II	5.1 II	8 I	5.1 II	5.1 II	5.1 II
5.1 III											6.1 I	6.1 I	6.1 II	5.1 III	8 I	8 II	5.1 III	5.1 III
6.1 I DERMAL															SOL LIQ 6.1 I 8 I	6.1 I	6.1 I	6.1 I
6.1 I ORAL															SOL LIQ 6.1 I 8 I	6.1 I	6.1 I	6.1 I
6.1 II INHAL															SOL LIQ 6.1 I 8 I	6.1 II	6.1 II	6.1 II
6.1 II DERMAL															SOL LIQ 6.1 I 8 I	SOL LIQ 6.1 II 8 II	6.1 II	6.1 II
6.1 II ORAL			SOL = Solid substances and mixtures LIQ = Liquid substances, mixtures and solutions DERMAL = Dermal toxicity ORAL = Oral toxicity INHAL = Inhalation toxicity *) Class 6.1 for pesticides												8.1	SOL LIQ 6.1 II 8 II	6.1 II	6.1 II
6.1 III															8 I	8 II	8 III	6.1 III
8 I																		8 I
8 II																		8 II
8 III																		8 III

NOTE 1: Examples to explain the use of the table

Classification of a single substance

Description of the substance to be classified:

An amine not mentioned by name meeting the criteria for Class 3, packing group II as well as those for Class 8, packing group I.

Procedure:

The intersection of line 3 II with column 8 I gives 8 I. This amine has therefore to be classified in Class 8 under UN No. 2734 AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S. or UN No. 2734 POLYAMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S., packing group I.

Classification of a mixture

Description of the mixture to be classified:

Mixture consisting of a flammable liquid classified in Class 3, packing group III, a toxic substance in Class 6.1, packing group II and a corrosive substance in Class 8, packing group I.

Procedure:

The intersection of line 3 III with column 6.1 II gives 6.1 II.

The intersection of line 6.1 II with column 8 I gives 8 I LIQ.

This mixture not further defined has therefore to be classified in Class 8 under UN No. 2922 CORROSIVE LIQUID, TOXIC, N.O.S., packing group I.

2: Examples for the classification of mixtures and solutions under a class and a packing group:

A phenol solution of Class 6.1, (II), in benzene of Class 3, (II) is to be classified in Class 3, (II); this solution is to be classified under UN No. 1992 FLAMMABLE LIQUID, TOXIC, N.O.S., Class 3, (II), by virtue of the toxicity of the phenol.

A solid mixture of sodium arsenate of Class 6.1, (II) and sodium hydroxide of Class 8, (II) is to be classified under UN No. 3290 TOXIC SOLID, CORROSIVE, INORGANIC, N.O.S., in Class 6.1 (II).

A solution of crude or refined naphthalene of Class 4.1, (III) in petrol of Class 3, (II), is to be classified under UN No. 3295 HYDROCARBONS, LIQUID, N.O.S. in Class 3, (II).

A mixture of hydrocarbons of Class 3, (III), and of polychlorinated biphenyls (PCB) of Class 9, (II), is to be classified under UN No. 2315 POLYCHLORINATED BIPHENYLS, LIQUID or UN No. 3432 POLYCHLORINATED BIPHENYLS, SOLID in Class 9, (II).

A mixture of propyleneimine of Class 3, and polychlorinated biphenyls (PCB) of Class 9, (II), is to be classified under UN No. 1921 PROPYLENEIMINE, INHIBITED in Class 3.

2.1.4 Classification of samples

2.1.4.1 When the class of a substance is uncertain and it is being carried for further testing, a tentative class, proper shipping name and UN number shall be assigned on the basis of the consignor's knowledge of the substance and application of:

(a) the classification criteria of Chapter 2.2; and

(b) the requirements of this Chapter.

The most severe packing group possible for the proper shipping name chosen shall be used.

Where this provision is used the proper shipping name shall be supplemented with the word "SAMPLE" (e.g., "FLAMMABLE LIQUID, N.O.S., SAMPLE"). In certain instances, where a specific proper shipping name is provided for a sample of a substance considered to meet certain classification criteria (e.g., GAS SAMPLE, NON-PRESSURIZED, FLAMMABLE, UN No. 3167) that proper shipping name shall be used. When an N.O.S. entry is used to carry the sample, the proper shipping name need not be supplemented with the technical name as required by special provision 274 of Chapter 3.3.

2.1.4.2 Samples of the substance shall be carried in accordance with the requirements applicable to the tentative assigned proper shipping name provided:

(a) The substance is not considered to be a substance not accepted for carriage by sub-sections 2.2.x.2 of Chapter 2.2 or by Chapter 3.2;

(b) The substance is not considered to meet the criteria for Class 1 or considered to be an infectious substance or a radioactive material;

(c) The substance is in compliance with 2.2.41.1.15 or 2.2.52.1.9 if it is a self-reactive substance or an organic peroxide, respectively;

(d) The sample is carried in a combination packaging with a net mass per package not exceeding 2.5 kg; and

(e) The sample is not packed together with other goods.

2.1.4.3 ***Samples of energetic materials for testing purposes***

2.1.4.3.1 Samples of organic substances carrying functional groups listed in Tables A6.1 and/or A6.3 in Appendix 6 (Screening Procedures) of the Manual of Tests and Criteria may be carried under UN No. 3224 (self-reactive solid type C) or UN No. 3223 (self-reactive liquid type C), as applicable, of Class 4.1 provided that:

(a) The samples do not contain any:
- Known explosives;
- Substances showing explosive effects in testing;
- Compounds designed with the view of producing a practical explosive or pyrotechnic effect; or
- Components consisting of synthetic precursors of intentional explosives;

(b) For mixtures, complexes or salts of inorganic oxidizing substances of Class 5.1 with organic material(s), the concentration of the inorganic oxidizing substance is:
- Less than 15%, by mass, if assigned to packing group I (high hazard) or II (medium hazard); or
- Less than 30%, by mass, if assigned to packing group III (low hazard);

(c) Available data do not allow a more precise classification;

(d) The sample is not packed together with other goods; and

(e) The sample is packed in accordance with packing instruction P 520 and special packing provisions PP 94 or PP 95 of 4.1.4.1, as applicable.

2.1.5 **Classification of articles as articles containing dangerous goods, n.o.s.**

NOTE: For articles which do not have a proper shipping name, other than UN Nos 3537 to 3548, and which contain only dangerous goods within the permitted limited quantity amounts specified in Column (7a) of Table A of Chapter 3.2, see UN No. 3363 and special provisions 301 and 672 of Chapter 3.3.

2.1.5.1 Articles containing dangerous goods may be classified as otherwise provided by RID under the proper shipping name for the dangerous goods they contain or in accordance with this section.

For the purposes of this section "article" means machinery, apparatus or other devices containing one or more dangerous goods (or residues thereof) that are an integral element of the article, necessary for its functioning and that cannot be removed for the purpose of carriage.

An inner packaging shall not be an article.

2.1.5.2 Such articles may in addition contain batteries. Lithium batteries that are integral to the article shall be of a type proven to meet the testing requirements of the Manual of Tests and Criteria, part III, sub-section 38.3, except when otherwise specified by RID (e.g. for pre-production prototype articles containing lithium batteries or for a small production run, consisting of not more than 100 such articles).

2.1.5.3 This section does not apply to articles for which a more specific proper shipping name already exists in Table A of Chapter 3.2.

2.1.5.4 This section does not apply to dangerous goods of Class 1, Class 6.2, Class 7 or radioactive material contained in articles.

2.1.5.5 Articles containing dangerous goods shall be assigned to the appropriate Class determined by the hazards present using, where applicable, the Table of precedence of hazard in 2.1.3.10 for each of the dangerous goods contained in the article. If dangerous goods classified as Class 9 are contained within the article, all other dangerous goods present in the article shall be considered to present a higher hazard.

2.1.5.6 Subsidiary hazards shall be representative of the primary hazards posed by the other dangerous goods contained within the article. When only one item of dangerous goods is present in the article, the subsidiary hazard(s), if any, shall be the subsidiary hazard(s) identified by the subsidiary hazard label(s) in column (5) of Table A of Chapter 3.2. If the article contains more than one item of dangerous goods and these could react dangerously with one another during carriage, each of the dangerous goods shall be enclosed separately (see 4.1.1.6).

2.1.6 **Classification of packagings, discarded, empty, uncleaned**

Empty uncleaned packagings, large packagings or IBCs, or parts thereof, carried for disposal, recycling or recovery of their material, other than reconditioning, repair, routine maintenance, remanufacturing or reuse, may be assigned to UN 3509 if they meet the requirements for this entry.

Chapter 2.2 Class specific provisions

2.2.1 Class 1: Explosive substances and articles

2.2.1.1 Criteria

2.2.1.1.1 The heading of Class 1 covers:

(a) Explosive substances: solid or liquid substances (or mixtures of substances) capable by chemical reaction of producing gases at such a temperature and pressure and at such a speed as to cause damage to the surroundings.

Pyrotechnic substances: substances or mixtures of substances designed to produce an effect by heat, light, sound, gas or smoke or a combination of these as the result of non-detonating self-sustaining exothermic chemical reactions.

NOTE 1: Substances which are not themselves explosive but which may form an explosive mixture of gas, vapour or dust are not substances of Class 1.

2: Also excluded from Class 1 are: water- or alcohol-wetted explosives of which the water or alcohol content exceeds the limits specified and those containing plasticizers – these explosives are assigned to Class 3 or Class 4.1 – and those explosives which, on the basis of their predominant hazard, are assigned to Class 5.2.

(b) Explosive articles: articles containing one or more explosive or pyrotechnic substances.

NOTE: Devices containing explosive or pyrotechnic substances in such small quantity or of such a character that their inadvertent or accidental ignition or initiation during carriage would not cause any manifestation external to the device by projection, fire, smoke, heat or loud noise are not subject to the requirements of Class 1.

(c) Substances and articles not mentioned above which are manufactured with a view to producing a practical explosive or pyrotechnic effect.

For the purposes of Class 1, the following definition applies:

Phlegmatized means that a substance (or "phlegmatizer") has been added to an explosive to enhance its safety in handling and carriage. The phlegmatizer renders the explosive insensitive, or less sensitive, to the following actions: heat, shock, impact, percussion or friction. Typical phlegmatizing agents include, but are not limited to: wax, paper, water, polymers (such as chlorofluoropolymers), alcohol and oils (such as petroleum jelly and paraffin).

2.2.1.1.2 Any substance or article having or suspected of having explosive properties shall be considered for assignment to Class 1 in accordance with the tests, procedures and criteria prescribed in Part I, Manual of Tests and Criteria.

A substance or article assigned to Class 1 can only be accepted for carriage when it has been assigned to a name or n.o.s. entry listed in Table A of Chapter 3.2 and meets the criteria of the Manual of Tests and Criteria.

2.2.1.1.3 The substances and articles of Class 1 shall be assigned to a UN Number and a name or n.o.s. entry listed in Table A of Chapter 3.2. Interpretation of the names of substances and articles in Table A of Chapter 3.2 shall be based upon the glossary in 2.2.1.4.

Samples of new or existing explosive substances or articles carried for purposes including: testing, classification, research and development quality control, or as a commercial sample, other than initiating explosive, may be assigned to UN No. 0190 SAMPLES, EXPLOSIVE.

The assignment of explosive substances and articles not mentioned by name as such in Table A of Chapter 3.2 to an n.o.s entry of Class 1 or UN No. 0190 SAMPLES, EXPLOSIVE as well as the assignment of certain substances the carriage of which is subject to a specific authorization by the competent authority according to the special provisions referred to in Column (6) of Table A of Chapter 3.2 shall be made by the competent authority of the country of origin. This competent authority shall also approve in writing the conditions of carriage of these substances and articles. If the country of origin is not an RID Contracting State, the classification and the conditions of carriage shall be recognized by the competent authority of the first RID Contracting State reached by the consignment.

2.2.1.1.4 Substances and articles of Class 1 shall have been assigned to a division in accordance with 2.2.1.1.5 and to a compatibility group in accordance with 2.2.1.1.6. The division shall be based on the results of the tests described in 2.3.0 and 2.3.1 applying the definitions in 2.2.1.1.5. The compatibility group shall be determined in accordance with the definitions in 2.2.1.1.6. The classification code shall consist of the division number and the compatibility group letter.

2.2.1.1.5 Definition of divisions

Division 1.1 Substances and articles which have a mass explosion hazard (a mass explosion is an explosion which affects almost the entire load virtually instantaneously).

Division 1.2 Substances and articles which have a projection hazard but not a mass explosion hazard.

Division 1.3 Substances and articles which have a fire hazard and either a minor blast hazard or a minor projection hazard or both, but not a mass explosion hazard:

(a) combustion of which gives rise to considerable radiant heat; or

(b) which burn one after another, producing minor blast or projection effects or both.

Division 1.4 Substances and articles which present only a slight hazard of explosion in the event of ignition or initiation during carriage. The effects are largely confined to the package and no projection of fragments of appreciable size or range is to be expected. An external fire shall not cause virtually instantaneous explosion of almost the entire contents of the package.

Division 1.5 Very insensitive substances having a mass explosion hazard which are so insensitive that there is very little probability of initiation or of transition from burning to detonation under normal conditions of carriage. As a minimum requirement they must not explode in the external fire test.

Division 1.6 Extremely insensitive articles which do not have a mass explosion hazard. The articles predominantly contain extremely insensitive substances and demonstrate a negligible probability of accidental initiation or propagation.

NOTE: The hazard from articles of Division 1.6 is limited to the explosion of a single article.

2.2.1.1.6 Definition of compatibility groups of substances and articles

A Primary explosive substance.

B Article containing a primary explosive substance and not having two or more effective protective features. Some articles, such as detonators for blasting, detonator assemblies for blasting and primers, cap-type, are included, even though they do not contain primary explosives.

C Propellant explosive substance or other deflagrating explosive substance or article containing such explosive substance.

D Secondary detonating explosive substance or black powder or article containing a secondary detonating explosive substance, in each case without means of initiation and without a propelling charge, or article containing a primary explosive substance and having two or more effective protective features.

E Article containing a secondary detonating explosive substance, without means of initiation, with a propelling charge (other than one containing a flammable liquid or gel or hypergolic liquids).

F Article containing a secondary detonating explosive substance with its own means of initiation, with a propelling charge (other than one containing a flammable liquid or gel or hypergolic liquids) or without a propelling charge.

G Pyrotechnic substance, or article containing a pyrotechnic substance, or article containing both an explosive substance and an illuminating, incendiary, tear- or smoke-producing substance (other than a water-activated article or one which contains white phosphorus, phosphides, a pyrophoric substance, a flammable liquid or gel or hypergolic liquids).

H Article containing both an explosive substance and white phosphorus.

J Article containing both an explosive substance and a flammable liquid or gel.

K Article containing both an explosive substance and a toxic chemical agent.

L Explosive substance or article containing an explosive substance and presenting a special hazard (e.g. due to water activation or the presence of hypergolic liquids, phosphides or a pyrophoric substance) necessitating isolation of each type.

N Articles predominantly containing extremely insensitive substances.

S Substance or article so packed or designed that any hazardous effects arising from accidental functioning are confined within the package unless the package has been degraded by fire, in which case all blast or projection effects are limited to the extent that they do not significantly hinder or prevent fire-fighting or other emergency response efforts in the immediate vicinity of the package.

NOTE 1: Each substance or article, packed in a specified packaging, may be assigned to one compatibility group only. Since the criterion of compatibility group S is empirical, assignment to this group is necessarily linked to the tests for assignment of a classification code.

2: Articles of compatibility groups D and E may be fitted or packed together with their own means of initiation, provided that such means have at least two effective protective features designed to prevent an explosion in the event of accidental functioning of the means of initiation. Such articles and packages shall be assigned to compatibility groups D or E.

3: Articles of compatibility groups D and E may be packed together with their own means of initiation, which do not have two effective protective features (i.e. means of initiation assigned to compatibility group B), provided that they comply with mixed packing provision MP 21 of Section 4.1.10. Such packages shall be assigned to compatibility groups D or E.

4: Articles may be fitted or packed together with their own means of ignition, provided that the means of ignition cannot function during normal conditions of carriage.

5: Articles of compatibility groups C, D and E may be packed together. Such packages shall be assigned to compatibility group E.

2.2.1.1.7 Assignment of fireworks to divisions

2.2.1.1.7.1 Fireworks shall normally be assigned to divisions 1.1, 1.2, 1.3 and 1.4 on the basis of test data derived from Test Series 6 of the Manual of Tests and Criteria. However:

(a) waterfalls containing flash composition (see Note 2 of 2.2.1.1.7.5) shall be classified as 1.1G regardless of the results of Test Series 6;

(b) since the range of such articles is very extensive and the availability of test facilities may be limited, assignment to divisions may also be made in accordance with the procedure in 2.2.1.1.7.2.

2.2.1.1.7.2 Assignment of fireworks to UN No. 0333, 0334, 0335 or 0336 may be made on the basis of analogy, without the need for Test Series 6 testing, in accordance with the default fireworks classification table in 2.2.1.1.7.5. Such assignment shall be made with the agreement of the competent authority. Items not specified in the table shall be classified on the basis of test data derived from Test Series 6.

NOTE 1: The addition of other types of fireworks to column 1 of the table in 2.2.1.1.7.5 shall only be made on the basis of full test data submitted to the UN Sub-Committee of Experts on the Transport of Dangerous Goods for consideration.

2: Test data derived by competent authorities which validates, or contradicts the assignment of fireworks specified in column 4 of the table in 2.2.1.1.7.5 to divisions in column 5 should be submitted to the UN Sub-Committee of Experts on the Transport of Dangerous Goods for information.

2.2.1.1.7.3 Where fireworks of more than one division are packed in the same package they shall be classified on the basis of the most dangerous division unless test data derived from Test Series 6 indicate otherwise.

2.2.1.1.7.4 The classification shown in the Table in 2.2.1.1.7.5 applies only for articles packed in fibreboard boxes (4G).

2.2.1.1.7.5 Default fireworks classification Table[2]

NOTE 1: References to percentages in the Table, unless otherwise stated, are to the mass of all pyrotechnic substances (e.g. rocket motors, lifting charge, bursting charge and effect charge).

2: "Flash composition" in this Table refers to pyrotechnic substances in powder form or as pyrotechnic units as presented in the fireworks that are used in waterfalls, or to produce an aural effect or used as a bursting charge, or propellant charge unless:

(a) The time taken for the pressure rise in the HSL Flash Composition Test in Appendix 7 of the Manual of Tests and Criteria is demonstrated to be more than 6 ms for 0.5 g of pyrotechnic substance; or

(b) The pyrotechnic substance gives a negative "-" result in the US Flash Composition Test in Appendix 7 of the Manual of Tests and Criteria.

3: Dimensions in mm refer to:

– for spherical and peanut shells the diameter of the sphere of the shell;

– for cylinder shells the length of the shell;

– for a shell in mortar, Roman candle, shot tube firework or mine the inside diameter of the tube comprising or containing the firework;

– for a bag mine or cylinder mine, the inside diameter of the mortar intended to contain the mine.

Type	Includes: / Synonym:	Definition	Specification	Classification
Shell, spherical or cylindrical	Spherical display shell: aerial shell, colour shell, dye shell, multi-break shell, multi-effect shell, nautical shell, parachute shell, smoke shell, star shell; report shell: maroon, salute, sound shell, thunderclap, aerial shell kit	Device with or without propellant charge, with delay fuse and bursting charge, pyrotechnic unit(s) or loose pyrotechnic substance and designed to be projected from a mortar	All report shells	1.1G
			Colour shell: ≥ 180 mm	1.1G
			Colour shell: < 180 mm with > 25% flash composition, as loose powder and/ or report effects	1.1G
			Colour shell: < 180 mm with ≤ 25% flash composition, as loose powder and/ or report effects	1.3G

[2] This Table contains a list of firework classifications which may be used in the absence of Test Series 6 data (see 2.2.1.1.7.2).

Type	Includes: / Synonym:	Definition	Specification	Classification
			Colour shell: ≤ 50 mm, or ≤ 60 g pyrotechnic substance, with ≤ 2% flash composition as loose powder and/ or report effects	1.4G
	Peanut shell	Device with two or more spherical aerial shells in a common wrapper propelled by the same propellant charge with separate external delay fuses	The most hazardous spherical aerial shell determines the classification	
	Preloaded mortar, shell in mortar	Assembly comprising a spherical or cylindrical shell inside a mortar from which the shell is designed to be projected	All report shells	1.1G
			Colour shell: ≥ 180 mm	1.1G
			Colour shell: > 25% flash composition as loose powder and/or report effects	1.1G
			Colour shell: > 50 mm and < 180 mm	1.2G
			Colour shell: ≤ 50 mm, or ≤ 60 g pyrotechnic substance, with ≤ 25% flash composition as loose powder and/ or report effects	1.3G
	Shell of shells (spherical) (Reference to percentages for shell of shells are to the gross mass of the fireworks article)	Device without propellant charge, with delay fuse and bursting charge, containing report shells and inert materials and designed to be projected from a mortar	> 120 mm	1.1G
		Device without propellant charge, with delay fuse and bursting charge, containing report shells ≤ 25g flash composition per report unit, with ≤ 33% flash composition and ≥ 60% inert materials and designed to be projected from a mortar	≤ 120 mm	1.3G
		Device without propellant charge, with delay fuse and bursting charge, containing colour shells and/or pyrotechnic units and designed to be projected from a mortar	> 300 mm	1.1G
		Device without propellant charge, with delay fuse and bursting charge, containing colour shells ≤ 70mm and/or pyrotechnic units, with ≤ 25% flash composition and ≤ 60% pyrotechnic substance and designed to be projected from a mortar	> 200mm and ≤ 300 mm	1.3G
		Device with propellant charge, with delay fuse and bursting charge, containing colour shells ≤ 70 mm and/or pyrotechnic units, with ≤ 25% flash composition and ≤ 60% pyrotechnic substance and designed to be projected from a mortar	≤ 200 mm	1.3G

Type	Includes: / Synonym:	Definition	Specification	Classification
Battery/ combination	Barrage, bombardos, cakes, finale box, flowerbed, hybrid, multiple tubes, shell cakes, banger batteries, flash banger batteries	Assembly including several elements either containing the same type or several types each corresponding to one of the types of fireworks listed in this table, with one or two points of ignition	The most hazardous firework type determines the classification	
Roman candle	Exhibition candle, candle, bombettes	Tube containing a series of pyrotechnic units consisting of alternate pyrotechnic substance, propellant charge, and transmitting fuse	≥ 50 mm inner diameter, containing flash composition, or < 50 mm with >25% flash composition	1.1G
			≥ 50 mm inner diameter, containing no flash composition	1.2G
			< 50 mm inner diameter and ≤ 25% flash composition	1.3G
			≤ 30 mm inner diameter, each pyrotechnic unit ≤ 25 g and ≤ 5% flash composition	1.4G
Shot tube	Single shot Roman candle, small preloaded mortar	Tube containing a pyrotechnic unit consisting of pyrotechnic substance, propellant charge with or without transmitting fuse	≤ 30 mm inner diameter and pyrotechnic unit > 25 g, or > 5% and ≤ 25% flash composition	1.3G
			≤ 30 mm inner diameter, pyrotechnic unit ≤ 25 g and ≤ 5% flash composition	1.4G
Rocket	Avalanche rocket, signal rocket, whistling rocket, bottle rocket, sky rocket, missile type rocket, table rocket	Tube containing pyrotechnic substance and/or pyrotechnic units, equipped with stick(s) or other means for stabilization of flight, and designed to be propelled into the air	Flash composition effects only	1.1G
			Flash composition > 25% of the pyrotechnic substance	1.1G
			> 20 g pyrotechnic substance and flash composition ≤ 25%	1.3G
			≤ 20 g pyrotechnic substance, black powder bursting charge and ≤ 0.13 g flash composition per report and ≤ 1 g in total	1.4G
Mine	Pot-a-feu, ground mine, bag mine, cylinder mine	Tube containing propellant charge and pyrotechnic units and designed to be placed on the ground or to be fixed in the ground. The principal effect is ejection of all the pyrotechnic units in a single burst producing a widely dispersed visual and/or aural effect in the air or: Cloth or paper bag or cloth or paper cylinder containing propellant charge and pyrotechnic units, designed to be placed in a mortar and to function as a mine	> 25% flash composition, as loose powder and/ or report effects	1.1G
			≥ 180 mm and ≤ 25% flash composition, as loose powder and/ or report effects	1.1G
			< 180 mm and ≤ 25% flash composition, as loose powder and/ or report effects	1.3G
			≤ 150 g pyrotechnic substance, containing ≤ 5% flash composition as loose powder and/ or report effects. Each pyrotechnic unit ≤ 25 g, each report effect < 2 g, each whistle, if any, ≤ 3 g	1.4G

Type	Includes: / Synonym:	Definition	Specification	Classification
Fountain	Volcanos, gerbs, lances, Bengal fire, flitter sparkle, cylindrical fountains, cone fountains, illuminating torch	Non-metallic case containing pressed or consolidated pyrotechnic substance producing sparks and flame **NOTE:** Fountains intended to produce a vertical cascade or curtain of sparks are considered to be waterfalls (see row below).	≥ 1 kg pyrotechnic substance	1.3G
			< 1 kg pyrotechnic substance	1.4G
Waterfall	cascades, showers	pyrotechnic fountain intended to produce a vertical cascade or curtain of sparks	containing flash composition regardless of the results of Test Series 6 (see 2.2.1.1.7.1 (a))	1.1G
			not containing flash composition	1.3G
Sparkler	Handheld sparklers, non-handheld sparklers, wire sparklers	Rigid wire partially coated (along one end) with slow burning pyrotechnic substance with or without an ignition tip	Perchlorate based sparklers: > 5 g per item or > 10 items per pack	1.3G
			Perchlorate based sparklers: ≤ 5 g per item and ≤ 10 items per pack; Nitrate based sparklers: ≤ 30 g per item	1.4G
Bengal stick	Dipped stick	Non-metallic stick partially coated (along one end) with slow-burning pyrotechnic substance and designed to be held in the hand	Perchlorate based items: > 5 g per item or > 10 items per pack	1.3G
			Perchlorate based items: ≤ 5 g per item and ≤ 10 items per pack; Nitrate based items: ≤ 30 g per item	1.4G
Low hazard fireworks and novelties	Table bombs, throwdowns, crackling granules, smokes, fog, snakes, glow worm, serpents, snaps, party poppers	Device designed to produce very limited visible and/ or audible effect which contains small amounts of pyrotechnic substance and/or explosive composition.	Throwdowns and snaps may contain up to 1.6 mg of silver fulminate; snaps and party poppers may contain up to 16 mg of potassium chlorate/ red phosphorous mixture; other articles may contain up to 5 g of pyrotechnic substance, but no flash composition	1.4G
Spinner	Aerial spinner, helicopter, chaser, ground spinner	Non-metallic tube or tubes containing gas- or spark-producing pyrotechnic substance, with or without noise producing composition, with or without aerofoils attached	Pyrotechnic substance per item > 20 g, containing ≤ 3% flash composition as report effects, or whistle composition ≤ 5 g	1.3G
			Pyrotechnic substance per item ≤ 20 g, containing ≤ 3% flash composition as report effects, or whistle composition ≤ 5 g	1.4G
Wheels	Catherine wheels, Saxon	Assembly including drivers containing pyrotechnic substance and provided with a means of attaching it to a support so that it can rotate	≥ 1 kg total pyrotechnic substance, no report effect, each whistle (if any) ≤ 25 g and ≤ 50 g whistle composition per wheel	1.3G

Type	Includes: / Synonym:	Definition	Specification	Classification
			< 1 kg total pyrotechnic substance, no report effect, each whistle (if any) ≤ 5 g and ≤ 10 g whistle composition per wheel	1.4G
Aerial wheel	Flying Saxon, UFO's, rising crown	Tubes containing propellant charges and sparks-flame- and/ or noise producing pyrotechnic substances, the tubes being fixed to a supporting ring	> 200 g total pyrotechnic substance or > 60 g pyrotechnic substance per driver, ≤ 3% flash composition as report effects, each whistle (if any) ≤ 25 g and ≤ 50 g whistle composition per wheel	1.3G
			≤ 200 g total pyrotechnic substance and ≤ 60 g pyrotechnic substance per driver, ≤ 3% flash composition as report effects, each whistle (if any) ≤ 5 g and ≤ 10 g whistle composition per wheel	1.4G
Selection pack	Display selection box, display selection pack, garden selection box, indoor selection box; assortment	A pack of more than one type each corresponding to one of the types of fireworks listed in this table	The most hazardous firework type determines the classification	
Firecracker	Celebration cracker, celebration roll, string cracker	Assembly of tubes (paper or cardboard) linked by a pyrotechnic fuse, each tube intended to produce an aural effect	Each tube ≤ 140 mg of flash composition or ≤ 1 g black powder	1.4G
Banger	Salute, flash banger, lady cracker	Non-metallic tube containing report composition intended to produce an aural effect	> 2 g flash composition per item	1.1G
			≤ 2 g flash composition per item and ≤ 10 g per inner packaging	1.3G
			≤ 1 g flash composition per item and ≤ 10 g per inner packaging or ≤ 10 g black powder per item	1.4G

2.2.1.1.8 Exclusion from Class 1

2.2.1.1.8.1 An article or a substance may be excluded from Class 1 by virtue of test results and the Class 1 definition with the approval of the competent authority of any RID Contracting State who may also recognize an approval granted by the competent authority of a country which is not an RID Contracting State provided that this approval has been granted in accordance with the procedures applicable according to RID, ADR, ADN, the IMDG Code or the ICAO Technical Instructions.

2.2.1.1.8.2 With the approval of the competent authority in accordance with 2.2.1.1.8.1, an article may be excluded from Class 1 when three unpackaged articles, each individually activated by its own means of initiation or ignition or external means to function in the designed mode, meet the following test criteria:

(a) No external surface shall have a temperature of more than 65 °C. A momentary spike in temperature up to 200 ºC is acceptable;

(b) No rupture or fragmentation of the external casing or movement of the article or detached parts thereof of more than one metre in any direction;

NOTE: Where the integrity of the article may be affected in the event of an external fire these criteria shall be examined by a fire test, such as described in ISO 12097-3.

(c) No audible report exceeding 135 dB(C) peak at a distance of one metre;

(d) No flash or flame capable of igniting a material such as a sheet of 80 ± 10 g/m² paper in contact with the article; and

(e) No production of smoke, fumes or dust in such quantities that the visibility in a one cubic metre chamber equipped with appropriately sized blow out panels is reduced more than 50% as measured by a calibrated light (lux) meter or radiometer located one metre from a constant light source located at the midpoint on opposite walls. The general guidance on Optical Density Testing in ISO 5659-1 and the general guidance on the Photometric System described in Section 7.5 in ISO 5659-2 may be used or similar optical density measurement methods designed to accomplish the same purpose may also be employed. A suitable hood cover surrounding the back and sides of the light meter shall be used to minimize effects of scattered or leaking light not emitted directly from the source.

NOTE 1: If during the tests addressing criteria (a), (b), (c) and (d) no or very little smoke is observed the test described in (e) may be waived.

2: The competent authority referred to in 2.2.1.1.8.1 may require testing in packaged form if it is determined that, as packaged for carriage, the article may pose a greater hazard.

2.2.1.1.9 Classification documentation

2.2.1.1.9.1 A competent authority assigning an article or substance to Class 1 shall confirm that classification with the applicant in writing.

2.2.1.1.9.2 A competent authority classification document may be in any form and may consist of more than one page, provided pages are numbered consecutively. The document shall have a unique reference.

2.2.1.1.9.3 The information provided shall be easy to identify, legible and durable.

2.2.1.1.9.4 Examples of the information that may be provided in the classification documents are as follows:

(a) The name of the competent authority and the provisions in national legislation under which it is granted its authority;

(b) The modal or national regulations for which the classification document is applicable;

(c) Confirmation that the classification has been approved, made or agreed in accordance with the UN Model Regulations or the relevant modal regulations;

(d) The name and address of the person in law to which the classification has been assigned and any company registration which uniquely identifies a company or other body corporate under national legislation;

(e) The name under which the explosives will be placed onto the market or otherwise supplied for carriage;

(f) The proper shipping name, UN number, class, division and corresponding compatibility group of the explosives;

(g) Where appropriate, the maximum net explosive mass of the package or article;

(h) The name, signature, stamp, seal or other identification of the person authorised by the competent authority to issue the classification document is clearly visible;

(i) Where safety in carriage or the division is assessed as being dependent upon the packaging, the packaging mark or a description of the permitted inner packagings, intermediate packagings, outer packagings;

(j) The classification document states the part number, stock number or other identifying reference under which the explosives will be placed onto the market or otherwise supplied for carriage;

(k) The name and address of the person in law who manufactured the explosives and any company registration which uniquely identifies a company or other body corporate under national legislation;

(l) Any additional information regarding the applicable packing instruction and special packing provisions where appropriate;

(m) The basis for assigning the classification, i.e. whether on the basis of test results, default for fireworks, analogy with classified explosive, by definition from Table A of Chapter 3.2 etc.;

(n) Any special conditions or limitations that the competent authority has identified as relevant to the safety for carriage of the explosives, the communication of the hazard and international carriage;

(o) The expiry date of the classification document is given where the competent authority considers one to be appropriate.

2.2.1.2 Substances and articles not accepted for carriage

2.2.1.2.1 Explosive substances which are unduly sensitive according to the criteria of the Manual of Tests and Criteria, Part I, or are liable to spontaneous reaction, as well as explosive substances and articles which cannot be assigned to a name or n.o.s. entry listed in Table A of Chapter 3.2, shall not be accepted for carriage.

2.2.1.2.2 Substances of compatibility group A shall not be accepted for carriage by rail (1.1 A, UN Nos. 0074, 0113, 0114, 0129, 0130, 0135, 0224 and 0473).

Articles of compatibility group K shall not be accepted for carriage (1.2 K, UN No. 0020 and 1.3 K, UN No. 0021).

2.2.1.3 List of collective entries

Classification code (see 2.2.1.1.4)	UN No.	Name of the substance or article
1.1 A	0473	SUBSTANCES, EXPLOSIVE, N.O.S. (not accepted for carriage by rail, see 2.2.1.2.2)
1.1 B	0461	COMPONENTS, EXPLOSIVE TRAIN, N.O.S.
1.1 C	0474	SUBSTANCES, EXPLOSIVE, N.O.S.
	0497	PROPELLANT, LIQUID
	0498	PROPELLANT, SOLID
	0462	ARTICLES, EXPLOSIVE, N.O.S.
1.1 D	0475	SUBSTANCES, EXPLOSIVE, N.O.S.
	0463	ARTICLES, EXPLOSIVE, N.O.S.
1.1 E	0464	ARTICLES, EXPLOSIVE, N.O.S.
1.1 F	0465	ARTICLES, EXPLOSIVE, N.O.S.
1.1 G	0476	SUBSTANCES, EXPLOSIVE, N.O.S.
1.1 L	0357	SUBSTANCES, EXPLOSIVE, N.O.S.
	0354	ARTICLES, EXPLOSIVE, N.O.S.
1.2 B	0382	COMPONENTS, EXPLOSIVE TRAIN, N.O.S.
1.2 C	0466	ARTICLES, EXPLOSIVE, N.O.S.
1.2 D	0467	ARTICLES, EXPLOSIVE, N.O.S.
1.2 E	0468	ARTICLES, EXPLOSIVE, N.O.S.
1.2 F	0469	ARTICLES, EXPLOSIVE, N.O.S.
1.2 L	0358	SUBSTANCES, EXPLOSIVE, N.O.S.
	0248	CONTRIVANCES, WATER-ACTIVATED with burster, expelling charge or propelling charge
	0355	ARTICLES, EXPLOSIVE, N.O.S.
1.3 C	0132	DEFLAGRATING METAL SALTS OF AROMATIC NITRO-DERIVATIVES, N.O.S.
	0477	SUBSTANCES, EXPLOSIVE, N.O.S.
	0495	PROPELLANT, LIQUID
	0499	PROPELLANT, SOLID
	0470	ARTICLES, EXPLOSIVE, N.O.S.
1.3 G	0478	SUBSTANCES, EXPLOSIVE, N.O.S.
1.3 L	0359	SUBSTANCES, EXPLOSIVE, N.O.S.
	0249	CONTRIVANCES, WATER-ACTIVATED with burster, expelling charge or propelling charge
	0356	ARTICLES, EXPLOSIVE, N.O.S.
1.4 B	0350	ARTICLES, EXPLOSIVE, N.O.S.
	0383	COMPONENTS, EXPLOSIVE TRAIN, N.O.S.
1.4 C	0479	SUBSTANCES, EXPLOSIVE, N.O.S.
	0501	PROPELLANT, SOLID
	0351	ARTICLES, EXPLOSIVE, N.O.S.
1.4 D	0480	SUBSTANCES, EXPLOSIVE, N.O.S.
	0352	ARTICLES, EXPLOSIVE, N.O.S.
1.4 E	0471	ARTICLES, EXPLOSIVE, N.O.S.
1.4 F	0472	ARTICLES, EXPLOSIVE, N.O.S.
1.4 G	0485	SUBSTANCES, EXPLOSIVE, N.O.S.
	0353	ARTICLES, EXPLOSIVE, N.O.S.
1.4 S	0481	SUBSTANCES, EXPLOSIVE, N.O.S.
	0349	ARTICLES, EXPLOSIVE, N.O.S.
	0384	COMPONENTS, EXPLOSIVE TRAIN, N.O.S.
1.5 D	0482	SUBSTANCES, EXPLOSIVE, VERY INSENSITIVE (SUBSTANCES, EVI) N.O.S.
1.6 N	0486	ARTICLES, EXPLOSIVE, EXTREMELY INSENSITIVE (ARTICLES, EEI)
	0190	SAMPLES, EXPLOSIVE other than initiating explosive
	NOTE:	Division and compatibility group shall be defined as directed by the competent authority and according to the principles in 2.2.1.1.4.

2.2.1.4 Glossary of names

NOTE 1: The descriptions in the glossary are not intended to replace the test procedures, nor to determine the hazard classification of a substance or article of Class 1. Assignment to the correct division and a decision on whether compatibility group S is appropriate shall be based on testing of the product in accordance with the Manual of Tests and Criteria, Part I or by analogy with similar products which have already been tested and assigned in accordance with the procedures of the Manual of Tests and Criteria.

2: The figures given after the names refer to the relevant UN numbers (Column 1 of Table A of Chapter 3.2). For the classification code, see 2.2.1.1.4.

AMMUNITION, ILLUMINATING, with or without burster, expelling charge or propelling charge: UN Nos. 0171, 0254, 0297

Ammunition designed to produce a single source of intense light for lighting up an area. The term includes illuminating cartridges, grenades and projectiles; and illuminating and target identification bombs.

NOTE: The following articles: CARTRIDGES, SIGNAL; SIGNAL DEVICES HAND; SIGNALS, DISTRESS; FLARES, AERIAL; FLARES, SURFACE are not included in this definition. They are listed separately.

AMMUNITION, INCENDIARY, liquid or gel, with burster, expelling charge or propelling charge: UN No. 0247

Ammunition containing liquid or gelatinous incendiary substance. Except when the incendiary substance is an explosive per se, it also contains one or more of the following: a propelling charge with primer and igniter charge; a fuze with burster or expelling charge.

AMMUNITION, INCENDIARY, WHITE PHOSPHORUS with burster, expelling charge or propelling charge: UN Nos. 0243, 0244

Ammunition containing white phosphorus as incendiary substance. It also contains one or more of the following: a propelling charge with primer and igniter charge; a fuze with burster or expelling charge.

AMMUNITION, INCENDIARY with or without burster, expelling charge or propelling charge: UN Nos. 0009, 0010, 0300

Ammunition containing incendiary composition. Except when the composition is an explosive per se, it also contains one or more of the following: a propelling charge with primer and igniter charge; a fuze with burster or expelling charge.

AMMUNITION, PRACTICE: UN Nos. 0362, 0488

Ammunition without a main bursting charge, containing a burster or expelling charge. Normally it also contains a fuze and a propelling charge.

NOTE: GRENADES, PRACTICE are not included in this definition. They are listed separately.

AMMUNITION, PROOF: UN No. 0363

Ammunition containing pyrotechnic substances, used to test the performance or strength of new ammunition, weapon components or assemblies.

AMMUNITION, SMOKE, WHITE PHOSPHORUS, with burster, expelling charge or propelling charge: UN Nos. 0245, 0246

Ammunition containing white phosphorus as a smoke-producing substance. It also contains one or more of the following: a propelling charge with primer and igniter charge; a fuze with burster or expelling charge. The term includes grenades, smoke.

AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge: UN Nos. 0015, 0016, 0303

Ammunition containing a smoke-producing substance such as chlorosulphonic acid mixture or titanium tetrachloride; or a smoke-producing pyrotechnic composition based on hexachloroethane or red phosphorus. Except when the substance is an explosive per se, the ammunition also contains one or more of the following: a propelling charge with primer and igniter charge; a fuze with burster or expelling charge. The term includes grenades, smoke.

NOTE: SIGNALS, SMOKE are not included in this definition. They are listed separately.

AMMUNITION, TEAR-PRODUCING, with burster, expelling charge or propelling charge: UN Nos. 0018, 0019, 0301

Ammunition containing a tear-producing substance. It also contains one or more of the following: a pyrotechnic substance; a propelling charge with primer and igniter charge; a fuze with burster or expelling charge.

ARTICLES, EXPLOSIVE, EXTREMELY INSENSITIVE (ARTICLES EEI): UN No. 0486

Articles that predominantly contain extremely insensitive substances which demonstrate a negligible probability of accidental initiation or propagation under normal conditions of transport, and which have passed Test Series 7.

ARTICLES, PYROPHORIC: UN No. 0380

Articles which contain a pyrophoric substance (capable of spontaneous ignition when exposed to air) and an explosive substance or component. The term excludes articles containing white phosphorus.

ARTICLES, PYROTECHNIC, for technical purposes: UN Nos. 0428, 0429, 0430, 0431, 0432

Articles which contain pyrotechnic substances and are used for technical purposes such as heat generation, gas generation, theatrical effects, etc.

NOTE: The following articles: all ammunition; CARTRIDGES, SIGNAL; CUTTERS, CABLE, EXPLOSIVE; FIREWORKS; FLARES, AERIAL; FLARES, SURFACE; RELEASE DEVICES, EXPLOSIVE; RIVETS, EXPLOSIVE; SIGNAL DEVICES, HAND; SIGNALS, DISTRESS; SIGNALS, RAILWAY TRACK, EXPLOSIVES; SIGNALS, SMOKE are not included in this definition. They are listed separately.

BLACK POWDER (GUNPOWDER), COMPRESSED or **BLACK POWDER (GUNPOWDER), IN PELLETS**: UN No. 0028

Substance consisting of a pelletized form of black powder.

BLACK POWDER (GUNPOWDER), granular or as meal: UN No. 0027

Substance consisting of an intimate mixture of charcoal or other carbon and either potassium nitrate or sodium nitrate, with or without sulphur.

BOMBS, WITH FLAMMABLE LIQUID, with bursting charge: UN Nos. 0399, 0400

Articles which are dropped from aircraft, consisting of a tank filled with flammable liquid and bursting charge.

BOMBS, PHOTO-FLASH: UN No. 0038

Explosive articles which are dropped from aircraft to provide brief, intense illumination for photography. They contain a charge of detonating explosive without means of initiation or with means of initiation containing two or more effective protective features.

BOMBS, PHOTO-FLASH: UN No. 0037

Explosive articles which are dropped from aircraft to provide brief, intense illumination for photography. They contain a charge of detonating explosive with means of initiation not containing two or more effective protective features.

BOMBS, PHOTO-FLASH: UN Nos. 0039, 0299

Explosive articles which are dropped from aircraft to provide brief, intense illumination for photography. They contain a photo-flash composition.

BOMBS with bursting charge: UN Nos. 0034; 0035

Explosive articles which are dropped from aircraft, without means of initiation or with means of initiation containing two or more effective protective features.

BOMBS with bursting charge: UN Nos. 0033, 0291

Explosive articles which are dropped from aircraft, with means of initiation not containing two or more effective protective features.

BOOSTERS WITH DETONATOR: UN Nos. 0225, 0268

Articles consisting of a charge of detonating explosive with means of initiation. They are used to increase the initiating power of detonators or detonating cord.

BOOSTERS without detonator: UN Nos. 0042, 0283

Articles consisting of a charge of detonating explosive without means of initiation. They are used to increase the initiating power of detonators or detonating cord.

BURSTERS, explosive: UN No. 0043

Articles consisting of a small charge of explosive used to open projectiles or other ammunition in order to disperse their contents.

CARTRIDGES, FLASH: UN Nos. 0049, 0050

Articles consisting of a casing, a primer and flash powder, all assembled in one piece ready for firing.

CARTRIDGES FOR TOOLS, BLANK: UN No. 0014

Article, used in tools, consisting of a closed cartridge case with a centre or rim fire primer with or without a charge of smokeless or black powder but with no projectile.

CARTRIDGES FOR WEAPONS, BLANK: UN Nos. 0326, 0413, 0327, 0338, 0014

Ammunition consisting of a closed cartridge case with a centre or rim fire primer and a charge of smokeless or black powder but no projectile. It produces a loud noise and is used for training, saluting, propelling charge, starter pistols, etc. The term includes ammunition, blank.

CARTRIDGES FOR WEAPONS, INERT PROJECTILE: UN Nos. 0328, 0417, 0339, 0012

Ammunition consisting of a projectile without bursting charge but with a propelling charge with or without a primer. The articles may include a tracer, provided that the predominant hazard is that of the propelling charge.

CARTRIDGES FOR WEAPONS with bursting charge: UN Nos. 0006, 0321, 0412

Ammunition consisting of a projectile with a bursting charge without means of initiation or with means of initiation containing two or more effective protective features; and a propelling charge with or without a primer. The term includes fixed (assembled) ammunition, semi-fixed (partially assembled) ammunition and separate loading ammunition when the components are packed together.

CARTRIDGES FOR WEAPONS with bursting charge: UN Nos. 0005, 0007, 0348

Ammunition consisting of a projectile with a bursting charge with means of initiation not containing two or more effective protective features; and a propelling charge with or without a primer. The term includes fixed (assembled) ammunition, semi-fixed (partially assembled) ammunition and separate loading ammunition when the components are packed together.

CARTRIDGES, OIL WELL: UN Nos. 0277, 0278

Articles consisting of a thin casing of fibreboard, metal or other material containing only propellant powder which projects a hardened projectile to perforate an oil well casing.

NOTE: CHARGES, SHAPED are not included in this definition. They are listed separately.

CARTRIDGES, POWER DEVICE: UN Nos. 0275, 0276, 0323, 0381

Articles designed to accomplish mechanical actions. They consist of a casing with a charge of deflagrating explosive and a means of ignition. The gaseous products of the deflagration produce inflation, linear or rotary motion or activate diaphragms, valves or switches or project fastening devices or extinguishing agents.

CARTRIDGES, SIGNAL: UN Nos. 0054, 0312, 0405

Articles designed to fire coloured flares or other signals from signal pistols, etc.

CARTRIDGES, SMALL ARMS: UN Nos. 0417, 0339, 0012

Ammunition consisting of a cartridge case fitted with a centre or rim fire primer and containing both a propelling charge and solid projectile. They are designed to be fired in weapons of calibre not larger than 19.1 mm. Shot-gun cartridges of any calibre are included in this description.

NOTE: CARTRIDGES, SMALL ARMS, BLANK, are not included in this definition. They are listed separately. Some military small arms cartridges are not included in this definition. They are listed under CARTRIDGES FOR WEAPONS, INERT PROJECTILE.

CARTRIDGES, SMALL ARMS, BLANK: UN Nos. 0014, 0327, 0338

Ammunition consisting of a closed cartridge case with a centre or rim fire primer and a charge of smokeless or black powder. The cartridge cases contain no projectiles. The cartridges are designed to be fired from weapons with a calibre of at most 19.1 mm and serve to produce a loud noise and are used for training, saluting, propelling charge, starter pistols, etc.

CASES, CARTRIDGE, EMPTY, WITH PRIMER: UN Nos. 0379; 0055

Articles consisting of a cartridge case made from metal, plastics or other non-inflammable material, in which the only explosive component is the primer.

CASES, COMBUSTIBLE, EMPTY, WITHOUT PRIMER: UN Nos. 0447, 0446

Articles consisting of a cartridge case made partly or entirely from nitrocellulose.

CHARGES, BURSTING, PLASTICS BONDED: UN Nos. 0457, 0458, 0459, 0460

Articles consisting of a charge of detonating explosive, plastics bonded, manufactured in a specific form without a casing and without means of initiation. They are designed as components of ammunition such as warheads.

CHARGES, DEMOLITION: UN No. 0048

Articles containing a charge of a detonating explosive in a casing of fibreboard, plastics, metal or other material. The articles are without means of initiation or with means of initiation containing two or more effective protective features.

NOTE: The following articles: BOMBS; MINES; PROJECTILES are not included in this definition. They are listed separately.

CHARGES, DEPTH: UN No. 0056

Articles consisting of a charge of detonating explosive contained in a drum or projectile without means of initiation or with means of initiation containing two or more effective protective features. They are designed to detonate under water.

CHARGES, EXPLOSIVE, COMMERCIAL without detonator: UN Nos. 0442, 0443, 0444, 0445

Articles consisting of a charge of detonating explosive without means of initiation, used for explosive welding, jointing, forming and other metallurgical processes.

CHARGES, PROPELLING, FOR CANNON: UN Nos. 0242, 0279, 0414

Charges of propellant in any physical form for separate-loading ammunition for cannon.

CHARGES, PROPELLING: UN Nos. 0271, 0272, 0415, 0491

Articles consisting of a charge of a propellant charge in any physical form, with or without a casing, as a component of rocket motors or for reducing the drag of projectiles.

CHARGES, SHAPED, without detonator: UN Nos. 0059, 0439, 0440, 0441

Articles consisting of a casing containing a charge of detonating explosive with a cavity lined with rigid material, without means of initiation. They are designed to produce a powerful, penetrating jet effect.

CHARGES, SHAPED, FLEXIBLE, LINEAR: UN Nos. 0237, 0288

Articles consisting of a V-shaped core of a detonating explosive clad by a flexible sheath.

CHARGES, SUPPLEMENTARY, EXPLOSIVE: UN No. 0060

Articles consisting of a small removable booster placed in the cavity of a projectile between the fuze and the bursting charge.

COMPONENTS, EXPLOSIVE TRAIN, N.O.S.: UN Nos. 0382, 0383, 0384, 0461

Articles containing an explosive designed to transmit detonation or deflagration within an explosive train.

CONTRIVANCES, WATER-ACTIVATED with burster, expelling charge or propelling charge: UN Nos. 0248, 0249

Articles whose functioning depends upon physico-chemical reaction of their contents with water.

CORD, DETONATING, flexible: UN Nos. 0065, 0289

Article consisting of a core of detonating explosive enclosed in spun fabric and a plastics or other covering. The covering is not necessary if the spun fabric is sift-proof.

CORD (FUSE) DETONATING, metal clad: UN Nos. 0102, 0290

Article consisting of a core of detonating explosive clad by a soft metal tube with or without protective covering.

CORD (FUSE) DETONATING, MILD EFFECT, metal clad: UN No. 0104

Article consisting of a core of detonating explosive clad by a soft metal tube with or without a protective covering. The quantity of explosive substance is so small that only a mild effect is manifested outside the cord.

CORD, IGNITER: UN No. 0066

Article consisting of textile yarns covered with black powder or another fast burning pyrotechnic composition and of a flexible protective covering; or it consists of a core of black powder surrounded by a flexible woven fabric. It burns progressively along its length with an external flame and is used to transmit ignition from a device to a charge or primer.

CUTTERS, CABLE, EXPLOSIVE: UN No. 0070

Articles consisting of a knife-edged device which is driven by a small charge of deflagrating explosive into an anvil.

DETONATOR ASSEMBLIES, NON-ELECTRIC for blasting: UN Nos. 0360, 0361, 0500

Non-electric detonators assembled with and activated by such means as safety fuse, shock tube, flash tube or detonating cord. They may be of instantaneous design or incorporate delay elements. Detonating relays incorporating detonating cord are included.

DETONATORS, ELECTRIC for blasting: UN Nos. 0030, 0255, 0456

Articles specially designed for the initiation of blasting explosives. These detonators may be constructed to detonate instantaneously or may contain a delay element. Electric detonators are activated by an electric current.

DETONATORS FOR AMMUNITION: UN Nos. 0073, 0364, 0365, 0366

Articles consisting of a small metal or plastics tube containing explosives such as lead azide, PETN or combinations of explosives. They are designed to start a detonation train.

DETONATORS, NON-ELECTRIC for blasting: UN Nos. 0029, 0267, 0455

Articles specially designed for the initiation of blasting explosives. These detonators may be constructed to detonate instantaneously or may contain a delay element. Non-electric detonators are activated by such means as shock tube, flash tube, safety fuse, other igniferous device or flexible detonating cord. Detonating relays without detonating cord are included.

EXPLOSIVE, BLASTING, TYPE A: UN No. 0081

Substances consisting of liquid organic nitrates such as nitroglycerine or a mixture of such ingredients with one or more of the following: nitrocellulose; ammonium nitrate or other inorganic nitrates; aromatic nitro-derivatives, or combustible materials, such as wood-meal and aluminium powder. They may contain inert components such as kieselguhr, and additives such as colouring agents and stabilizers. Such explosives shall be in powdery, gelatinous or elastic form. The term includes dynamite; gelatine, blasting and gelatine dynamites.

EXPLOSIVE, BLASTING, TYPE B: UN Nos. 0082, 0331

Substances consisting of

(a) a mixture of ammonium nitrate or other inorganic nitrates with an explosive such as trinitrotoluene, with or without other substances such as wood-meal and aluminium powder; or

(b) a mixture of ammonium nitrate or other inorganic nitrates with other combustible substances which are not explosive ingredients. In both cases they may contain inert components such as kieselguhr, and additives such as colouring agents and stabilizers. Such explosives must not contain nitroglycerine, similar liquid organic nitrates or chlorates.

EXPLOSIVE, BLASTING, TYPE C: UN No. 0083

Substances consisting of a mixture of either potassium or sodium chlorate or potassium, sodium or ammonium perchlorate with organic nitro-derivatives or combustible materials such as wood-meal or aluminium powder or a hydrocarbon. They may contain inert components such as kieselguhr and additives such as colouring agents and stabilizers. Such explosives must not contain nitroglycerine or similar liquid organic nitrates.

EXPLOSIVE, BLASTING, TYPE D: UN No. 0084

Substances consisting of a mixture of organic nitrated compounds and combustible materials such as hydrocarbons and aluminium powder. They may contain inert components such as kieselguhr and additives such as colouring agents and stabilizers. Such explosives must not contain nitroglycerine, similar liquid organic nitrates, chlorates and ammonium nitrate. The term generally includes plastic explosives.

EXPLOSIVES, BLASTING, TYPE E: UN Nos. 0241, 0332

Substances consisting of water as an essential ingredient and high proportions of ammonium nitrate or other oxidizers, some or all of which are in solution. The other constituents may include nitro-derivatives such as trinitrotoluene, hydrocarbons or aluminium powder. They may contain inert components such as kieselguhr and additives such as colouring agents and stabilizers. The term includes explosives, emulsion, explosives, slurry and explosives, watergel.

FIREWORKS: UN Nos. 0333, 0334, 0335, 0336, 0337

Pyrotechnic articles designed for entertainment.

FLARES, AERIAL: UN Nos. 0093, 0403, 0404, 0420, 0421;

Articles containing pyrotechnic substances which are designed to be dropped from an aircraft to illuminate, identify, signal or warn.

FLARES, SURFACE: UN Nos. 0092, 0418, 0419

Articles containing pyrotechnic substances which are designed for use on the surface to illuminate, identify, signal or warn.

FLASH POWDER: UN Nos. 0094, 0305

Pyrotechnic substance which, when ignited, produces an intense light.

FRACTURING DEVICES, EXPLOSIVE without detonator, for oil wells: UN No. 0099

Articles consisting of a charge of detonating explosive contained in a casing without means of initiation. They are used to fracture the rock around a drill shaft to assist the flow of crude oil from the rock.

FUSE, IGNITER, tubular, metal clad: UN No. 0103

Article consisting of a metal tube with a core of deflagrating explosive.

FUSE, NON-DETONATING: UN No. 0101

Article consisting of cotton yarns impregnated with fine black powder (quickmatch). It burns with an external flame and is used in ignition trains for fireworks, etc.

FUSE, SAFETY: UN No. 0105

Article consisting of a core of fine grained black powder surrounded by a flexible woven fabric with one or more protective outer coverings. When ignited, it burns at a predetermined rate without any external explosive effect.

FUZES, DETONATING: UN Nos. 0106, 0107, 0257, 0367

Articles with explosive components designed to produce a detonation in ammunition. They incorporate mechanical, electrical, chemical or hydrostatic components to initiate the detonation. They generally incorporate protective features.

FUZES, DETONATING with protective features: UN Nos. 0408, 0409, 0410

Articles with explosive components designed to produce a detonation in ammunition. They incorporate mechanical, electrical, chemical or hydrostatic components to initiate the detonation. The detonating fuze must incorporate two or more effective protective features.

FUZES, IGNITING: UN Nos. 0316, 0317, 0368

Articles with primary explosive components designed to produce a deflagration in ammunition. They incorporate mechanical, electrical, chemical or hydrostatic components to start the deflagration. They generally incorporate protective features.

GRENADES, hand or rifle, with bursting charge: UN Nos. 0284, 0285

Articles which are designed to be thrown by hand or to be projected by a rifle. They are without means of initiation or with means of initiation containing two or more effective protective features.

GRENADES, hand or rifle, with bursting charge: UN Nos. 0292, 0293

Articles which are designed to be thrown by hand or to be projected by a rifle. They are with means of initiation not containing two or more effective protective features.

GRENADES, PRACTICE, hand or rifle: UN Nos. 0110, 0372, 0318, 0452

Articles without a main bursting charge which are designed to be thrown by hand or to be projected by a rifle. They contain the priming device and may contain a spotting charge.

HEXOTONAL: UN No. 0393

Substance consisting of an intimate mixture of cyclotrimethylene-trinitramine (RDX), trinitrotoluene (TNT) and aluminium.

HEXOLITE (HEXOTOL), dry or wetted with less than 15% water, by mass: UN No. 0118

Substance consisting of an intimate mixture of cyclotrimethylene-trinitramine (RDX) and trinitrotoluene (TNT). The term includes "Composition B".

IGNITERS: UN Nos. 0121, 0314, 0315, 0325, 0454

Articles containing one or more explosive substances designed to produce a deflagration in an explosive train. They may be actuated chemically, electrically or mechanically.

NOTE: The following articles: CORD, IGNITER; FUSE, IGNITER; FUSE, NON-DETONATING; FUZES, IGNITING; LIGHTERS, FUSE; PRIMERS, CAP TYPE; PRIMERS, TUBULAR are not included in this definition. They are listed separately.

JET PERFORATING GUNS, CHARGED, oil well, without detonator: UN Nos. 0124, 0494

Articles consisting of a steel tube or metallic strip, into which are inserted shaped charges connected by detonating cord, without means of initiation.

LIGHTERS, FUSE: UN No. 0131

Articles of various design actuated by friction, percussion or electricity and used to ignite safety fuse.

MINES with bursting charge: UN Nos. 0137, 0138

Articles consisting normally of metal or composition receptacles filled with a detonating explosive, without means of initiation or with means of initiation containing two or more effective protective features. They are designed to be operated by the passage of ships, vehicles or personnel. The term includes "Bangalore torpedoes".

MINES with bursting charge: UN Nos. 0136, 0294

Articles consisting normally of metal or composition receptacles filled with a detonating explosive, with means of initiation not containing two or more effective protective features. They are designed to be operated by the passage of ships, vehicles or personnel. The term includes "Bangalore torpedoes".

OCTOLITE (OCTOL), dry or wetted with less than 15% water, by mass: UN No. 0266

Substance consisting of an intimate mixture of cyclotetramethylene-tetranitramine (HMX) and trinitrotoluene (TNT).

OCTONAL: UN No. 0496

Substance consisting of an intimate mixture of cyclotetramethylenetetranitramine (HMX), trinitrotoluene (TNT) and aluminium.

PENTOLITE, dry or wetted with less than 15% water, by mass: UN No. 0151

Substance consisting of an intimate mixture of pentaerythrite tetranitrate (PETN) and trinitrotoluene (TNT).

POWDER CAKE (POWDER PASTE), WETTED with not less than 17% alcohol, by mass; **POWDER CAKE (POWDER PASTE), WETTED** with not less than 25% water, by mass: UN Nos. 0433, 0159

Substance consisting of nitrocellulose impregnated with not more than 60% of nitroglycerine or other liquid organic nitrates or a mixture of these.

POWDER, SMOKELESS: UN Nos. 0160, 0161, 0509

Substance based on nitrocellulose used as propellant. The term includes propellants with a single base (nitrocellulose (NC) alone), those with a double base (such as NC and nitroglycerine/(NG)) and those with a triple base (such as NC/NG/nitroguanidine).

NOTE: Cast, pressed or bag-charges of smokeless powder are listed under CHARGES, PROPELLING or CHARGES, PROPELLING, FOR CANON.

PRIMERS, CAP TYPE: UN Nos. 0044, 0377, 0378

Articles consisting of a metal or plastics cap containing a small amount of primary explosive mixture that is readily ignited by impact. They serve as igniting elements in small arms cartridges and in percussion primers for propelling charges.

PRIMERS, TUBULAR: UN Nos. 0319, 0320, 0376

Articles consisting of a primer for ignition and an auxiliary charge of deflagrating explosive such as black powder used to ignite the propelling charge in a cartridge case for cannon, etc.

PROJECTILES, inert with tracer: UN Nos. 0345, 0424, 0425

Articles such as a shell or bullet, which are projected from a cannon or other gun, rifle or other small arm.

PROJECTILES with burster or expelling charge: UN Nos. 0346, 0347

Articles such as a shell or bullet, which are projected from a cannon or other gun. They are without means of initiation or with means of initiation containing two or more effective protective features. They are used to scatter dyes for spotting or other inert materials.

PROJECTILES with burster or expelling charge: UN Nos. 0426, 0427

Articles such as a shell or bullet, which are projected from a cannon or other gun. They are with means of initiation not containing two or more effective protective features. They are used to scatter dyes for spotting or other inert materials.

PROJECTILES with burster or expelling charge: UN Nos. 0434, 0435

Articles such as a shell or bullet, which are projected from a cannon or other gun, rifle or other small arm. They are used to scatter dyes for spotting or other inert materials.

PROJECTILES with bursting charge: UN Nos. 0168, 0169, 0344

Articles such as a shell or bullet, which are projected from a cannon or other gun. They are without means of initiation or with means of initiation containing two or more effective protective features.

PROJECTILES with bursting charge: UN Nos. 0167, 0324

Articles such as a shell or bullet, which are projected from a cannon or other gun. They are with means of initiation not containing two or more effective protective features.

PROPELLANT, LIQUID: UN Nos. 0495, 0497

Substance consisting of a deflagrating liquid explosive, used for propulsion.

PROPELLANT, SOLID: UN Nos. 0498, 0499, 0501

Substance consisting of a deflagrating solid explosive, used for propulsion.

RELEASE DEVICES, EXPLOSIVE: UN No. 0173

Articles consisting of a small charge of explosive with means of initiation and rods or links. They sever the rods or links to release equipment quickly.

RIVETS, EXPLOSIVE: UN No. 0174

Articles consisting of a small charge of explosive inside a metallic rivet.

ROCKET MOTORS: UN Nos. 0186, 0280, 0281, 0510

Articles consisting of a charge of explosive, generally a solid propellant, contained in a cylinder fitted with one or more nozzles. They are designed to propel a rocket or a guided missile.

ROCKET MOTORS, LIQUID FUELLED: UN Nos. 0395, 0396

Articles consisting of a liquid fuel within a cylinder fitted with one or more nozzles. They are designed to propel a rocket or a guided missile.

ROCKET MOTORS WITH HYPERGOLIC LIQUIDS with or without expelling charge: UN Nos. 0322, 0250

Articles consisting of a hypergolic fuel contained in a cylinder fitted with one or more nozzles. They are designed to propel a rocket or a guided missile.

ROCKETS, LINE THROWING: UN Nos. 0238, 0240, 0453

Articles consisting of a rocket motor which is designed to extend a line.

ROCKETS, LIQUID FUELLED with bursting charge: UN Nos. 0397, 0398

Articles consisting of a liquid fuel within a cylinder fitted with one or more nozzles and fitted with a warhead. The term includes guided missiles.

ROCKETS with bursting charge: UN Nos. 0181, 0182

Articles consisting of a rocket motor and a warhead without means of initiation or with means of initiation containing two or more effective protective features. The term includes guided missiles.

ROCKETS with bursting charge: UN Nos. 0180, 0295

Articles consisting of a rocket motor and a warhead with means of initiation not containing two or more effective protective features. The term includes guided missiles.

ROCKETS with expelling charge: UN Nos. 0436, 0437, 0438

Articles consisting of a rocket motor and a charge to expel the payload from a rocket head. The term includes guided missiles.

ROCKETS with inert head: UN Nos. 0183, 0502

Articles consisting of a rocket motor and an inert head. The term includes guided missiles.

SAFETY DEVICES, PYROTECHNIC: UN No. 0503

Articles which contain pyrotechnic substances or dangerous goods of other classes and are used in vehicles, vessels or aircraft to enhance safety to persons. Examples are: air bag inflators, air bag modules, seat-belt pretensioners and pyromechanical devices. These pyromechanical devices are assembled components for tasks such as but not limited to separation, locking, or occupant restraint.

SAMPLES, EXPLOSIVE, other than initiating explosive UN No. 0190

New or existing explosive substances or articles, not yet assigned to a name in Table A of Chapter 3.2 and carried in conformity with the instructions of the competent authority and generally in small quantities, inter alia, for the purposes of testing, classification, research and development, or quality control, or as commercial samples.

NOTE: Explosive substances or articles already assigned to another name in Table A of Chapter 3.2 are not included in this definition.

SIGNAL DEVICES, HAND: UN Nos. 0191, 0373

Portable articles containing pyrotechnic substances which produce visual signals or warnings. The term includes small surface flares such as highway or railway flares and small distress flares.

SIGNALS, DISTRESS, ship: UN Nos. 0194, 0195, 0505, 0506

Articles containing pyrotechnic substances designed to produce signals by means of sound, flame or smoke or any combination thereof.

SIGNALS, RAILWAY TRACK, EXPLOSIVE: UN Nos. 0192, 0193, 0492, 0493

Articles containing a pyrotechnic substance which explodes with a loud report when the article is crushed. They are designed to be placed on a rail.

SIGNALS, SMOKE: UN Nos. 0196, 0197, 0313, 0487, 0507

Articles containing pyrotechnic substances which emit smoke. In addition they may contain devices for emitting audible signals.

SOUNDING DEVICES, EXPLOSIVE: UN Nos. 0374, 0375

Articles consisting of a charge of detonating explosive, without means of initiation or with means of initiation containing two or more effective protective features. They are dropped from ships and function when they reach a predetermined depth or the sea bed.

SOUNDING DEVICES, EXPLOSIVE: UN Nos. 0204, 0296

Articles consisting of a charge of detonating explosive with means of initiation not containing two or more effective protective features. They are dropped from ships and function when they reach a predetermined depth or the sea bed.

SUBSTANCES, EXPLOSIVE, VERY INSENSITIVE (SUBSTANCES, EVI), N.O.S.: UN No. 0482

Substances presenting a mass explosion hazard but which are so insensitive that there is very little probability of initiation or of transition from burning to detonation under normal conditions of transport, and which have passed Test Series 5.

TORPEDOES, LIQUID FUELLED with inert head: UN No. 0450

Articles consisting of a liquid explosive system to propel the torpedo through the water, with an inert head.

TORPEDOES, LIQUID FUELLED with or without bursting charge: UN No. 0449

Articles consisting of either a liquid explosive system to propel the torpedo through the water, with or without a warhead; or a liquid non-explosive system to propel the torpedo through the water, with a warhead.

TORPEDOES with bursting charge: UN No. 0451

Articles consisting of a non-explosive system to propel the torpedo through the water, and a warhead without means of initiation or with means of initiation containing two or more effective protective features.

TORPEDOES with bursting charge: UN No. 0329

Articles consisting of an explosive system to propel the torpedo through the water, and a warhead without means of initiation or with means of initiation containing two or more effective protective features.

TORPEDOES with bursting charge: UN No. 0330

Articles consisting of an explosive or non-explosive system to propel the torpedo through the water, and a warhead with means of initiation not containing two or more effective protective features.

TRACERS FOR AMMUNITION: UN Nos. 0212, 0306

Sealed articles containing pyrotechnic substances, designed to reveal the trajectory of a projectile.

TRITONAL: UN No. 0390

Substance consisting of trinitrotoluene (TNT) mixed with aluminium.

WARHEADS, ROCKET with burster or expelling charge: UN No. 0370

Articles consisting of an inert payload and a small charge of detonating or deflagrating explosive, without means of initiation or with means of initiation containing two or more effective protective features. They are designed to be fitted to a rocket motor to scatter inert material. The term includes warheads for guided missiles.

WARHEADS, ROCKET with burster or expelling charge: UN No. 0371

Articles consisting of an inert payload and a small charge of detonating or deflagrating explosive, with means of initiation not containing two or more effective protective features. They are designed to be fitted to a rocket motor to scatter inert material. The term includes warheads for guided missiles.

WARHEADS, ROCKET with bursting charge: UN Nos. 0286, 0287

Articles consisting of a detonating explosive, without means of initiation or with means of initiation containing two or more effective protective features. They are designed to be fitted to a rocket. The term includes warheads for guided missiles.

WARHEADS, ROCKET with bursting charge: UN No. 0369

Articles consisting of a detonating explosive, with means of initiation not containing two or more effective protective features. They are designed to be fitted to a rocket. The term includes warheads for guided missiles.

WARHEADS, TORPEDO with bursting charge: UN No. 0221

Articles consisting of a detonating explosive, without means of initiation or with means of initiation containing two or more effective protective features. They are designed to be fitted to a torpedo.

2.2.2 Class 2: Gases

2.2.2.1 Criteria

2.2.2.1.1 The heading of Class 2 covers pure gases, mixtures of gases, mixtures of one or more gases with one or more other substances and articles containing such substances.

A gas is a substance which:

(a) at 50 °C has a vapour pressure greater than 300 kPa (3 bar); or

(b) is completely gaseous at 20 °C at the standard pressure of 101.3 kPa.

NOTE 1: UN No. 1052 HYDROGEN FLUORIDE is nevertheless classified in Class 8.

2: A pure gas may contain other components deriving from its production process or added to preserve the stability of the product, provided that the level of these components does not change its classification or its conditions of carriage, such as filling ratio, filling pressure, test pressure.

3: N.O.S. entries in 2.2.2.3 may cover pure gases as well as mixtures.

2.2.2.1.2 The substances and articles of Class 2 are subdivided as follows:

1. *Compressed gas:* a gas which when packaged under pressure for carriage is entirely gaseous at -50 °C; this category includes all gases with a critical temperature less than or equal to -50 °C;
2. *Liquefied gas:* a gas which when packaged under pressure for carriage is partially liquid at temperatures above -50 °C. A distinction is made between:

   High pressure liquefied gas: a gas with a critical temperature above -50 °C and equal to or below +65 °C; and

   Low pressure liquefied gas: a gas with a critical temperature above +65 °C;
3. *Refrigerated liquefied gas*: a gas which when packaged for carriage is made partially liquid because of its low temperature;
4. *Dissolved gas:* a gas which when packaged under pressure for carriage is dissolved in a liquid phase solvent;
5. Aerosol dispensers and receptacles, small, containing gas (gas cartridges);
6. Other articles containing gas under pressure;
7. Non-pressurized gases subject to special requirements (gas samples);
8. Chemicals under pressure: liquids, pastes or powders, pressurized with a propellant that meets the definition of a compressed or liquefied gas and mixtures thereof;
9. *Adsorbed gas:* a gas which when packaged for carriage is adsorbed onto a solid porous material resulting in an internal receptacle pressure of less than 101.3 kPa at 20 °C and less than 300 kPa at 50 °C.

2.2.2.1.3 Substances and articles (except aerosols and chemicals under pressure) of Class 2 are assigned to one of the following groups according to their hazardous properties, as follows:

A asphyxiant;

O oxidizing;

F flammable;

T toxic;

TF toxic, flammable;

TC toxic, corrosive;

TO toxic, oxidizing;

TFC toxic, flammable, corrosive;

TOC toxic, oxidizing, corrosive.

For gases and gas mixtures presenting hazardous properties associated with more than one group according to the criteria, the groups designated by letter T take precedence over all other groups. The groups designated by letter F take precedence over the groups designated by letters A or O.

NOTE 1: In the UN Model Regulations, the IMDG Code and the ICAO Technical Instructions, gases are assigned to one of the following three divisions, based on the primary hazard:

Division 2.1: flammable gases (corresponding to the groups designated by the capital letter F);

Division 2.2: non-flammable, non-toxic gases (corresponding to the groups designated by the capital letters A or O);

Division 2.3: toxic gases (corresponding to the groups designated by the capital letter T (i.e. T, TF, TC, TO, TFC and TOC).

2: Receptacles, small containing gas (UN No. 2037) shall be assigned to the groups A to TOC according to the hazard of the contents. For aerosols (UN No. 1950), see 2.2.2.1.6. For chemicals under pressure (UN Nos. 3500 to 3505), see 2.2.2.1.7.

3: Corrosive gases are considered to be toxic, and are therefore assigned to the group TC, TFC or TOC.

2.2.2.1.4 If a mixture of Class 2 mentioned by name in Table A of Chapter 3.2 meets different criteria as mentioned in 2.2.2.1.2 and 2.2.2.1.5, this mixture shall be classified according to the criteria and assigned to an appropriate N.O.S. entry.

2.2.2.1.5 Substances and articles (except aerosols and chemicals under pressure) of Class 2 which are not mentioned by name in Table A of Chapter 3.2 shall be classified under a collective entry listed in 2.2.2.3 in accordance with 2.2.2.1.2 and 2.2.2.1.3. The following criteria shall apply:

Asphyxiant gases

Gases which are non-oxidizing, non-flammable and non-toxic and which dilute or replace oxygen normally in the atmosphere.

Flammable gases

Gases which at 20 °C and a standard pressure of 101.3 kPa:

(a) are ignitable when in a mixture of 13% or less by volume with air; or

(b) have a flammable range with air of at least 12 percentage points regardless of the lower flammable limit.

Flammability shall be determined by tests or by calculation, in accordance with methods adopted by ISO (see ISO 10156:2010).

Where insufficient data are available to use these methods, tests by a comparable method recognized by the competent authority of the country of origin may be used.

If the country of origin is not an RID Contracting State these methods shall be recognized by the competent authority of the first RID Contracting State reached by the consignment.

Oxidizing gases

Gases, which may, generally by providing oxygen, cause or contribute to the combustion of other material more than air does. These are pure gases or gas mixtures with an oxidizing power greater than 23.5% as determined by a method specified in ISO 10156:2010.

Toxic gases

NOTE: Gases meeting the criteria for toxicity in part or completely owing to their corrosivity are to be classified as toxic. See also the criteria under the heading "Corrosive gases" for a possible subsidiary corrosivity hazard.

Gases which:

(a) are known to be so toxic or corrosive to humans as to pose a hazard to health; or

(b) are presumed to be toxic or corrosive to humans because they have a LC_{50} value for acute toxicity equal to or less than 5 000 ml/m³ (ppm) when tested in accordance with 2.2.61.1.

In the case of gas mixtures (including vapours of substances from other classes) the following formula may be used:

$$LC_{50}\ \text{Toxic (mixture)} = \frac{1}{\sum_{i=1}^{n} \frac{f_i}{T_i}}$$

where

f_i = mole fraction of the i^{th} component substance of the mixture;

T_i = toxicity index of the i^{th} component substance of the mixture. The T_i equals the LC_{50} value as found in packing instruction P200 of 4.1.4.1. When no LC_{50} value is listed in packing instruction P200 of 4.1.4.1, a LC_{50} value available in scientific literature shall be used. When the LC_{50} value is unknown, the toxicity index is determined by using the lowest LC_{50} value of substances of similar physiological and chemical effects, or through testing if this is the only practical possibility.

Corrosive gases

Gases or gas mixtures meeting the criteria for toxicity completely owing to their corrosivity are to be classified as toxic with a subsidiary corrosivity hazard.

A gas mixture that is considered to be toxic due to the combined effects of corrosivity and toxicity has a subsidiary hazard of corrosivity when the mixture is known by human experience to be destructive to the skin, eyes or mucous membranes or when the LC_{50} value of the corrosive components of the mixture is equal to or less than 5 000 ml/m^3 (ppm) when the LC_{50} is calculated by the formula:

$$LC_{50}\ \text{Corrosive (mixture)} = \frac{1}{\sum_{i=1}^{n} \frac{fc_i}{Tc_i}}$$

where

fc_i = mole fraction of the i^{th} corrosive component substance of the mixture;

Tc_i = toxicity index of the i^{th} corrosive component substance of the mixture. The T_{ci} equals the LC_{50} value as found in packing instruction P200 of 4.1.4.1. When no LC_{50} value is listed in packing instruction P200 of 4.1.4.1, a LC_{50} value available in scientific literature shall be used. When the LC_{50} value is unknown the toxicity index is determined by using the lowest LC_{50} value of substances of similar physiological and chemical effects, or through testing if this is the only practical possibility.

2.2.2.1.6 Aerosols

Aerosols (UN No. 1950) are assigned to one of the following groups according to their hazardous properties, as follows:

A asphyxiant;
O oxidizing;
F flammable;
T toxic;
C corrosive;
CO corrosive, oxidizing;
FC flammable, corrosive;
TF toxic, flammable;
TC toxic, corrosive;
TO toxic, oxidizing;
TFC toxic, flammable, corrosive
TOC toxic, oxidizing, corrosive.

The classification depends on the nature of the contents of the aerosol dispenser.

NOTE: Gases, which meet the definition of toxic gases according to 2.2.2.1.5 and gases identified as "Considered as pyrophoric" by table note c of Table 2 of packing instruction P 200 in 4.1.4.1, shall not be used as a propellant in an aerosol dispenser. Aerosols with contents meeting the criteria for packing group I for toxicity or corrosivity shall not be accepted for carriage (see also 2.2.2.2.2).

The following criteria shall apply:

(a) Assignment to group A shall apply when the contents do not meet the criteria for any other group according to sub-paragraphs (b) to (f) below;

(b) Assignment to group O shall apply when the aerosol contains an oxidizing gas according to 2.2.2.1.5;

(c) Assignment to group F shall apply if the contents include 85% by mass or more flammable components and the chemical heat of combustion is 30 kJ/g or more.

It shall not apply if the contents contain 1% by mass or less flammable components and the heat of combustion is less than 20 kJ/g.

Otherwise the aerosol shall be tested for flammability in accordance with the tests described in the Manual of Tests and Criteria, Part III, section 31. Extremely flammable and flammable aerosols shall be assigned to group F.

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

(d) Assignment to group T shall apply when the contents, other than the propellant of aerosol dispensers to be ejected, are classified as Class 6.1, packing groups II or III;

(e) Assignment to group C shall apply when the contents, other than the propellant of aerosol dispensers to be ejected, meet the criteria for Class 8, packing groups II or III;

(f) When the criteria for more than one group amongst groups O, F, T, and C are met, assignment to groups CO, FC, TF, TC TO, TFC or TOC shall apply, as relevant.

2.2.2.1.7 Chemicals under pressure

Chemicals under pressure (UN Nos. 3500 to 3505) are assigned to one of the following groups according to their hazardous properties, as follows:

A asphyxiant;

F flammable;

T toxic;

C corrosive;

FC flammable, corrosive;

TF toxic, flammable.

The classification depends on the hazard characteristics of the components in the different states:

The propellant;

The liquid; or

The solid.

NOTE 1: Gases, which meet the definition of toxic gases or of oxidizing gases according to 2.2.2.1.5 or gases identified as "Considered as pyrophoric" by table note c of Table 2 of packing instruction P 200 in 4.1.4.1, shall not be used as a propellant in chemicals under pressure.

2: Chemicals under pressure with contents meeting the criteria for packing group I for toxicity or corrosivity or with contents meeting both the criteria for packing group II or III for toxicity and for packing group II or III for corrosivity shall not be accepted for carriage under these UN numbers.

3: Chemicals under pressure with components meeting the properties of Class 1; liquid desensitized explosives of Class 3; self-reactive substances and solid desensitized explosives of Class 4.1; Class 4.2; Class 4.3; Class 5.1; Class 5.2; Class 6.2; or Class 7, shall not be used for carriage under these UN numbers.

4: A chemical under pressure in an aerosol dispenser shall be carried under UN No. 1950.

The following criteria shall apply:

(a) Assignment to group A shall apply when the contents do not meet the criteria for any other group according to sub-paragraphs (b) to (e) below;

(b) Assignment to group F shall apply if one of the components, which can be a pure substance or a mixture, needs to be classified as flammable. Flammable components are flammable liquids and liquid mixtures, flammable solids and solid mixtures or flammable gases and gas mixtures meeting the following criteria:

(i) A flammable liquid is a liquid having a flashpoint of not more than 93 °C;

(ii) A flammable solid is a solid which meets the criteria in 2.2.41.1;

(iii) A flammable gas is a gas which meets the criteria in 2.2.2.1.5;

(c) Assignment to group T shall apply when the contents, other than the propellant, are classified as dangerous goods of Class 6.1, packing groups II or III;

(d) Assignment to group C shall apply when the contents, other than the propellant, are classified as dangerous goods of Class 8, packing groups II or III;

(e) When the criteria for two groups amongst groups F, T, and C are met, assignment to groups FC or TF shall apply, as relevant.

2.2.2.2 Gases not accepted for carriage

2.2.2.2.1 Chemically unstable gases of Class 2 shall not be accepted for carriage unless the necessary precautions have been taken to prevent the possibility of a dangerous decomposition or polymerization under normal conditions of carriage or unless carried in accordance with special packing provision (r) of packing instruction P 200 (10) of 4.1.4.1, as applicable. For the precautions necessary to prevent polymerization, see special provision 386 of Chapter 3.3. To this end particular care shall be taken to ensure that receptacles and tanks do not contain any substances liable to promote these reactions.

2.2.2.2.2 The following substances and mixtures shall not be accepted for carriage:

– UN No. 2186 HYDROGEN CHLORIDE, REFRIGERATED LIQUID;

– UN No. 2421 NITROGEN TRIOXIDE;

– UN No. 2455 METHYL NITRITE;

– Refrigerated liquefied gases which cannot be assigned to classification codes 3A, 3O or 3F;

– Dissolved gases which cannot be classified under UN Nos. 1001, 2073 or 3318;

– Aerosols where gases which are toxic according to 2.2.2.1.5 or pyrophoric according to packing instruction P200 in 4.1.4.1 are used as propellants;

– Aerosols with contents meeting the criteria for packing group I for toxicity or corrosivity (see 2.2.61 and 2.2.8);

– Receptacles, small, containing gases which are very toxic (LC_{50} lower than 200 ppm) or pyrophoric according to packing instruction P200 in 4.1.4.1.

2.2.2.3 List of collective entries

Compressed gases		
Classificationcode	UN No.	Name of the substance or article
1 A	1956	COMPRESSED GAS, N.O.S.
1 O	3156	COMPRESSED GAS, OXIDIZING, N.O.S.
1 F	1964	HYDROCARBON GAS MIXTURE, COMPRESSED, N.O.S.
	1954	COMPRESSED GAS, FLAMMABLE, N.O.S.
1T	1955	COMPRESSED GAS, TOXIC, N.O.S.
1 TF	1953	COMPRESSED GAS, TOXIC, FLAMMABLE, N.O.S.
1 TC	3304	COMPRESSED GAS, TOXIC, CORROSIVE, N.O.S.
1 TO	3303	COMPRESSED GAS, TOXIC, OXIDIZING, N.O.S.
1 TFC	3305	COMPRESSED GAS, TOXIC, FLAMMABLE, CORROSIVE, N.O.S.
1 TOC	3306	COMPRESSED GAS, TOXIC, OXIDIZING, CORROSIVE, N.O.S.

Liquefied gases		
Classification code	UN No.	Name of the substance or article
2 A	1058	LIQUEFIED GASES, non-flammable, charged with nitrogen, carbon dioxide or air
	1078	REFRIGERANT GAS, N.O.S. such as mixtures of gases, Indicated by the letter R..., which as: Mixture F1, have a vapour pressure at 70 °C not exceeding 1.3 MPa (13 bar) and a density at 50 °C not lower than that of dichlorofluoromethane (1.30 kg/l); Mixture F2, have a vapour pressure at 70 °C not exceeding 1.9 MPa (19 bar) and a density at 50 °C not lower than that of dichlorodifluoromethane (1.21 kg/l); Mixture F3, have a vapour pressure at 70 °C not exceeding 3 MPa (30 bar) and a density at 50 °C not lower than that of chlorodifluoromethane (1.09 kg/l). **NOTE:** Trichlorofluoromethane (Refrigerant R 11), 1,1,2-trichloro-1,2,2-trifluoroethane (Refrigerant R 113), 1,1,1-trichloro-2,2,2-trifluoroethane (Refrigerant R 113a), 1-chloro-1,2,2-trifluoroethane (Refrigerant R 133) and 1-chloro-1,1,2-trifluoroethane (Refrigerant R 133b) are not substances of Class 2. They may, however, enter into the composition of mixtures F1 to F3.
	1968	INSECTICIDE GAS, N.O.S.
	3163	LIQUEFIED GAS, N.O.S.
2 O	3157	LIQUEFIED GAS, OXIDIZING, N.O.S.
2 F	1010	BUTADIENES AND HYDROCARBON MIXTURE, STABILIZED, having a vapour pressure at 70 °C not exceeding 1.1 MPa (11 bar) and a density at 50 °C not lower than 0.525 kg/l. **NOTE:** Butadienes, stabilized are also classified under UN No. 1010, see Table A of chapter 3.2.
	1060	METHYLACETYLENE AND PROPADIENE MIXTURE, STABILIZED such as mixtures of methylacetylene and propadiene with hydrocarbons, which as: Mixture P1, contain not more than 63% methylacetylene and propadiene by volume and not more than 24% propane and propylene by volume, the percentage of C_4- saturated hydrocarbons being not less than 14% by volume; and as Mixture P2, contain not more than 48% methylacetylene and propadiene by volume and not more than 50% propane and propylene by volume, the percentage of C_4- saturated hydrocarbons being not less than 5% by volume, as well as mixtures of propadiene with 1 to 4% methylacetylene.

Liquefied gases (cont'd)		
Classification code	UN No.	Name of the substance or article
2F (cont'd)	1965	HYDROCARBON GAS MIXTURE, LIQUEFIED, N.O.S such as mixtures, which as: Mixture A, have a vapour pressure at 70 °C not exceeding 1.1 MPa (11 bar) and a density at 50 °C not lower than 0.525 kg/l; Mixture A01, have a vapour pressure at 70 °C not exceeding 1.6 MPa (16 bar) and a relative density at 50 °C not lower than 0.516 kg/l; Mixture A02, have a vapour pressure at 70 °C not exceeding 1.6 MPa (16 bar) and a relative density at 50 °C not lower than 0.505 kg/l; Mixture A0, have a vapour pressure at 70 °C not exceeding 1.6 MPa (16 bar) and a density at 50 °C not lower than 0.495 kg/l; Mixture A1, have a vapour pressure at 70 °C not exceeding 2.1 MPa (21 bar) and a density at 50 °C not lower than 0.485 kg/l; Mixture B1 have a vapour pressure at 70 °C not exceeding 2.6 MPa (26 bar) and a relative density at 50 °C not lower than 0.474 kg/l; Mixture B2 have a vapour pressure at 70 °C not exceeding 2.6 MPa (26 bar) and a relative density at 50 °C not lower than 0.463 kg/l; Mixture B, have a vapour pressure at 70 °C not exceeding 2.6 MPa (26 bar) and a density at 50 °C not lower than 0.450 kg/l; Mixture C, have a vapour pressure at 70 °C not exceeding 3.1 MPa (31 bar) and a relative density at 50 °C not lower than 0.440 kg/l; **NOTE 1:** In the case of the foregoing mixtures, the use of the following names customary in the trade is permitted for describing these substances: for mixtures A, A01, A02 and A0: BUTANE; for mixture C: PROPANE. **2:** UN No. 1075 PETROLEUM GASES, LIQUEFIED may be used as an alternative entry for UN No. 1965 HYDROCARBON GAS MIXTURE LIQUEFIED, N.O.S. for carriage prior to or following maritime or air carriage.
	3354	INSECTICIDE GAS, FLAMMABLE, N.O.S.
	3161	LIQUEFIED GAS, FLAMMABLE, N.O.S.
2 T	1967	INSECTICIDE GAS, TOXIC, N.O.S.
	3162	LIQUEFIED GAS, TOXIC, N.O.S.
2 TF	3355	INSECTICIDE GAS, TOXIC, FLAMMABLE, N.O.S.
	3160	LIQUEFIED GAS, TOXIC, FLAMMABLE, N.O.S.
2 TC	3308	LIQUEFIED GAS, TOXIC, CORROSIVE, N.O.S.
2 TO	3307	LIQUEFIED GAS, TOXIC, OXIDIZING, N.O.S.
2 TFC	3309	LIQUEFIED GAS, TOXIC, FLAMMABLE, CORROSIVE, N.O.S.
2 TOC	3310	LIQUEFIED GAS, TOXIC, OXIDIZING, CORROSIVE, N.O.S.

Refrigerated liquefied gases		
Classification code	UN No.	Name of the substance or article
3 A	3158	GAS, REFRIGERATED LIQUID, N.O.S.
3 O	3311	GAS, REFRIGERATED LIQUID, OXIDIZING, N.O.S.
3 F	3312	GAS, REFRIGERATED LIQUID, FLAMMABLE, N.O.S.

Dissolved gases		
Classification code	UN No.	Name of the substance or article
4	Only substances listed in Table A of Chapter 3.2 are to be accepted for carriage.	

Aerosols and receptacles, small, containing gas		
Classification code	UN No.	Name of the substance or article
5	1950	AEROSOLS
	2037	RECEPTACLES, SMALL CONTAINING GAS (GAS CARTRIDGES) without a release device, non-refillable

Other articles containing gas under pressure		
Classification code	UN No.	Name of the substance or article
6A	2857	REFRIGERATING MACHINES containing non-flammable, non-toxic gases or ammonia solutions (UN 2672)
	3164	ARTICLES, PRESSURIZED, PNEUMATIC (containing non-flammable gas) or
	3164	ARTICLES, PRESSURIZED, HYDRAULIC (containing non-flammable gas)
	3538	ARTICLES CONTAINING NON-FLAMMABLE, NON TOXIC GAS, N.O.S.
6F	3150	DEVICES, SMALL, HYDROCARBON GAS POWERED or
	3150	HYDROCARBON GAS REFILLS FOR SMALL DEVICES, with release device
	3478	FUEL CELL CARTRIDGES, containing liquefied flammable gas or
	3478	FUEL CELL CARTRIDGES CONTAINED IN EQUIPMENT, containing liquefied flammable gas or
	3478	FUEL CELL CARTRIDGES PACKED WITH EQUIPMENT, containing liquefied flammable gas
	3479	FUEL CELL CARTRIDGES, containing hydrogen in metal hydride or
	3479	FUEL CELL CARTRIDGES CONTAINED IN EQUIPMENT, containing hydrogen in metal hydride or
	3479	FUEL CELL CARTRIDGES PACKED WITH EQUIPMENT, containing hydrogen in metal hydride
	3529	ENGINE, INTERNAL COMBUSTION, FLAMMABLE GAS POWERED or
	3529	ENGINE, FUEL CELL, FLAMMABLE GAS POWERED or
	3529	MACHINERY, INTERNAL COMBUSTION, FLAMMABLE GAS POWERED or
	3529	MACHINERY, FUEL CELL, FLAMMABLE GAS POWERED
	3537	ARTICLES CONTAINING FLAMMABLE GAS, N.O.S.
6T	3539	ARTICLES CONTAINING TOXIC GAS, N.O.S.

Gas samples		
Classification code	UN No.	Name of the substance or article
7 F	3167	GAS SAMPLE, NON-PRESSURIZED, FLAMMABLE, N.O.S., not refrigerated liquid
7 T	3169	GAS SAMPLE, NON-PRESSURIZED, TOXIC, N.O.S., not refrigerated liquid
7 TF	3168	GAS SAMPLE, NON-PRESSURIZED, TOXIC, FLAMMABLE, N.O.S., not refrigerated liquid

Chemicals under pressure		
Classification code	UN No.	Name of the substance or article
8 A	3500	CHEMICAL UNDER PRESSURE, N.O.S.
8 F	3501	CHEMICAL UNDER PRESSURE, FLAMMABLE, N.O.S.
8 T	3502	CHEMICAL UNDER PRESSURE, TOXIC, N.O.S.
8 C	3503	CHEMICAL UNDER PRESSURE, CORROSIVE, N.O.S.
8 TF	3504	CHEMICAL UNDER PRESSURE, FLAMMABLE, TOXIC, N.O.S.
8 FC	3505	CHEMICAL UNDER PRESSURE, FLAMMABLE, CORROSIVE, N.O.S.

Adsorbed gases		
Classification code	UN No.	Name of the substance or article
9 A	3511	ADSORBED GAS, N.O.S.
9 O	3513	ADSORBED GAS, OXIDIZING, N.O.S.
9 F	3510	ADSORBED GAS, FLAMMABLE, N.O.S.
9 T	3512	ADSORBED GAS, TOXIC, N.O.S.
9 TF	3514	ADSORBED GAS, TOXIC, FLAMMABLE, N.O.S.
9 TC	3516	ADSORBED GAS, TOXIC, CORROSIVE, N.O.S.
9 TO	3515	ADSORBED GAS, TOXIC, OXIDIZING, N.O.S.
9 TFC	3517	ADSORBED GAS, TOXIC, FLAMMABLE, CORROSIVE, N.O.S.
9 TOC	3518	ADSORBED GAS, TOXIC, OXIDIZING, CORROSIVE, N.O.S.

2.2.3 Class 3: Flammable liquids

2.2.3.1 Criteria

2.2.3.1.1 The heading of Class 3 covers substances and articles containing substances of this Class which:

– are liquids according to subparagraph (a) of the definition for "liquid" in 1.2.1;

– have at 50 °C a vapour pressure of not more than 300 kPa (3 bar) and are not completely gaseous at 20 °C and at standard pressure of 101.3 kPa; and

– have a flash-point of not more than 60 °C (see 2.3.3.1 for the relevant test).

The heading of Class 3 also covers liquid substances and molten solid substances with a flash-point of more than 60 °C and which are carried or handed over for carriage whilst heated at temperatures equal to or higher than their flash-point. These substances are assigned to UN No. 3256.

The heading of Class 3 also covers liquid desensitized explosives. Liquid desensitized explosives are explosive substances which are dissolved or suspended in water or other liquid substances, to form an homogeneous liquid mixture to suppress their explosive properties. Such entries in Table A of Chapter 3.2 are UN Nos. 1204, 2059, 3064, 3343, 3357 and 3379.

NOTE 1: Substances having a flash-point above 35 °C which do not sustain combustion according to the criteria of sub-section 32.2.5 of Part III of the Manual of Tests and Criteria, are not substances of Class 3; if, however, these substances are handed over for carriage and carried whilst heated at temperatures equal to or higher than their flash-point, they are substances of Class 3.

2: By derogation from paragraph 2.2.3.1.1 above, diesel fuel, gasoil, heating oil (light) including synthetically manufactured products having a flash-point above 60 °C and not more than 100 °C shall be deemed substances of Class 3, UN No. 1202.

3: Flammable liquids which are highly toxic by inhalation, as defined in 2.2.61.1.4 to 2.2.61.1.9, and toxic substances having a flash-point of 23 °C or above are substances of Class 6.1 (see 2.2.61.1). Liquids which are highly toxic by inhalation are indicated as "toxic by inhalation" in their proper shipping name in Column (2) or by special provision 354 in Column (6) of Table A of Chapter 3.2.

4: Flammable liquid substances and preparations used as pesticides, which are highly toxic, toxic or slightly toxic and have a flash-point of 23 °C or above are substances of Class 6.1 (see 2.2.61.1).

2.2.3.1.2 The substances and articles of Class 3 are subdivided as follows:

F Flammable liquids, without subsidiary hazard and articles containing such substances:
- F1 Flammable liquids having a flash-point of or below 60 °C;
- F2 Flammable liquids having a flash-point above 60 °C which are carried or handed over for carriage at or above their flash-point (elevated temperature substances);
- F3 Articles containing flammable liquids;

FT Flammable liquids, toxic:
- FT1 Flammable liquids, toxic;
- FT2 Pesticides;

FC Flammable liquids, corrosive;

FTC Flammable liquids, toxic, corrosive;

D Liquid desensitized explosives.

2.2.3.1.3 Substances and articles classified in Class 3 are listed in Table A of Chapter 3.2. Substances not mentioned by name in Table A of Chapter 3.2 shall be assigned to the relevant entry of 2.2.3.3 and the relevant packing group in accordance with the provisions of this section. Flammable liquids shall be assigned to one of the following packing groups according to the degree of danger they present for carriage:

Packing group	Flash-point (closed cup)	Initial boiling point
I	-	≤ 35 °C
II[(a)]	< 23 °C	> 35 °C
III[(a)]	≥ 23 °C and ≤ 60 °C	> 35 °C

(a) See also 2.2.3.1.4.

For a liquid with (a) subsidiary hazard(s), the packing group determined in accordance with the table above and the packing group based on the severity of the subsidiary hazard(s) shall be considered; the classification and packing group shall then be determined in accordance with the table of precedence of hazards in 2.1.3.10.

2.2.3.1.4 Viscous flammable liquids such as paints, enamels, lacquers, varnishes, adhesives and polishes having a flash-point of less than 23 °C may be assigned to packing group III in conformity with the procedures prescribed in the Manual of Tests and Criteria, Part III, sub-section 32.3, provided that:

(a) The viscosity[3] and flash-point are in accordance with the following Table:

Kinematic viscosity (extrapolated) ν (at near-zero shear rate) mm^2/s at 23°C	Flow-time t in seconds	Jet diameter (mm)	Flash-point, closed-cup (°C)
$20 < \nu \leq 80$	$20 < t \leq 60$	4	above 17
$80 < \nu \leq 135$	$60 < t \leq 100$	4	above 10
$135 < \nu \leq 220$	$20 < t \leq 32$	6	above 5
$220 < \nu \leq 300$	$32 < t \leq 44$	6	above –1
$300 < \nu \leq 700$	$44 < t \leq 100$	6	above –5
$700 < \nu$	$100 < t$	6	no limit

(b) Less than 3% of the clear solvent layer separates in the solvent separation test;

(c) The mixture or any separated solvent does not meet the criteria for Class 6.1 or Class 8;

(d) The substances are packed in receptacles of not more than 450 litre capacity.

NOTE: These provisions also apply to mixtures containing no more than 20% nitrocellulose with a nitrogen content not exceeding 12.6% by dry mass. Mixtures containing more than 20% but not more than 55% nitrocellulose with a nitrogen content not exceeding 12.6% by dry mass are substances assigned to UN No. 2059.

Mixtures having a flash-point below 23 °C and containing:

– more than 55% nitrocellulose, whatever their nitrogen content; or

– not more than 55% nitrocellulose with a nitrogen content above 12.6% by dry mass,

are substances of Class 1 (UN Nos. 0340 or 0342) or of Class 4.1 (UN Nos. 2555, 2556 or 2557).

2.2.3.1.5 *Viscous liquids*

2.2.3.1.5.1 Except as provided for in 2.2.3.1.5.2, viscous liquids which:

– have a flash-point of 23 °C or above and less than or equal to 60 °C;

– are not toxic, corrosive or environmentally hazardous;

– contain not more than 20% nitrocellulose provided the nitrocellulose contains not more than 12.6% nitrogen by dry mass; and

– are packed in receptacles of not more than 450 litre capacity;

are not subject to RID, if:

(a) in the solvent separation test (see Manual of Tests and Criteria, Part III, sub-section 32.5.1), the height of the separated layer of solvent is less than 3% of the total height; and

(b) the flowtime in the viscosity test (see Manual of Tests and Criteria, Part III, sub-section 32.4.3), with a jet diameter of 6 mm is equal to or greater than:

(i) 60 seconds; or

(ii) 40 seconds if the viscous liquid contains not more than 60% of Class 3 substances.

2.2.3.1.5.2 Viscous liquids which are also environmentally hazardous, but meet all other criteria in 2.2.3.1.5.1, are not subject to any other provisions of RID when they are carried in single or combination packagings containing a net quantity per single or inner packaging of 5 litres or less, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

2.2.3.1.6 If substances of Class 3, as a result of admixtures, come into categories of hazard different from those to which the substances mentioned by name in Table A of Chapter 3.2 belong, these mixtures or solutions shall be assigned to the entries to which they belong on the basis of their actual degree of danger.

NOTE: For the classification of solutions and mixtures (such as preparations and wastes) see also 2.1.3.

2.2.3.1.7 On the basis of the test procedures in accordance with 2.3.3.1 and 2.3.4, and the criteria set out in 2.2.3.1.1, it may also be determined whether the nature of a solution or a mixture mentioned by name or containing a substance mentioned by name is such that the solution or mixture is not subject to the provisions for this Class (see also 2.1.3).

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[3] Viscosity determination: Where the substance concerned is non-Newtonian, or where a flow cup method of viscosity determination is otherwise unsuitable, a variable shear-rate viscometer shall be used to determine the dynamic viscosity coefficient of the substance, at 23 °C, at a number of shear rates. The values obtained are plotted against shear rate and then extrapolated to zero shear rate. The dynamic viscosity thus obtained, divided by the density, gives the apparent kinematic viscosity at near-zero shear rate.

2.2.3.2 Substances not accepted for carriage

2.2.3.2.1 Substances of Class 3 which are liable to form peroxides easily (as happens with ethers or with certain heterocyclic oxygenated substances) shall not be accepted for carriage if their peroxide content, calculated as hydrogen peroxide (H_2O_2), exceeds 0.3%. The peroxide content shall be determined as indicated in 2.3.3.3.

2.2.3.2.2 Chemically unstable substances of Class 3 shall not be accepted for carriage unless the necessary precautions have been taken to prevent the possibility of a dangerous decomposition or polymerization under normal conditions of carriage. For the precautions necessary to prevent polymerization, see special provision 386 of Chapter 3.3. To this end particular care shall be taken to ensure that receptacles and tanks do not contain any substances liable to promote these reactions.

2.2.3.2.3 Liquid desensitized explosives other than those listed in Table A of Chapter 3.2 shall not be accepted for carriage as substances of Class 3.

2.2.3.3 List of collective entries

Subsidiary hazard	Classification code	UN No.	Name of the substance or article
Flammable liquids and articles containing such substances			
		1133	ADHESIVES containing flammable liquid
		1136	COAL TAR DISTILLATES, FLAMMABLE
		1139	COATING SOLUTION (includes surface treatments or coatings used for industrial or other purposes such as vehicle undercoating, drum or barrel lining)
		1169	EXTRACTS, AROMATIC, LIQUID
		1197	EXTRACTS, FLAVOURING, LIQUID
		1210	PRINTING INK, flammable or
		1210	PRINTING INK RELATED MATERIAL (including printing ink thinning or reducing compound), flammable
		1263	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or
		1263	PAINT RELATED MATERIAL (including paint thinning or reducing compound)
		1266	PERFUMERY PRODUCTS with flammable solvents
		1293	TINCTURES, MEDICINAL
	F1	1306	WOOD PRESERVATIVES, LIQUID
		1866	RESIN SOLUTION, flammable
		1999	TARS, LIQUID, including road oils, and cutback bitumens
		3065	ALCOHOLIC BEVERAGES
		1224	KETONES, LIQUID, N.O.S.
		1268	PETROLEUM DISTILLATES, N.O.S. or
		1268	PETROLEUM PRODUCTS, N.O.S.
		1987	ALCOHOLS, N.O.S.
		1989	ALDEHYDES, N.O.S.
		2319	TERPENE HYDROCARBONS, N.O.S.
		3271	ETHERS, N.O.S.
		3272	ESTERS, N.O.S.
		3295	HYDROCARBONS, LIQUID, N.O.S.
		3336	MERCAPTANS, LIQUID, FLAMMABLE, N.O.S. or
		3336	MERCAPTANS MIXTURE, LIQUID, FLAMMABLE, N.O.S.
		1993	FLAMMABLE LIQUID, N.O.S.
whithout subsidiary hazard F	**F2 elevated temperature**	3256	ELEVATED TEMPERATURE LIQUID, FLAMMABLE, N.O.S., with flash-point above 60 °C, at or above its flash-point
	F3 articles	3269	POLYESTER RESIN KIT, liquid base material
		3473	FUEL CELL CARTRIDGES or
		3473	FUEL CELL CARTRIDGES CONTAINED IN EQUIPMENT or
		3473	FUEL CELL CARTRIDGES PACKED WITH EQUIPMENT
		3528	ENGINE, INTERNAL COMBUSTION, FLAMMABLE LIQUID POWERED or
		3528	ENGINE, FUEL CELL, FLAMMABLE LIQUID POWERED or
		3528	MACHINERY, INTERNAL COMBUSTION, FLAMMABLE LIQUID POWERED or
		3528	MACHINERY, FUEL CELL, FLAMMABLE LIQUID POWERED
		3540	ARTICLES CONTAINING FLAMMABLE LIQUID, N.O.S.

	FT1	1228 MERCAPTANS, LIQUID, FLAMMABLE, TOXIC, N.O.S. or 1228 MERCAPTAN MIXTURE, LIQUID, FLAMMABLE, TOXIC, N.O.S. 1986 ALCOHOLS, FLAMMABLE, TOXIC, N.O.S. 1988 ALDEHYDES, FLAMMABLE, TOXIC, N.O.S. 2478 ISOCYANATES, FLAMMABLE, TOXIC, N.O.S. or 2478 ISOCYANATE SOLUTION, FLAMMABLE, TOXIC, N.O.S. 3248 MEDICINE, LIQUID, FLAMMABLE, TOXIC, N.O.S. 3273 NITRILES, FLAMMABLE, TOXIC, N.O.S. 1992 FLAMMABLE LIQUID, TOXIC, N.O.S.
Toxic FT	**pesticide (flash point below 23 °C) FT2**	2758 CARBAMATE PESTICIDE, LIQUID, FLAMMABLE, TOXIC 2760 ARSENICAL PESTICIDE, LIQUID, FLAMMABLE, TOXIC 2762 ORGANOCHLORINE PESTICIDE, LIQUID, FLAMMABLE, TOXIC 2764 TRIAZINE PESTICIDE, LIQUID, FLAMMABLE, TOXIC 2772 THIOCARBAMATE PESTICIDE, LIQUID, FLAMMABLE, TOXIC 2776 COPPER BASED PESTICIDE, LIQUID, FLAMMABLE, TOXIC 2778 MERCURY BASED PESTICIDE, LIQUID, FLAMMABLE, TOXIC 2780 SUBSTITUTED NITROPHENOL PESTICIDE, LIQUID, FLAMMABLE, TOXIC 2782 BIPYRIDILIUM PESTICIDE, LIQUID, FLAMMABLE, TOXIC 2784 ORGANOPHOSPHORUS PESTICIDE, LIQUID, FLAMMABLE, TOXIC 2787 ORGANOTIN PESTICIDE, LIQUID, FLAMMABLE, TOXIC 3024 COUMARIN DERIVATIVE PESTICIDE, LIQUID, FLAMMABLE, TOXIC 3346 PHENOXYACETIC ACID DERIVATIVE PESTICIDE, LIQUID, FLAMMABLE, TOXIC 3350 PYRETHROID PESTICIDE, LIQUID, FLAMMABLE TOXIC 3021 PESTICIDE, LIQUID, FLAMMABLE, TOXIC, N.O.S. **NOTE:** The classification of a pesticide under an entry shall be effected on the basis of the active ingredient, of the physical state of the pesticide and any subsidiary hazards it may exhibit.
Corrosive	**FC**	3469 PAINT, FLAMMABLE, CORROSIVE (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or 3469 PAINT RELATED MATERIAL, FLAMMABLE, CORROSIVE (including paint thinning and reducing compound) 2733 AMINES, FLAMMABLE, CORROSIVE, N.O.S. or 2733 POLYAMINES, FLAMMABLE, CORROSIVE, N.O.S. 2985 CHLOROSILANES, FLAMMABLE, CORROSIVE, N.O.S. 3274 ALCOHOLATES SOLUTION, N.O.S., in alcohol 2924 FLAMMABLE LIQUID, CORROSIVE, N.O.S.
Toxic, corrosive	**FTC**	3286 FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S.
Liquid desensitized explosive	**D**	3343 NITROGLYCERIN MIXTURE, DESENSITIZED, LIQUID, FLAMMABLE, N.O.S. with not more than 30% nitroglycerin by mass 3357 NITROGLYCERIN MIXTURE, DESENSITIZED, LIQUID, N.O.S. with not more than 30% nitroglycerin by mass 3379 DESENSITIZED EXPLOSIVE, LIQUID, N.O.S.

2.2.41 Class 4.1: Flammable solids, self-reactive substances, polymerizing substances and solid desensitized explosives

2.2.41.1 Criteria

2.2.41.1.1 The heading of Class 4.1 covers flammable substances and articles, desensitized explosives which are solids according to subparagraph (a) of the definition "solid" in 1.2.1, self-reactive liquids or solids and polymerizing substances.

The following are assigned to Class 4.1:

– readily flammable solid substances and articles (see paragraphs 2.2.41.1.3 to 2.2.41.1.8);
– self-reactive solids or liquids (see paragraphs 2.2.41.1.9 to 2.2.41.1.16);
– solid desensitized explosives (see 2.2.41.1.18);
– substances related to self-reactive substances (see 2.2.41.1.19);
– polymerizing substances (see 2.2.41.1.20).

2.2.41.1.2 The substances and articles of Class 4.1 are subdivided as follows:

F Flammable solids, without subsidiary hazard:
- F1 Organic;
- F2 Organic, molten;
- F3 Inorganic;
- F4 Articles;

FO Flammable solids, oxidizing;

FT Flammable solids, toxic:
- FT1 Organic, toxic;
- FT2 Inorganic, toxic;

FC Flammable solids, corrosive:
- FC1 Organic, corrosive;
- FC2 Inorganic, corrosive;

D Solid desensitized explosives without subsidiary hazard;

DT Solid desensitized explosives, toxic;

SR Self-reactive substances:
- SR1 Not requiring temperature control;
- SR2 Requiring temperature control (not accepted for carriage by rail);

PM Polymerizing substances:
- PM1 Not requiring temperature control;
- PM2 Requiring temperature control (not accepted for carriage by rail).

Flammable solids

Definition and properties

2.2.41.1.3 *Flammable solids* are readily combustible solids and solids which may cause fire through friction.

Readily combustible solids are powdered, granular, or pasty substances which are dangerous if they can be easily ignited by brief contact with an ignition source, such as a burning match, and if the flame spreads rapidly. The danger may come not only from the fire but also from toxic combustion products. Metal powders are especially dangerous because of the difficulty of extinguishing a fire since normal extinguishing agents such as carbon dioxide or water can increase the hazard.

Classification

2.2.41.1.4 Substances and articles classified as flammable solids of Class 4.1 are listed in Table A of Chapter 3.2. The assignment of organic substances and articles not mentioned by name in Table A of Chapter 3.2 to the relevant entry of 2.2.41.3 in accordance with the provisions of Chapter 2.1 can be based on experience or on the results of the test procedures in accordance with Part III, sub-section 33.2.1 of the Manual of Tests and Criteria. The assignment of inorganic substances not mentioned by name shall be based on the results of the test procedures in accordance with Part III, sub-section 33.2.1 of the Manual of Tests and Criteria; experience shall also be taken into account when it leads to a more stringent assignment.

2.2.41.1.5 When substances not mentioned by name are assigned to one of the entries listed in 2.2.41.3 on the basis of the test procedures in accordance with the Manual of Tests and Criteria, Part III, sub-section 33.2.1, the following criteria apply:

(a) With the exception of metal powders or powders of metal alloys, powdery, granular or pasty substances shall be classified as readily flammable substances of Class 4.1 if they can be easily ignited by brief contact with an ignition source (e.g. a burning match), or if, in the event of ignition, the flame spreads rapidly, the burning time is less than 45 seconds for a measured distance of 100 mm or the rate of burning is greater than 2.2 mm/s.

(b) Metal powders or powders of metal alloys shall be assigned to Class 4.1 if they can be ignited by a flame and the reaction spreads over the whole length of the sample in 10 minutes or less.

Solids which may cause fire through friction shall be classified in Class 4.1 by analogy with existing entries (e.g. matches) or in accordance with any appropriate special provision.

2.2.41.1.6 On the basis of the test procedure in accordance with the Manual of Tests and Criteria, Part III, Section 33.2.1 and the criteria set out in 2.2.41.1.4 and 2.2.41.1.5, it may also be determined whether the nature of a substance mentioned by name is such that the substance is not subject to the provisions for this Class.

2.2.41.1.7 If substances of Class 4.1, as a result of admixtures, come into different categories of hazard from those to which the substances mentioned by name in Table A of Chapter 3.2 belong, these mixtures shall be assigned to the entries to which they belong on the basis of their actual degree of danger.

NOTE: For the classification of solutions and mixtures (such as preparations and wastes), see also 2.1.3.

Assignment of packing groups

2.2.41.1.8 Flammable solids classified under the various entries in Table A of Chapter 3.2 shall be assigned to packing groups II or III on the basis of test procedures of the Manual of Tests and Criteria, Part III, sub-section 33.2.1, in accordance with the following criteria:

(a) Readily flammable solids which, when tested, have a burning time of less than 45 seconds over a measured distance of 100 mm shall be assigned to:

Packing group II: if the flame passes the wetted zone;

Packing group III: if the wetted zone stops the flame for at least four minutes;

(b) Metal powders or powders of metal alloys shall be assigned to:

Packing group II: if, when tested, the reaction spreads over the whole length of the sample in five minutes or less;

Packing group III: if, when tested, the reaction spreads over the whole length of the sample in more than five minutes.

For solids which may cause fire through friction, the packing group shall be assigned by analogy with existing entries or in accordance with any special provision.

Self-reactive substances

Definitions

2.2.41.1.9 For the purposes of RID, *self-reactive substances* are thermally unstable substances liable to undergo a strongly exothermic decomposition even without participation of oxygen (air). Substances are not considered to be self-reactive substances of Class 4.1, if:

(a) they are explosives according to the criteria of Class 1;

(b) they are oxidizing substances according to the classification procedure for Class 5.1 (see 2.2.51.1) except that mixtures of oxidizing substances which contain 5% or more of combustible organic substances shall be subjected to the classification procedure defined in Note 2;

(c) they are organic peroxides according to the criteria of Class 5.2 (see 2.2.52.1);

(d) their heat of decomposition is less than 300 J/g; or

(e) their self-accelerating decomposition temperature (SADT) (see Note 3 below) is greater than 75 °C for a 50 kg package.

NOTE 1: The heat of decomposition can be determined using any internationally recognised method e.g. differential scanning calorimetry and adiabatic calorimetry.

2: Mixtures of oxidizing substances meeting the criteria of Class 5.1 which contain 5% or more of combustible organic substances, which do not meet the criteria mentioned in (a), (c), (d) or (e) above, shall be subjected to the self-reactive substance classification procedure.

A mixture showing the properties of a self-reactive substance, type B to F, shall be classified as a self-reactive substance of Class 4.1.

A mixture showing the properties of a self-reactive substance, type G, according to the principle given in section 20.4.3 (g) of Part II of the Manual of Tests and Criteria shall be considered for classification as a substance of Class 5.1 (see 2.2.51.1).

3: The self-accelerating decomposition temperature (SADT) is the lowest temperature at which self-accelerating decomposition may occur with a substance in the packaging as used during carriage. Requirements for the determination of the SADT are given in the Manual of Tests and Criteria, Part II, Chapter 20 and section 28.4.

4: Any substance which shows the properties of a self-reactive substance shall be classified as such, even if this substance gives a positive test result according to 2.2.42.1.5 for inclusion in Class 4.2.

Properties

2.2.41.1.10 The decomposition of self-reactive substances can be initiated by heat, contact with catalytic impurities (e.g. acids, heavy-metal compounds, bases), friction or impact. The rate of decomposition increases with temperature and varies with the substance. Decomposition, particularly if no ignition occurs, may result in the evolution of toxic gases or vapours. For certain self-reactive substances, the temperature shall be controlled. Some self-reactive substances may decompose explosively, particularly if confined. This characteristic may be modified by the addition of diluents or by the use of appropriate packagings. Certain self-reactive substances burn vigorously. Self-reactive substances are, for example, some compounds of the types listed below:

aliphatic azo compounds (-C-N=N-C-);

organic azides (-C-N_3);

diazonium salts (-CN_2^+ Z^-);

N-nitroso compounds (-N-N=O); and

aromatic sulphonylhydrazides (-SO_2-NH-NH_2).

This list is not exhaustive and substances with other reactive groups and some mixtures of substances may have similar properties.

Classification

2.2.41.1.11 Self-reactive substances are classified into seven types according to the degree of danger they present. The types of self-reactive substances range from type A, which is not accepted for carriage in the packaging in which it is tested, to type G, which is not subject to the provisions for self-reactive substances of Class 4.1. The classification of types B to F is directly related to the maximum quantity allowed in one packaging. The principles to be applied for classification as well as the applicable classification procedures, test methods and criteria and an example of a suitable test report are given in Part II of the Manual of Tests and Criteria.

2.2.41.1.12 Self-reactive substances which have already been classified and are already permitted for carriage in packagings are listed in 2.2.41.4, those already permitted for carriage in IBCs are listed in 4.1.4.2, packing instruction IBC520 and those already permitted for carriage in tanks according to Chapter 4.2 are listed in 4.2.5.2, portable tank instruction T23. Each permitted substance listed is assigned to a generic entry of Table A of Chapter 3.2 (UN Nos. 3221 to 3240) and appropriate subsidiary hazards and remarks providing relevant transport information are given.

The collective entries specify:

– self-reactive substances types B to F, see 2.2.41.1.11 above;

– physical state (liquid/solid).

The classification of the self-reactive substances listed in 2.2.41.4 is based on the technically pure substance (except where a concentration of less than 100% is specified).

2.2.41.1.13 Classification of self-reactive substances not listed in 2.2.41.4, 4.1.4.2, packing instruction IBC520 or 4.2.5.2, portable tank instruction T23 and assignment to a collective entry shall be made by the competent authority of the country of origin on the basis of a test report. The statement of approval shall contain the classification and the relevant conditions of carriage. If the country of origin is not an RID Contracting State, the classification and the conditions of carriage shall be recognized by the competent authority of the first RID Contracting State reached by the consignment.

2.2.41.1.14 Activators, such as zinc compounds, may be added to some self-reactive substances to change their reactivity. Depending on both the type and the concentration of the activator, this may result in a decrease in thermal stability and a change in explosive properties. If either of these properties is altered, the new formulation shall be assessed in accordance with the classification procedure.

2.2.41.1.15 Samples of self-reactive substances or formulations of self-reactive substances not listed in 2.2.41.4, for which a complete set of test results is not available and which are to be carried for further testing or evaluation, shall be assigned to one of the appropriate entries for self-reactive substances type C provided the following conditions are met:

– the available data indicate that the sample would be no more dangerous than self-reactive substances type B;

– the sample is packaged in accordance with packing method OP2 and the quantity per wagon is limited to 10 kg;

Samples requiring temperature control shall not be accepted for carriage by rail.

Desensitization

2.2.41.1.16 In order to ensure safety during carriage, self-reactive substances are in many cases desensitized by use of a diluent. Where a percentage of a substance is stipulated, this refers to the percentage by mass, rounded to the nearest whole number. If a diluent is used, the self-reactive substance shall be tested with the diluent present in the concentration and form used in carriage. Diluents which may allow a self-reactive substance to concentrate to a dangerous extent in the event of leakage from a packaging shall not be used. Any diluent shall be compatible with the self-reactive substance. In this regard, compatible diluents are those solids or liquids which have no detrimental influence on the thermal stability and hazard type of the self-reactive substance.

2.2.41.1.17 (Reserved)

Solid desensitized explosives

2.2.41.1.18 Solid desensitized explosives are substances which are wetted with water or alcohols or are diluted with other substances to suppress their explosive properties. Such entries in Table A of Chapter 3.2 are: UN Nos. 1310, 1320, 1321, 1322, 1336, 1337, 1344, 1347, 1348, 1349, 1354, 1355, 1356, 1357, 1517, 1571, 2555, 2556, 2557, 2852, 2907, 3317, 3319, 3344, 3364, 3365, 3366, 3367, 3368, 3369, 3370, 3376, 3380 and 3474.

Substances related to self-reactive substances

2.2.41.1.19 Substances that:

(a) have been provisionally accepted into Class 1 according to Test Series 1 and 2 but exempted from Class 1 by Test Series 6;

(b) are not self-reactive substances of Class 4.1; and

(c) are not substances of Classes 5.1 or 5.2

are also assigned to Class 4.1. UN Nos. 2956, 3241, 3242 and 3251 are such entries.

Polymerizing substances

Definitions and properties

2.2.41.1.20 *Polymerizing substances* are substances which, without stabilization, are liable to undergo a strongly exothermic reaction resulting in the formation of larger molecules or resulting in the formation of polymers under conditions normally encountered in carriage. Such substances are considered to be polymerizing substances of Class 4.1 when:

(a) Their self-accelerating polymerization temperature (SAPT) is 75 °C or less under the conditions (with or without chemical stabilization as offered for carriage) and in the packaging, IBC or tank in which the substance or mixture is to be carried;

(b) They exhibit a heat of reaction of more than 300 J/g; and

(c) They do not meet any other criteria for inclusion in classes 1 to 8.

A mixture meeting the criteria of a polymerizing substance shall be classified as a polymerizing substance of Class 4.1.

Temperature control requirements

2.2.41.1.21 (Reserved)

2.2.41.2 Substances not accepted for carriage

2.2.41.2.1 The chemically unstable substances of Class 4.1 shall not be accepted for carriage unless the necessary steps have been taken to prevent their dangerous decomposition or polymerization during carriage. To this end, it shall in particular be ensured that receptacles and tanks do not contain any substance liable to promote these reactions.

2.2.41.2.2 Flammable solids, oxidizing, assigned to UN No. 3097 shall not be accepted for carriage unless they meet the requirements for Class 1 (see also 2.1.3.7).

2.2.41.2.3 The following substances shall not be accepted for carriage:

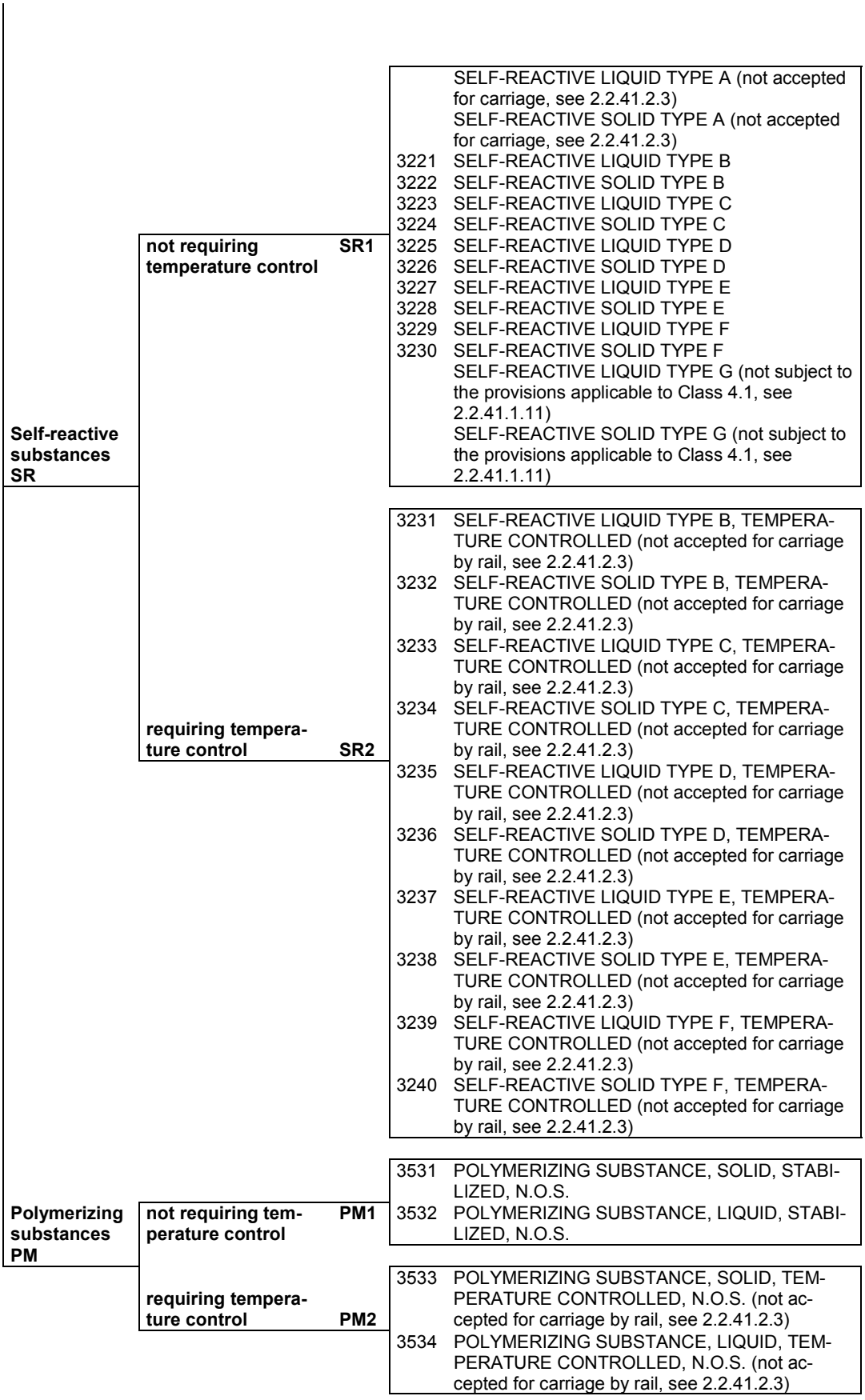
– Self-reactive substances of type A (see Manual of Tests and Criteria, Part II, paragraph 20.4.2 (a));
– Phosphorus sulphides which are not free from yellow and white phosphorus;
– Solid densitized explosives other than those listed in Table A of Chapter 3.2;
– Inorganic flammable substances in the molten form other than UN No. 2448 SULPHUR, MOLTEN.

The following substances shall not be accepted for carriage by rail:

– Barium azide with a water content less than 50% (mass);
– Self-reactive substances with an SADT ≤ 55 °C, therefore requiring temperature control:
  UN 3231 SELF-REACTIVE LIQUID TYPE B, TEMPERATURE CONTROLLED;
  UN 3232 SELF-REACTIVE SOLID TYPE B, TEMPERATURE CONTROLLED;
  UN 3233 SELF-REACTIVE LIQUID TYPE C, TEMPERATURE CONTROLLED;
  UN 3234 SELF-REACTIVE SOLID TYPE C, TEMPERATURE CONTROLLED;
  UN 3235 SELF-REACTIVE LIQUID TYPE D, TEMPERATURE CONTROLLED;
  UN 3236 SELF-REACTIVE SOLID TYPE D, TEMPERATURE CONTROLLED;
  UN 3237 SELF-REACTIVE LIQUID TYPE E, TEMPERATURE CONTROLLED;
  UN 3238 SELF-REACTIVE SOLID TYPE E, TEMPERATURE CONTROLLED;
  UN 3239 SELF-REACTIVE LIQUID TYPE F, TEMPERATURE CONTROLLED;
  UN 3240 SELF-REACTIVE SOLID TYPE F, TEMPERATURE CONTROLLED;
– Polymerizing substances requiring temperature control:
  UN 3533 POLYMERIZING SUBSTANCE, SOLID, TEMPERATURE CONTROLLED, N.O.S.;
  UN 3534 POLYMERIZING SUBSTANCE, LIQUID, TEMPERATURE CONTROLLED, N.O.S.

2.2.41.3 List of collective entries

	Subsidiary hazard		Classification code	UN No.	Name of the substance or article
Flammable Solids F	**without subsidiary hazard**	**organic**	**F1**	3175	SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S.
				1353	FIBRES IMPREGNATED WITH WEAKLY NITRATED NITROCELLULOSE, N.O.S. or
				1353	FABRICS IMPREGNATED WITH WEAKLY NITRATED NITROCELLULOSE, N.O.S.
				1325	FLAMMABLE SOLID, ORGANIC, N.O.S.
		organic molten	**F2**	3176	FLAMMABLE SOLID, ORGANIC, MOLTEN, N.O.S.
		inorganic	**F3**	3089	METAL POWDER, FLAMMABLE, N.O.S.[a],[b]
				3181	METAL SALTS OF ORGANIC COMPOUNDS, FLAMMABLE, N.O.S.
				3182	METAL HYDRIDES, FLAMMABLE,N.O.S.[c]
				3178	FLAMMABLE SOLID, INORGANIC, N.O.S.
		articles	**F4**	3527	POLYESTER RESIN KIT, solid base material
				3541	ARTICLES CONTAINING FLAMMABLE SOLID, N.O.S.
	Oxidizing		**FO**	3097	FLAMMABLE SOLID, OXIDIZING, N.O.S. (not accepted for carriage, see 2.2.41.2.2)
	toxic FT	**organic**	**FT1**	2926	FLAMMABLE SOLID, TOXIC, ORGANIC, N.O.S.
		inorganic	**FT2**	3179	FLAMMABLE SOLID, TOXIC, INORGANIC, N.O.S.
	corrosive FC	**organic**	**FC1**	2925	FLAMMABLE SOLID, CORROSIVE, ORGANIC, N.O.S.
		inorganic	**FC2**	3180	FLAMMABLE SOLID, CORROSIVE, INORGANIC, N.O.S.
Solid desensitized explosives	**without subsidiary hazard**		**D**	3319	NITROGLYCERIN MIXTURE, DESENSITIZED, SOLID, N.O.S. with more than 2% but not more than 10% nitroglycerin by mass
				3344	PENTAERYTHRITE TETRANITRATE (PENTAERYTHRITOL TETRANITRATE, PETN) MIXTURE, DESENSITIZED, SOLID, N.O.S. with more than 10% but not more than 20% PETN by mass
				3380	DESENSITIZED EXPLOSIVE, SOLID, N.O.S.
	toxic		**DT**	Only substances listed in Table A of Chapter 3.2 are to be accepted for carriage as substances of Class 4.1	



(a) Metals and metal alloys in powdered or other flammable form, liable to spontaneous combustion, are substances of Class 4.2.

(b) Metals and metal alloys in powdered or other flammable form, which in contact with water, emit flammable gases, are substances of Class 4.3.

(c) Metals hydrides which, in contact with water, emit flammable gases, are substances of Class 4.3. Aluminium borohydride or aluminium borohydride in devices are substances of Class 4.2, UN No. 2870.

2.2.41.4 List of currently assigned self-reactive substances in packagings

In the column "Packing Method", codes "OP1" to "OP8" refer to packing methods in 4.1.4.1, packing instruction P520 (see also 4.1.7.1). Self-reactive substances to be carried shall fulfil the classification as listed. For substances permitted in IBCs, see 4.1.4.2, packing instruction IBC520 and, for those permitted in tanks according to Chapter 4.2, see 4.2.5.2.6, portable tank instruction T23. The formulations listed in packing instruction IBC 520 of 4.1.4.2 and in portable tank instruction T 23 of 4.2.5.2.6 may also be carried packed in accordance with packing method OP8 of packing instruction P 520 of 4.1.4.1.

NOTE: The classification given in this table is based on the technically pure substance (except where a concentration of less than 100% is specified). For other concentrations, the substance may be classified differently following the procedures given in Part II of the Manual of Tests and Criteria.

Self-reactive substance	Concen-tration (%)	Packing method	UN generic entry	Remarks
ACETONE-PYROGALLOL COPOLYMER 2-DIAZO-1-NAPHTHOL-5-SULPHONATE	100	OP8	3228	
AZODICARBONAMIDE FORMULATION TYPE B, TEMPERATURE CONTROLLED	< 100		3232	prohibited
AZODICARBONAMIDE FORMULATION TYPE C	< 100	OP6	3224	(3)
AZODICARBONAMIDE FORMULATION TYPE C, TEMPERATURE CONTROLLED	< 100		3234	prohibited
AZODICARBONAMIDE FORMULATION TYPE D	< 100	OP7	3226	(5)
AZODICARBONAMIDE FORMULATION TYPE D, TEMPERATURE CONTROLLED	< 100		3236	prohibited
2,2'-AZODI(2,4-DIMETHYL-4-METHOXYVALERONITRILE)	100		3236	prohibited
2,2'-AZODI(2,4-DIMETHYLVALERONITRILE)	100		3236	prohibited
2,2'-AZODI(ETHYL-2-METHYLPROPIONATE)	100		3235	prohibited
1,1-AZODI(HEXAHYDROBENZONITRILE)	100	OP7	3226	
2,2'-AZODI(ISOBUTYRONITRILE	100		3234	prohibited
2,2'-AZODI(ISOBUTYRONITRILE) as a water based paste	≤ 50	OP6	3224	
2,2'-AZODI(2-METHYLBUTYRO-NITRILE)	100		3236	prohibited
BENZENE-1,3-DISULPHONYL HYDRAZIDE, as a paste	52	OP7	3226	
BENZENE SULPHONYL HYDRAZIDE	100	OP7	3226	
4-(BENZYL(ETHYL)AMINO)-3-ETHOXY-BENZENEDIAZONIUM ZINC CHLORIDE	100	OP7	3226	
4-(BENZYL(METHYL)AMINO)-3-ETHOXYBENZENEDIAZONIUM ZINC CHLORIDE	100		3236	prohibited
3-CHLORO-4-DIETHYLAMINOBENZENE-DIAZONIUM ZINC CHLORIDE	100	OP7	3226	
2-DIAZO-1-NAPHTHOL-4-SULPHONYL CHLORIDE	100	OP5	3222	(2)
2-DIAZO-1-NAPHTHOL-5-SULPHONYL CHLORIDE	100	OP5	3222	(2)

Self-reactive substance	Concen-tration (%)	Packing method	UN generic entry	Remarks
2-DIAZO-1-NAPHTHOL SULPHONIC ACID ESTER MIXTURE, TYPE D	< 100	OP7	3226	(9)
2,5-DIBUTOXY-4-(4-MORPHOLINYL)-BENZENEDIAZONIUM, TETRACHLOROZINCATE (2:1)	100	OP8	3228	
2,5-DIETHOXY-4-MORPHOLINO-BENZENEDIAZONIUM ZINC CHLORIDE	67 – 100		3236	prohibited
2,5-DIETHOXY-4-MORPHOLINO-BENZENEDIAZONIUM ZINC CHLORIDE	66		3236	prohibited
2,5-DIETHOXY-4-MORPHOLINO-BENZENEDIAZONIUM TETRAFLUOROBORATE	100		3236	prohibited
2,5-DIETHOXY-4-(4-MORPHOLINYL)-BENZENEDIAZONIUM SULPHATE	100	OP7	3226	
2,5-DIETHOXY-4-(PHENYLSULPHONYL)-BENZENEDIAZONIUM ZINC CHLORIDE	67		3236	prohibited
DIETHYLENEGLYCOL BIS (ALLYL CARBONATE) + DI-ISOPROPYLPEROXYDICARBONATE	≥ 88 ≤ 12		3237	prohibited
2,5-DIMETHOXY-4-(4-METHYLPHENYLSULPHONYL)BENZENEDIAZONIUM ZINC CHLORIDE	79		3236	prohibited
4-(DIMETHYLAMINO)-BENZENEDIAZONIUM TRICHLOROZINCATE (-1)	100	OP8	3228	
4-DIMETHYLAMINO-6-(2-DIMETHYL-AMINOETHOXY) TOLUENE-2-DIAZONIUM ZINC CHLORIDE	100		3236	prohibited
N,N'-DINITROSO-N,N'-DIMETHYL TEREPHTHALAMIDE, as a paste	72	OP6	3224	
N,N'-DINITROSOPENTAMETHYLENE-TETRAMINE	82	OP6	3224	(7)
DIPHENYLOXIDE-4,4'-DISULPHONYL HYDRAZIDE	100	OP7	3226	
4-DIPROPYLAMINOBENZENEDIAZONIUM ZINC CHLORIDE	100	OP7	3226	
2-(N,N-ETHOXYCARBONYL-PHENYLAMINO)-3-METHOXY-4-(N-METHYL-N-CYCLOHEXYL-AMINO) BENZENEDIAZONIUM ZINC CHLORIDE	63 – 92		3236	prohibited
2-(N,N-ETHOXYCARBONYL-PHENYLAMINO)-3-METHOXY-4-(N-METHYL-N-CYCLOHEXYL-AMINO) BENZENEDIAZONIUM ZINC CHLORIDE	62		3236	prohibited
N-FORMYL-2-(NITROMETHYLENE)-1,3-PERHYDROTHIAZINE	100		3236	prohibited
2-(2-HYDROXYETHOXY)-1-(PYRROLIDIN-1-YL)BENZENE-4-DIAZONIUM ZINC CHLORIDE	100		3236	prohibited

Self-reactive substance	Concen-tration (%)	Packing method	UN generic entry	Remarks
3-(2-HYDROXYETHOXY)-4-(PYRROLIDIN-1-YL)BENZENE DIAZONIUM ZINC CHLORIDE	100		3236	prohibited
2-(N,N-METHYLAMINOETHYL-CARBONYL)-4-(3,4-DIMETHYL-PHENYLSULPHONYL)BENZENEDIAZONIUM HYDROGEN SULPHATE	96		3236	prohibited
4-METHYLBENZENESULPHONYL-HYDRAZIDE	100	OP7	3226	
3-METHYL-4-(PYRROLIDIN-1YL) BENZENEDIAZONIUM TETRAFLUOROBORATE	95		3234	prohibited
PHOSPHOROTHIOIC ACID, O-[(CYANOPHENYL METHYLENE) AZANYL] O,O-DIETHYL ESTER	82 – 91 (Z isomer)	OP8	3227	(10)
SODIUM 2-DIAZO-1-NAPHTHOL-4-SULPHONATE	100	OP7	3226	
SODIUM 2-DIAZO-1-NAPHTHOL-5-SULPHONATE	100	OP7	3226	
4-NITROSOPHENOL	100		3236	prohibited
SELF-REACTIVE LIQUID, SAMPLE		OP2	3223	(8)
SELF-REACTIVE LIQUID, SAMPLE, TEMPERATURE CONTROLLED			3233	prohibited
SELF-REACTIVE SOLID, SAMPLE		OP2	3224	(8)
SELF-REACTIVE SOLID, SAMPLE, TEMPERATURE CONTROLLED			3234	prohibited
TETRAMINE PALLADIUM (II) NITRATE	100		3234	prohibited

Remarks

(1) (Reserved)

(2) "EXPLOSIVE" subsidiary hazard label required (Model No. 1, see 5.2.2.2.2).

(3) Azodicarbonamide formulations which fulfil the criteria of paragraph 20.4.2 (c) of the Manual of Tests and Criteria.

(4) (Reserved)

(5) Azodicarbonamide formulations which fulfil the criteria of paragraph 20.4.2 (d) of the Manual of Tests and Criteria.

(6) (Reserved)

(7) With a compatible diluent having a boiling point of not less than 150 °C.

(8) See 2.2.41.1.15.

(9) This entry applies to mixtures of esters of 2-diazo-1-naphthol-4-sulphonic acid and 2-diazo-1-naphthol-5-sulphonic acid which fulfil the criteria of paragraph 20.4.2 (d) of the Manual of Test and Criteria.

(10) This entry applies to the technical mixture in n-butanol within the specified concentration limits of the (Z) isomer.

2.2.42 Class 4.2: Substances liable to spontaneous combustion

2.2.42.1 Criteria

2.2.42.1.1 The heading of Class 4.2 covers:

– *Pyrophoric substances* which are substances, including mixtures and solutions (liquid or solid), which even in small quantities ignite on contact with air within five minutes. These are the Class 4.2 substances the most liable to spontaneous combustion; and

– *Self-heating substances and articles* which are substances and articles, including mixtures and solutions, which, on contact with air, without energy supply, are liable to self-heating. These substances will ignite only in large amounts (kilogrammes) and after long periods of time (hours or days).

2.2.42.1.2 The substances and articles of Class 4.2 are subdivided as follows:

S Substances liable to spontaneous combustion, without subsidiary hazard:
- S1 Organic, liquid;
- S2 Organic, solid;
- S3 Inorganic, liquid;
- S4 Inorganic, solid;
- S5 Organometallic
- S6 Articles

SW Substances liable to spontaneous combustion, which, in contact with water, emit flammable gases;

SO Substances liable to spontaneous combustion, oxidizing;

ST Substances liable to spontaneous combustion, toxic:
- ST1 Organic, toxic, liquid;
- ST2 Organic, toxic, solid;
- ST3 Inorganic, toxic, liquid;
- ST4 Inorganic, toxic, solid;

SC Substances liable to spontaneous combustion, corrosive:
- SC1 Organic, corrosive, liquid;
- SC2 Organic, corrosive, solid;
- SC3 Inorganic, corrosive, liquid;
- SC4 Inorganic, corrosive, solid.

Properties

2.2.42.1.3 Self-heating of a substance is a process where the gradual reaction of that substance with oxygen (in air) generates heat. If the rate of heat production exceeds the rate of heat loss, then the temperature of the substance will rise which, after an induction time, may lead to self-ignition and combustion.

Classification

2.2.42.1.4 Substances and articles classified in Class 4.2 are listed in Table A of Chapter 3.2. The assignment of substances and articles not mentioned by name in Table A of Chapter 3.2 to the relevant specific n.o.s. entry of 2.2.42.3 in accordance with the provisions of Chapter 2.1 can be based on experience or the results of the test procedures in accordance with the Manual of Tests and Criteria, Part III, Section 33.3. Assignment to general n.o.s. entries of Class 4.2 shall be based on the results of the test procedures in accordance with the Manual of Tests and Criteria, Part III, section 33.3; experience shall also be taken into account when it leads to a more stringent assignment.

2.2.42.1.5 When substances or articles not mentioned by name are assigned to one of the entries listed in 2.2.42.3 on the basis of the test procedures in accordance with the Manual of Tests and Criteria, Part III, section 33.3, the following criteria shall apply:

(a) Solids liable to spontaneous combustion (pyrophoric) shall be assigned to Class 4.2 when they ignite on falling from a height of 1 m or within five minutes;

(b) Liquids liable to spontaneous combustion (pyrophoric) shall be assigned to Class 4.2 when:
  (i) on being poured on an inert carrier, they ignite within five minutes, or
  (ii) in the event of a negative result of the test according to (i), when poured on a dry, indented filter paper (Whatman No. 3 filter), they ignite or carbonize it within five minutes;

(c) Substances in which, in a 10 cm sample cube, at 140 °C test temperature, spontaneous combustion or a rise in temperature to over 200 °C is observed within 24 hours shall be assigned to Class 4.2. This criterion is based on the temperature of the spontaneous combustion of charcoal, which is at 50 °C for a sample cube of 27 m^3. Substances with a temperature of spontaneous combustion higher than 50 °C for a volume of 27 m^3 are not to be assigned to Class 4.2.

NOTE 1: Substances carried in packages with a volume of not more than 3 m^3 are exempted from Class 4.2 if, tested with a 10 cm sample cube at 120 °C, no spontaneous combustion nor a rise in temperature to over 180 °C is observed within 24 hours.

2: Substances carried in packages with a volume of not more than 450 litres are exempted from Class 4.2 if, tested with a 10 cm sample cube at 100 °C, no spontaneous combustion nor a rise in temperature to over 160 °C is observed within 24 hours.

3: Since organometallic substances can be classified in Class 4.2 or 4.3 with additional subsidiary hazards, depending on their properties, a specific classification flow chart for these substances is given in 2.3.5.

2.2.42.1.6 If substances of Class 4.2, as a result of admixtures, come into different categories of hazard from those to which the substances mentioned by name in Table A of Chapter 3.2 belong, these mixtures shall be assigned to the entries to which they belong on the basis of their actual degree of danger.

NOTE: For the classification of solutions and mixtures (such as preparations and wastes), see also 2.1.3.

2.2.42.1.7 On the basis of the test procedure in the Manual of Tests and Criteria, Part III, section 33.3 and the criteria set out in 2.2.42.1.5, it may also be determined whether the nature of a substance mentioned by name is such that the substance is not subject to the provisions for this Class.

Assignment of packing groups

2.2.42.1.8 Substances and articles classified under the various entries in Table A of Chapter 3.2 shall be assigned to packing groups I, II or III on the basis of test procedures of the Manual of Tests and Criteria, Part III, section 33.3, in accordance with the following criteria:

(a) Substances liable to spontaneous combustion (pyrophoric) shall be assigned to packing group I;

(b) Self-heating substances and articles in which, in a 2.5 cm sample cube, at 140 °C test temperature, spontaneous combustion or a rise in temperature to over 200 °C is observed within 24 hours, shall be assigned to packing group II;

Substances with a temperature of spontaneous combustion higher than 50 °C for a volume of 450 litres are not to be assigned to packing group II;

(c) Slightly self-heating substances in which, in a 2.5 cm sample cube, the phenomena referred to under (b) are not observed, in the given conditions, but in which in a 10 cm sample cube at 140 °C test temperature spontaneous combustion or a rise in temperature to over 200 °C is observed within 24 hours, shall be assigned to packing group III.

2.2.42.2 Substances not accepted for carriage

The following substances shall not be accepted for carriage:

– UN No. 3255 tert-BUTYL HYPOCHLORITE; and

– Self-heating solids, oxidizing, assigned to UN No. 3127 unless they meet the requirements for Class 1 (see 2.1.3.7).

2.2.42.3 List of collective entries

Subsidiary hazard	Classification code	UN No.	Name of the substance or article

Substances liable to spontaneous combustion

Without subsidiary hazard	**organic**	**liquid**	**S1**	2845 PYROPHORIC LIQUID, ORGANIC, N.O.S. 3183 SELF-HEATING LIQUID, ORGANIC, N.O.S.
		solid	**S2**	1373 FIBRES or FABRICS, ANIMAL or VEGETABLE or SYNTHETIC, N.O.S. with oil 2006 PLASTICS, NITROCELLULOSE-BASED, SELF-HEATING, N.O.S. 3313 ORGANIC PIGMENTS, SELF HEATING 2846 PYROPHORIC SOLID, ORGANIC, N.O.S. 3088 SELF-HEATING SOLID, ORGANIC, N.O.S.

Without subsidiary hazard S (cont'd)		**liquid**	**S3**	3194 PYROPHORIC LIQUID, INORGANIC, N.O.S. 3186 SELF-HEATING LIQUID, INORGANIC, N.O.S.
	inorganic	**solid**	**S4**	1383 PYROPHORIC METAL, N.O.S. or 1383 PYROPHORIC ALLOY, N.O.S. 1378 METAL CATALYST, WETTED with a visible excess of liquid 2881 METAL CATALYST, DRY 3189 METAL POWDER, SELF-HEATING, N.O.S.[a] 3205 ALKALINE EARTH METAL ALCOHOLATES, N.O.S. 3200 PYROPHORIC SOLID, INORGANIC, N.O.S. 3190 SELF-HEATING SOLID, INORGANIC, N.O.S.
	Organo-metallic		**S5**	3391 ORGANOMETALLIC SUBSTANCE, SOLID, PYROPHORIC 3392 ORGANOMETALLIC SUBSTANCE, LIQUID, PYROPHORIC 3400 ORGANOMETALLIC SUBSTANCE, SOLID, SELF-HEATING
	Articles		**S6**	3542 ARTICLES CONTAINING A SUBSTANCE LIABLE TO SPONTANEOUS COMBUSTION, N.O.S.
Water-reactive			**SW**	3393 ORGANOMETALLIC SUBSTANCE, SOLID, PYROPHORIC, WATER-REACTIVE 3394 ORGANOMETALLIC SUBSTANCE, LIQUID, PYROPHORIC, WATER-REACTIVE
Oxidizing			**SO**	3127 SELF-HEATING SOLID, OXIDIZING, N.O.S. (not accepted for carriage, see 2.2.42.2)
Toxic ST	**organic**	**liquid**	**ST1**	3184 SELF-HEATING LIQUID, TOXIC, ORGANIC, N.O.S.
		solid	**ST2**	3128 SELF-HEATING SOLID, TOXIC, ORGANIC, N.O.S.
	inorganic	**liquid**	**ST3**	3187 SELF-HEATING LIQUID, TOXIC, INORGANIC, N.O.S.
		solid	**ST4**	3191 SELF-HEATING SOLID, TOXIC, INORGANIC, N.O.S.
Corrosive SC	**organic**	**liquid**	**SC1**	3185 SELF-HEATING LIQUID, CORROSIVE, ORGANIC, N.O.S.
		solid	**SC2**	3126 SELF-HEATING SOLID, CORROSIVE, ORGANIC, N.O.S.
	inorganic	**liquid**	**SC3**	3188 SELF-HEATING LIQUID, CORROSIVE, INORGANIC, N.O.S.
		solid	**SC4**	3206 ALKALI METAL ALCOHOLATES, SELF-HEATING, CORROSIVE, N.O.S. 3192 SELF-HEATING SOLID, CORROSIVE, INORGANIC, N.O.S.

Footnotes

[a] Dust and powder of metals, non toxic in a non-spontaneous combustible form which nevertheless, in contact with water, emit flammable gases, are substances of Class 4.3.

2.2.43 Class 4.3: Substances which, in contact with water, emit flammable gases

2.2.43.1 Criteria

2.2.43.1.1 The heading of Class 4.3 covers substances which react with water to emit flammable gases liable to form explosive mixtures with air, and articles containing such substances.

2.2.43.1.2 Substances and articles of Class 4.3 are subdivided as follows:

W Substances which, in contact with water, emit flammable gases, without subsidiary hazard, and articles containing such substances:
- W1 Liquid;
- W2 Solid;
- W3 Articles;

WF1 Substances which, in contact with water, emit flammable gases, liquid, flammable;

WF2 Substances which, in contact with water, emit flammable gases, solid, flammable;

WS Substances which, in contact with water, emit flammable gases, solid, self-heating;

WO Substances which, in contact with water, emit flammable gases, oxidizing, solid;

WT Substances which, in contact with water, emit flammable gases, toxic:
- WT1 Liquid;
- WT2 Solid;

WC Substances which, in contact with water, emit flammable gases, corrosive:
- WC1 Liquid;
- WC2 Solid;

WFC Substances which, in contact with water, emit flammable gases, flammable, corrosive.

Properties

2.2.43.1.3 Certain substances in contact with water may emit flammable gases that can form explosive mixtures with air. Such mixtures are easily ignited by all ordinary sources of ignition, for example naked lights, sparking handtools or unprotected lamps. The resulting blast wave and flames may endanger people and the environment. The test method referred to in 2.2.43.1.4 below is used to determine whether the reaction of a substance with water leads to the development of a dangerous amount of gases which may be flammable. This test method shall not be applied to pyrophoric substances.

Classification

2.2.43.1.4 Substances and articles classified in Class 4.3 are listed in Table A of Chapter 3.2. The assignment of substances and articles not mentioned by name in Table A of Chapter 3.2 to the relevant entry of 2.2.43.3 in accordance with the provisions of Chapter 2.1 shall be based on the results of the test procedure in accordance with the Manual of Tests and Criteria, Part III, Section 33.4; experience shall also be taken into account when it leads to a more stringent assignment.

2.2.43.1.5 When substances not mentioned by name are assigned to one of the entries listed in 2.2.43.3 on the basis of the test procedure in accordance with the Manual of Tests and Criteria, Part III, Section 33.4, the following criteria shall apply:

A substance shall be assigned to Class 4.3 if:

(a) spontaneous ignition of the gas emitted takes place in any step of the test procedure; or

(b) there is an evolution of flammable gas at a rate greater than 1 litre per kilogramme of the substance to be tested per hour.

NOTE: Since organometallic substances can be classified in Class 4.2 or 4.3 with additional subsidiary hazards, depending on their properties, a specific classification flow chart for these substances is given in 2.3.5.

2.2.43.1.6 If substances of Class 4.3, as a result of admixtures, come into different categories of hazard from those to which the substances mentioned by name in Table A of Chapter 3.2 belong, these mixtures shall be assigned to the entries to which they belong on the basis of their actual degree of danger.

NOTE: For the classification of solutions and mixtures (such as preparations and wastes) see also 2.1.3.

2.2.43.1.7 On the basis of the test procedures in accordance with the Manual of Tests and Criteria, Part III, Section 33.4, and the criteria set out in 2.2.43.1.5, it may also be determined whether the nature of a substance mentioned by name is such that the substance is not subject to the provisions for this Class.

Assignment of packing groups

2.2.43.1.8 Substances and articles classified under the various entries in Table A of Chapter 3.2 shall be assigned to packing groups I, II or III on the basis of test procedures of the Manual of Tests and Criteria, Part III, section 33.4, in accordance with the following criteria:

(a) Packing group I shall be assigned to any substance which reacts vigorously with water at ambient temperature and generally demonstrates a tendency for the gas produced to ignite spontaneously, or one which reacts readily with water at ambient temperatures such that the rate of evolution of flammable gas is equal to or greater than 10 litres per kilogramme of substance over any one minute period;

(b) Packing group II shall be assigned to any substance which reacts readily with water at ambient temperature such that the maximum rate of evolution of flammable gas is equal to or greater than 20 litres per kilogramme of substance per hour, and which does not meet the criteria of packing group I;

(c) Packing group III shall be assigned to any substance which reacts slowly with water at ambient temperature such that the maximum rate of evolution of flammable gas is greater than 1 litre per kilogramme of substance per hour, and which does not meet the criteria of packing groups I or II.

2.2.43.2 Substances not accepted for carriage

Water-reactive solids, oxidizing, assigned to UN No. 3133 shall not be accepted for carriage unless they meet the requirements for Class 1 (see also 2.1.3.7).

2.2.43.3 List of collective entries

Subsidiary hazard	Classification code	UN No.	Name of the substance or article
Substances which, in contact with water, emit flammable gases			
without subsidiary hazard W	**liquid W1**	1389	ALKALI METAL AMALGAM, LIQUID
		1391	ALKALI METAL DISPERSION or
		1391	ALKALINE EARTH METAL DISPERSION
		1392	ALKALINE EARTH METAL AMALGAM, LIQUID
		1420	POTASSIUM METAL ALLOYS, LIQUID
		1422	POTASSIUM SODIUM ALLOYS, LIQUID
		3398	ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE
		1421	ALKALI METAL ALLOY, LIQUID, N.O.S.
		3148	WATER-REACTIVE LIQUID, N.O.S.
	solid W2[(a)]	1390	ALKALI METAL AMIDES
		3170	ALUMINIUM SMELTING BY-PRODUCTS or
		3170	ALUMINIUM REMELTING BY-PRODUCTS
		3401	ALKALI METAL AMALGAM, SOLID
		3402	ALKALINE EARTH METAL AMALGAM, SOLID
		3403	POTASSIUM METAL ALLOYS, SOLID
		3404	POTASSIUM SODIUM ALLOYS, SOLID
		3395	ORGANOMETALLIC SUBSTANCE, SOLID, WATER-REACTIVE
		1393	ALKALINE EARTH METAL ALLOY, N.O.S.
		1409	METAL HYDRIDES, WATER-REACTIVE, N.O.S.
		3208	METALLIC SUBSTANCE, WATER-REACTIVE, N.O.S.
		2813	WATER-REACTIVE SOLID, N.O.S.
	Articles W3	3292	BATTERIES, CONTAINING SODIUM or
		3292	CELLS, CONTAINING SODIUM
		3543	ARTICLES CONTAINING A SUBSTANCE WHICH IN CONTACT WITH WATER EMITS FLAMMABLE GASES, N.O.S.

Liquid, flammable		**WF1**	3482 ALKALI METAL DISPERSION, FLAMMABLE or 3482 ALKALINE EARTH METAL DISPERSION, FLAMMABLE 3399 ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE
Solid, flammable		**WF2**	3396 ORGANOMETALLIC SUBSTANCE, SOLID, WATER-REACTIVE, FLAMMABLE 3132 WATER-REACTIVE SOLID, FLAMMABLE, N.O.S.
Solid, self-heating		**WS**[b]	3397 ORGANOMETALLIC SUBSTANCE, SOLID, WATER-REACTIVE, SELF-HEATING 3209 METALLIC SUBSTANCE, WATER-REACTIVE, SELF-HEATING, N.O.S. 3135 WATER-REACTIVE SOLID, SELF-HEATING, N.O.S.
Solid, oxidizing		**WO**	3133 WATER-REACTIVE SOLID, OXIDIZING, N.O.S. (not accepted for carriage, see 2.2.43.2)
Toxic WT	**liquid**	**WT1**	3130 WATER-REACTIVE LIQUID, TOXIC, N.O.S.
	solid	**WT2**	3134 WATER-REACTIVE SOLID, TOXIC, N.O.S.
Corrosive WC	**liquid**	**WC1**	3129 WATER-REACTIVE LIQUID, CORROSIVE, N.O.S.
	solid	**WC2**	3131 WATER-REACTIVE SOLID, CORROSIVE, N.O.S.
Flammable, corrosive		**WFC**[c]	2988 CHLOROSILANES, WATER-REACTIVE, FLAMMABLE, CORROSIVE, NO.S. (No other collective entry with this classification code available; if need be, classification under a collective entry with a classification code to be determined according to the table of precedence of hazard in 2.1.3.10.)

Footnotes

(a) Metals and metal alloys which, in contact with water, do not emit flammable gases and are not pyrophoric or self-heating, but which are readily flammable, are substances of Class 4.1. Alkaline-earth metals and alkaline-earth metal alloys in pyrophoric form are substances of Class 4.2 Dust and powders of metals in pyrophoric form are substances of Class 4.2. Metals and metal alloys in pyrophoric form are substances of Class 4.2. Compounds of phosphorus with heavy metals such as iron, copper, etc. are not subject to the provisions of RID.

(b) Metals and metal alloys in pyrophoric form are substances of Class 4.2.

(c) Chlorosilanes, having a flash-point of less than 23 °C and which, in contact with water, do not emit flammable gases, are substances of Class 3. Chlorosilanes, having a flash-point equal to or greater than 23 °C and which, in contact with water, do not emit flammable gases, are substances of Class 8.

2.2.51 Class 5.1: Oxidizing substances

2.2.51.1 Criteria

2.2.51.1.1 The heading of Class 5.1 covers substances which, while in themselves not necessarily combustible, may, generally by yielding oxygen, cause or contribute to the combustion of other material, and articles containing such substances.

2.2.51.1.2 The substances of Class 5.1 and articles containing such substances are subdivided as follows:

O Oxidizing substances without subsidiary hazard or articles containing such substances:
- O1 Liquid;
- O2 Solid;
- O3 Articles;

OF Oxidizing substances, solid, flammable;

OS Oxidizing substances, solid, self-heating;

OW Oxidizing substances, solid which, in contact with water, emit flammable gases;

OT Oxidizing substances, toxic:
- OT1 Liquid;
- OT2 Solid;

OC Oxidizing substances, corrosive:
- OC1 Liquid;
- OC2 Solid;

OTC Oxidizing substances, toxic, corrosive.

2.2.51.1.3 Substances and articles classified in Class 5.1 are listed in Table A of Chapter 3.2. The assignment of substances and articles not mentioned by name in Table A of Chapter 3.2 to the relevant entry of 2.2.51.3 in accordance with the provisions of Chapter 2.1 can be based on the tests, methods and criteria in 2.2.51.1.6 to 2.2.51.1.10 below and the Manual of Tests and Criteria, Part III, Section 34.4 or, for solid ammonium nitrate based fertilizers, Section 39 subject to the restrictions of 2.2.51.2.2, thirteenth and fourteenth indents. In the event of divergence between test results and known experience, judgement based on known experience shall take precedence over test results.

2.2.51.1.4 If substances of Class 5.1, as a result of admixtures, come into different categories of hazard from those to which the substances mentioned by name in Table A of Chapter 3.2 belong, these mixtures or solutions shall be assigned to the entries to which they belong on the basis of their actual degree of danger.

NOTE: For the classification of solutions and mixtures (such as preparations and wastes), see also Section 2.1.3.

2.2.51.1.5 On the basis of the test procedures in the Manual of Tests and Criteria, Part III, Section 34.4 or, for solid ammonium nitrate based fertilizers, Section 39, and the criteria set out in 2.2.51.1.6 to 2.2.51.1.10 it may also be determined whether the nature of a substance mentioned by name in Table A of Chapter 3.2 is such that the substance is not subject to the provisions for this class.

Oxidizing solids

Classification

2.2.51.1.6 When oxidizing solid substances not mentioned by name in Table A of Chapter 3.2 are assigned to one of the entries listed in 2.2.51.3 on the basis of the test procedure in accordance with the Manual of Tests and Criteria, Part III, sub-section 34.4.1 (test O.1) or alternatively, sub section 34.4.3 (test O.3), the following criteria shall apply:

(a) In the test O.1, a solid substance shall be assigned to Class 5.1 if, in the 4:1 or the 1:1 sample-to-cellulose ratio (by mass) tested, it ignites or burns or exhibits mean burning times equal to or less than that of a 3:7 mixture (by mass) of potassium bromate and cellulose; or

(b) In the test O.3, a solid substance shall be assigned to Class 5.1 if, in the 4:1 or the 1:1 sample-to-cellulose ratio (by mass) tested, it exhibits a mean burning rate equal to or greater than the mean burning rate of a 1:2 mixture (by mass) of calcium peroxide and cellulose.

2.2.51.1.7 By exception, solid ammonium nitrate based fertilizers shall be classified in accordance with the procedure as set out in the Manual of Tests and Criteria, Part III, Section 39.

Assignment of packing groups

2.2.51.1.8 Oxidizing solids classified under the various entries in Table A of Chapter 3.2 shall be assigned to packing groups I, II or III on the basis of test procedures of the Manual of Tests and Criteria, Part III, sub-section 34.4.1 (test O.1) or sub-section 34.4.3 (test O.3), in accordance with the following criteria:

(a) Test O.1:

(i) Packing group I: any substance which, in the 4:1 or 1:1 sample-to-cellulose ratio (by mass) tested, exhibits a mean burning time less than the mean burning time of a 3:2 mixture, by mass, of potassium bromate and cellulose;

(ii) Packing group II: any substance which, in the 4:1 or 1:1 sample-to-cellulose ratio (by mass) tested, exhibits a mean burning time equal to or less than the mean burning time of a 2:3 mixture (by mass) of potassium bromate and cellulose and the criteria for packing group I are not met;

(iii) Packing group III: any substance which, in the 4:1 or 1:1 sample-to-cellulose ratio (by mass) tested, exhibits a mean burning time equal to or less than the mean burning time of a 3:7 mixture (by mass) of potassium bromate and cellulose and the criteria for packing groups I and II are not met;

(b) Test O.3:

(i) Packing group I: any substance which, in the 4:1 or 1:1 sample-to-cellulose ratio (by mass) tested, exhibits a mean burning rate greater than the mean burning rate of a 3:1 mixture (by mass) of calcium peroxide and cellulose;

(ii) Packing group II: any substance which, in the 4:1 or 1:1 sample-to-cellulose ratio (by mass) tested, exhibits a mean burning rate equal to or greater than the mean burning rate of a 1:1 mixture (by mass) of calcium peroxide and cellulose, and the criteria for packing group I are not met;

(iii) Packing group III: any substance which, in the 4:1 or 1:1 sample-to-cellulose ratio (by mass) tested, exhibits a mean burning rate equal to or greater than the mean burning rate of a 1:2 mixture (by mass) of calcium peroxide and cellulose, and the criteria for packing groups I and II are not met.

Oxidizing liquids

Classification

2.2.51.1.9 When oxidizing liquid substances not mentioned by name in Table A of Chapter 3.2 are assigned to one of the entries listed in 2.2.51.3 on the basis of the test procedure in accordance with the Manual of Tests and Criteria, Part III, sub-section 34.4.2, the following criteria shall apply:

A liquid substance shall be assigned to Class 5.1 if, in the 1:1 mixture, by mass, of substance and cellulose tested, it exhibits a pressure rise of 2070 kPa gauge or more and a mean pressure rise time equal to or less than the mean pressure rise time of a 1:1 mixture, by mass, of 65% aqueous nitric acid and cellulose.

Assignment of packing groups

2.2.51.1.10 Oxidizing liquids classified under the various entries in Table A of Chapter 3.2 shall be assigned to packing groups I, II or III on the basis of test procedures of the Manual of Tests and Criteria, Part III, section 34.4.2, in accordance with the following criteria:

(a) Packing group I: any substance which, in the 1:1 mixture, by mass, of substance and cellulose tested, spontaneously ignites; or the mean pressure rise time of a 1:1 mixture, by mass, of substance and cellulose is less than that of a 1:1 mixture, by mass, of 50% perchloric acid and cellulose;

(b) Packing group II: any substance which, in the 1:1 mixture, by mass, of substance and cellulose tested, exhibits a mean pressure rise time less than or equal to the mean pressure rise time of a 1:1 mixture, by mass, of 40% aqueous sodium chlorate solution and cellulose; and the criteria for packing group I are not met;

(c) Packing group III: any substance which, in the 1:1 mixture, by mass, of substance and cellulose tested, exhibits a mean pressure rise time less than or equal to the mean pressure rise time of a 1:1 mixture, by mass, of 65% aqueous nitric acid and cellulose; and the criteria for packing groups I and II are not met.

2.2.51.2 Substances not accepted for carriage

2.2.51.2.1 The chemically unstable substances of Class 5.1 shall not be accepted for carriage unless the necessary steps have been taken to prevent their dangerous decomposition or polymerization during carriage. To this end it shall in particular be ensured that receptacles and tanks do not contain any material liable to promote these reactions.

2.2.51.2.2 The following substances and mixtures shall not be accepted for carriage:

- Oxidizing solids, self-heating, assigned to UN No. 3100, oxidizing solids, water-reactive, assigned to UN No. 3121 and oxidizing solids, flammable, assigned to UN No. 3137, unless they meet the requirements for Class 1 (see also 2.1.3.7);
- Hydrogen peroxide, not stabilized or hydrogen peroxide, aqueous solutions, not stabilized containing more than 60% hydrogen peroxide;
- Tetranitromethane not free from combustible impurities;
- Perchloric acid solutions containing more than 72% (mass) acid, or mixtures of perchloric acid with any liquid other than water;
- Chloric acid solution containing more than 10% chloric acid or mixtures of chloric acid with any liquid other than water;
- Halogenated fluor compounds other than UN Nos. 1745 BROMINE PENTAFLUORIDE; 1746 BROMINE TRIFLUORIDE and 2495 IODINE PENTAFLUORIDE of Class 5.1 as well as UN Nos. 1749 CHLORINE TRIFLUORIDE and 2548 CHLORINE PENTAFLUORIDE of Class 2;
- Ammonium chlorate and its aqueous solutions and mixtures of a chlorate with an ammonium salt*;*
- Ammonium chlorite and its aqueous solutions and mixtures of a chlorite with an ammonium salt;
- Mixtures of a hypochlorite with an ammonium salt;
- Ammonium bromate and its aqueous solutions and mixtures of a bromate with an ammonium salt;
- Ammonium permanganate and its aqueous solutions and mixtures of a permanganate with an ammonium salt;
- Ammonium nitrate containing more than 0.2% combustible substances (including any organic substance calculated as carbon) unless it is a constituent of a substance or article of Class 1;
- Ammonium nitrate based fertilizers with compositions that lead to exit boxes 4, 6, 8, 15, 31, or 33 of the flowchart of paragraph 39.5.1 of the Manual of Tests and Criteria, Part III, Section 39, unless they have been assigned a suitable UN number in Class 1;
- Ammonium nitrate based fertilizers with compositions that lead to exit boxes 20, 23 or 39 of the flowchart of paragraph 39.5.1 of the Manual of Tests and Criteria, Part III, Section 39, unless they have been assigned a suitable UN number in Class 1 or, provided that the suitability for carriage has been demonstrated and that this has been approved by the competent authority, in Class 5.1 other than UN No. 2067;

  NOTE: The term "competent authority" means the competent authority of the country of origin. If the country of origin is not an RID Contracting State, the classification and conditions of carriage shall be recognized by the competent authority of the first RID Contracting State reached by the consignment.
- Ammonium nitrite and its aqueous solutions and mixtures of an inorganic nitrite with an ammonium salt;
- Mixtures of potassium nitrate, sodium nitrite and an ammonium salt.

2.2.51.3 List of collective entries

Subsidiary hazard	Classification code	UN No.	Name of the substance or article
Oxidizing substances and articles containing such substances			
Without subsidiary hazard O	**liquid O1**	3210	CHLORATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.
		3211	PERCHLORATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.
		3213	BROMATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.
		3214	PERMANGANATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.
		3216	PERSULPHATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.
		3218	NITRATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.
		3219	NITRITES, INORGANIC, AQUEOUS SOLUTION, N.O.S.
		3139	OXIDIZING LIQUID, N.O.S.
	solid O2	1450	BROMATES, INORGANIC, N.O.S.
		1461	CHLORATES, INORGANIC, N.O.S.
		1462	CHLORITES, INORGANIC, N.O.S.
		1477	NITRATES, INORGANIC, N.O.S.
		1481	PERCHLORATES, INORGANIC, N.O.S.
		1482	PERMANGANATES, INORGANIC, N.O.S.
		1483	PEROXIDES, INORGANIC, N.O.S.
		2627	NITRITES, INORGANIC, N.O.S.
		3212	HYPOCHLORITES, INORGANIC, N.O.S.
		3215	PERSULPHATES, INORGANIC, N.O.S.
		1479	OXIDIZING SOLID, N.O.S.
	articles O3	3356	OXYGEN GENERATOR, CHEMICAL
		3544	ARTICLES CONTAINING OXIDIZING SUBSTANCE, N.O.S.
Solid, flammable	**OF**	3137	OXIDIZING SOLID, FLAMMABLE, N.O.S. (not accepted for carriage, see 2.2.51.2)
Solid, self-heating	**OS**	3100	OXIDIZING SOLID, SELF-HEATING, N.O.S. (not accepted for carriage, see 2.2.51.2)
Solid, water reactive	**OW**	3121	OXIDIZING SOLID, WATER REACTIVE, N.O.S. (not accepted for carriage, see 2.2.51.2)
Toxic OT	**liquid OT1**	3099	OXIDIZING LIQUID, TOXIC, N.O.S.
	solid OT2	3087	OXIDIZING SOLID, TOXIC, N.O.S.
Corrosive OC	**liquid OC1**	3098	OXIDIZING LIQUID, CORROSIVE, N.O.S.
	solid OC2	3085	OXIDIZING SOLID, CORROSIVE, N.O.S.
Toxic, corrosive	**OTC**		(No collective entry with this classification code available; if need be, classification under a collective entry with a classification code to be determined according to the table of precedence of hazard in 2.1.3.10.)

2.2.52 Class 5.2: Organic peroxides

2.2.52.1 Criteria

2.2.52.1.1 The heading of Class 5.2 covers organic peroxides and formulations of organic peroxides.

2.2.52.1.2 The substances of Class 5.2 are subdivided as follows:

P1 Organic peroxides, not requiring temperature control;

P2 Organic peroxides, requiring temperature control (not accepted for carriage by rail).

Definition

2.2.52.1.3 *Organic peroxides* are organic substances which contain the bivalent -O-O- structure and may be considered derivatives of hydrogen peroxide, where one or both of the hydrogen atoms have been replaced by organic radicals.

Properties

2.2.52.1.4 Organic peroxides are liable to exothermic decomposition at normal or elevated temperatures. The decomposition can be initiated by heat, contact with impurities (e.g. acids, heavy-metal compounds, amines), friction or impact. The rate of decomposition increases with temperature and varies with the organic peroxide formulation. Decomposition may result in the evolution of harmful, or flammable, gases or vapours. Some organic peroxides may decompose explosively, particularly if confined. This characteristic may be modified by the addition of diluents or by the use of appropriate packagings. Many organic peroxides burn vigorously. Contact of organic peroxides with the eyes is to be avoided. Some organic peroxides will cause serious injury to the cornea, even after brief contact, or will be corrosive to the skin.

NOTE: Test methods for determining the flammability of organic peroxides are set out in the Manual of Tests and Criteria, Part III, sub-section 32.4. Because organic peroxides may react vigorously when heated, it is recommended to determine their flash-point using small sample sizes such as described in ISO 3679:1983.

Classification

2.2.52.1.5 Any organic peroxide shall be considered for classification in Class 5.2 unless the organic peroxide formulation contains:

(a) Not more than 1.0% available oxygen from the organic peroxides when containing not more than 1.0% hydrogen peroxide;

(b) Not more than 0.5% available oxygen from the organic peroxides when containing more than 1.0% but not more than 7.0% hydrogen peroxide.

NOTE: The available oxygen content (%) of an organic peroxide formulation is given by the formula

$$16 \times \sum (n_i \times c_i/m_i)$$

where:

n_i = number of peroxygen groups per molecule of organic peroxide i;

c_i = concentration (mass %) of organic peroxide i; and

m_i = molecular mass of organic peroxide i.

2.2.52.1.6 Organic peroxides are classified into seven types according to the degree of danger they present. The types of organic peroxide range from type A, which is not accepted for carriage in the packaging in which it is tested, to type G, which is not subject to the provisions of Class 5.2. The classification of types B to F is directly related to the maximum quantity allowed in one package. The principles to be applied to the classification of substances not listed in 2.2.52.4 are set out in the Manual of Tests and Criteria, Part II.

2.2.52.1.7 Organic peroxides which have already been classified and are already permitted for carriage in packagings are listed in 2.2.52.4, those already permitted for carriage in IBCs are listed in 4.1.4.2, packing instruction IBC520 and those already permitted for carriage in tanks in accordance with Chapters 4.2 and 4.3 are listed in 4.2.5.2, portable tank instruction T23. Each permitted substance listed is assigned to a generic entry of Table A of Chapter 3.2 (UN Nos. 3101 to 3120) and appropriate subsidiary hazards and remarks providing relevant transport information are given.

These generic entries specify:

– the type (B to F) of organic peroxide (see 2.2.52.1.6 above);

– physical state (liquid/solid).

Mixtures of these formulations may be classified as the same type of organic peroxide as that of the most dangerous component and be carried under the conditions of carriage given for this type. However, as two stable components can form a thermally less stable mixture, the self-accelerating decomposition temperature (SADT) of the mixture shall be determined.

2.2.52.1.8 Classification of organic peroxides not listed in 2.2.52.4, 4.1.4.2, packing instruction IBC520 or 4.2.5.2, portable tank instruction T23, and assignment to a collective entry shall be made by the competent authority of the country of origin. The statement of approval shall contain the classification and the relevant conditions of carriage. If the country of origin is not an RID Contracting State, the classification and conditions of carriage shall be recognized by the competent authority of the first RID Contracting State reached by the consignment.

2.2.52.1.9 Samples of organic peroxides or formulations of organic peroxides not listed in 2.2.52.4, for which a complete set of test results is not available and which are to be carried for further testing or evaluation, shall be assigned to one of the appropriate entries for organic peroxides type C provided the following conditions are met:

– the available data indicate that the sample would be no more dangerous than organic peroxides type B;
– the sample is packaged in accordance with packing method OP2 and the quantity per wagon is limited to 10 kg.

Samples requiring temperature control shall not be accepted for carriage by rail.

Desensitization of organic peroxides

2.2.52.1.10 In order to ensure safety during carriage, organic peroxides are in many cases desensitized by organic liquids or solids, inorganic solids or water. Where a percentage of a substance is stipulated, this refers to the percentage by mass, rounded to the nearest whole number. In general, desensitization shall be such that, in case of spillage, the organic peroxide will not concentrate to a dangerous extent.

2.2.52.1.11 Unless otherwise stated for the individual organic peroxide formulation, the following definition(s) shall apply to diluents used for desensitization:

– diluents type A are organic liquids which are compatible with the organic peroxide and which have a boiling point of not less than 150 °C. Type A diluents may be used for desensitizing all organic peroxides.
– diluents type B are organic liquids which are compatible with the organic peroxide and which have a boiling point of less than 150 °C but not less than 60 °C and a flash-point of not less than 5 °C.

Type B diluents may be used for desensitization of all organic peroxides, provided that the boiling point of the liquid is at least 60 °C higher than the SADT in a 50 kg package.

2.2.52.1.12 Diluents, other than type A or type B, may be added to organic peroxide formulations as listed in 2.2.52.4, provided that they are compatible. However, replacement of all or part of a type A or type B diluent by another diluent with differing properties requires that the organic peroxide formulation be re-assessed in accordance with the normal acceptance procedure for Class 5.2.

2.2.52.1.13 Water may only be used for the desensitization of organic peroxides which are listed in 2.2.52.4 or in the competent authority decision according to 2.2.52.1.8 as being "with water" or "as a stable dispersion in water". Samples of organic peroxides or formulations of organic peroxides not listed in 2.2.52.4 may also be desensitized with water provided the requirements of 2.2.52.1.9 are met.

2.2.52.1.14 Organic and inorganic solids may be used for desensitization of organic peroxides, provided that they are compatible. Compatible liquids and solids are those which have no detrimental influence on the thermal stability and hazard type of the organic peroxide formulation.

2.2.52.1.15 – 2.2.52.1.16 (Reserved)

2.2.52.2 Substances not accepted for carriage

The following organic peroxides shall not be accepted for carriage under the requirements of Class 5.2:

– Organic peroxides, type A (see Manual of Tests and Criteria, Part II, paragraph 20.4.3 (a)).

The following organic peroxides requiring temperature control are not to be accepted for carriage by rail:

– Organic peroxides, types B and C with an SADT ≤ 50 °C:
  UN 3111 ORGANIC PEROXIDE TYPE B, LIQUID, TEMPERATURE CONTROLLED;
  UN 3112 ORGANIC PEROXIDE TYPE B, SOLID, TEMPERATURE CONTROLLED;
  UN 3113 ORGANIC PEROXIDE TYPE C, LIQUID, TEMPERATURE CONTROLLED;
  UN 3114 ORGANIC PEROXIDE TYPE C, SOLID, TEMPERATURE CONTROLLED;
– Organic peroxides type D showing a violent or medium effect when heated under confinement with an SADT ≤ 50 °C or showing a low or no effect when heated under confinement with an SADT ≤ 45 °C:
  UN 3115 ORGANIC PEROXIDE TYPE D, LIQUID, TEMPERATURE CONTROLLED;
  UN 3116 ORGANIC PEROXIDE TYPE D, SOLID, TEMPERATURE CONTROLLED;

– Organic peroxides types E and F with an SADT ≤ 45 °C:
UN 3117 ORGANIC PEROXIDE TYPE E, LIQUID, TEMPERATURE CONTROLLED;
UN 3118 ORGANIC PEROXIDE TYPE E, SOLID, TEMPERATURE CONTROLLED;
UN 3119 ORGANIC PEROXIDE TYPE F, LIQUID, TEMPERATURE CONTROLLED;
UN 3120 ORGANIC PEROXIDE TYPE F, SOLID, TEMPERATURE CONTROLLED

2.2.52.3 List of collective entries

	Classification code	UN No.	Name of the substance or article
Organic peroxides			
			ORGANIC PEROXIDE TYPE A, LIQUID (not accepted for carriage, see 2.2.52.2)
			ORGANIC PEROXIDE TYPE A, SOLID (not accepted for carriage, see 2.2.52.2)
		3101	ORGANIC PEROXIDE TYPE B, LIQUID
		3102	ORGANIC PEROXIDE TYPE B, SOLID
		3103	ORGANIC PEROXIDE TYPE C, LIQUID
		3104	ORGANIC PEROXIDE TYPE C, SOLID
Not requiring temperature control	**P1**	3105	ORGANIC PEROXIDE TYPE D, LIQUID
		3106	ORGANIC PEROXIDE TYPE D, SOLID
		3107	ORGANIC PEROXIDE TYPE E, LIQUID
		3108	ORGANIC PEROXIDE TYPE E, SOLID
		3109	ORGANIC PEROXIDE TYPE F, LIQUID
		3110	ORGANIC PEROXIDE TYPE F, SOLID
			ORGANIC PEROXIDE TYPE G, LIQUID (not subject to the provisions applicable to Class 5.2, see 2.2.52.1.6)
			ORGANIC PEROXIDE TYPE G, SOLID (not subject to the provisions applicable to Class 5.2, see 2.2.52.1.6)
		3545	ARTICLES CONTAINING ORGANIC PEROXIDE, N.O.S.
		3111	ORGANIC PEROXIDE TYPE B, LIQUID, TEMPERATURE CONTROLLED (not accepted for carriage by rail, see 2.2.52.2)
		3112	ORGANIC PEROXIDE TYPE B, SOLID, TEMPERATURE CONTROLLED (not accepted for carriage by rail, see 2.2.52.2)
		3113	ORGANIC PEROXIDE TYPE C, LIQUID, TEMPERATURE CONTROLLED (not accepted for carriage by rail, see 2.2.52.2)
		3114	ORGANIC PEROXIDE TYPE C, SOLID, TEMPERATURE CONTROLLED (not accepted for carriage by rail, see 2.2.52.2)
Requiring temperature control	**P2**	3115	ORGANIC PEROXIDE TYPE D, LIQUID, TEMPERATURE CONTROLLED (not accepted for carriage by rail, see 2.2.52.2)
		3116	ORGANIC PEROXIDE TYPE D, SOLID, TEMPERATURE CONTROLLED (not accepted for carriage by rail, see 2.2.52.2)
		3117	ORGANIC PEROXIDE TYPE E, LIQUID, TEMPERATURE CONTROLLED (not accepted for carriage by rail, see 2.2.52.2)
		3118	ORGANIC PEROXIDE TYPE E, SOLID, TEMPERATURE CONTROLLED (not accepted for carriage by rail, see 2.2.52.2)
		3119	ORGANIC PEROXIDE TYPE F, LIQUID, TEMPERATURE CONTROLLED (not accepted for carriage by rail, see 2.2.52.2)
		3120	ORGANIC PEROXIDE TYPE F, SOLID, TEMPERATURE CONTROLLED (not accepted for carriage by rail, see 2.2.52.2)

2.2.52.4 List of currently assigned organic peroxides in packagings

In the column "Packing Method", codes "OP1" to "OP8" refer to packing methods in 4.1.4.1 packing instruction P520 (see also 4.1.7.1). Organic peroxides to be carried shall fulfil the classification as listed. For substances permitted in IBCs, see 4.1.4.2, packing instruction IBC520 and, for those permitted in tanks according to Chapters 4.2 and 4.3, see 4.2.5.2.6, portable tank instruction T23. The formulations listed in packing instruction IBC 520 of 4.1.4.2 and in portable tank instruction T 23 of 4.2.5.2.6 may also be carried packed in accordance with packing method OP8 of packing instruction P 520 of 4.1.4.1.

Organic peroxide	Concentration (%)	Diluent type A (%)	Diluent type B (%)[1]	Inert solid (%)	Water	Packing method	Number (generic entry)	Subsidiary hazards and re-marks
ACETYL ACETONE PEROXIDE	≤ 42	≥ 48			≥ 8	OP7	3105	(2)
"	≤ 32 as a paste					OP7	3106	(20)
ACETYL CYCLOHEXANESULPHONYL PEROXIDE	≤ 82				≥ 12		3112	prohibited
"	≤ 32		≥ 68				3115	prohibited
tert-AMYL HYDROPEROXIDE	≤ 88	≥ 6			≥ 6	OP8	3107	
tert-AMYL PEROXYACETATE	≤ 62	≥ 38				OP7	3105	
tert-AMYL PEROXYBENZOATE	≤ 100					OP5	3103	
tert-AMYL PEROXY-2-ETHYLHEXANOATE	≤ 100						3115	prohibited
tert-AMYL PEROXY-2-ETHYLHEXYL CARBONATE	≤ 100					OP7	3105	
tert-AMYLPEROXY ISOPROPYL CARBONATE	≤ 77	≥ 23				OP5	3103	
tert-AMYL PEROXYNEODECANOATE	≤ 77		≥ 23				3115	prohibited
"	≤ 47	≥ 53					3119	prohibited
tert-AMYL PEROXYPIVALATE	≤ 77		≥ 23				3113	prohibited
tert-AMYLPEROXY-3,5,5-TRIMETHYLHEXANOATE	≤ 100					OP7	3105	
tert-BUTYL CUMYL PEROXIDE	> 42 – 100					OP8	3109	
"	≤ 52			≥ 48		OP8	3108	
n-BUTYL-4,4-DI-(tert-BUTYLPEROXY) VALERATE	> 52 – 100					OP5	3103	
"	≤ 52			≥ 48		OP8	3108	
tert-BUTYL HYDROPEROXIDE	> 79 – 90				≥ 10	OP5	3103	(13)
"	≤ 80	≥ 20				OP7	3105	(4) (13)

Organic peroxide	Concentration (%)	Diluent type A (%)	Diluent type B (%)[1]	Inert solid (%)	Water	Packing method	Number (generic entry)	Subsidiary hazards and re-marks
"	≤ 79				> 14	OP8	3107	(13) (23)
"	≤ 72				≥ 28	OP8	3109	(13)
tert-BUTYL HYDROPEROXIDE + DI-tert-BUTYLPEROXIDE	< 82 + > 9				≥ 7	OP5	3103	(13)
tert-BUTYL MONOPEROXYMALEATE	> 52 – 100					OP5	3102	(3)
"	≤ 52	≥ 48				OP6	3103	
"	≤ 52			≥ 48		OP8	3108	
"	≤ 52 as a paste					OP8	3108	
tert-BUTYL PEROXYACETATE	> 52 – 77	≥ 23				OP5	3101	(3)
"	> 32 – 52	≥ 48				OP6	3103	
"	≤ 32		≥ 68			OP8	3109	
tert-BUTYL PEROXYBENZOATE	> 77 – 100					OP5	3103	
"	> 52 – 77	≥ 23				OP7	3105	
"	≤ 52			≥ 48		OP7	3106	
tert-BUTYL PEROXYBUTYL FUMARATE	≤ 52	≥ 48				OP7	3105	
tert-BUTYL PEROXYCROTONATE	≤ 77	≥ 23				OP7	3105	
tert-BUTYL PEROXYDIETHYLACETATE	≤ 100						3113	prohibited
tert-BUTYL PEROXY-2-ETHYLHEXANOATE	> 52 – 100						3113	prohibited
"	> 32 – 52		≥ 48				3117	prohibited
"	≤ 32			≥ 48			3118	prohibited
"	≤ 32		≥ 68				3119	prohibited

Organic peroxide	Concentration (%)	Diluent type A (%)	Diluent type B (%)[1]	Inert solid (%)	Water	Packing method	Number (generic entry)	Subsidiary hazards and remarks
tert-BUTYL PEROXY-2-ETHYLHEXANOATE + 2,2-DI-(tert-BUTYLPEROXY)BUTANE	≤ 12 + ≤ 14	≥ 14		≥ 60		OP7	3106	
"	≤ 31 + ≤ 36		≥ 33				3115	prohibited
tert-BUTYL PEROXY-2-ETHYLHEXYLCARBONATE	≤ 100					OP7	3105	
tert-BUTYL PEROXYISOBUTYRATE	> 52 – 77		≥ 23				3111	prohibited
"	≤ 52		≥ 48				3115	prohibited
tert-BUTYLPEROXY ISOPROPYLCARBONATE	≤ 77	≥ 23				OP5	3103	
1-(2-tert-BUTYLPEROXY ISOPROPYL)-3-ISOPROPENYLBENZENE	≤ 77	≥ 23				OP7	3105	
"	≤ 42			≥ 58		OP8	3108	
tert-BUTYL PEROXY-2-METHYLBENZOATE	≤ 100					OP5	3103	
tert-BUTYL PEROXYNEODECANOATE	> 77 – 100						3115	prohibited
"	≤ 77	≥ 23					3115	prohibited
"	≤ 52 as a stable dispersion in water						3119	prohibited
"	≤ 42 as a stable dispersion in water (frozen)						3118	prohibited
"	≤ 32	≥ 68					3119	prohibited
tert-BUTYL PEROXYNEOHEPTANOATE	≤ 77	≥ 23					3115	prohibited

Organic peroxide	Concentration (%)	Diluent type A (%)	Diluent type B (%)[1]	Inert solid (%)	Water	Packing method	Number (generic entry)	Subsidiary hazards and remarks
"	≤ 42 as a stable dispersion in water						3117	prohibited
tert-BUTYL PEROXYPIVALATE	> 67 – 77	≥ 23					3113	prohibited
"	> 27 – 67		≥ 33				3115	prohibited
"	≤ 27		≥ 73				3119	prohibited
tert-BUTYL PEROXY STEARYLCARBONATE	≤ 100					OP7	3106	
tert-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE	> 37 – 100					OP7	3105	
"	≤ 42			≥ 58		OP7	3106	
"	≤ 37		≥ 63			OP8	3109	
3-CHLOROPEROXYBENZOIC ACID	> 57 – 86			≥ 14		OP1	3102	(3)
"	≤ 57			≥ 3	≥ 40	OP7	3106	
"	≤ 77			≥ 6	≥ 17	OP7	3106	
CUMYL HYDROPEROXIDE	> 90 – 98	≤ 10				OP8	3107	(13)
"	≤ 90	≥ 10				OP8	3109	(13) (18)
CUMYL PEROXYNEODECANOATE	≤ 87	≥ 13					3115	prohibited
"	≤ 77		≥ 23				3115	prohibited
"	≤ 52 as a stable dispersion in water						3119	prohibited
CUMYL PEROXYNEOHEPTANOATE	≤ 77	≥ 23					3115	prohibited
CUMYL PEROXYPIVALATE	≤ 77		≥ 23				3115	prohibited

Organic peroxide	Concentration (%)	Diluent type A (%)	Diluent type B (%)[1]	Inert solid (%)	Water	Packing method	Number (generic entry)	Subsidiary hazards and re-marks
CYCLOHEXANONE PEROXIDE(S)	≤ 91				≥ 9	OP6	3104	(13)
"	≤ 72	≥ 28				OP7	3105	(5)
"	≤ 72 as a paste					OP7	3106	(5) (20)
"	≤ 32			≥ 68			exempt	(29)
([3R-(3R,5aS,6S,8aS,9R,10R,12S, 12aR**)]-DECAHYDRO-10-METHOXY-3,6,9-TRIMETHYL-3,12-EPOXY-12H-PYRANO[4,3-j]-1,2-BENZODIOXEPIN)	≤ 100					OP7	3106	
DIACETONE ALCOHOL PEROXIDES	≤ 57		≥ 26		≥ 8		3115	prohibited
DIACETYL PEROXIDE	≤ 27		≥ 73				3115	prohibited
DI-tert-AMYL PEROXIDE	≤ 100					OP8	3107	
2,2-DI-(tert-AMYLPEROXY)-BUTANE	≤ 57	≥ 43				OP7	3105	
1,1-DI-(tert-AMYLPEROXY)CYCLOHEXANE	≤ 82	≥ 18				OP6	3103	
DIBENZOYL PEROXIDE	> 52 – 100			≤ 48		OP2	3102	(3)
"	> 77 – 94				≥ 6	OP4	3102	(3)
"	≤ 77				≥ 23	OP6	3104	
"	≤ 62			≥ 28	≥ 10	OP7	3106	
"	> 52 – 62 as a paste					OP7	3106	(20)
"	> 35 – 52			≥ 48		OP7	3106	
"	> 36 – 42	≥ 18			≤ 40	OP8	3107	
"	≤ 56.5 as a paste				≥ 15	OP8	3108	
"	≤ 52 as a paste					OP8	3108	(20)

Organic peroxide	Concentration (%)	Diluent type A (%)	Diluent type B (%)[1]	Inert solid (%)	Water	Packing method	Number (generic entry)	Subsidiary hazards and re-marks
"	≤ 42 as a stable dispersion in water					OP8	3109	
"	≤ 35			≥ 65			exempt	(29)
DI-(4-tert-BUTYLCYCLOHEXYL)-PEROXYDICARBONATE	≤ 100						3114	prohibited
"	≤ 42 as a stable dispersion in water						3119	prohibited
"	≤ 42 as a paste						3116	prohibited
DI-tert-BUTYL PEROXIDE	> 52 – 100					OP8	3107	
"	≤ 52		≥ 48			OP8	3109	(25)
DI-tert-BUTYL PEROXYAZELATE	≤ 52	≥ 48				OP7	3105	
2,2-DI-(tert-BUTYLPEROXY)BUTANE	≤ 52	≥ 48				OP6	3103	
1,6-Di-(tert-BUTYLPEROXY-CARBONYLOXY) HEXANE	≤ 72	≥ 28				OP5	3103	
1,1-DI-(tert-BUTYLPEROXY) CYCLOHEXANE	> 80 – 100					OP5	3101	(3)
"	≤ 72		≥ 28			OP5	3103	(30)
"	> 52 – 80	≥ 20				OP5	3103	
"	> 42 – 52	≥ 48				OP7	3105	
"	≤ 42	≥ 13		≥ 45		OP7	3106	
"	≤ 42	≥ 58				OP8	3109	
"	≤ 27	≥ 25				OP8	3107	(21)
"	≤ 13	≥ 13	≥ 74			OP8	3109	

Organic peroxide	Concentration (%)	Diluent type A (%)	Diluent type B (%)[1]	Inert solid (%)	Water	Packing method	Number (generic entry)	Subsidiary hazards and remarks
1,1-DI-(tert-BUTYLPEROXY) CYCLOHEXANE + tert-BUTYL PEROXY-2-ETHYLHEXANOATE	≤ 43 + ≤ 16	≥ 41				OP7	3105	
DI-n-BUTYL PEROXYDICARBONATE	> 27 – 52		≥ 48				3115	prohibited
"	≤ 27		≥ 73				3117	prohibited
"	≤ 42 as a stable dispersion in water (frozen)						3118	prohibited
DI-sec-BUTYL PEROXYDICARBONATE	> 52 – 100						3113	prohibited
"	≤ 52		≥ 48				3115	prohibited
DI-(tert-BUTYLPEROXYISOPROPYL)BENZENE(S)	> 42 – 100			≤ 57		OP7	3106	
"	≤ 42			≥ 58			exempt	(29)
DI-(tert-BUTYLPEROXY) PHTHALATE	> 42 – 52	≥ 48				OP7	3105	
"	≤ 52 as a paste					OP7	3106	(20)
"	≤ 42	≥ 58				OP8	3107	
2,2-DI-(tert-BUTYLPEROXY) PROPANE	≤ 52	≥ 48				OP7	3105	
"	≤ 42	≥ 13		≥ 45		OP7	3106	

Organic peroxide	Concentration (%)	Diluent type A (%)	Diluent type B (%)[1]	Inert solid (%)	Water	Packing method	Number (generic entry)	Subsidiary hazards and re-marks
1,1-DI-(tert-BUTYLPEROXY)-3,3,5-TRIMETHYLCYCLOHEXANE	> 90 – 100					OP5	3101	(3)
"	≤ 90		≥ 10			OP5	3103	(30)
"	> 57 – 90	≥ 10				OP5	3103	
"	≤ 77		≥ 23			OP5	3103	
"	≤ 57			≥ 43		OP8	3110	
"	≤ 57	≥ 43				OP8	3107	
"	≤ 32	≥ 26	≥ 42			OP8	3107	
DICETYL PEROXYDICARBONATE	≤ 100						3120	prohibited
"	≤ 42 as a stable dispersion in water						3119	prohibited
DI-4-CHLOROBENZOYL PEROXIDE	≤ 77				≥ 23	OP5	3102	(3)
"	≤ 52 as a paste					OP7	3106	(20)
"	≤ 32			≥ 68			exempt	(29)
DICUMYL PEROXIDE	> 52 – 100					OP8	3110	(12)
"	≤ 52			≥ 48			exempt	(29)
DICYCLOHEXYL PEROXYDICARBONATE	> 91 – 100						3112	prohibited
"	≤ 91				≥ 9		3114	prohibited
"	≤ 42 as a stable dispersion in water						3119	prohibited
DIDECANOYL PEROXIDE	≤ 100						3114	prohibited

Organic peroxide	Concentration (%)	Diluent type A (%)	Diluent type B (%)[1]	Inert solid (%)	Water	Packing method	Number (generic entry)	Subsidiary hazards and remarks
2,2-DI-(4,4-DI (tert-BUTYLPEROXY) CYCLOHEXYL) PROPANE	≤ 42			≥ 58		OP7	3106	
"	≤ 22		≥ 78			OP8	3107	
DI-2,4-DICHLOROBENZOYL PEROXIDE	≤ 77				≥ 23	OP5	3102	(3)
"	≤ 52 as a paste						3118	prohibited
"	≤ 52 as a paste with silicon oil					OP7	3106	
DI-(2-ETHOXYETHYL) PEROXYDICARBONATE	≤ 52		≥ 48				3115	prohibited
DI-(2-ETHYLHEXYL) PEROXYDICARBONATE	> 77 – 100						3113	prohibited
"	≤ 77		≥ 23				3115	prohibited
"	≤ 62 as a stable dispersion in water						3119	prohibited
"	≤ 52 as a stable dispersion in water (frozen)						3120	prohibited
2,2-DIHYDROPEROXYPROPANE	≤ 27			≥ 73		OP5	3102	(3)
DI-(1-HYDROXYCYCLOHEXYL) PEROXIDE	≤ 100					OP7	3106	
DIISOBUTYRYL PEROXIDE	> 32 – 52		≥ 48				3111	prohibited
"	≤ 32		≥ 68				3115	prohibited
"	≤ 42 as a stable dispersion in water						3119	prohibited
DI-ISOPROPYLBENZENE DIHYDROPEROXIDE	≤ 82	≥ 5			≥ 5	OP7	3106	(24)

Organic peroxide	Concentration (%)	Diluent type A (%)	Diluent type B (%)[1]	Inert solid (%)	Water	Packing method	Number (generic entry)	Subsidiary hazards and remarks
DIISOPROPYL PEROXYDICARBONATE	> 52 – 100						3112	prohibited
"	≤ 52		≥ 48				3115	prohibited
"	≤ 32	≥ 68					3115	prohibited
DILAUROYL PEROXIDE	≤ 100					OP7	3106	
"	≤ 42 as a stable dispersion in water					OP8	3109	
DI-(3-METHOXYBUTYL) PEROXYDICARBONATE	≤ 52		≥ 48				3115	prohibited
DI-(2-METHYLBENZOYL) PEROXIDE	≤ 87				≥ 13		3112	prohibited
DI-(4-METHYLBENZOYL) PEROXIDE	≤ 52 as a paste with silicon oil					OP7	3106	
DI-(3-METHYLBENZOYL) PEROXIDE + BENZOYL (3-METHYLBENZOYL) PEROXIDE + DIBENZOYL PEROXIDE	≤ 20 + ≤ 18 + ≤ 4		≥ 58				3115	prohibited
2,5-DIMETHYL-2,5-DI-(BENZOYLPEROXY) HEXANE	> 82 – 100					OP5	3102	(3)
"	≤ 82			≥ 18		OP7	3106	
"	≤ 82				≥ 18	OP5	3104	
2,5-DIMETHYL-2,5-DI-(tert-BUTYLPEROXY) HEXANE	> 90 – 100					OP5	3103	
"	> 52 – 90	≥ 10				OP7	3105	
"	≤ 77			≥ 23		OP8	3108	
"	≤ 52	≥ 48				OP8	3109	
"	≤ 47 as a paste					OP8	3108	

Organic peroxide	Concentration (%)	Diluent type A (%)	Diluent type B (%)[1]	Inert solid (%)	Water	Packing method	Number (generic entry)	Subsidiary hazards and remarks
2,5-DIMETHYL-2,5-DI-(tert-BUTYLPEROXY) HEXYNE-3	> 86 – 100					OP5	3101	(3)
"	>52 – 86	≥ 14				OP5	3103	(26)
	≤ 52			≥ 48		OP7	3106	
2,5-DIMETHYL-2,5-DI-(2-ETHYLHEXANOYLPEROXY) HEXANE	≤ 100						3113	prohibited
2,5-DIMETHYL-2,5-DIHYDROPEROXYHEXANE□	≤ 82				≥ 18	OP6	3104	
2,5-DIMETHYL-2,5-DI-(3,5,5-TRIMETHYLHEXANOYLPEROXY) HEXANE	≤ 77	≥ 23				OP7	3105	
1,1-DIMETHYL-3-HYDROXYBUTYLPEROXYNEOHEPTANOATE	≤ 52	≥ 48					3117	prohibited
DIMYRISTYL PEROXYDICARBONATE	≤ 100						3116	prohibited
"	≤ 42 as a stable dispersion in water						3119	prohibited
DI-(2-NEODECANOYLPEROXYISOPROPYL) BENZENE	≤ 52	≥ 48					3115	prohibited
DI-n-NONANOYL PEROXIDE	≤ 100						3116	prohibited
DI-n-OCTANOYL PEROXIDE	≤ 100						3114	prohibited
DI-(2-PHENOXYETHYL) PEROXYDICARBONATE	> 85 – 100					OP5	3102	(3)
"	≤ 85				≥ 15	OP7	3106	
DIPROPIONYL PEROXIDE	≤ 27		≥ 73				3117	prohibited
DI-n-PROPYL PEROXYDICARBONATE	≤ 100						3113	prohibited
"	≤ 77		≥ 23				3113	prohibited
DISUCCINIC ACID PEROXIDE	> 72 – 100					OP4	3102	(3) (17)

Organic peroxide	Concentration (%)	Diluent type A (%)	Diluent type B (%)[1]	Inert solid (%)	Water	Packing method	Number (generic entry)	Subsidiary hazards and remarks
"	≤ 72				≥ 28		3116	prohibited
DI-(3,5,5-TRIMETHYLHEXANOYL) PEROXIDE	> 52 – 82	≥ 18					3115	prohibited
"	> 38 – 52	≥ 48					3119	prohibited
"	≤ 52 as a stable dispersion in water						3119	prohibited
"	≤ 38	≥ 62					3119	prohibited
ETHYL 3,3-DI-(tert-AMYLPEROXY) BUTYRATE	≤ 67	≥ 33				OP7	3105	
ETHYL 3,3-DI-(tert-BUTYLPEROXY) BUTYRATE	> 77 – 100					OP5	3103	
"	≤ 77	≥ 23				OP7	3105	
"	≤ 52			≥ 48		OP7	3106	
1-(2-ETHYLHEXANOYL-PEROXY)-1,3-DIMETHYLBUTYL PEROXYPIVALATE	≤ 52	≥ 45	≥ 10				3115	prohibited
tert-HEXYL PEROXYNEODECANOATE	≤ 71	≥ 29					3115	prohibited
tert-HEXYL PEROXYPIVALATE	≤ 72		≥ 28				3115	prohibited
3-HYDROXY-1,1-DIMETHYLBUTYL PEROXYNEODECANOATE	≤ 77	≥ 23					3115	prohibited
“	≤ 52 as a stable dispersion in water						3119	prohibited
“	≤ 52	≥ 48					3117	prohibited
ISOPROPYL sec-BUTYL PEROXYDICARBONATE + DI-sec-BUTYL PEROXYDICARBONATE + DI-ISOPROPYL PEROXYDICARBONATE	≤ 32 + ≤ 15 – 18 + ≤ 12 – 15	≥ 38					3115	prohibited

Organic peroxide	Concentration (%)	Diluent type A (%)	Diluent type B (%)[1]	Inert solid (%)	Water	Packing method	Number (generic entry)	Subsidiary hazards and re-marks
"	≤ 52 + ≤ 28 + ≤ 22						3111	prohibited
ISOPROPYLCUMYL HYDROPEROXIDE	≤ 72	≥ 28				OP8	3109	(13)
p-MENTHYL HYDROPEROXIDE	> 72 – 100					OP7	3105	(13)
"	≤ 72	≥ 28				OP8	3109	(27)
METHYLCYCLOHEXANONE PEROXIDE(S)	≤ 67		≥ 33				3115	prohibited
METHYL ETHYL KETONE PEROXIDE(S)	see remark (8)	≥ 48				OP5	3101	(3) (8) (13)
"	see remark (9)	≥ 55				OP7	3105	(9)
"	see remark (10)	≥ 60				OP8	3107	(10)
METHYL ISOBUTYL KETONE PEROXIDE(S)	≤ 62	≥ 19				OP7	3105	(22)
METHYL ISOPROPYL KETONE PEROXIDE(S)	see remark (31)	≥ 70				OP8	3109	(31)
ORGANIC PEROXIDE, LIQUID, SAMPLE						OP2	3103	(11)
ORGANIC PEROXIDE, LIQUID, SAMPLE, TEMPERATURE CONTROLLED							3113	prohibited
ORGANIC PEROXIDE, SOLID, SAMPLE						OP2	3104	(11)
ORGANIC PEROXIDE, SOLID, SAMPLE, TEMPERATURE CONTROLLED							3114	prohibited
3,3,5,7,7-PENTAMETHYL-1,2,4-TRIOXEPANE	≤ 100					OP8	3107	
PEROXYACETIC ACID, TYPE D, stabilized	≤ 43					OP7	3105	(13) (14) (19)

Organic peroxide	Concentration (%)	Diluent type A (%)	Diluent type B (%)[1]	Inert solid (%)	Water	Packing method	Number (generic entry)	Subsidiary hazards and re-marks
PEROXYACETIC ACID, TYPE E, stabilized	≤ 43					OP8	3107	(13) (15) (19)
PEROXYACETIC ACID, TYPE F, stabilized	≤ 43					OP8	3109	(13) (16) (19)
PEROXYLAURIC ACID	≤ 100						3118	prohibited
1-PHENYLETHYL HYDROPEROXIDE	≤ 38		≥ 62			OP8	3109	
PINANYL HYDROPEROXIDE	> 56 – 100					OP7	3105	(13)
"	≤ 56	≥ 44				OP8	3109	
POLYETHER POLY-tert-BUTYLPEROXYCARBONATE	≤ 52		≥ 48			OP8	3107	
1,1,3,3-TETRAMETHYLBUTYL HYDROPEROXIDE	≤ 100					OP7	3105	
1,1,3,3-TETRAMETHYLBUTYL PEROXY-2 ETHYLHEXANOATE	≤ 100						3115	prohibited
1,1,3,3- TETRAMETHYLBUTYL PEROXYNEODECANOATE	≤ 72		≥ 28				3115	prohibited
"	≤ 52 as a stable dispersion in wa-ter						3119	prohibited
1,1,3,3-TETRAMETHYL-BUTYL PEROXYPIVALATE	≤ 77	≥ 23					3115	prohibited
3,6,9-TRIETHYL-3,6,9-TRIMETHYL-1,4,7 TRIPEROXONANE	≤ 42	≥ 58				OP7	3105	(28)
"	≤ 17	≥ 18		≥ 65		OP8	3110	

Remarks (refer to the last column of the Table in 2.2.52.4):

(1) Diluent type B may always be replaced by diluent type A. The boiling point of diluent type B shall be at least 60 °C higher than the SADT of the organic peroxide.

(2) Available oxygen ≤ 4.7%.

(3) "EXPLOSIVE" subsidiary hazard label required (Model No.1, see 5.2.2.2.2).

(4) Diluent may be replaced by di-tert-butyl peroxide.

(5) Available oxygen ≤ 9%.

(6) (Reserved)

(7) (Reserved)

(8) Available oxygen > 10% and ≤ 10.7%, with or without water.

(9) Available oxygen ≤ 10%, with or without water.

(10) Available oxygen ≤ 8.2%, with or without water.

(11) See 2.2.52.1.9.

(12) Up to 2 000 kg per receptacle assigned to ORGANIC PEROXIDE TYPE F on the basis of large scale trials.

(13) "CORROSIVE" subsidiary hazard label required (Model No.8, see 5.2.2.2.2).

(14) Peroxyacetic acid formulations which fulfil the criteria of the Manual of Tests and Criteria, paragraph 20.4.3 (d).

(15) Peroxyacetic acid formulations which fulfil the criteria of the Manual of Tests and Criteria, paragraph 20.4.3 (e).

(16) Peroxyacetic acid formulations which fulfil the criteria of the Manual of Tests and Criteria, paragraph 20.4.3 (f).

(17) Addition of water to this organic peroxide will decrease its thermal stability.

(18) No "CORROSIVE" subsidiary hazard label (Model No.8, see 5.2.2.2.2) required for concentrations below 80%.

(19) Mixtures with hydrogen peroxide, water and acid(s).

(20) With diluent type A, with or without water.

(21) With ≥ 25% diluent type A by mass, and in addition ethylbenzene.

(22) With ≥ 19% diluent type A by mass, and in addition methyl isobutyl ketone.

(23) With < 6% di-tert-butyl peroxide.

(24) With ≤ 8% 1-isopropylhydroperoxy-4-isopropylhydroxybenzene.

(25) Diluent type B with boiling point > 110 °C.

(26) With < 0.5% hydroperoxides content.

(27) For concentrations more than 56%, "CORROSIVE" subsidiary hazard label required (Model No.8, see 5.2.2.2.2).

(28) Available active oxygen ≤ 7.6% in diluent Type A having a 95% boil-off point in the range of 200 °C – 260 °C.

(29) Not subject to the requirements of RID for Class 5.2.

(30) Diluent type B with boiling point > 130 °C.

(31) Active oxygen ≤ 6.7%.

2.2.61 Class 6.1: Toxic substances

2.2.61.1 Criteria

2.2.61.1.1 The heading of Class 6.1 covers substances of which it is known by experience or regarding which it is presumed from experiments on animals that in relatively small quantities they are able by a single action or by action of short duration to cause damage to human health, or death, by inhalation, by cutaneous absorption or by ingestion.

NOTE: Genetically modified microorganisms and organisms shall be assigned to this Class if they meet the conditions for this Class.

2.2.61.1.2 Substances of Class 6.1 are subdivided as follows:

T Toxic substances without subsidiary hazard:
- T1 Organic, liquid;
- T2 Organic, solid;
- T3 Organometallic substances;
- T4 Inorganic, liquid;
- T5 Inorganic, solid;
- T6 Liquid, used as pesticides;
- T7 Solid, used as pesticides;
- T8 Samples;
- T9 Other toxic substances;
- T10 Articles

TF Toxic substances, flammable:
- TF1 Liquid;
- TF2 Liquid, used as pesticides;
- TF3 Solid;

TS Toxic substances, self-heating, solid;

TW Toxic substances, which, in contact with water, emit flammable gases:
- TW1 Liquid;
- TW2 Solid;

TO Toxic substances, oxidizing:
- TO1 Liquid;
- TO2 Solid;

TC Toxic substances, corrosive:
- TC1 Organic, liquid;
- TC2 Organic, solid;
- TC3 Inorganic, liquid;
- TC4 Inorganic, solid;

TFC Toxic substances, flammable, corrosive.

TFW Toxic substances, flammable, which, in contact with water, emit flammable gases.

Definitions

2.2.61.1.3 For the purposes of RID:

LD_{50} (median lethal dose) for acute oral toxicity is the statistically derived single dose of a substance that can be expected to cause death within 14 days in 50 per cent of young adult albino rats when administered by the oral route. The LD_{50} value is expressed in terms of mass of test substance per mass of test animal (mg/kg);

LD_{50} for acute dermal toxicity is that dose of the substance which, administered by continuous contact for 24 hours with the bare skin of albino rabbits, is most likely to cause death within 14 days in one half of the animals tested. The number of animals tested shall be sufficient to give a statistically significant result and be in conformity with good pharmacological practice. The result is expressed in milligrams per kg body mass;

LC_{50} for acute toxicity on inhalation is that concentration of vapour, mist or dust which, administered by continuous inhalation to both male and female young adult albino rats for one hour, is most likely to cause death within 14 days in one half of the animals tested. A solid substance shall be tested if at least 10% (by mass) of its total mass is likely to be dust in a respirable range, e.g. the aerodynamic diameter of that particle-fraction is 10 µm or less. A liquid substance shall be tested if a mist is likely to be generated in a leakage of the transport containment. Both for solid and liquid substances more than 90% (by mass) of a specimen

prepared for inhalation toxicity shall be in the respirable range as defined above. The result is expressed in milligrams per litre of air for dusts and mists or in millilitres per cubic metre of air (parts per million) for vapours.

Classification and assignment of packing groups

2.2.61.1.4 Substances of Class 6.1 shall be classified in three packing groups according to the degree of danger they present for carriage, as follows:

Packing group I: highly toxic substances

Packing group II: toxic substances

Packing group III: slightly toxic substances.

2.2.61.1.5 Substances, mixtures, solutions and articles classified in Class 6.1 are listed in Table A of Chapter 3.2. The assignment of substances, mixtures and solutions not mentioned by name in Table A of Chapter 3.2 to the relevant entry of 2.2.61.3 and to the relevant packing group in accordance with the provisions of Chapter 2.1, shall be made according to the following criteria in 2.2.61.1.6 to 2.2.61.1.11.

2.2.61.1.6 To assess the degree of toxicity, account shall be taken of human experience of instances of accidental poisoning, as well as special properties possessed by any individual substances: liquid state, high volatility, any special likelihood of cutaneous absorption, and special biological effects.

2.2.61.1.7 In the absence of observations on humans, the degree of toxicity shall be assessed using the available data from animal experiments in accordance with the table below:

	Packing group	Oral toxicity LD_{50} (mg/kg)	Dermal toxicity LD_{50} (mg/kg)	Inhalation toxicity by dusts and mists LC_{50} (mg/l)
Highly toxic	I	≤ 5	≤ 50	≤ 0.2
Toxic	II	> 5 and ≤ 50	> 50 and ≤ 200	> 0.2 and ≤ 2
Slightly toxic	III[(a)]	> 50 and ≤ 300	> 200 and ≤ 1 000	> 2 and ≤ 4

[(a)] Tear gas substances shall be included in packing group II even if data concerning their toxicity correspond to packing group III criteria.

2.2.61.1.7.1 Where a substance exhibits different degrees of toxicity for two or more kinds of exposure, it shall be classified under the highest such degree of toxicity.

2.2.61.1.7.2 Substances meeting the criteria of Class 8 and with an inhalation toxicity of dusts and mists (LC_{50}) leading to packing group I shall only be accepted for an allocation to Class 6.1 if the toxicity through oral ingestion or dermal contact is at least in the range of packing groups I or II. Otherwise an assignment to Class 8 shall be made if appropriate (see 2.2.8.1.4.5).

2.2.61.1.7.3 The criteria for inhalation toxicity of dusts and mists are based on LC_{50} data relating to 1-hour exposure, and where such information is available it shall be used. However, where only LC_{50} data relating to 4-hour exposure are available, such figures can be multiplied by four and the product substituted in the above criteria, i.e. LC_{50} value multiplied by four (4 hour) is considered the equivalent of LC_{50} (1 hour).

Inhalation toxicity of vapours

2.2.61.1.8 Liquids giving off toxic vapours shall be classified into the following groups where "V" is the saturated vapour concentration (in ml/m^3 of air) (volatility) at 20 °C and standard atmospheric pressure:

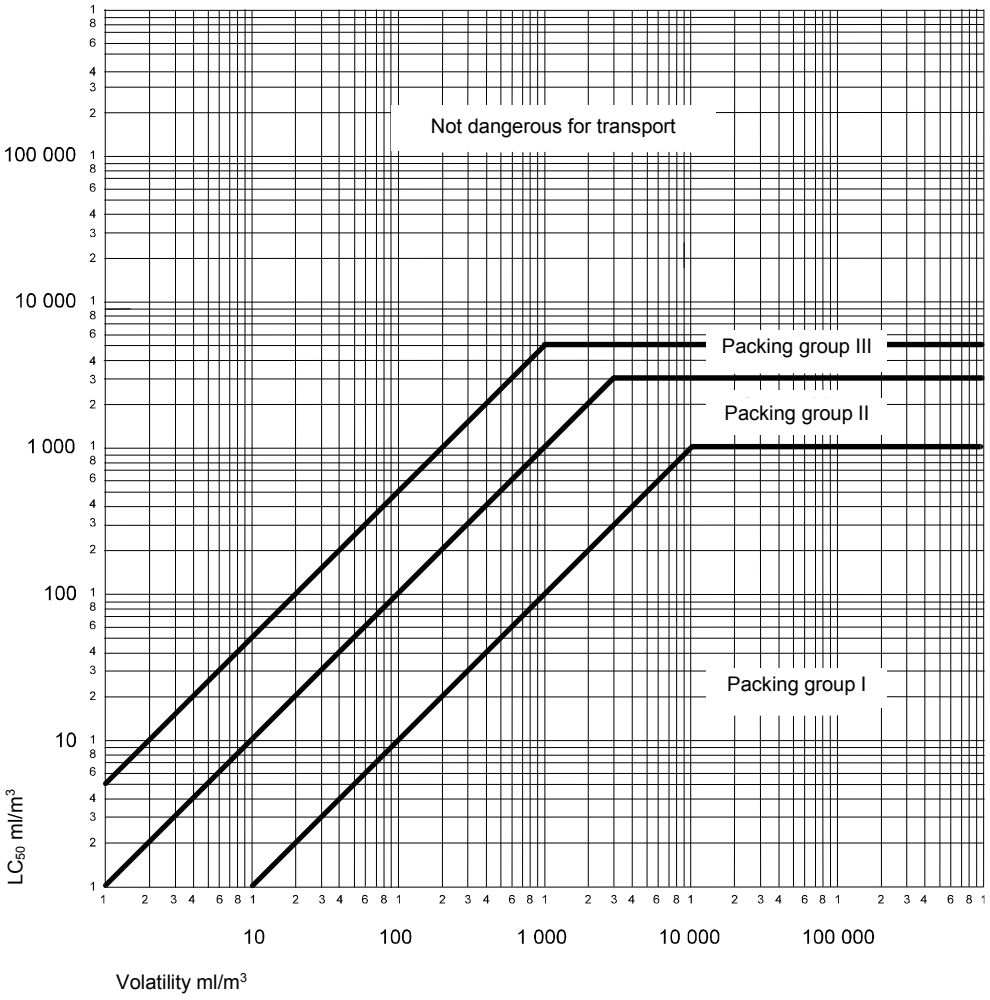
	Packing group	
Highly toxic	I	Where $V \geq 10\ LC_{50}$ and $LC_{50} \leq 1\ 000\ ml/m^3$
Toxic	II	Where $V \geq LC_{50}$ and $LC_{50} \leq 3\ 000\ ml/m^3$ and the criteria for packing group I are not met
Slightly toxic	III[(a)]	Where $V \geq 1/5\ LC_{50}$ and $LC_{50} \leq 5\ 000\ ml/m^3$ and the criteria for packing groups I and II are not met

[(a)] Tear gas substances shall be included in packing group II even if data concerning their toxicity correspond to packing group III criteria.

These criteria for inhalation toxicity of vapours are based on LC_{50} data relating to 1-hour exposure, and where such information is available, it shall be used.

However, where only LC_{50} data relating to 4-hour exposure to the vapours are available, such figures can be multiplied by two and the product substituted in the above criteria, i.e. LC_{50} (4 hour) × 2 is considered the equivalent of LC_{50} (1 hour).

Group borderlines inhalation toxicity of vapours



In this figure, the criteria are expressed in graphical form, as an aid to easy classification. However, due to approximations inherent in the use of graphs, substances falling on or near group borderlines shall be checked using numerical criteria.

Mixtures of liquids

2.2.61.1.9 Mixtures of liquids which are toxic on inhalation shall be assigned to packing groups according to the following criteria:

2.2.61.1.9.1 If LC_{50} is known for each of the toxic substances constituting the mixture, the packing group may be determined as follows:

(a) Calculation of the LC_{50} of the mixture:

$$LC_{50}\,(\text{mixture}) = \frac{1}{\sum_{i=1}^{n} \frac{f_i}{LC_{50i}}}$$

where

f_i = molar fraction of constituent i of the mixture;

LC_{50i} = average lethal concentration of constituent i in ml/m^3.

(b) Calculation of volatility of each mixture constituent:

$$V_i = P_i \times \frac{10^6}{101.3} \text{ (ml/m}^3\text{)}$$

where

P_i = partial pressure of constituent i in kPa at 20 °C and at standard atmospheric pressure.

(c) Calculation of the ratio of volatility to LC_{50}:

$$R = \sum_{i=1}^{n} \frac{V_i}{LC_{50i}}$$

(d) The values calculated for LC_{50} (mixture) and R are then used to determine the packing group of the mixture:

Packing group I: $R \geq 10$ and LC_{50} (mixture) $\leq 1\,000$ ml/m^3;

Packing group II: $R \geq 1$ and LC_{50} (mixture) $\leq 3\,000$ ml/m^3, if the mixture does not meet the criteria for packing group I;

Packing group III: $R \geq 1/5$ and LC_{50} (mixture) $\leq 5\,000$ ml/m^3, if the mixture does not meet the criteria of packing groups I or II.

2.2.61.1.9.2 In the absence of LC_{50} data on the toxic constituent substances, the mixture may be assigned to a group based on the following simplified threshold toxicity tests. When these threshold tests are used, the most restrictive group shall be determined and used for carrying the mixture.

2.2.61.1.9.3 A mixture is assigned to packing group I only if it meets both of the following criteria:

(a) A sample of the liquid mixture is vaporized and diluted with air to create a test atmosphere of 1 000 ml/m^3 vaporized mixture in air. Ten albino rats (5 male and 5 female) are exposed to the test atmosphere for 1 hour and observed for 14 days. If five or more of the animals die within the 14-day observation period, the mixture is presumed to have an LC_{50} equal to or less than 1 000 ml/m^3;

(b) A sample of vapour in equilibrium with the liquid mixture is diluted with 9 equal volumes of air to form a test atmosphere. Ten albino rats (5 male and 5 female) are exposed to the test atmosphere for 1 hour and observed for 14 days. If five or more of the animals die within the 14-day observation period, the mixture is presumed to have a volatility equal to or greater than 10 times the mixture LC_{50}.

2.2.61.1.9.4 A mixture is assigned to packing group II only if it meets both of the following criteria, and does not meet the criteria for packing group I:

(a) A sample of the liquid mixture is vaporized and diluted with air to create a test atmosphere of 3 000 ml/m^3 vaporized mixture in air. Ten albino rats (5 male and 5 female) are exposed to the test atmosphere for 1 hour and observed for 14 days. If five or more of the animals die within the 14-day observation period, the mixture is presumed to have an LC_{50} equal to or less than 3 000 ml/m^3;

(b) A sample of the vapour in equilibrium with the liquid mixture is used to form a test atmosphere. Ten albino rats (5 male and 5 female) are exposed to the test atmosphere for 1 hour and observed for 14 days. If five or more of the animals die within the 14-day observation period, the mixture is presumed to have a volatility equal to or greater than the mixture LC_{50}.

2.2.61.1.9.5 A mixture is assigned to packing group III only if it meets both of the following criteria, and does not meet the criteria for packing groups I or II:

(a) A sample of the liquid mixture is vaporized and diluted with air to create a test atmosphere of 5 000 ml/m^3 vaporized mixture in air. Ten albino rats (5 male and 5 female) are exposed to the test atmosphere for 1 hour and observed for 14 days. If five or more of the animals die within the 14-day observation period, the mixture is presumed to have an LC_{50} equal to or less than 5 000 ml/m^3;

(b) The vapour concentration (volatility) of the liquid mixture is measured and if the vapour concentration is equal to or greater than 1 000 ml/m^3, the mixture is presumed to have a volatility equal to or greater than 1/5 the mixture LC_{50}.

Methods for determining oral and dermal toxicity of mixtures

2.2.61.1.10 When classifying and assigning the appropriate packing group to mixtures in Class 6.1 in accordance with the oral and dermal toxicity criteria (see 2.2.61.1.3), it is necessary to determine the acute LD_{50} of the mixture.

2.2.61.1.10.1 If a mixture contains only one active substance, and the LD_{50} of that constituent is known, in the absence of reliable acute oral and dermal toxicity data on the actual mixture to be carried, the oral or dermal LD_{50} may be obtained by the following method:

$$LD_{50}\ \text{value of preparation} = \frac{LD_{50}\ \text{value of active substance} \times 100}{\text{percentage of active substance by mass}}$$

2.2.61.1.10.2 If a mixture contains more than one active constituent, there are three possible approaches that may be used to determine the oral or dermal LD_{50} of the mixture. The preferred method is to obtain reliable acute oral and dermal toxicity data on the actual mixture to be carried. If reliable, accurate data are not available, then either of the following methods may be performed:

(a) Classify the formulation according to the most hazardous constituent of the mixture as if that constituent were present in the same concentration as the total concentration of all active constituents; or

(b) Apply the formula:

$$\frac{C_A}{T_A} + \frac{C_B}{T_B} + ... + \frac{C_Z}{T_Z} = \frac{100}{T_M}$$

where:

C = the percentage concentration of constituent A, B, ..., Z in the mixture;

T = the oral LD_{50} values of constituent A, B, ... Z;

T_M = the oral LD_{50} value of the mixture.

NOTE: This formula can also be used for dermal toxicities, provided that this information is available on the same species for all constituents. The use of this formula does not take into account any potentiation or protective phenomena.

Classification of pesticides

2.2.61.1.11 All active pesticide substances and their preparations for which the LC_{50} and/or LD_{50} values are known and which are classified in Class 6.1 shall be classified under appropriate packing groups in accordance with the criteria given in 2.2.61.1.6 to 2.2.61.1.9. Substances and preparations which are characterized by subsidiary hazards shall be classified according to the precedence of hazard Table in 2.1.3.10 with the assignment of appropriate packing groups.

2.2.61.1.11.1 If the oral or dermal LD_{50} value for a pesticide preparation is not known, but the LD_{50} value of its active substance(s) is known, the LD_{50} value for the preparation may be obtained by applying the procedures in 2.2.61.1.10.

NOTE: LD_{50} toxicity data for a number of common pesticides may be obtained from the most current edition of the document "The WHO Recommended Classification of Pesticides by Hazard and Guidelines to Classification" available from the International Programme on Chemical Safety, World Health Organisation (WHO), 1211 Geneva 27, Switzerland. While that document may be used as a source of LD_{50} data for pesticides, its classification system shall not be used for purposes of transport classification of, or assignment of packing groups to, pesticides, which shall be in accordance with the requirements of RID.

2.2.61.1.11.2 The proper shipping name used in the carriage of the pesticide shall be selected on the basis of the active ingredient, of the physical state of the pesticide and any subsidiary hazards it may exhibit (see 3.1.2).

2.2.61.1.12 If substances of Class 6.1, as a result of admixtures, come into categories of hazard different from those to which the substances mentioned by name in Table A of Chapter 3.2 belong, these mixtures or solutions shall be assigned to the entries to which they belong on the basis of their actual degree of danger.

NOTE: For the classification of solutions and mixtures (such as preparations and wastes), see also 2.1.3.

2.2.61.1.13 On the basis of the criteria of 2.2.61.1.6 to 2.2.61.1.11, it may also be determined whether the nature of a solution or mixture mentioned by name or containing a substance mentioned by name is such that the solution or mixture is not subject to the requirements for this Class.

2.2.61.1.14 Substances, solutions and mixtures, with the exception of substances and preparations used as pesticides, which are not classified as acute toxic category 1, 2 or 3 according to Regulation (EC) No 1272/2008[4], may be considered as substances not belonging to Class 6.1.

[4] Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directive 67/548/EEC and 1999/45/EC; and amending Regulation (EC) No 1907/2006, published in the Official Journal of the European Union, L 353, 31 December 2008, p 1-1355.

2.2.61.2 Substances not accepted for carriage

2.2.61.2.1 Chemically unstable substances of Class 6.1 shall not be accepted for carriage unless the necessary precautions have been taken to prevent the possibility of a dangerous decomposition or polymerization under normal conditions of carriage. For the precautions necessary to prevent polymerization, see special provision 386 of Chapter 3.3. To this end particular care shall be taken to ensure that receptacles and tanks do not contain any substances liable to promote these reactions.

2.2.61.2.2 The following substances and mixtures shall not be accepted for carriage:

– Hydrogen cyanide, anhydrous or in solution, which do not meet the descriptions of UN Nos. 1051, 1613, 1614 and 3294;
– Metal carbonyls, having a flash-point below 23 °C, other than UN Nos. 1259 NICKEL CARBONYL and 1994 IRON PENTACARBONYL;
– 2,3,7,8-TETRACHLORODIBENZO-P-DIOXINE (TCDD) in concentrations considered highly toxic in accordance with the criteria in 2.2.61.1.7;
– UN No. 2249 DICHLORODIMETHYL ETHER, SYMMETRICAL;
– Preparations of phosphides without additives inhibiting the emission of toxic flammable gases.

The following substances shall not be accepted for carriage by rail:

– Barium azide, dry or with less than 50% water or alcohols;
– UN 0135 MERCURY FULMINATE, WETTED.

2.2.61.3 List of collective entries

Subsidiary hazard		Classification code	UN No.	Name of the substance or article
Toxic substances				
Without subsidiary hazard	**organic**	**liquid**[(a)] **T1**	1583	CHLOROPICRIN MIXTURE, N.O.S.
			1602	DYE, LIQUID, TOXIC, N.O.S., or
			1602	DYE INTERMEDIATE, LIQUID, TOXIC, N.O.S.
			1693	TEAR GAS SUBSTANCE, LIQUID, N.O.S.
			1851	MEDICINE, LIQUID, TOXIC, N.O.S.
			2206	ISOCYANATES, TOXIC, N.O.S. or
			2206	ISOCYANATE SOLUTION, TOXIC, N.O.S.
			3140	ALKALOIDS, LIQUID, N.O.S. or
			3140	ALKALOID SALTS, LIQUID, N.O.S.
			3142	DISINFECTANT, LIQUID, TOXIC, N.O.S.
			3144	NICOTINE COMPOUND, LIQUID, N.O.S. or
			3144	NICOTINE PREPARATION, LIQUID, N.O.S.
			3172	TOXINS, EXTRACTED FROM LIVING SOURCES, LIQUID, N.O.S.
			3276	NITRILES, LIQUID, TOXIC, N.O.S.
			3278	ORGANOPHOSPHORUS COMPOUND, LIQUID, TOXIC, N.O.S.
			3381	TOXIC BY INHALATION LIQUID, N.O.S. with an LC_{50} lower than or equal to 200 ml/m^3 and saturated vapour concentration greater than or equal to 500 LC_{50}
			3382	TOXIC BY INHALATION LIQUID, N.O.S. with an LC_{50} lower than or equal to 1 000 ml/m^3 and saturated vapour concentration greater than or equal to 10 LC_{50}
			2810	TOXIC LIQUID, ORGANIC, N.O.S.

Without subsidiary hazard (cont'd)	**organic** (cont'd)	**solid**[a],[b]	**T2**	1544 ALKALOIDS, SOLID, N.O.S. or 1544 ALKALOID SALTS, SOLID, N.O.S. 1601 DISINFECTANT, SOLID, TOXIC, N.O.S. 1655 NICOTINE COMPOUND, SOLID, N.O.S., or 1655 NICOTINE PREPARATION, SOLID, N.O.S. 3143 DYE, SOLID, TOXIC, N.O.S. or 3143 DYE INTERMEDIATE, SOLID, TOXIC, N.O.S. 3249 MEDICINE, SOLID, TOXIC, N.O.S. 3439 NITRILES, SOLID, TOXIC, N.O.S. 3448 TEAR GAS SUBSTANCE, SOLID, N.O.S. 3462 TOXINS, EXTRACTED FROM LIVING SOURCES, SOLID, N.O.S. 3464 ORGANOPHOSPHORUS COMPOUND, SOLID, TOXIC, N.O.S. 2811 TOXIC SOLID, ORGANIC, N.O.S.
		organometallic[c],[d]	**T3**	2026 PHENYLMERCURIC COMPOUND, N.O.S. 2788 ORGANOTIN COMPOUND, LIQUID, N.O.S. 3146 ORGANOTIN COMPOUND, SOLID, N.O.S. 3280 ORGANOARSENIC COMPOUND, LIQUID, N.O.S. 3281 METAL CARBONYLS, LIQUID, N.O.S. 3465 ORGANOARSENIC COMPOUND, SOLID, N.O.S. 3466 METAL CARBONYLS, SOLID, N.O.S. 3282 ORGANOMETALLIC COMPOUND, LIQUID, TOXIC, N.O.S. 3467 ORGANOMETALLIC COMPOUND, SOLID, TOXIC, N.O.S.
	inorganic	**liquid**[e]	**T4**	1556 ARSENIC COMPOUND, LIQUID, N.O.S., inorganic including: Arsenates, n.o.s.; Arsenites, n.o.s.; and Arsenic sulphides, n.o.s. 1935 CYANIDE SOLUTION, N.O.S. 2024 MERCURY COMPOUND, LIQUID, N.O.S. 3141 ANTIMONY COMPOUND, INORGANIC, LIQUID, N.O.S. 3381 TOXIC BY INHALATION LIQUID, N.O.S. with an LC_{50} lower than or equal to 200 ml/m^3 and saturated vapour concentration greater than or equal to 500 LC_{50} 3382 TOXIC BY INHALATION LIQUID, N.O.S. with an LC_{50} lower than or equal to 1 000 ml/m^3 and saturated vapour concentration greater than or equal to 10 LC_{50} 3440 SELENIUM COMPOUND, LIQUID, N.O.S. 3287 TOXIC LIQUID, INORGANIC, N.O.S.
		solid[f],[g]	**T5**	1549 ANTIMONY COMPOUND, INORGANIC, SOLID, N.O.S. 1557 ARSENIC COMPOUND, SOLID, N.O.S., including: Arsenates, n.o.s.; Arsenites, n.o.s.; and Arsenic sulphides, n.o.s. 1564 BARIUM COMPOUND, N.O.S. 1566 BERYLLIUM COMPOUND, N.O.S. 1588 CYANIDES, INORGANIC, SOLID, N.O.S. 1707 THALLIUM COMPOUND, N.O.S. 2025 MERCURY COMPOUND, SOLID, N.O.S. 2291 LEAD COMPOUND, SOLUBLE, N.O.S. 2570 CADMIUM COMPOUND 2630 SELENATES or 2630 SELENITES 2856 FLUOROSILICATES, N.O.S. 3283 SELENIUM COMPOUND, SOLID, N.O.S. 3284 TELLURIUM COMPOUND, N.O.S. 3285 VANADIUM COMPOUND, N.O.S. 3288 TOXIC SOLID, INORGANIC, N.O.S.

Without subsidiary hazard (cont'd)	**pesticides**	**liquid**[h]	**T6**	2992	CARBAMATE PESTICIDE, LIQUID, TOXIC
				2994	ARSENICAL PESTICIDE, LIQUID, TOXIC
				2996	ORGANOCHLORINE PESTICIDE, LIQUID, TOXIC
				2998	TRIAZINE PESTICIDE, LIQUID, TOXIC
				3006	THIOCARBAMATE PESTICIDE, LIQUID, TOXIC
				3010	COPPER BASED PESTICIDE, LIQUID, TOXIC
				3012	MERCURY BASED PESTICIDE, LIQUID, TOXIC
				3014	SUBSTITUTED NITROPHENOL PESTICIDE, LIQUID, TOXIC
				3016	BIPYRIDILIUM PESTICIDE, LIQUID, TOXIC
				3018	ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC
				3020	ORGANOTIN PESTICIDE, LIQUID, TOXIC
				3026	COUMARIN DERIVATIVE PESTICIDE, LIQUID, TOXIC
				3348	PHENOXYACETIC ACID DERIVATIVE PESTICIDE, LIQUID, TOXIC
				3352	PYRETHROID PESTICIDE, LIQUID, TOXIC
				2902	PESTICIDE, LIQUID, TOXIC, N.O.S.
		solid[h]	**T7**	2757	CARBAMATE PESTICIDE, SOLID, TOXIC
				2759	ARSENICAL PESTICIDE, SOLID, TOXIC
				2761	ORGANOCHLORINE PESTICIDE, SOLID, TOXIC
				2763	TRIAZINE PESTICIDE, SOLID, TOXIC
				2771	THIOCARBAMATE PESTICIDE, SOLID, TOXIC
				2775	COPPER BASED PESTICIDE, SOLID, TOXIC
				2777	MERCURY BASED PESTICIDE, SOLID, TOXIC
				2779	SUBSTITUTED NITROPHENOL PESTICIDE, SOLID, TOXIC
				2781	BIPYRIDILIUM PESTICIDE, SOLID, TOXIC
				2783	ORGANOPHOSPHORUS PESTICIDE, SOLID, TOXIC
				2786	ORGANOTIN PESTICIDE, SOLID, TOXIC
				3027	COUMARIN DERIVATIVE PESTICIDE, SOLID, TOXIC
				3048	ALUMINIUM PHOSPHIDE PESTICIDE
				3345	PHENOXYACETIC ACID DERIVATIVE PESTICIDE, SOLID, TOXIC
				3349	PYRETHROID PESTICIDE, SOLID, TOXIC
				2588	PESTICIDE, SOLID, TOXIC, N.O.S.
	samples		**T8**	3315	CHEMICAL SAMPLE, TOXIC
	other toxic substances[i]		**T9**	3243	SOLIDS CONTAINING TOXIC LIQUID, N.O.S.
	articles		**T10**	3546	ARTICLES CONTAINING TOXIC SUBSTANCE, N.O.S.
Flammable TF		**liquid**[j],[k]	**TF1**	3071	MERCAPTANS, LIQUID, TOXIC, FLAMMABLE, N.O.S. or
				3071	MERCAPTAN MIXTURE, LIQUID, TOXIC, FLAMMABLE, N.O.S.
				3080	ISOCYANATES, TOXIC, FLAMMABLE, N.O.S. or
				3080	ISOCYANATE SOLUTION, TOXIC, FLAMMABLE, N.O.S.
				3275	NITRILES, TOXIC, FLAMMABLE, N.O.S.
				3279	ORGANOPHOSPHORUS COMPOUND, TOXIC, FLAMMABLE, N.O.S.
				3383	TOXIC BY INHALATION LIQUID, FLAMMABLE, N.O.S. with an LC_{50} lower than or equal to 200 ml/m^3 and saturated vapour concentration greater than or equal to 500 LC_{50}
				3384	TOXIC BY INHALATION LIQUID, FLAMMABLE, N.O.S. with an LC_{50} lower than or equal to 1 000 ml/m^3 and saturated vapour concentration greater than or equal to 10 LC_{50}
				2929	TOXIC LIQUID, FLAMMABLE, ORGANIC, N.O.S.

Flammable TF (cont'd)			2991	CARBAMATE PESTICIDE, LIQUID, TOXIC, FLAMMABLE
			2993	ARSENICAL PESTICIDE, LIQUID, TOXIC, FLAMMABLE
			2995	ORGANOCHLORINE PESTICIDE, LIQUID, TOXIC, FLAMMABLE
			2997	TRIAZINE PESTICIDE, LIQUID, TOXIC, FLAMMABLE
			3005	THIOCARBAMATE PESTICIDE, LIQUID, TOXIC, FLAMMABLE
			3009	COPPER BASED PESTICIDE, LIQUID, TOXIC, FLAMMABLE
			3011	MERCURY BASED PESTICIDE, LIQUID, TOXIC, FLAMMABLE
	pesticides (flash-point not less than 23 °C)	**TF2**	3013	SUBSTITUTED NITROPHENOL PESTICIDE, LIQUID, TOXIC, FLAMMABLE
			3015	BIPYRIDILIUM PESTICIDE, LIQUID, TOXIC, FLAMMABLE
			3017	ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC, FLAMMABLE
			3019	ORGANOTIN PESTICIDE, LIQUID, TOXIC, FLAMMABLE
			3025	COUMARIN DERIVATIVE PESTICIDE, LIQUID, TOXIC, FLAMMABLE
			3347	PHENOXYACETIC ACID DERIVATIVE PESTICIDE, LIQUID, TOXIC, FLAMMABLE
			3351	PYRETHROID PESTICIDE, LIQUID, TOXIC, FLAMMABLE
			2903	PESTICIDE, LIQUID, TOXIC, FLAMMABLE, N.O.S.
			1700	TEAR GAS CANDLES
	solid	**TF3**	2930	TOXIC SOLID, FLAMMABLE, ORGANIC, N.O.S.
			3535	TOXIC SOLID, FLAMMABLE, INORGANIC, N.O.S.
Solid, self-heating[c]		**TS**	3124	TOXIC SOLID, SELF-HEATING, N.O.S.
			3385	TOXIC BY INHALATION LIQUID, WATER-REACTIVE, N.O.S. with an LC_{50} lower than or equal to 200 ml/m^3 and saturated vapour concentration greater than or equal to 500 LC_{50}
Water-reactive[d] **TW**	**liquid**	**TW1**	3386	TOXIC BY INHALATION LIQUID, WATER-REACTIVE, N.O.S. with an LC_{50} lower than or equal to 1 000 ml/m^3 and saturated vapour concentration greater than or equal to 10 LC_{50}
			3123	TOXIC LIQUID, WATER-REACTIVE, N.O.S.
	solid[l]	**TW2**	3125	TOXIC SOLID, WATER-REACTIVE, N.O.S.
			3387	TOXIC BY INHALATION LIQUID, OXIDIZING, N.O.S. with an LC_{50} lower than or equal to 200 ml/m^3 and saturated vapour concentration greater than or equal to 500 LC_{50}
Oxidizing[m] **TO**	**liquid**	**TO1**	3388	TOXIC BY INHALATION LIQUID, OXIDIZING, N.O.S. with an LC_{50} lower than or equal to 1 000 ml/m^3 and saturated vapour concentration greater than or equal to 10 LC_{50}
			3122	TOXIC LIQUID, OXIDIZING, N.O.S.
	solid	**TO2**	3086	TOXIC SOLID, OXIDIZING, N.O.S.

Corrosive[(n)] **TC**	**organic**	**liquid**	**TC1**	3277	CHLOROFORMATES, TOXIC, CORROSIVE, N.O.S.
				3361	CHLOROSILANES, TOXIC, CORROSIVE, N.O.S.
				3389	TOXIC BY INHALATION LIQUID, CORROSIVE, N.O.S. with an LC_{50} lower than or equal to 200 ml/m^3 and saturated vapour concentration greater than or equal to 500 LC_{50}
				3390	TOXIC BY INHALATION LIQUID, CORROSIVE, N.O.S. with an LC_{50} lower than or equal to 1 000 ml/m^3 and saturated vapour concentration greater than or equal to 10 LC_{50}
				2927	TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S.
		solid	**TC2**	2928	TOXIC SOLID, CORROSIVE, ORGANIC, N.O.S.
	inorganic	**liquid**	**TC3**	3389	TOXIC BY INHALATION LIQUID, CORROSIVE, N.O.S. with an LC_{50} lower than or equal to 200 ml/m^3 and saturated vapour concentration greater than or equal to 500 LC_{50}
				3390	TOXIC BY INHALATION LIQUID, CORROSIVE, N.O.S. with an LC_{50} lower than or equal to 1 000 ml/m^3 and saturated vapour concentration greater than or equal to 10 LC_{50}
				3289	TOXIC LIQUID, CORROSIVE, INORGANIC, N.O.S.
		solid	**TC4**	3290	TOXIC SOLID, CORROSIVE, INORGANIC, N.O.S.
Flammable, corrosive			**TFC**	2742	CHLOROFORMATES, TOXIC, CORROSIVE, FLAMMABLE, N.O.S.
				3362	CHLOROSILANES, TOXIC, CORROSIVE, FLAMMABLE, N.O.S.
				3488	TOXIC BY INHALATION LIQUID, FLAMMABLE, CORROSIVE, N.O.S. with an LC_{50} lower than or equal to 200 ml/m^3 and saturated vapour concentration greater than or equal to 500 LC_{50}
				3489	TOXIC BY INHALATION LIQUID, FLAMMABLE, CORROSIVE, N.O.S. with an LC_{50} lower than or equal to 1000 ml/m^3 and saturated vapour concentration greater than or equal to 10 LC_{50}
flammable, water-reactive			**TFW**	3490	TOXIC BY INHALATION LIQUID, WATER-REACTIVE, FLAMMABLE, N.O.S. with an LC_{50} lower than or equal to 200 ml/m^3 and saturated vapour concentration greater than or equal to 500 LC_{50}
				3491	TOXIC BY INHALATION LIQUID, WATER-REACTIVE, FLAMMABLE, N.O.S. with an LC_{50} lower than or equal to 1000 ml/m^3 and saturated vapour concentration greater than or equal to 10 LC_{50}

Footnotes

(a) Substances and preparations containing alkaloids or nicotine used as pesticides shall be classified under UN No. 2588 PESTICIDES, SOLID, TOXIC, N.O.S., UN No. 2902 PESTICIDES, LIQUID, TOXIC, N.O.S. or UN No. 2903 PESTICIDES, LIQUID, TOXIC, FLAMMABLE, N.O.S.

(b) Active substances and triturations or mixtures of substances intended for laboratories and experiments and for the manufacture of pharmaceutical products with other substances shall be classified according to their toxicity (see 2.2.61.1.7 to 2.2.61.1.11).

(c) Self-heating substances, slightly toxic and spontaneously combustible organometallic compounds, are substances of Class 4.2.

(d) Water-reactive substances, slightly toxic, and water-reactive organometallic compounds, are substances of Class 4.3.

(e) Mercury fulminate, wetted with not less than 20% water, or mixture of alcohol and water by mass is a substance of Class 1, UN No. 0135 and shall not be accepted for carriage by rail (see 2.2.61.2.2).

(f) Ferricyanides, ferrocyanides, alkaline thiocyanates and ammonium thiocyanates are not subject to the provisions of RID.

(g) Lead salts and lead pigments which, when mixed in a ratio of 1:1000 with 0.07M hydrochloric acid and stirred for one hour at a temperature of 23 °C ± 2 °C, exhibit a solubility of 5% or less, are not subject to the provisions of RID.

(h) Articles impregnated with this pesticide, such as fibreboard plates, paper strips, cotton-wool balls, sheets of plastics material, in hermetically closed wrappings, are not subject to the provisions of RID.

(i) Mixtures of solids which are not subject to the provisions of RID and of toxic liquids may be carried under UN No. 3243 without first applying the classification criteria of Class 6.1, provided there is no free liquid visible at the time the substance is loaded or at the time the packaging, wagon or container is closed. Each packaging shall correspond to a design type that has passed a leakproofness test at the packing group II level. This entry shall not be used for solids containing a packing group I liquid.

(j) Highly toxic and toxic flammable liquids having a flash-point below 23 °C are substances of Class 3 except those which are highly toxic by inhalation, as defined in 2.2.61.1.4 to 2.2.61.1.9. Liquids which are highly toxic by inhalation are indicated as "toxic by inhalation" in their proper shipping name in Column (2) or by special provision 354 in Column (6) of Table A of Chapter 3.2.

(k) Flammable liquids, slightly toxic, with the exception of substances and preparations used as pesticides, having a flash-point between 23 °C and 60 °C inclusive, are substances of Class 3.

(l) Metal phosphides assigned to UN Nos. 1360, 1397, 1432, 1714, 2011 and 2013 are substances of Class 4.3.

(m) Oxidizing substances, slightly toxic, are substances of Class 5.1.

(n) Substances slightly toxic and slightly corrosive, are substances of Class 8.

2.2.62 Class 6.2: Infectious substances

2.2.62.1 Criteria

2.2.62.1.1 The heading of Class 6.2 covers infectious substances. For the purposes of RID, infectious substances are substances which are known or are reasonably expected to contain pathogens. Pathogens are defined as microorganisms (including bacteria, viruses, rickettsia, parasites, fungi) and other agents such as prions, which can cause disease in humans or animals.

NOTE 1: Genetically modified microorganisms and organisms, biological products, diagnostic specimens and intentionally infected live animals shall be assigned to this Class if they meet the conditions for this Class.

The carriage of unintentionally or naturally infected live animals is subject only to the relevant rules and regulations of the respective countries of origin, transit and destination.

2: Toxins from plant, animal or bacterial sources which do not contain any infectious substances or organisms or which are not contained in them are substances of Class 6.1, UN No. 3172 or 3462.

2.2.62.1.2 Substances of Class 6.2 are subdivided as follows:

I1 Infectious substances affecting humans;

I2 Infectious substances affecting animals only;

I3 Clinical waste;

I4 Biological substances.

Definitions

2.2.62.1.3 For the purposes of RID:

"Biological products" are those products derived from living organisms which are manufactured and distributed in accordance with the requirements of appropriate national authorities, which may have special licensing requirements, and are used either for prevention, treatment, or diagnosis of disease in humans or animals, or for development, experimental or investigational purposes related thereto. They include, but are not limited to, finished or unfinished products such as vaccines;

"Cultures" are the result of a process by which pathogens are intentionally propagated. This definition does not include human or animal patient specimens as defined in this paragraph;

"Medical or clinical wastes" are wastes derived from the medical treatment of animals or humans or from bioresearch;

"Patient specimens" are those, collected directly from humans or animals, including, but not limited to, excreta, secreta, blood and its components, tissue and tissue fluid swabs, and body parts being carried for purposes such as research, diagnosis, investigational activities, disease treatment and prevention.

Classification

2.2.62.1.4 Infectious substances shall be classified in Class 6.2 and assigned to UN Nos. 2814, 2900, 3291 or 3373, as appropriate.

Infectious substances are divided into the following categories:

2.2.62.1.4.1 Category A: An infectious substance which is carried in a form that, when exposure to it occurs, is capable of causing permanent disability, life-threatening or fatal disease in otherwise healthy humans or animals. Indicative examples of substances that meet these criteria are given in the table in this paragraph.

NOTE: An exposure occurs when an infectious substance is released outside of the protective packaging, resulting in physical contact with humans or animals.

(a) Infectious substances meeting these criteria which cause disease in humans or both in humans and animals shall be assigned to UN No. 2814. Infectious substances which cause disease only in animals shall be assigned to UN No. 2900;

(b) Assignment to UN No. 2814 or UN No. 2900 shall be based on the known medical history and symptoms of the source human or animal, endemic local conditions, or professional judgement concerning individual circumstances of the source human or animal.

NOTE 1: The proper shipping name for UN No. 2814 is "INFECTIOUS SUBSTANCE, AFFECTING HUMANS". The proper shipping name for UN No. 2900 is "INFECTIOUS SUBSTANCE, AFFECTING ANIMALS only".

2: The following table is not exhaustive. Infectious substances, including new or emerging pathogens, which do not appear in the table but which meet the same criteria shall be assigned to Category A. In addition, if there is doubt as to whether or not a substance meets the criteria it shall be included in Category A.

3: In the following table, the microorganisms written in italics are bacteria, mycoplasmas, rickettsia or fungi.

Indicative examples of infectious substances included in Category A in any form unless otherwise indicated (see 2.2.62.1.4.1)	
UN Number and name	**Microorganism**
UN No. 2814 INFECTIOUS SUB-STANCES AFFECT ING HUMANS	*Bacillus anthracis* (cultures only) *Brucella abortus* (cultures only) *Brucella melitensis* (cultures only) *Brucella suis* (cultures only) *Burkholderia mallei* – *Pseudomonas mallei* – Glanders (cultures only) *Burkholderia pseudomallei* – *Pseudomonas pseudomallei* (cultures only) *Chlamydia psittaci* – avian strains (cultures only) *Clostridium botulinum* (cultures only) *Coccidioides immitis* (cultures only) *Coxiella burnetii* (cultures only) Crimean-Congo haemorrhagic fever virus Dengue virus (cultures only) Eastern equine encephalitis virus (cultures only) *Escherichia coli*, verotoxigenic (cultures only)[a] Ebola virus Flexal virus *Francisella tularensis* (cultures only) Guanarito virus Hantaan virus Hantavirus causing haemorrhagic fever with renal syndrome Hendra virus Hepatitis B virus (cultures only) Herpes B virus (cultures only) Human immunodeficiency virus (cultures only) Highly pathogenic avian influenza virus (cultures only) Japanese Encephalitis virus (cultures only) Junin virus Kyasanur Forest disease virus Lassa virus Machupo virus Marburg virus Monkeypox virus *Mycobacterium tuberculosis* (cultures only)[a] Nipah virus Omsk haemorrhagic fever virus Poliovirus (cultures only) Rabies virus (cultures only) *Rickettsia prowazekii* (cultures only) *Rickettsia rickettsii* (cultures only) Rift Valley fever virus (cultures only) Russian spring-summer encephalitis virus (cultures only) Sabia virus *Shigella dysenteriae type 1* (cultures only)[a] Tick-borne encephalitis virus (cultures only) Variola virus Venezuelan equine encephalitis virus (cultures only) West Nile virus (cultures only) Yellow fever virus (cultures only) *Yersinia pestis* (cultures only)

UN Number and name	Microorganism
UN No. 2900 INFECTIOUS SUBSTANCES AFFECTING ANIMALS only	African swine fever virus (cultures only) Avian paramyxovirus Type 1 – Velogenic Newcastle disease virus (cultures only) Classical swine fever virus (cultures only) Foot and mouth disease virus (cultures only) Lumpy skin disease virus (cultures only) *Mycoplasma mycoides* – Contagious bovine pleuropneumonia (cultures only) Peste des petits ruminants virus (cultures only) Rinderpest virus (cultures only) Sheep-pox virus (cultures only) Goatpox virus (cultures only) Swine vesicular disease virus (cultures only) Vesicular stomatitis virus (cultures only)

[a] Nevertheless, when the cultures are intended for diagnostic or clinical purposes, they may be classified as infectious substances of Category B.

2.2.62.1.4.2 Category B: An infectious substance which does not meet the criteria for inclusion in Category A. Infectious substances in Category B shall be assigned to UN No. 3373.

NOTE: The proper shipping name of UN No. 3373 is "BIOLOGICAL SUBSTANCE, CATEGORY B".

2.2.62.1.5 *Exemptions*

2.2.62.1.5.1 Substances which do not contain infectious substances or substances which are unlikely to cause disease in humans or animals are not subject to the provisions of RID unless they meet the criteria for inclusion in another class.

2.2.62.1.5.2 Substances containing microorganisms which are non-pathogenic to humans or animals are not subject to RID unless they meet the criteria for inclusion in another class.

2.2.62.1.5.3 Substances in a form that any present pathogens have been neutralized or inactivated such that they no longer pose a health risk are not subject to RID unless they meet the criteria for inclusion in another class.

NOTE: Medical equipment which has been drained of free liquid is deemed to meet the requirements of this paragraph and is not subject to the provisions of RID.

2.2.62.1.5.4 Substances where the concentration of pathogens is at a level naturally encountered (including foodstuff and water samples) and which are not considered to pose a significant risk of infection are not subject to RID unless they meet the criteria for inclusion in another class.

2.2.62.1.5.5 Dried blood spots, collected by applying a drop of blood onto absorbent material, are not subject to RID.

2.2.62.1.5.6 Faecal occult blood screening samples are not subject to RID.

2.2.62.1.5.7 Blood or blood components which have been collected for the purposes of transfusion or for the preparation of blood products to be used for transfusion or transplantation and any tissues or organs intended for use in transplantation as well as samples drawn in connection with such purposes are not subject to RID.

2.2.62.1.5.8 Human or animal specimens for which there is minimal likelihood that pathogens are present are not subject to RID if the specimen is carried in a packaging which will prevent any leakage and which is marked with the words "EXEMPT HUMAN SPECIMEN" or "EXEMPT ANIMAL SPECIMEN", as appropriate.

The packaging is deemed to comply with the above requirements if it meets the following conditions:

(a) The packaging consists of three components:
  (i) a leak-proof primary receptacle(s);
  (ii) a leak-proof secondary packaging; and
  (iii) an outer packaging of adequate strength for its capacity, mass and intended use, and with at least one surface having minimum dimensions of 100 mm x 100 mm;

(b) For liquids, absorbent material in sufficient quantity to absorb the entire contents is placed between the primary receptacle(s) and the secondary packaging so that, during carriage, any release or leak of a liquid substance will not reach the outer packaging and will not compromise the integrity of the cushioning material;

(c) When multiple fragile primary receptacles are placed in a single secondary packaging, they are either individually wrapped or separated to prevent contact between them.

NOTE 1: An element of professional judgment is required to determine if a substance is exempt under this paragraph. That judgment should be based on the known medical history, symptoms and individual circumstances of the source, human or animal, and endemic local conditions. Examples of specimens which may be carried under this paragraph include

– the blood or urine tests to monitor cholesterol levels, blood glucose levels, hormone levels, or prostate specific antibodies (PSA);

– those required to monitor organ function such as heart, liver or kidney function for humans or animals with non-infectious diseases, or for therapeutic drug monitoring;

– those conducted for insurance or employment purposes and are intended to determine the presence of drugs or alcohol;

– pregnancy test;

– biopsies to detect cancer; and

– antibody detection in humans or animals in the absence of any concern for infection (e.g. evaluation of vaccine induced immunity, diagnosis of autoimmune disease, etc.).

2: For air transport, packagings for specimens exempted under this paragraph shall meet the conditions in (a) to (c).

2.2.62.1.5.9 Except for:

(a) Medical waste (UN No. 3291);

(b) Medical devices or equipment contaminated with or containing infectious substances in Category A (UN No. 2814 or UN No. 2900); and

(c) Medical devices or equipment contaminated with or containing other dangerous goods that meet the definition of another class,

medical devices or equipment potentially contaminated with or containing infectious substances which are being carried for disinfection, cleaning, sterilization, repair, or equipment evaluation are not subject to the provisions of RID other than those of this paragraph if packed in packagings designed and constructed in such a way that, under normal conditions of carriage, they cannot break, be punctured or leak their contents. Packagings shall be designed to meet the construction requirements listed in 6.1.4 or 6.6.4.

These packagings shall meet the general packing requirements of 4.1.1.1 and 4.1.1.2 and be capable of retaining the medical devices and equipment when dropped from a height of 1.2 m.

The packagings shall be marked "USED MEDICAL DEVICE" or "USED MEDICAL EQUIPMENT". When using overpacks, these shall be marked in the same way, except when the inscription remains visible.

2.2.62.1.6 (Reserved)

2.2.62.1.7 (Reserved)

2.2.62.1.8 (Reserved)

2.2.62.1.9 *Biological products*

For the purposes of RID, biological products are divided into the following groups:

(a) those which are manufactured and packaged in accordance with the requirements of appropriate national authorities and carried for the purposes of final packaging or distribution, and use for personal health care by medical professionals or individuals. Substances in this group are not subject to the provisions of RID;

(b) those which do not fall under paragraph (a) and are known or reasonably believed to contain infectious substances and which meet the criteria for inclusion in Category A or Category B. Substances in this group shall be assigned to UN Nos. 2814, 2900 or 3373, as appropriate.

NOTE: Some licensed biological products may present a biohazard only in certain parts of the world. In that case, competent authorities may require these biological products to be in compliance with local requirements for infectious substances or may impose other restrictions.

2.2.62.1.10 *Genetically modified microorganisms and organisms*

Genetically modified microorganisms not meeting the definition of infectious substance shall be classified according to section 2.2.9.

2.2.62.1.11 *Medical or clinical wastes*

2.2.62.1.11.1 Medical or clinical wastes containing Category A infectious substances shall be assigned to UN No. 2814 or UN No. 2900 as appropriate. Medical or clinical wastes containing infectious substances in Category B shall be assigned to UN No. 3291.

NOTE: Medical or clinical wastes assigned to number 18 01 03 (Wastes from human or animal health care and/or related research – wastes from natal care, diagnosis, treatment or prevention of disease in humans – wastes whose collection and disposal is subject to special requirements in order to prevent infection) or 18 02 02 (Wastes from human or animal health care and/or related research – wastes from research, diagnosis, treatment or prevention of disease involving animals – wastes whose collection and disposal is subject to special requirements in order to prevent infection) according to the list of wastes annexed to the Commission Decision 2000/532/EC[5] as amended, shall be classified according to the provisions set out in this paragraph, based on the medical or veterinary diagnosis concerning the patient or the animal.

2.2.62.1.11.2 Medical or clinical wastes which are reasonably believed to have a low probability of containing infectious substances shall be assigned to UN No. 3291. For the assignment, international, regional or national waste catalogues may be taken into account.

NOTE 1: The proper shipping name for UN No. 3291 is "CLINICAL WASTE, UNSPECIFIED, N.O.S." or "(BIO) MEDICAL WASTE, N.O.S". or "REGULATED MEDICAL WASTE, N.O.S.".

2: Notwithstanding the classification criteria set out above, medical or clinical wastes assigned to number 18 01 04 (Wastes from human or animal health care and/or related research – wastes from natal care, diagnosis, treatment or prevention of disease in humans – wastes whose collection and disposal is not subject to special requirements in order to prevent infection) or 18 02 03 (Wastes from human or animal health care and/or related research – wastes from research, diagnosis, treatment or prevention of disease involving animals – wastes whose collection and disposal is not subject to special requirements in order to prevent infection) according to the list of wastes annexed to the Commission Decision 2000/532/EC5 as amended, are not subject to the provisions of RID.

2.2.62.1.11.3 Decontaminated medical or clinical wastes which previously contained infectious substances are not subject to the provisions of RID unless they meet the criteria for inclusion in another class.

2.2.62.1.11.4 Medical or clinical wastes assigned to UN No. 3291 are assigned to packing group II.

2.2.62.1.12 *Infected animals*

2.2.62.1.12.1 Unless an infectious substance cannot be consigned by any other means, live animals shall not be used to consign such a substance. A live animal which has been intentionally infected and is known or suspected to contain an infectious substance shall only be carried under terms and conditions approved by the competent authority.

NOTE: The approval of the competent authorities shall be issued on the basis of the relevant rules for the carriage of live animals, taking into consideration dangerous goods aspects. The authorities that are competent to lay down these conditions and rules for approval shall be regulated at national level.

If there is no approval by a competent authority of an RID Contracting State, the competent authority of an RID Contracting State may recognize an approval issued by the competent authority of a country that is not an RID Contracting State.

Rules for the carriage of livestock are, for example, contained in Council Regulation (EC) No 1/2005 of 22 December 2004 on the protection of animals during transport (Official Journal of the European Union No L 3 of 5 January 2005) as amended.

2.2.62.1.12.2 (Deleted)

2.2.62.2 Substances not accepted for carriage

Live vertebrate or invertebrate animals shall not be used to carry an infectious agent unless the agent cannot be carried by other means or unless this carriage has been approved by the competent authority (see 2.2.62.1.12.1).

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[5] Commission Decision 2000/532/EC of 3 May 2000 replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste (replaced by the Directive of the European Parliament and of the Council 2006/12/EC (Official Journal of the European Communities No. L 114 of 27 April 2006, page 9)) and Council Decision 94/904/EC establishing a list of hazardous waste pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous waste (Official Journal of the European Communities No. L 226 of 6 September 2000, page 3).

2.2.62.3 List of collective entries

	Classification code	UN No.	Name of the substance or article
Infectious substances			
Effects on humans	**I1**	2814	INFECTIOUS SUBSTANCE, AFFECTING HUMANS
Effects on animals only	**I2**	2900	INFECTIOUS SUBSTANCE, AFFECTING ANIMALS only
Clinical waste	**I3**	3291 3291 3291	CLINICAL WASTE, UNSPECIFIED, N.O.S. or (BIO)MEDICAL WASTE, N.O.S. or REGULATED MEDICAL WASTE, N.O.S.
Biological substances	**I4**	3373	BIOLOGICAL SUBSTANCE, CATEGORY B

2.2.7 Class 7: Radioactive material

2.2.7.1 Definitions

2.2.7.1.1 ***Radioactive material*** means any material containing radionuclides where both the activity concentration and the total activity in the consignment exceed the values specified in 2.2.7.2.2.1 to 2.2.7.2.2.6.

2.2.7.1.2 ***Contamination***

Contamination means the presence of a radioactive substance on a surface in quantities in excess of 0.4 Bq/cm^2 for beta and gamma emitters and low toxicity alpha emitters, or 0.04 Bq/cm^2 for all other alpha emitters.

Non-fixed contamination means contamination that can be removed from a surface during routine conditions of carriage.

Fixed contamination means contamination other than non-fixed contamination.

2.2.7.1.3 Definitions of specific terms

A_1 and A_2

A_1 means the activity value of special form radioactive material which is listed in Table 2.2.7.2.2.1 or derived in 2.2.7.2.2.2 and is used to determine the activity limits for the requirements of RID.

A_2 means the activity value of radioactive material, other than special form radioactive material, which is listed in Table 2.2.7.2.2.1 or derived in 2.2.7.2.2.2 and is used to determine the activity limits for the requirements of RID.

Fissile nuclides means uranium-233, uranium-235, plutonium-239 and plutonium-241.

Fissile material means a material containing any of the fissile nuclides. Excluded from the definition of fissile material are the following:

(a) Natural uranium or depleted uranium which is unirradiated;

(b) Natural uranium or depleted uranium which has been irradiated in thermal reactors only;

(c) Material with fissile nuclides less than a total of 0.25 g;

(d) Any combination of (a), (b) and/or (c).

These exclusions are only valid if there is no other material with fissile nuclides in the package or in the consignment if shipped unpackaged.

Low dispersible radioactive material means either a solid radioactive material or a solid radioactive material in a sealed capsule, that has limited dispersibility and is not in powder form.

Low specific activity (LSA) material means radioactive material which by its nature has a limited specific activity, or radioactive material for which limits of estimated average specific activity apply. External shielding materials surrounding the LSA material shall not be considered in determining the estimated average specific activity.

Low toxicity alpha emitters are: natural uranium; depleted uranium; natural thorium; uranium-235 or uranium-238; thorium-232; thorium-228 and thorium-230 when contained in ores or physical and chemical concentrates; or alpha emitters with a half-life of less than 10 days.

Special form radioactive material means either:

(a) An indispersible solid radioactive material; or

(b) A sealed capsule containing radioactive material.

Specific activity of a radionuclide means the activity per unit mass of that nuclide. The specific activity of a material shall mean the activity per unit mass of the material in which the radionuclides are essentially uniformly distributed.

Surface contaminated object (SCO) means a solid object which is not itself radioactive but which has radioactive material distributed on its surface.

Unirradiated thorium means thorium containing not more than 10^{-7} g of uranium-233 per gram of thorium-232.

Unirradiated uranium means uranium containing not more than 2×10^3 Bq of plutonium per gram of uranium-235, not more than 9×10^6 Bq of fission products per gram of uranium-235 and not more than 5×10^{-3} g of uranium-236 per gram of uranium-235.

Uranium – natural, depleted, enriched means the following:

Natural uranium means uranium (which may be chemically separated) containing the naturally occurring distribution of uranium isotopes (approximately 99.28% uranium-238, and 0.72% uranium-235 by mass).

Depleted uranium means uranium containing a lesser mass percentage of uranium-235 than in natural uranium.

Enriched uranium means uranium containing a greater mass percentage of uranium-235 than 0.72%.

In all cases, a very small mass percentage of uranium-234 is present.

2.2.7.2 Classification

2.2.7.2.1 General provisions

2.2.7.2.1.1 Radioactive material shall be assigned to one of the UN numbers specified in Table 2.2.7.2.1.1, in accordance with 2.2.7.2.4 and 2.2.7.2.5, taking into account the material characteristics determined in 2.2.7.2.3.

Table 2.2.7.2.1.1: Assignment of UN numbers

UN No.	Proper shipping name and description[a]
Excepted packages (1.7.1.5)	
UN 2908	RADIOACTIVE MATERIAL, EXCEPTED PACKAGE – EMPTY PACKAGING
UN 2909	RADIOACTIVE MATERIAL, EXCEPTED PACKAGE – ARTICLES MANUFACTURED FROM NATURAL URANIUM or DEPLETED URANIUM or NATURAL THORIUM
UN 2910	RADIOACTIVE MATERIAL, EXCEPTED PACKAGE – LIMITED QUANTITY OF MATERIAL
UN 2911	RADIOACTIVE MATERIAL, EXCEPTED PACKAGE – INSTRUMENTS or ARTICLES
UN 3507	URANIUM HEXAFLUORIDE, RADIOACTIVE MATERIAL, EXCEPTED PACKAGE less than 0.1 kg per package, non-fissile or fissile-excepted[b,c]
Low specific activity radioactive material (2.2.7.2.3.1)	
UN 2912	RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-I), non-fissile or fissile-excepted[b]
UN 3321	RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-II), non fissile or fissile-excepted[b]
UN 3322	RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-III), non fissile or fissile-excepted[b]
UN 3324	RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-II), FISSILE
UN 3325	RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-III), FISSILE
Surface contaminated objects (2.2.7.2.3.2)	
UN 2913	RADIOACTIVE MATERIAL, SURFACE CONTAMINATED OBJECTS (SCO-I or SCO-II), non-fissile or fissile-excepted[b]
UN 3326	RADIOACTIVE MATERIAL, SURFACE CONTAMINATED OBJECTS (SCO-I or SCO-II), FISSILE
Type A packages (2.2.7.2.4.4)	
UN 2915	RADIOACTIVE MATERIAL, TYPE A PACKAGE, non-special form, non-fissile or fissile-excepted[b]
UN 3327	RADIOACTIVE MATERIAL, TYPE A PACKAGE, FISSILE, non-special form
UN 3332	RADIOACTIVE MATERIAL, TYPE A PACKAGE, SPECIAL FORM, non fissile or fissile-excepted[b]
UN 3333	RADIOACTIVE MATERIAL, TYPE A PACKAGE, SPECIAL FORM, FISSILE
Type B(U) packages (2.2.7.2.4.6)	
UN 2916	RADIOACTIVE MATERIAL, TYPE B(U) PACKAGE, non-fissile or fissile-excepted[b]
UN 3328	RADIOACTIVE MATERIAL, TYPE B(U) PACKAGE, FISSILE
Type B(M) packages (2.2.7.2.4.6)	
UN 2917	RADIOACTIVE MATERIAL, TYPE B(M) PACKAGE, non-fissile or fissile-excepted[b]
UN 3329	RADIOACTIVE MATERIAL, TYPE B(M) PACKAGE, FISSILE
Type C packages (2.2.7.2.4.6)	
UN 3323	RADIOACTIVE MATERIAL, TYPE C PACKAGE, non fissile or fissile-excepted[b]
UN 3330	RADIOACTIVE MATERIAL, TYPE C PACKAGE, FISSILE
Special arrangement (2.2.7.2.5)	
UN 2919	RADIOACTIVE MATERIAL, TRANSPORTED UNDER SPECIAL ARRANGEMENT, non-fissile or fissile-excepted[b]
UN 3331	RADIOACTIVE MATERIAL, TRANSPORTED UNDER SPECIAL ARRANGEMENT, FISSILE
Uranium hexafluoride (2.2.7.2.4.5)	
UN 2977	RADIOACTIVE MATERIAL, URANIUM HEXAFLUORIDE, FISSILE
UN 2978	RADIOACTIVE MATERIAL, URANIUM HEXAFLUORIDE, non-fissile or fissile-excepted[b]
UN 3507	URANIUM HEXAFLUORIDE, RADIOACTIVE MATERIAL, EXCEPTED PACKAGE less than 0.1 kg per package, non-fissile or fissile-excepted[b,c]

[a] The proper shipping name is found in the column "proper shipping name and description" and is restricted to that part shown in capital letters. In the cases of UN Nos. 2909, 2911, 2913 and 3326, where alternative proper shipping names are separated by the word "or" only the relevant proper shipping name shall be used.

[b] The term "fissile-excepted" refers only to material excepted under 2.2.7.2.3.5.

[c] For UN No. 3507, see also special provision 369 in Chapter 3.3.

2.2.7.2.2 Determination of basic radionuclide values

2.2.7.2.2.1 The following basic values for individual radionuclides are given in Table 2.2.7.2.2.1:

(a) A_1 and A_2 in TBq;

(b) Activity concentration limits for exempt material in Bq/g; and

(c) Activity limits for exempt consignments in Bq.

Table 2.2.7.2.2.1: Basic radionuclides values for individual radionuclides

Radionuclide (atomic number)	A_1 (TBq)	A_2 (TBq)	Activity concentration limit for exempt material (Bq/g)	Activity limit for an exempt consignment (Bq)
Actinium (89)				
Ac-225[(a)]	8×10^{-1}	6×10^{-3}	1×10^{1}	1×10^{4}
Ac-227[(a)]	9×10^{-1}	9×10^{-5}	1×10^{-1}	1×10^{3}
Ac-228	6×10^{-1}	5×10^{-1}	1×10^{1}	1×10^{6}
Silver (47)				
Ag-105	2×10^{0}	2×10^{0}	1×10^{2}	1×10^{6}
Ag-108m[(a)]	7×10^{-1}	7×10^{-1}	1×10^{1} [(b)]	1×10^{6} [(b)]
Ag-110m[(a)]	4×10^{-1}	4×10^{-1}	1×10^{1}	1×10^{6}
Ag-111	2×10^{0}	6×10^{-1}	1×10^{3}	1×10^{6}
Aluminium (13)				
Al-26	1×10^{-1}	1×10^{-1}	1×10^{1}	1×10^{5}
Americium (95)				
Am-241	1×10^{1}	1×10^{-3}	1×10^{0}	1×10^{4}
Am-242m[(a)]	1×10^{1}	1×10^{-3}	1×10^{0} [(b)]	1×10^{4} [(b)]
Am-243[(a)]	5×10^{0}	1×10^{-3}	1×10^{0} [(b)]	1×10^{3} [(b)]
Argon (18)				
Ar-37	4×10^{1}	4×10^{1}	1×10^{6}	1×10^{8}
Ar-39	4×10^{1}	2×10^{1}	1×10^{7}	1×10^{4}
Ar-41	3×10^{-1}	3×10^{-1}	1×10^{2}	1×10^{9}
Arsenic (33)				
As-72	3×10^{-1}	3×10^{-1}	1×10^{1}	1×10^{5}
As-73	4×10^{1}	4×10^{1}	1×10^{3}	1×10^{7}
As-74	1×10^{0}	9×10^{-1}	1×10^{1}	1×10^{6}
As-76	3×10^{-1}	3×10^{-1}	1×10^{2}	1×10^{5}
As-77	2×10^{1}	7×10^{-1}	1×10^{3}	1×10^{6}
Astatine (85)				
At-211[(a)]	2×10^{1}	5×10^{-1}	1×10^{3}	1×10^{7}
Gold (79)				
Au-193	7×10^{0}	2×10^{0}	1×10^{2}	1×10^{7}
Au-194	1×10^{0}	1×10^{0}	1×10^{1}	1×10^{6}
Au-195	1×10^{1}	6×10^{0}	1×10^{2}	1×10^{7}
Au-198	1×10^{0}	6×10^{-1}	1×10^{2}	1×10^{6}
Au-199	1×10^{1}	6×10^{-1}	1×10^{2}	1×10^{6}
Barium (56)				
Ba-131[(a)]	2×10^{0}	2×10^{0}	1×10^{2}	1×10^{6}
Ba-133	3×10^{0}	3×10^{0}	1×10^{2}	1×10^{6}
Ba-133m	2×10^{1}	6×10^{-1}	1×10^{2}	1×10^{6}
Ba-140[(a)]	5×10^{-1}	3×10^{-1}	1×10^{1} [(b)]	1×10^{5} [(b)]
Beryllium (4)				
Be-7	2×10^{1}	2×10^{1}	1×10^{3}	1×10^{7}
Be-10	4×10^{1}	6×10^{-1}	1×10^{4}	1×10^{6}
Bismuth (83)				
Bi-205	7×10^{-1}	7×10^{-1}	1×10^{1}	1×10^{6}
Bi-206	3×10^{-1}	3×10^{-1}	1×10^{1}	1×10^{5}
Bi-207	7×10^{-1}	7×10^{-1}	1×10^{1}	1×10^{6}
Bi-210	1×10^{0}	6×10^{-1}	1×10^{3}	1×10^{6}
Bi-210m[(a)]	6×10^{-1}	2×10^{-2}	1×10^{1}	1×10^{5}
Bi-212[(a)]	7×10^{-1}	6×10^{-1}	1×10^{1} [(b)]	1×10^{5} [(b)]

Radionuclide (atomic number)	A_1 (TBq)	A_2 (TBq)	Activity concentration limit for exempt material (Bq/g)	Activity limit for an exempt consignment (Bq)
Berkelium (97)				
Bk-247	8×10^{0}	8×10^{-4}	1×10^{0}	1×10^{4}
Bk-249[a]	4×10^{1}	3×10^{-1}	1×10^{3}	1×10^{6}
Bromine (35)				
Br-76	4×10^{-1}	4×10^{-1}	1×10^{1}	1×10^{5}
Br-77	3×10^{0}	3×10^{0}	1×10^{2}	1×10^{6}
Br-82	4×10^{-1}	4×10^{-1}	1×10^{1}	1×10^{6}
Carbon (6)				
C-11	1×10^{0}	6×10^{-1}	1×10^{1}	1×10^{6}
C-14	4×10^{1}	3×10^{0}	1×10^{4}	1×10^{7}
Calcium (20)				
Ca-41	Unlimited	Unlimited	1×10^{5}	1×10^{7}
Ca-45	4×10^{1}	1×10^{0}	1×10^{4}	1×10^{7}
Ca-47[a]	3×10^{0}	3×10^{-1}	1×10^{1}	1×10^{6}
Cadmium (48)				
Cd-109	3×10^{1}	2×10^{0}	1×10^{4}	1×10^{6}
Cd-113m	4×10^{1}	5×10^{-1}	1×10^{3}	1×10^{6}
Cd-115[a]	3×10^{0}	4×10^{-1}	1×10^{2}	1×10^{6}
Cd-115m	5×10^{-1}	5×10^{-1}	1×10^{3}	1×10^{6}
Cerium (58)				
Ce-139	7×10^{0}	2×10^{0}	1×10^{2}	1×10^{6}
Ce-141	2×10^{1}	6×10^{-1}	1×10^{2}	1×10^{7}
Ce-143	9×10^{-1}	6×10^{-1}	1×10^{2}	1×10^{6}
Ce-144[a]	2×10^{-1}	2×10^{-1}	1×10^{2} [b]	1×10^{5} [b]
Californium (98)				
Cf-248	4×10^{1}	6×10^{-3}	1×10^{1}	1×10^{4}
Cf-249	3×10^{0}	8×10^{-4}	1×10^{0}	1×10^{3}
Cf-250	2×10^{1}	2×10^{-3}	1×10^{1}	1×10^{4}
Cf-251	7×10^{0}	7×10^{-4}	1×10^{0}	1×10^{3}
Cf-252	1×10^{-1}	3×10^{-3}	1×10^{1}	1×10^{4}
Cf-253[a]	4×10^{1}	4×10^{-2}	1×10^{2}	1×10^{5}
Cf-254	1×10^{-3}	1×10^{-3}	1×10^{0}	1×10^{3}
Chlorine (17)				
Cl-36	1×10^{1}	6×10^{-1}	1×10^{4}	1×10^{6}
Cl-38	2×10^{-1}	2×10^{-1}	1×10^{1}	1×10^{5}
Curium (96)				
Cm-240	4×10^{1}	2×10^{-2}	1×10^{2}	1×10^{5}
Cm-241	2×10^{0}	1×10^{0}	1×10^{2}	1×10^{6}
Cm-242	4×10^{1}	1×10^{-2}	1×10^{2}	1×10^{5}
Cm-243	9×10^{0}	1×10^{-3}	1×10^{0}	1×10^{4}
Cm-244	2×10^{1}	2×10^{-3}	1×10^{1}	1×10^{4}
Cm-245	9×10^{0}	9×10^{-4}	1×10^{0}	1×10^{3}
Cm-246	9×10^{0}	9×10^{-4}	1×10^{0}	1×10^{3}
Cm-247[a]	3×10^{0}	1×10^{-3}	1×10^{0}	1×10^{4}
Cm-248	2×10^{-2}	3×10^{-4}	1×10^{0}	1×10^{3}
Cobalt (27)				
Co-55	5×10^{-1}	5×10^{-1}	1×10^{1}	1×10^{6}
Co-56	3×10^{-1}	3×10^{-1}	1×10^{1}	1×10^{5}
Co-57	1×10^{1}	1×10^{1}	1×10^{2}	1×10^{6}
Co-58	1×10^{0}	1×10^{0}	1×10^{1}	1×10^{6}
Co-58m	4×10^{1}	4×10^{1}	1×10^{4}	1×10^{7}
Co-60	4×10^{-1}	4×10^{-1}	1×10^{1}	1×10^{5}
Chromium (24)				
Cr-51	3×10^{1}	3×10^{1}	1×10^{3}	1×10^{7}
Caesium (55)				
Cs-129	4×10^{0}	4×10^{0}	1×10^{2}	1×10^{5}
Cs-131	3×10^{1}	3×10^{1}	1×10^{3}	1×10^{6}
Cs-132	1×10^{0}	1×10^{0}	1×10^{1}	1×10^{5}
Cs-134	7×10^{-1}	7×10^{-1}	1×10^{1}	1×10^{4}
Cs-134m	4×10^{1}	6×10^{-1}	1×10^{3}	1×10^{5}
Cs-135	4×10^{1}	1×10^{0}	1×10^{4}	1×10^{7}
Cs-136	5×10^{-1}	5×10^{-1}	1×10^{1}	1×10^{5}
Cs-137[a]	2×10^{0}	6×10^{-1}	1×10^{1} [b]	1×10^{4} [b]
Copper (29)				
Cu-64	6×10^{0}	1×10^{0}	1×10^{2}	1×10^{6}
Cu-67	1×10^{1}	7×10^{-1}	1×10^{2}	1×10^{6}

Radionuclide (atomic number)	A_1 (TBq)	A_2 (TBq)	Activity concentration limit for exempt material (Bq/g)	Activity limit for an exempt consignment (Bq)
Dysprosium (66)				
Dy-159	2×10^{1}	2×10^{1}	1×10^{3}	1×10^{7}
Dy-165	9×10^{-1}	6×10^{-1}	1×10^{3}	1×10^{6}
Dy-166[(a)]	9×10^{-1}	3×10^{-1}	1×10^{3}	1×10^{6}
Erbium (68)				
Er-169	4×10^{1}	1×10^{0}	1×10^{4}	1×10^{7}
Er-171	8×10^{-1}	5×10^{-1}	1×10^{2}	1×10^{6}
Europium (63)				
Eu-147	2×10^{0}	2×10^{0}	1×10^{2}	1×10^{6}
Eu-148	5×10^{-1}	5×10^{-1}	1×10^{1}	1×10^{6}
Eu-149	2×10^{1}	2×10^{1}	1×10^{2}	1×10^{7}
Eu-150 (short lived)	2×10^{0}	7×10^{-1}	1×10^{3}	1×10^{6}
Eu-150 (long lived)	7×10^{-1}	7×10^{-1}	1×10^{1}	1×10^{6}
Eu-152	1×10^{0}	1×10^{0}	1×10^{1}	1×10^{6}
Eu-152m	8×10^{-1}	8×10^{-1}	1×10^{2}	1×10^{6}
Eu-154	9×10^{-1}	6×10^{-1}	1×10^{1}	1×10^{6}
Eu-155	2×10^{1}	3×10^{0}	1×10^{2}	1×10^{7}
Eu-156	7×10^{-1}	7×10^{-1}	1×10^{1}	1×10^{6}
Fluorine (9)				
F-18	1×10^{0}	6×10^{-1}	1×10^{1}	1×10^{6}
Iron (26)				
Fe-52[(a)]	3×10^{-1}	3×10^{-1}	1×10^{1}	1×10^{6}
Fe-55	4×10^{1}	4×10^{1}	1×10^{4}	1×10^{6}
Fe-59	9×10^{-1}	9×10^{-1}	1×10^{1}	1×10^{6}
Fe-60[(a)]	4×10^{1}	2×10^{-1}	1×10^{2}	1×10^{5}
Gallium (31)				
Ga-67	7×10^{0}	3×10^{0}	1×10^{2}	1×10^{6}
Ga-68	5×10^{-1}	5×10^{-1}	1×10^{1}	1×10^{5}
Ga-72	4×10^{-1}	4×10^{-1}	1×10^{1}	1×10^{5}
Gadolinium (64)				
Gd-146[(a)]	5×10^{-1}	5×10^{-1}	1×10^{1}	1×10^{6}
Gd-148	2×10^{1}	2×10^{-3}	1×10^{1}	1×10^{4}
Gd-153	1×10^{1}	9×10^{0}	1×10^{2}	1×10^{7}
Gd-159	3×10^{0}	6×10^{-1}	1×10^{3}	1×10^{6}
Germanium (32)				
Ge-68[(a)]	5×10^{-1}	5×10^{-1}	1×10^{1}	1×10^{5}
Ge-71	4×10^{1}	4×10^{1}	1×10^{4}	1×10^{8}
Ge-77	3×10^{-1}	3×10^{-1}	1×10^{1}	1×10^{5}
Hafnium (72)				
Hf-172[(a)]	6×10^{-1}	6×10^{-1}	1×10^{1}	1×10^{6}
Hf-175	3×10^{0}	3×10^{0}	1×10^{2}	1×10^{6}
Hf-181	2×10^{0}	5×10^{-1}	1×10^{1}	1×10^{6}
Hf-182	Unlimited	Unlimited	1×10^{2}	1×10^{6}
Mercury (80)				
Hg-194[(a)]	1×10^{0}	1×10^{0}	1×10^{1}	1×10^{6}
Hg-195m[(a)]	3×10^{0}	7×10^{-1}	1×10^{2}	1×10^{6}
Hg-197	2×10^{1}	1×10^{1}	1×10^{2}	1×10^{7}
Hg-197m	1×10^{1}	4×10^{-1}	1×10^{2}	1×10^{6}
Hg-203	5×10^{0}	1×10^{0}	1×10^{2}	1×10^{5}
Holmium (67)				
Ho-166	4×10^{-1}	4×10^{-1}	1×10^{3}	1×10^{5}
Ho-166m	6×10^{-1}	5×10^{-1}	1×10^{1}	1×10^{6}
Iodine (53)				
I-123	6×10^{0}	3×10^{0}	1×10^{2}	1×10^{7}
I-124	1×10^{0}	1×10^{0}	1×10^{1}	1×10^{6}
I-125	2×10^{1}	3×10^{0}	1×10^{3}	1×10^{6}
I-126	2×10^{0}	1×10^{0}	1×10^{2}	1×10^{6}
I-129	Unlimited	Unlimited	1×10^{2}	1×10^{5}
I-131	3×10^{0}	7×10^{-1}	1×10^{2}	1×10^{6}
I-132	4×10^{-1}	4×10^{-1}	1×10^{1}	1×10^{5}
I-133	7×10^{-1}	6×10^{-1}	1×10^{1}	1×10^{6}
I-134	3×10^{-1}	3×10^{-1}	1×10^{1}	1×10^{5}
I-135[(a)]	6×10^{-1}	6×10^{-1}	1×10^{1}	1×10^{6}
Indium (49)				
In-111	3×10^{0}	3×10^{0}	1×10^{2}	1×10^{6}
In-113m	4×10^{0}	2×10^{0}	1×10^{2}	1×10^{6}

Radionuclide (atomic number)	A_1 (TBq)	A_2 (TBq)	Activity concentration limit for exempt material (Bq/g)	Activity limit for an exempt consignment (Bq)
In-114m[a]	1×10^{1}	5×10^{-1}	1×10^{2}	1×10^{6}
In-115m	7×10^{0}	1×10^{0}	1×10^{2}	1×10^{6}
Iridium (77)				
Ir-189[a]	1×10^{1}	1×10^{1}	1×10^{2}	1×10^{7}
Ir-190	7×10^{-1}	7×10^{-1}	1×10^{1}	1×10^{6}
Ir-192	1×10^{0} [c]	6×10^{-1}	1×10^{1}	1×10^{4}
Ir-194	3×10^{-1}	3×10^{-1}	1×10^{2}	1×10^{5}
Potassium (19)				
K-40	9×10^{-1}	9×10^{-1}	1×10^{2}	1×10^{6}
K-42	2×10^{-1}	2×10^{-1}	1×10^{2}	1×10^{6}
K-43	7×10^{-1}	6×10^{-1}	1×10^{1}	1×10^{6}
Krypton (36)				
Kr-79	4×10^{0}	2×10^{0}	1×10^{3}	1×10^{5}
Kr-81	4×10^{1}	4×10^{1}	1×10^{4}	1×10^{7}
Kr-85	1×10^{1}	1×10^{1}	1×10^{5}	1×10^{4}
Kr-85m	8×10^{0}	3×10^{0}	1×10^{3}	1×10^{10}
Kr-87	2×10^{-1}	2×10^{-1}	1×10^{2}	1×10^{9}
Lanthanum (57)				
La-137	3×10^{1}	6×10^{0}	1×10^{3}	1×10^{7}
La-140	4×10^{-1}	4×10^{-1}	1×10^{1}	1×10^{5}
Lutetium (71)				
Lu-172	6×10^{-1}	6×10^{-1}	1×10^{1}	1×10^{6}
Lu-173	8×10^{0}	8×10^{0}	1×10^{2}	1×10^{7}
Lu-174	9×10^{0}	9×10^{0}	1×10^{2}	1×10^{7}
Lu-174m	2×10^{1}	1×10^{1}	1×10^{2}	1×10^{7}
Lu-177	3×10^{1}	7×10^{-1}	1×10^{3}	1×10^{7}
Magnesium (12)				
Mg-28[a]	3×10^{-1}	3×10^{-1}	1×10^{1}	1×10^{5}
Manganese (25)				
Mn-52	3×10^{-1}	3×10^{-1}	1×10^{1}	1×10^{5}
Mn-53	Unlimited	Unlimited	1×10^{4}	1×10^{9}
Mn-54	1×10^{0}	1×10^{0}	1×10^{1}	1×10^{6}
Mn-56	3×10^{-1}	3×10^{-1}	1×10^{1}	1×10^{5}
Molybdenum (42)				
Mo-93	4×10^{1}	2×10^{1}	1×10^{3}	1×10^{8}
Mo-99[a]	1×10^{0}	6×10^{-1}	1×10^{2}	1×10^{6}
Nitrogen (7)				
N-13	9×10^{-1}	6×10^{-1}	1×10^{2}	1×10^{9}
Sodium (11)				
Na-22	5×10^{-1}	5×10^{-1}	1×10^{1}	1×10^{6}
Na-24	2×10^{-1}	2×10^{-1}	1×10^{1}	1×10^{5}
Niobium (41)				
Nb-93m	4×10^{1}	3×10^{1}	1×10^{4}	1×10^{7}
Nb-94	7×10^{-1}	7×10^{-1}	1×10^{1}	1×10^{6}
Nb-95	1×10^{0}	1×10^{0}	1×10^{1}	1×10^{6}
Nb-97	9×10^{-1}	6×10^{-1}	1×10^{1}	1×10^{6}
Neodymium (60)				
Nd-147	6×10^{0}	6×10^{-1}	1×10^{2}	1×10^{6}
Nd-149	6×10^{-1}	5×10^{-1}	1×10^{2}	1×10^{6}
Nickel (28)				
Ni-59	Unlimited	Unlimited	1×10^{4}	1×10^{8}
Ni-63	4×10^{1}	3×10^{1}	1×10^{5}	1×10^{8}
Ni-65	4×10^{-1}	4×10^{-1}	1×10^{1}	1×10^{6}
Neptunium (93)				
Np-235	4×10^{1}	4×10^{1}	1×10^{3}	1×10^{7}
Np-236 (short lived)	2×10^{1}	2×10^{0}	1×10^{3}	1×10^{7}
Np-236 (long lived)	9×10^{0}	2×10^{-2}	1×10^{2}	1×10^{5}
Np-237	2×10^{1}	2×10^{-3}	1×10^{0} [b]	1×10^{3} [b]
Np-239	7×10^{0}	4×10^{-1}	1×10^{2}	1×10^{7}
Osmium (76)				
Os-185	1×10^{0}	1×10^{0}	1×10^{1}	1×10^{6}
Os-191	1×10^{1}	2×10^{0}	1×10^{2}	1×10^{7}
Os-191m	4×10^{1}	3×10^{1}	1×10^{3}	1×10^{7}
Os-193	2×10^{0}	6×10^{-1}	1×10^{2}	1×10^{6}
Os-194[a]	3×10^{-1}	3×10^{-1}	1×10^{2}	1×10^{5}
Phosphorus (15)				

Radionuclide (atomic number)	A_1 (TBq)	A_2 (TBq)	Activity concentration limit for exempt material (Bq/g)	Activity limit for an exempt consignment (Bq)
P-32	5×10^{-1}	5×10^{-1}	1×10^{3}	1×10^{5}
P-33	4×10^{1}	1×10^{0}	1×10^{5}	1×10^{8}
Protactinium (91)				
Pa-230[a]	2×10^{0}	7×10^{-2}	1×10^{1}	1×10^{6}
Pa-231	4×10^{0}	4×10^{-4}	1×10^{0}	1×10^{3}
Pa-233	5×10^{0}	7×10^{-1}	1×10^{2}	1×10^{7}
Lead (82)				
Pb-201	1×10^{0}	1×10^{0}	1×10^{1}	1×10^{6}
Pb-202	4×10^{1}	2×10^{1}	1×10^{3}	1×10^{6}
Pb-203	4×10^{0}	3×10^{0}	1×10^{2}	1×10^{6}
Pb-205	Unlimited	Unlimited	1×10^{4}	1×10^{7}
Pb-210[a]	1×10^{0}	5×10^{-2}	1×10^{1} [b]	1×10^{4} [b]
Pb-212[a]	7×10^{-1}	2×10^{-1}	1×10^{1} [b]	1×10^{5} [b]
Palladium (46)				
Pd-103[a]	4×10^{1}	4×10^{1}	1×10^{3}	1×10^{8}
Pd-107	Unlimited	Unlimited	1×10^{5}	1×10^{8}
Pd-109	2×10^{0}	5×10^{-1}	1×10^{3}	1×10^{6}
Promethium (61)				
Pm-143	3×10^{0}	3×10^{0}	1×10^{2}	1×10^{6}
Pm-144	7×10^{-1}	7×10^{-1}	1×10^{1}	1×10^{6}
Pm-145	3×10^{1}	1×10^{1}	1×10^{3}	1×10^{7}
Pm-147	4×10^{1}	2×10^{0}	1×10^{4}	1×10^{7}
Pm-148m[a]	8×10^{-1}	7×10^{-1}	1×10^{1}	1×10^{6}
Pm-149	2×10^{0}	6×10^{-1}	1×10^{3}	1×10^{6}
Pm-151	2×10^{0}	6×10^{-1}	1×10^{2}	1×10^{6}
Polonium (84)				
Po-210	4×10^{1}	2×10^{-2}	1×10^{1}	1×10^{4}
Praseodymium (59)				
Pr-142	4×10^{-1}	4×10^{-1}	1×10^{2}	1×10^{5}
Pr-143	3×10^{0}	6×10^{-1}	1×10^{4}	1×10^{6}
Platinum (78)				
Pt-188[a]	1×10^{0}	8×10^{-1}	1×10^{1}	1×10^{6}
Pt-191	4×10^{0}	3×10^{0}	1×10^{2}	1×10^{6}
Pt-193	4×10^{1}	4×10^{1}	1×10^{4}	1×10^{7}
Pt-193m	4×10^{1}	5×10^{-1}	1×10^{3}	1×10^{7}
Pt-195m	1×10^{1}	5×10^{-1}	1×10^{2}	1×10^{6}
Pt-197	2×10^{1}	6×10^{-1}	1×10^{3}	1×10^{6}
Pt-197m	1×10^{1}	6×10^{-1}	1×10^{2}	1×10^{6}
Plutonium (94)				
Pu-236	3×10^{1}	3×10^{-3}	1×10^{1}	1×10^{4}
Pu-237	2×10^{1}	2×10^{1}	1×10^{3}	1×10^{7}
Pu-238	1×10^{1}	1×10^{-3}	1×10^{0}	1×10^{4}
Pu-239	1×10^{1}	1×10^{-3}	1×10^{0}	1×10^{4}
Pu-240	1×10^{1}	1×10^{-3}	1×10^{0}	1×10^{3}
Pu-241[a]	4×10^{1}	6×10^{-2}	1×10^{2}	1×10^{5}
Pu-242	1×10^{1}	1×10^{-3}	1×10^{0}	1×10^{4}
Pu-244[a]	4×10^{-1}	1×10^{-3}	1×10^{0}	1×10^{4}
Radium (88)				
Ra-223[a]	4×10^{-1}	7×10^{-3}	1×10^{2} [b]	1×10^{5} [b]
Ra-224[a]	4×10^{-1}	2×10^{-2}	1×10^{1} [b]	1×10^{5} [b]
Ra-225[a]	2×10^{-1}	4×10^{-3}	1×10^{2}	1×10^{5}
Ra-226[a]	2×10^{-1}	3×10^{-3}	1×10^{1} [b]	1×10^{4} [b]
Ra-228[a]	6×10^{-1}	2×10^{-2}	1×10^{1} [b]	1×10^{5} [b]
Rubidium (37)				
Rb-81	2×10^{0}	8×10^{-1}	1×10^{1}	1×10^{6}
Rb-83[a]	2×10^{0}	2×10^{0}	1×10^{2}	1×10^{6}
Rb-84	1×10^{0}	1×10^{0}	1×10^{1}	1×10^{6}
Rb-86	5×10^{-1}	5×10^{-1}	1×10^{2}	1×10^{5}
Rb-87	Unlimited	Unlimited	1×10^{4}	1×10^{7}
Rb (nat)	Unlimited	Unlimited	1×10^{4}	1×10^{7}
Rhenium (75)				
Re-184	1×10^{0}	1×10^{0}	1×10^{1}	1×10^{6}
Re-184m	3×10^{0}	1×10^{0}	1×10^{2}	1×10^{6}
Re-186	2×10^{0}	6×10^{-1}	1×10^{3}	1×10^{6}
Re-187	Unlimited	Unlimited	1×10^{6}	1×10^{9}
Re-188	4×10^{-1}	4×10^{-1}	1×10^{2}	1×10^{5}

Radionuclide (atomic number)	A_1 (TBq)	A_2 (TBq)	Activity concentration limit for exempt material (Bq/g)	Activity limit for an exempt consignment (Bq)
Re-189[a]	3×10^{0}	6×10^{-1}	1×10^{2}	1×10^{6}
Re (nat)	Unlimited	Unlimited	1×10^{6}	1×10^{9}
Rhodium (45)				
Rh-99	2×10^{0}	2×10^{0}	1×10^{1}	1×10^{6}
Rh-101	4×10^{0}	3×10^{0}	1×10^{2}	1×10^{7}
Rh-102	5×10^{-1}	5×10^{-1}	1×10^{1}	1×10^{6}
Rh-102m	2×10^{0}	2×10^{0}	1×10^{2}	1×10^{6}
Rh-103m	4×10^{1}	4×10^{1}	1×10^{4}	1×10^{8}
Rh-105	1×10^{1}	8×10^{-1}	1×10^{2}	1×10^{7}
Radon (86)				
Rn-222[a]	3×10^{-1}	4×10^{-3}	1×10^{1} [b]	1×10^{8} [b]
Ruthenium (44)				
Ru-97	5×10^{0}	5×10^{0}	1×10^{2}	1×10^{7}
Ru-103[a]	2×10^{0}	2×10^{0}	1×10^{2}	1×10^{6}
Ru-105	1×10^{0}	6×10^{-1}	1×10^{1}	1×10^{6}
Ru-106[a]	2×10^{-1}	2×10^{-1}	1×10^{2} [b]	1×10^{5} [b]
Sulphur (16)				
S-35	4×10^{1}	3×10^{0}	1×10^{5}	1×10^{8}
Antimony (51)				
Sb-122	4×10^{-1}	4×10^{-1}	1×10^{2}	1×10^{4}
Sb-124	6×10^{-1}	6×10^{-1}	1×10^{1}	1×10^{6}
Sb-125	2×10^{0}	1×10^{0}	1×10^{2}	1×10^{6}
Sb-126	4×10^{-1}	4×10^{-1}	1×10^{1}	1×10^{5}
Scandium (21)				
Sc-44	5×10^{-1}	5×10^{-1}	1×10^{1}	1×10^{5}
Sc-46	5×10^{-1}	5×10^{-1}	1×10^{1}	1×10^{6}
Sc-47	1×10^{1}	7×10^{-1}	1×10^{2}	1×10^{6}
Sc-48	3×10^{-1}	3×10^{-1}	1×10^{1}	1×10^{5}
Selenium (34)				
Se-75	3×10^{0}	3×10^{0}	1×10^{2}	1×10^{6}
Se-79	4×10^{1}	2×10^{0}	1×10^{4}	1×10^{7}
Silicion (14)				
Si-31	6×10^{-1}	6×10^{-1}	1×10^{3}	1×10^{6}
Si-32	4×10^{1}	5×10^{-1}	1×10^{3}	1×10^{6}
Samarium (62)				
Sm-145	1×10^{1}	1×10^{1}	1×10^{2}	1×10^{7}
Sm-147	Unlimited	Unlimited	1×10^{1}	1×10^{4}
Sm-151	4×10^{1}	1×10^{1}	1×10^{4}	1×10^{8}
Sm-153	9×10^{0}	6×10^{-1}	1×10^{2}	1×10^{6}
Tin (50)				
Sn-113[a]	4×10^{0}	2×10^{0}	1×10^{3}	1×10^{7}
Sn-117m	7×10^{0}	4×10^{-1}	1×10^{2}	1×10^{6}
Sn-119m	4×10^{1}	3×10^{1}	1×10^{3}	1×10^{7}
Sn-121m[a]	4×10^{1}	9×10^{-1}	1×10^{3}	1×10^{7}
Sn-123	8×10^{-1}	6×10^{-1}	1×10^{3}	1×10^{6}
Sn-125	4×10^{-1}	4×10^{-1}	1×10^{2}	1×10^{5}
Sn-126[a]	6×10^{-1}	4×10^{-1}	1×10^{1}	1×10^{5}
Strontium (38)				
Sr-82[a]	2×10^{-1}	2×10^{-1}	1×10^{1}	1×10^{5}
Sr-85	2×10^{0}	2×10^{0}	1×10^{2}	1×10^{6}
Sr-85m	5×10^{0}	5×10^{0}	1×10^{2}	1×10^{7}
Sr-87m	3×10^{0}	3×10^{0}	1×10^{2}	1×10^{6}
Sr-89	6×10^{-1}	6×10^{-1}	1×10^{3}	1×10^{6}
Sr-90[a]	3×10^{-1}	3×10^{-1}	1×10^{2} [b]	1×10^{4} [b]
Sr-91[a]	3×10^{-1}	3×10^{-1}	1×10^{1}	1×10^{5}
Sr-92[a]	1×10^{0}	3×10^{-1}	1×10^{1}	1×10^{6}
Tritium (1)				
T (H-3)	4×10^{1}	4×10^{1}	1×10^{6}	1×10^{9}
Tantalum (73)				
Ta-178 (long lived)	1×10^{0}	8×10^{-1}	1×10^{1}	1×10^{6}
Ta-179	3×10^{1}	3×10^{1}	1×10^{3}	1×10^{7}
Ta-182	9×10^{-1}	5×10^{-1}	1×10^{1}	1×10^{4}
Terbium (65)				
Tb-157	4×10^{1}	4×10^{1}	1×10^{4}	1×10^{7}
Tb-158	1×10^{0}	1×10^{0}	1×10^{1}	1×10^{6}
Tb-160	1×10^{0}	6×10^{-1}	1×10^{1}	1×10^{6}

Radionuclide (atomic number)	A_1 (TBq)	A_2 (TBq)	Activity concentration limit for exempt material (Bq/g)	Activity limit for an exempt consignment (Bq)
Technetium (43)				
Tc-95m[a]	2×10^{0}	2×10^{0}	1×10^{1}	1×10^{6}
Tc-96	4×10^{-1}	4×10^{-1}	1×10^{1}	1×10^{6}
Tc-96m[a]	4×10^{-1}	4×10^{-1}	1×10^{3}	1×10^{7}
Tc-97	Unlimited	Unlimited	1×10^{3}	1×10^{8}
Tc-97m	4×10^{1}	1×10^{0}	1×10^{3}	1×10^{7}
Tc-98	8×10^{-1}	7×10^{-1}	1×10^{1}	1×10^{6}
Tc-99	4×10^{1}	9×10^{-1}	1×10^{4}	1×10^{7}
Tc-99m	1×10^{1}	4×10^{0}	1×10^{2}	1×10^{7}
Tellurium (52)				
Te-121	2×10^{0}	2×10^{0}	1×10^{1}	1×10^{6}
Te-121m	5×10^{0}	3×10^{0}	1×10^{2}	1×10^{6}
Te-123m	8×10^{0}	1×10^{0}	1×10^{2}	1×10^{7}
Te-125m	2×10^{1}	9×10^{-1}	1×10^{3}	1×10^{7}
Te-127	2×10^{1}	7×10^{-1}	1×10^{3}	1×10^{6}
Te-127m[a]	2×10^{1}	5×10^{-1}	1×10^{3}	1×10^{7}
Te-129	7×10^{-1}	6×10^{-1}	1×10^{2}	1×10^{6}
Te-129m[a]	8×10^{-1}	4×10^{-1}	1×10^{3}	1×10^{6}
Te-131m[a]	7×10^{-1}	5×10^{-1}	1×10^{1}	1×10^{6}
Te-132[a]	5×10^{-1}	4×10^{-1}	1×10^{2}	1×10^{7}
Thorium (90)				
Th-227	1×10^{1}	5×10^{-3}	1×10^{1}	1×10^{4}
Th-228[a]	5×10^{-1}	1×10^{-3}	1×10^{0} [b]	1×10^{4} [b]
Th-229	5×10^{0}	5×10^{-4}	1×10^{0} [b]	1×10^{3} [b]
Th-230	1×10^{1}	1×10^{-3}	1×10^{0}	1×10^{4}
Th-231	4×10^{1}	2×10^{-2}	1×10^{3}	1×10^{7}
Th-232	Unlimited	Unlimited	1×10^{1}	1×10^{4}
Th-234[a]	3×10^{-1}	3×10^{-1}	1×10^{3} [b]	1×10^{5} [b]
Th (nat)	Unlimited	Unlimited	1×10^{0} [b]	1×10^{3} [b]
Titanium (22)				
Ti-44[a]	5×10^{-1}	4×10^{-1}	1×10^{1}	1×10^{5}
Thallium (81)				
Tl-200	9×10^{-1}	9×10^{-1}	1×10^{1}	1×10^{6}
Tl-201	1×10^{1}	4×10^{0}	1×10^{2}	1×10^{6}
Tl-202	2×10^{0}	2×10^{0}	1×10^{2}	1×10^{6}
Tl-204	1×10^{1}	7×10^{-1}	1×10^{4}	1×10^{4}
Thulium (69)				
Tm-167	7×10^{0}	8×10^{-1}	1×10^{2}	1×10^{6}
Tm-170	3×10^{0}	6×10^{-1}	1×10^{3}	1×10^{6}
Tm-171	4×10^{1}	4×10^{1}	1×10^{4}	1×10^{8}
Uranium (92)				
U-230 (fast lung absorption)[a][d]	4×10^{1}	1×10^{-1}	1×10^{1} [b]	1×10^{5} [b]
U-230 (medium lung absorption)[a][e]	4×10^{1}	4×10^{-3}	1×10^{1}	1×10^{4}
U-230 (slow lung absorption)[a][f]	3×10^{1}	3×10^{-3}	1×10^{1}	1×10^{4}
U-232 (fast lung absorption)[d]	4×10^{1}	1×10^{-2}	1×10^{0} [b]	1×10^{3} [b]
U-232 (medium lung absorption)[e]	4×10^{1}	7×10^{-3}	1×10^{1}	1×10^{4}
U-232 (slow lung absorption)[f]	1×10^{1}	1×10^{-3}	1×10^{1}	1×10^{4}
U-233 (fast lung absorption)[d]	4×10^{1}	9×10^{-2}	1×10^{1}	1×10^{4}
U-233 (medium lung absorption)[e]	4×10^{1}	2×10^{-2}	1×10^{2}	1×10^{5}
U-233 (slow lung absorption)[f]	4×10^{1}	6×10^{-3}	1×10^{1}	1×10^{5}
U-234 (fast lung absorption)[d]	4×10^{1}	9×10^{-2}	1×10^{1}	1×10^{4}
U-234 (medium lung absorption)[e]	4×10^{1}	2×10^{-2}	1×10^{2}	1×10^{5}
U-234 (slow lung absorption)[f]	4×10^{1}	6×10^{-3}	1×10^{1}	1×10^{5}
U-235 (all lung absorption types)[a][d][e][f]	Unlimited	Unlimited	1×10^{1} [b]	1×10^{4} [b]
U-236 (fast lung absorption)[d]	Unlimited	Unlimited	1×10^{1}	1×10^{4}
U-236 (medium lung absorption)[e]	4×10^{1}	2×10^{-2}	1×10^{2}	1×10^{5}
U-236 (slow lung absorption)[f]	4×10^{1}	6×10^{-3}	1×10^{1}	1×10^{4}
U-238 (all lung absorption types)[d][e][f]	Unlimited	Unlimited	1×10^{1} [b]	1×10^{4} [b]

Radionuclide (atomic number)	A_1 (TBq)	A_2 (TBq)	Activity concentration limit for exempt material (Bq/g)	Activity limit for an exempt consignment (Bq)
U (nat)	Unlimited	Unlimited	1×10^0 (b)	1×10^3 (b)
U (enriched to 20% or less)(g)	Unlimited	Unlimited	1×10^0	1×10^3
U (dep)	Unlimited	Unlimited	1×10^0	1×10^3
Vanadium (23)				
V-48	4×10^{-1}	4×10^{-1}	1×10^1	1×10^5
V-49	4×10^1	4×10^1	1×10^4	1×10^7
Tungsten (74)				
W-178(a)	9×10^0	5×10^0	1×10^1	1×10^6
W-181	3×10^1	3×10^1	1×10^3	1×10^7
W-185	4×10^1	8×10^{-1}	1×10^4	1×10^7
W-187	2×10^0	6×10^{-1}	1×10^2	1×10^6
W-188(a)	4×10^{-1}	3×10^{-1}	1×10^2	1×10^5
Xenon (54)				
Xe-122(a)	4×10^{-1}	4×10^{-1}	1×10^2	1×10^9
Xe-123	2×10^0	7×10^{-1}	1×10^2	1×10^9
Xe-127	4×10^0	2×10^0	1×10^3	1×10^5
Xe-131m	4×10^1	4×10^1	1×10^4	1×10^4
Xe-133	2×10^1	1×10^1	1×10^3	1×10^4
Xe-135	3×10^0	2×10^0	1×10^3	1×10^{10}
Yttrium (39)				
Y-87(a)	1×10^0	1×10^0	1×10^1	1×10^6
Y-88	4×10^{-1}	4×10^{-1}	1×10^1	1×10^6
Y-90	3×10^{-1}	3×10^{-1}	1×10^3	1×10^5
Y-91	6×10^{-1}	6×10^{-1}	1×10^3	1×10^6
Y-91m	2×10^0	2×10^0	1×10^2	1×10^6
Y-92	2×10^{-1}	2×10^{-1}	1×10^2	1×10^5
Y-93	3×10^{-1}	3×10^{-1}	1×10^2	1×10^5
Ytterbium (70)				
Yb-169	4×10^0	1×10^0	1×10^2	1×10^7
Yb-175	3×10^1	9×10^{-1}	1×10^3	1×10^7
Zinc (30)				
Zn-65	2×10^0	2×10^0	1×10^1	1×10^6
Zn-69	3×10^0	6×10^{-1}	1×10^4	1×10^6
Zn-69m(a)	3×10^0	6×10^{-1}	1×10^2	1×10^6
Zirconium (40)				
Zr-88	3×10^0	3×10^0	1×10^2	1×10^6
Zr-93	Unlimited	Unlimited	1×10^3 (b)	1×10^7 (b)
Zr-95(a)	2×10^0	8×10^{-1}	1×10^1	1×10^6
Zr-97(a)	4×10^{-1}	4×10^{-1}	1×10^1 (b)	1×10^5 (b)

(a) A_1 and/or A_2 values for these parent radionuclides include contributions from their progeny with half-lives less than 10 days, as listed in the following:

Mg-28	Al-28
Ar-42	K-42
Ca-47	Sc-47
Ti-44	Sc-44
Fe-52	Mn-52m
Fe-60	Co-60m
Zn-69m	Zn-69
Ge-68	Ga-68
Rb-83	Kr-83m
Sr-82	Rb-82
Sr-90	Y-90
Sr-91	Y-91m
Sr-92	Y-92
Y-87	Sr-87m
Zr-95	Nb-95m
Zr-97	Nb-97m, Nb-97
Mo-99	Tc-99m
Tc-95m	Tc-95
Tc-96m	Tc-96
Ru-103	Rh-103m
Ru-106	Rh-106
Pd-103	Rh-103m
Ag-108m	Ag-108
Ag-110m	Ag-110

Cd-115	In-115m
In-114m	In-114
Sn-113	In-113m
Sn-121m	Sn-121
Sn-126	Sb-126m
Te-118	Sb-118
Te-127m	Te-127
Te-129m	Te-129
Te-131m	Te-131
Te-132	I-132
I-135	Xe-135m
Xe-122	I-122
Cs-137	Ba-137m
Ba-131	Cs-131
Ba-140	La-140
Ce-144	Pr-144m, Pr-144
Pm-148m	Pm-148
Gd-146	Eu-146
Dy-166	Ho-166
Hf-172	Lu-172
W-178	Ta-178
W-188	Re-188
Re-189	Os-189m
Os-194	Ir-194
Ir-189	Os-189m
Pt-188	Ir-188
Hg-194	Au-194
Hg-195m	Hg-195
Pb-210	Bi-210
Pb-212	Bi-212, Tl-208, Po-212
Bi-210m	Tl-206
Bi-212	Tl-208, Po-212
At-211	Po-211
Rn-222	Po-218, Pb-214, At-218, Bi-214, Po-214
Ra-223	Rn-219, Po-215, Pb-211, Bi-211, Po-211, Tl-207
Ra-224	Rn-220, Po-216, Pb-212, Bi-212, Tl-208, Po-212
Ra-225	Ac-225, Fr-221, At-217, Bi-213, Tl-209, Po-213, Pb-209
Ra-226	Rn-222, Po-218, Pb-214, At-218, Bi-214, Po-214
Ra-228	Ac-228
Ac-225	Fr-221, At-217, Bi-213, Tl-209, Po-213, Pb-209
Ac-227	Fr-223
Th-228	Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Tl-208, Po-212
Th-234	Pa-234m, Pa-234
Pa-230	Ac-226, Th-226, Fr-222, Ra-222, Rn-218, Po-214
U-230	Th-226, Ra-222, Rn-218, Po-214
U-235	Th-231
Pu-241	U-237
Pu-244	U-240, Np-240m
Am-242m	Am-242, Np-238
Am-243	Np-239
Cm-247	Pu-243
Bk-249	Am-245
Cf-253	Cm-249

(b) Parent nuclides and their progeny included in secular equilibrium are listed in the following:

Sr-90	Y-90
Zr-93	Nb-93m
Zr-97	Nb-97
Ru-106	Rh-106
Ag-108m	Ag-108
Cs-137	Ba-137m
Ce-144	Pr-144
Ba-140	La-140
Bi-212	Tl-208 (0.36), Po-212 (0.64)
Pb-210	Bi-210, Po-210
Pb-212	Bi-212, Tl-208 (0.36), Po-212 (0.64)
Rn-222	Po-218, Pb-214, Bi-214, Po-214
Ra-223	Rn-219, Po-215, Pb-211, Bi-211, Tl-207
Ra-224	Rn-220, Po-216, Pb-212, Bi-212, Tl-208 (0.36), Po-212 (0.64)
Ra-226	Rn-222, Po-218, Pb-214, Bi-214, Po-214, Pb-210, Bi-210, Po-210

Ra-228	Ac-228
Th-228	Ra-224, Rn-220, Po-216, Pb212, Bi-212, Tl208 (0.36), Po-212 (0.64)
Th-229	Ra-225, Ac-225, Fr-221, At-217, Bi-213, Po-213, Pb-209
Th-nat	Ra-228, Ac-228, Th-228, Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Tl-208 (0.36), Po-212 (0.64)
Th-234	Pa-234m
U-230	Th-226, Ra-222, Rn-218, Po-214
U-232	Th-228, Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Tl-208 (0.36), Po-212 (0.64)
U-235	Th-231
U-238	Th-234, Pa-234m
U-nat	Th-234, Pa-234m, U-234, Th-230, Ra-226, Rn-222, Po-218, Pb-214, Bi-214, Po-214, Pb-210, Bi-210, Po-210
Np-237	Pa-233
Am-242m	Am-242
Am-243	Np-239

(c) The quantity may be determined from a measurement of the rate of decay or a measurement of the radiation level at a prescribed distance from the source.

(d) These values apply only to compounds of uranium that take the chemical form of UF_6, UO_2F_2 and $UO_2(NO_3)_2$ in both normal and accident conditions of carriage.

(e) These values apply only to compounds of uranium that take the chemical form of UO_3, UF_4, UCl_4 and hexavalent compounds in both normal and accident conditions of carriage.

(f) These values apply to all compounds of uranium other than those specified in (d) and (e) above.

(g) These values apply to unirradiated uranium only.

2.2.7.2.2.2 For individual radionuclides:

(a) Which are not listed in Table 2.2.7.2.2.1 the determination of the basic radionuclide values referred to in 2.2.7.2.2.1 shall require multilateral approval. For these radionuclides, activity concentration limits for exempt material and activity limits for exempt consignments shall be calculated in accordance with the principles established in the International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources, Safety Series No. 115, IAEA, Vienna (1996). It is permissible to use an A_2 value calculated using a dose coefficient for the appropriate lung absorption type as recommended by the International Commission on Radiological Protection, if the chemical forms of each radionuclide under both normal and accident conditions of carriage are taken into consideration. Alternatively, the radionuclide values in Table 2.2.7.2.2.2 may be used without obtaining competent authority approval;

(b) In instruments or articles in which the radioactive material is enclosed or is included as a component part of the instrument or other manufactured article and which meet 2.2.7.2.4.1.3 (c), alternative basic radionuclide values to those in Table 2.2.7.2.2.1 for the activity limit for an exempt consignment are permitted and shall require multilateral approval. Such alternative activity limits for an exempt consignment shall be calculated in accordance with the principles set out in the International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources, Safety Series No. 115, IAEA, Vienna (1996).

Table 2.2.7.2.2.2: Basic radionuclide values for unknown radionuclides or mixtures

Radioactive contents	A_1	A_2	Activity concentration limit for exempt material	Activity limit for an exempt consignment
	(TBq)	(TBq)	(Bq/g)	(Bq)
Only beta or gamma emitting nuclides are known to be present	0.1	0.02	1×10^1	1×10^4
Alpha emitting nuclides but no neutron emitters are known to be present	0.2	9×10^{-5}	1×10^{-1}	1×10^3
Neutron emitting nuclides are known to be present or no relevant data are available	0.001	9×10^{-5}	1×10^{-1}	1×10^3

2.2.7.2.2.3 In the calculations of A_1 and A_2 for a radionuclide not in Table 2.2.7.2.2.1, a single radioactive decay chain in which the radionuclides are present in their naturally occurring proportions, and in which no daughter nuclide has a half-life either longer than 10 days or longer than that of the parent nuclide, shall be considered as a single radionuclide; and the activity to be taken into account and the A_1 or A_2 value to be applied shall be those corresponding to the parent nuclide of that chain. In the case of radioactive decay chains in which any daughter nuclide has a half-life either longer than 10 days or greater than that of the parent nuclide, the parent and such daughter nuclides shall be considered as mixtures of different nuclides.

2.2.7.2.2.4 For mixtures of radionuclides, the basic radionuclide values referred to in 2.2.7.2.2.1 may be determined as follows:

$$X_m = \frac{1}{\sum_i \frac{f(i)}{X(i)}}$$

where

f(i) is the fraction of activity or activity concentration of radionuclide i in the mixture;

X(i) is the appropriate value of A_1 or A_2, or the activity concentration limit for exempt material or the activity limit for an exempt consignment as appropriate for the radionuclide i; and

X_m is the derived value of A_1 or A_2, or the activity concentration limit for exempt material or the activity limit for an exempt consignment in the case of a mixture.

2.2.7.2.2.5 When the identity of each radionuclide is known but the individual activities of some of the radionuclides are not known, the radionuclides may be grouped and the lowest radionuclide value, as appropriate, for the radionuclides in each group may be used in applying the formulas in 2.2.7.2.2.4 and 2.2.7.2.4.4. Groups may be based on the total alpha activity and the total beta/gamma activity when these are known, using the lowest radionuclide values for the alpha emitters or beta/gamma emitters, respectively.

2.2.7.2.2.6 For individual radionuclides or for mixtures of radionuclides for which relevant data are not available, the values shown in Table 2.2.7.2.2.2 shall be used.

2.2.7.2.3 Determination of other material characteristics

2.2.7.2.3.1 Low specific activity (LSA) material

2.2.7.2.3.1.1 (Reserved)

2.2.7.2.3.1.2 LSA material shall be in one of three groups:

(a) LSA-I

(i) uranium and thorium ores and concentrates of such ores, and other ores containing naturally occurring radionuclides;

(ii) natural uranium, depleted uranium, natural thorium or their compounds or mixtures, that are unirradiated and in solid or liquid form;

(iii) radioactive material for which the A_2 value is unlimited. Fissile material may be included only if excepted under 2.2.7.2.3.5;

(iv) other radioactive material in which the activity is distributed throughout and the estimated average specific activity does not exceed 30 times the values for activity concentration specified in 2.2.7.2.2.1 to 2.2.7.2.2.6. Fissile material may be included only if excepted under 2.2.7.2.3.5;

(b) LSA-II

(i) water with tritium concentration up to 0.8 TBq/l;

(ii) other material in which the activity is distributed throughout and the estimated average specific activity does not exceed 10^{-4} A_2/g for solids and gases, and 10^{-5} A_2/g for liquids;

(c) LSA-III

Solids (e.g. consolidated wastes, activated materials), excluding powders that meet the requirements of 2.2.7.2.3.1.3, in which:

(i) the radioactive material is distributed throughout a solid or a collection of solid objects, or is essentially uniformly distributed in a solid compact binding agent (such as concrete, bitumen and ceramic);

(ii) the radioactive material is relatively insoluble, or it is intrinsically contained in a relatively insoluble matrix, so that, even under loss of packaging, the loss of radioactive material per package by leaching when placed in water for seven days would not exceed 0.1 A_2; and

(iii) the estimated average specific activity of the solid, excluding any shielding material, does not exceed 2×10^{-3} A_2/g.

2.2.7.2.3.1.3 LSA-III material shall be a solid of such a nature that if the entire contents of a package were subjected to the test specified in 2.2.7.2.3.1.4 the activity in the water would not exceed 0.1 A_2.

2.2.7.2.3.1.4 LSA-III material shall be tested as follows:

A solid material sample representing the entire contents of the package shall be immersed for 7 days in water at ambient temperature. The volume of water to be used in the test shall be sufficient to ensure that at the end of the 7 day test period the free volume of the unabsorbed and unreacted water remaining shall be at least 10% of the volume of the solid test sample itself. The water shall have an initial pH of 6-8 and a maximum conductivity of 1 mS/m at 20 °C. The total activity of the free volume of water shall be measured following the 7 day immersion of the test sample.

2.2.7.2.3.1.5 Demonstration of compliance with the performance standards in 2.2.7.2.3.1.4 shall be in accordance with 6.4.12.1 and 6.4.12.2.

2.2.7.2.3.2 Surface contaminated object (SCO)

SCO is classified in one of two groups:

(a) SCO-I: A solid object on which:

(i) the non-fixed contamination on the accessible surface averaged over 300 cm^2 (or the area of the surface if less than 300 cm^2) does not exceed 4 Bq/cm^2 for beta and gamma emitters and low toxicity alpha emitters, or 0.4 Bq/cm^2 for all other alpha emitters; and

(ii) the fixed contamination on the accessible surface averaged over 300 cm^2 (or the area of the surface if less than 300 cm^2) does not exceed 4×10^4 Bq/cm^2 for beta and gamma emitters and low toxicity alpha emitters, or 4×10^3 Bq/cm^2 for all other alpha emitters; and

(iii) the non-fixed contamination plus the fixed contamination on the inaccessible surface averaged over 300 cm^2 (or the area of the surface if less than 300 cm^2) does not exceed 4×10^4 Bq/cm^2 for beta and gamma emitters and low toxicity alpha emitters, or 4×10^3 Bq/cm^2 for all other alpha emitters;

(b) SCO-II: A solid object on which either the fixed or non-fixed contamination on the surface exceeds the applicable limits specified for SCO-I in (a) above and on which:

(i) the non-fixed contamination on the accessible surface averaged over 300 cm^2 (or the area of the surface if less than 300 cm^2) does not exceed 400 Bq/cm^2 for beta and gamma emitters and low toxicity alpha emitters, or 40 Bq/cm^2 for all other alpha emitters; and

(ii) the fixed contamination on the accessible surface, averaged over 300 cm^2 (or the area of the surface if less than 300 cm^2) does not exceed 8×10^5 Bq/cm^2 for beta and gamma emitters and low toxicity alpha emitters, or 8×10^4 Bq/cm^2 for all other alpha emitters; and

(iii) the non-fixed contamination plus the fixed contamination on the inaccessible surface averaged over 300 cm^2 (or the area of the surface if less than 300 cm^2) does not exceed 8×10^5 Bq/cm^2 for beta and gamma emitters and low toxicity alpha emitters, or 8×10^4 Bq/cm^2 for all other alpha emitters.

2.2.7.2.3.3 Special form radioactive material

2.2.7.2.3.3.1 Special form radioactive material shall have at least one dimension not less than 5 mm. When a sealed capsule constitutes part of the special form radioactive material, the capsule shall be so manufactured that it can be opened only by destroying it. The design for special form radioactive material requires unilateral approval.

2.2.7.2.3.3.2 Special form radioactive material shall be of such a nature or shall be so designed that if it is subjected to the tests specified in 2.2.7.2.3.3.4 to 2.2.7.2.3.3.8, it shall meet the following requirements:

(a) It would not break or shatter under the impact, percussion and bending tests 2.2.7.2.3.3.5 (a), (b), (c) and 2.2.7.2.3.3.6 (a) as applicable;

(b) It would not melt or disperse in the applicable heat test 2.2.7.2.3.3.5 (d) or 2.2.7.2.3.3.6 (b) as applicable; and

(c) The activity in the water from the leaching tests specified in 2.2.7.2.3.3.7 and 2.2.7.2.3.3.8 would not exceed 2 kBq; or alternatively for sealed sources, the leakage rate for the volumetric leakage assessment test specified in ISO 9978:1992 "Radiation Protection – Sealed Radioactive Sources – Leakage Test Methods", would not exceed the applicable acceptance threshold acceptable to the competent authority.

2.2.7.2.3.3.3 Demonstration of compliance with the performance standards in 2.2.7.2.3.3.2 shall be in accordance with 6.4.12.1 and 6.4.12.2.

2.2.7.2.3.3.4 Specimens that comprise or simulate special form radioactive material shall be subjected to the impact test, the percussion test, the bending test, and the heat test specified in 2.2.7.2.3.3.5 or alternative tests as authorized in 2.2.7.2.3.3.6. A different specimen may be used for each of the tests. Following each test, a leaching assessment or volumetric leakage test shall be performed on the specimen by a method no less sensitive than the methods given in 2.2.7.2.3.3.7 for indispersible solid material or 2.2.7.2.3.3.8 for encapsulated material.

2.2.7.2.3.3.5 The relevant test methods are:

(a) Impact test: The specimen shall drop onto the target from a height of 9 m. The target shall be as defined in 6.4.14;

(b) Percussion test: The specimen shall be placed on a sheet of lead which is supported by a smooth solid surface and struck by the flat face of a mild steel bar so as to cause an impact equivalent to that resulting from a free drop of 1.4 kg through 1 m. The lower part of the bar shall be 25 mm in diameter with the edges rounded off to a radius of (3.0 ± 0.3) mm. The lead, of hardness number 3.5 to 4.5 on the Vickers scale and not more than 25 mm thick, shall cover an area greater than that covered by the specimen. A fresh surface of lead shall be used for each impact. The bar shall strike the specimen so as to cause maximum damage;

(c) Bending test: The test shall apply only to long, slender sources with both a minimum length of 10 cm and a length to minimum width ratio of not less than 10. The specimen shall be rigidly clamped in a horizontal position so that one half of its length protrudes from the face of the clamp. The orientation of the specimen shall be such that the specimen will suffer maximum damage when its free end is struck by the flat face of a steel bar. The bar shall strike the specimen so as to cause an impact equivalent to that resulting from a free vertical drop of 1.4 kg through 1 m. The lower part of the bar shall be 25 mm in diameter with the edges rounded off to a radius of (3.0 ± 0.3) mm;

(d) Heat test: The specimen shall be heated in air to a temperature of 800 °C and held at that temperature for a period of 10 minutes and shall then be allowed to cool.

2.2.7.2.3.3.6 Specimens that comprise or simulate radioactive material enclosed in a sealed capsule may be excepted from:

(a) The tests prescribed in 2.2.7.2.3.3.5 (a) and (b) provided that the specimens are alternatively subjected to the impact test prescribed in ISO 2919:2012 "Radiation Protection – Sealed Radioactive Sources – General requirements and classification":

(i) The Class 4 impact test if the mass of the special form radioactive material is less than 200 g;

(ii) The Class 5 impact test if the mass of the special form radioactive material is equal to or more than 200 g but is less than 500 g;

(b) The test prescribed in 2.2.7.2.3.3.5 (d) provided they are alternatively subjected to the Class 6 temperature test specified in ISO 2919:2012 "Radiation protection – Sealed radioactive sources – General requirements and classification".

2.2.7.2.3.3.7 For specimens which comprise or simulate indispersible solid material, a leaching assessment shall be performed as follows:

(a) The specimen shall be immersed for 7 days in water at ambient temperature. The volume of water to be used in the test shall be sufficient to ensure that at the end of the 7 day test period the free volume of the unabsorbed and unreacted water remaining shall be at least 10% of the volume of the solid test sample itself. The water shall have an initial pH of 6–8 and a maximum conductivity of 1 mS/m at 20 °C;

(b) The water with specimen shall then be heated to a temperature of (50 ± 5) °C and maintained at this temperature for 4 hours;

(c) The activity of the water shall then be determined;

(d) The specimen shall then be kept for at least 7 days in still air at not less than 30 °C and relative humidity not less than 90%;

(e) The specimen shall then be immersed in water of the same specification as in (a) above and the water with the specimen heated to (50 ± 5) °C and maintained at this temperature for 4 hours;

(f) The activity of the water shall then be determined.

2.2.7.2.3.3.8 For specimens which comprise or simulate radioactive material enclosed in a sealed capsule, either a leaching assessment or a volumetric leakage assessment shall be performed as follows:

(a) The leaching assessment shall consist of the following steps:

(i) the specimen shall be immersed in water at ambient temperature. The water shall have an initial pH of 6–8 with a maximum conductivity of 1 mS/m at 20 °C;

(ii) the water and specimen shall be heated to a temperature of (50 ± 5) °C and maintained at this temperature for 4 hours;

(iii) the activity of the water shall then be determined;

(iv) the specimen shall then be kept for at least 7 days in still air at not less than 30 °C and relative humidity of not less than 90%;

(v) the process in (i), (ii) and (iii) shall be repeated;

(b) The alternative volumetric leakage assessment shall comprise any of the tests prescribed in ISO 9978:1992 "Radiation Protection – Sealed radioactive sources – Leakage test methods", provided that they are acceptable to the competent authority.

2.2.7.2.3.4 Low dispersible radioactive material

2.2.7.2.3.4.1 The design for low dispersible radioactive material shall require multilateral approval. Low dispersible radioactive material shall be such that the total amount of this radioactive material in a package, taking into account the provisions of 6.4.8.14, shall meet the following requirements:

(a) The radiation level at 3 m from the unshielded radioactive material does not exceed 10 mSv/h;

(b) If subjected to the tests specified in 6.4.20.3 and 6.4.20.4, the airborne release in gaseous and particulate forms of up to 100 μm aerodynamic equivalent diameter would not exceed 100 A_2. A separate specimen may be used for each test; and

(c) If subjected to the test specified in 2.2.7.2.3.1.4 the activity in the water would not exceed 100 A_2. In the application of this test, the damaging effects of the tests specified in (b) above shall be taken into account.

2.2.7.2.3.4.2 Low dispersible radioactive material shall be tested as follows:

A specimen that comprises or simulates low dispersible radioactive material shall be subjected to the enhanced thermal test specified in 6.4.20.3 and the impact test specified in 6.4.20.4. A different specimen may be used for each of the tests. Following each test, the specimen shall be subjected to the leach test specified in 2.2.7.2.3.1.4. After each test it shall be determined if the applicable requirements of 2.2.7.2.3.4.1 have been met.

2.2.7.2.3.4.3 Demonstration of compliance with the performance standards in 2.2.7.2.3.4.1 and 2.2.7.2.3.4.2 shall be in accordance with 6.4.12.1 and 6.4.12.2.

2.2.7.2.3.5 Fissile material

Fissile material and packages containing fissile material shall be classified under the relevant entry as "FISSILE" in accordance with Table 2.2.7.2.1.1 unless excepted by one of the provisions of paragraphs (a) to (f) below and carried subject to the requirements of 7.5.11 CW 33 (4.3). All provisions apply only to material in packages that meets the requirements of 6.4.7.2 unless unpackaged material is specifically allowed in the provision.

(a) Uranium enriched in uranium-235 to a maximum of 1% by mass, and with a total plutonium and uranium-233 content not exceeding 1% of the mass of uranium-235, provided that the fissile nuclides are distributed essentially homogeneously throughout the material. In addition, if uranium-235 is present in metallic, oxide or carbide forms, it shall not form a lattice arrangement;

(b) Liquid solutions of uranyl nitrate enriched in uranium-235 to a maximum of 2% by mass, with a total plutonium and uranium-233 content not exceeding 0.002% of the mass of uranium, and with a minimum nitrogen to uranium atomic ratio (N/U) of 2;

(c) Uranium with a maximum uranium enrichment of 5% by mass uranium-235 provided:

(i) There is no more than 3.5 g of uranium-235 per package;

(ii) The total plutonium and uranium-233 content does not exceed 1% of the mass of uranium-235 per package;

(iii) Carriage of the package is subject to the consignment limit provided in 7.5.11 CW 33 (4.3) (c);

(d) Fissile nuclides with a total mass not greater than 2.0 g per package provided the package is carried subject to the consignment limit provided in 7.5.11 CW 33 (4.3) (d);

(e) Fissile nuclides with a total mass not greater than 45 g either packaged or unpackaged subject to limits provided in 7.5.11 CW 33 (4.3) (e);

(f) A fissile material that meets the requirements of 7.5.11 CW 33 (4.3) (b), 2.2.7.2.3.6 and 5.1.5.2.1.

2.2.7.2.3.6 A fissile material excepted from classification as "FISSILE" under 2.2.7.2.3.5 (f) shall be subcritical without the need for accumulation control under the following conditions:

(a) The conditions of 6.4.11.1 (a);

(b) The conditions consistent with the assessment provisions stated in 6.4.11.12 (b) and 6.4.11.13 (b) for packages.

2.2.7.2.4 Classification of packages or unpacked material

The quantity of radioactive material in a package shall not exceed the relevant limits for the package type as specified below.

2.2.7.2.4.1 Classification as excepted package

2.2.7.2.4.1.1 A package may be classified as an excepted package if it meets one of the following conditions:

(a) It is an empty package having contained radioactive material;

(b) It contains instruments or articles not exceeding the activity limits specified in columns (2) and (3) of Table 2.2.7.2.4.1.2;

(c) It contains articles manufactured of natural uranium, depleted uranium or natural thorium;

(d) It contains radioactive material not exceeding the activity limits specified in column (4) of Table 2.2.7.2.4.1.2; or

(e) It contains less than 0.1 kg of uranium hexafluoride not exceeding the activity limits specified in column (4) of Table 2.2.7.2.4.1.2.

2.2.7.2.4.1.2 A package containing radioactive material may be classified as an excepted package, provided that the radiation level at any point on its external surface does not exceed 5 μSv/h.

Table 2.2.7.2.4.1.2: Activity limits for excepted packages

Physical state of contents	Instruments or articles		Materials
	Item limits[(a)]	Package limits[(a)]	Package limits[(a)]
(1)	(2)	(3)	(4)
Solids			
special form	10^{-2} A_1	A_1	10^{-3} A_1
other form	10^{-2} A_2	A_2	10^{-3} A_2
Liquids	10^{-3} A_2	10^{-1} A_2	10^{-4} A_2
Gases			
tritium	2 x 10^{-2} A_2	2 x 10^{-1} A_2	2 x 10^{-2} A_2
special form	10^{-3} A_1	10^{-2} A_1	10^{-3} A_1
other form	10^{-3} A_2	10^{-2} A_2	10^{-3} A_2

[(a)] For mixtures of radionuclides, see 2.2.7.2.2.4 to 2.2.7.2.2.6.

2.2.7.2.4.1.3 Radioactive material which is enclosed in or is included as a component part of an instrument or other manufactured article may be classified under UN No. 2911 RADIOACTIVE MATERIAL, EXCEPTED PACKAGE – INSTRUMENTS or ARTICLES, provided that:

(a) The radiation level at 10 cm from any point on the external surface of any unpackaged instrument or article is not greater than 0.1 mSv/h;

(b) Each instrument or manufactured article bears the mark "RADIOACTIVE" on its external surface except for the following:

(i) radioluminescent time-pieces or devices;

(ii) consumer products that have either received regulatory approval in accordance with 1.7.1.4 (e) or do not individually exceed the activity limit for an exempt consignment in Table 2.2.7.2.2.1 (column 5), provided such products are transported in a package that bears the mark "RADIOACTIVE" on its internal surface in such a manner that a warning of the presence of radioactive material is visible on opening the package; and

(iii) other instruments or articles too small to bear the mark "RADIOACTIVE", provided that they are transported in a package that bears the mark "RADIOACTIVE" on its internal surface in such a manner that a warning of the presence of radioactive material is visible on opening the package;

(c) The active material is completely enclosed by non-active components (a device performing the sole function of containing radioactive material shall not be considered to be an instrument or manufactured article); and

(d) The limits specified in columns 2 and 3 of Table 2.2.7.2.4.1.2 are met for each individual item and each package, respectively.

2.2.7.2.4.1.4 Radioactive material in forms other than as specified in 2.2.7.2.4.1.3 and with an activity not exceeding the limits specified in column 4 of Table 2.2.7.2.4.1.2, may be classified under UN No. 2910 RADIOACTIVE MATERIAL, EXCEPTED PACKAGE – LIMITED QUANTITY OF MATERIAL, provided that:

(a) The package retains its radioactive contents under routine conditions of carriage; and

(b) The package bears the mark "RADIOACTIVE" on either:

(i) An internal surface in such a manner that a warning of the presence of radioactive material is visible on opening the package; or

(ii) The outside of the package, where it is impractical to mark an internal surface.

2.2.7.2.4.1.5 Uranium hexafluoride not exceeding the limits specified in Column 4 of Table 2.2.7.2.4.1.2 may be classified under UN 3507 URANIUM HEXAFLUORIDE, RADIOACTIVE MATERIAL, EXCEPTED PACKAGE, less than 0.1 kg per package, non-fissile or fissile-excepted provided that:

(a) The mass of uranium hexafluoride in the package is less than 0.1 kg;

(b) The conditions of 2.2.7.2.4.5.2 and 2.2.7.2.4.1.4 (a) and (b) are met.

2.2.7.2.4.1.6 Articles manufactured of natural uranium, depleted uranium or natural thorium and articles in which the sole radioactive material is unirradiated natural uranium, unirradiated depleted uranium or unirradiated natural thorium may be classified under UN No. 2909 RADIOACTIVE MATERIAL, EXCEPTED PACKAGE – ARTICLES MANUFACTURED FROM NATURAL URANIUM or DEPLETED URANIUM or NATURAL THORIUM, provided that the outer surface of the uranium or thorium is enclosed in an inactive sheath made of metal or some other substantial material.

2.2.7.2.4.1.7 An empty packaging which had previously contained radioactive material may be classified under UN No. 2908 RADIOACTIVE MATERIAL, EXCEPTED PACKAGE – EMPTY PACKAGING, provided that:

(a) It is in a well-maintained condition and securely closed;

(b) The outer surface of any uranium or thorium in its structure is covered with an inactive sheath made of metal or some other substantial material;

(c) The level of internal non-fixed contamination, when averaged over any 300 cm^2, does not exceed:

(i) 400 Bq/cm^2 for beta and gamma emitters and low toxicity alpha emitters; and

(ii) 40 Bq/cm^2 for all other alpha emitters; and

(d) Any labels which may have been displayed on it in conformity with 5.2.2.1.11.1 are no longer visible.

2.2.7.2.4.2 Classification as Low specific activity (LSA) material

Radioactive material may only be classified as LSA material if the definition of LSA in 2.2.7.1.3 and the conditions of 2.2.7.2.3.1, 4.1.9.2 and 7.5.11 CW 33 (2) are met.

2.2.7.2.4.3 Classification as Surface contaminated object (SCO)

Radioactive material may be classified as SCO if the definition of SCO in 2.2.7.1.3 and the conditions of 2.2.7.2.3.2, 4.1.9.2 and 7.5.11 CW 33 (2) are met.

2.2.7.2.4.4 Classification as Type A package

Packages containing radioactive material may be classified as Type A packages, provided that the following conditions are met:

Type A packages shall not contain activities greater than either of the following:

(a) For special form radioactive material: A1;

(b) For all other radioactive material: A_2.

For mixtures of radionuclides whose identities and respective activities are known, the following condition shall apply to the radioactive contents of a Type A package:

$$\sum_i \frac{B(i)}{A_1(i)} + \sum_j \frac{C(j)}{A_2(j)} \leq 1$$

where

B(i) is the activity of radionuclide i as special form radioactive material;

$A_1(i)$ is the A_1 value for radionuclide i;

C(j) is the activity of radionuclide j as other than special form radioactive material;

$A_2(j)$ is the A_2 value for radionuclide j.

2.2.7.2.4.5 Classification of uranium hexafluoride

2.2.7.2.4.5.1 Uranium hexafluoride shall only be assigned to:

(a) UN No. 2977, RADIOACTIVE MATERIAL, URANIUM HEXAFLUORIDE, FISSILE;

(b) UN No. 2978, RADIOACTIVE MATERIAL, URANIUM HEXAFLUORIDE, non-fissile or fissile-excepted; or

(c) UN No. 3507, URANIUM HEXAFLUORIDE, RADIOACTIVE MATERIAL, EXCEPTED PACKAGE less than 0.1 kg per package, non-fissile or fissile-excepted.

2.2.7.2.4.5.2 The contents of a package containing uranium hexafluoride shall comply with the following requirements:

(a) For UN Nos. 2977 and 2978, the mass of uranium hexafluoride shall not be different from that allowed for the package design, and for UN No. 3507, the mass of uranium hexafluoride shall be less than 0.1 kg;

(b) The mass of uranium hexafluoride shall not be greater than a value that would lead to an ullage smaller than 5% at the maximum temperature of the package as specified for the plant systems where the package shall be used; and

(c) The uranium hexafluoride shall be in solid form and the internal pressure shall not be above atmospheric pressure when presented for carriage.

2.2.7.2.4.6 Classification as Type B(U), Type B(M) or Type C packages

2.2.7.2.4.6.1 Packages not otherwise classified in 2.2.7.2.4 (2.2.7.2.4.1 to 2.2.7.2.4.5) shall be classified in accordance with the competent authority certificate of approval for the package issued by the country of origin of design.

2.2.7.2.4.6.2 The contents of a Type B(U), Type B(M) or Type C package shall be as specified in the certificate of approval.

2.2.7.2.5 Special arrangements

Radioactive material shall be classified as transported under special arrangement when it is intended to be carried in accordance with 1.7.4.

2.2.8 Class 8: Corrosive substances

2.2.8.1 Definition, general provisions and criteria

2.2.8.1.1 *Corrosive substances* are substances which, by chemical action, will cause irreversible damage to the skin, or, in the case of leakage, will materially damage, or even destroy, other goods or the means of transport. The heading of this class also covers other substances which form a corrosive liquid only in the presence of water, or which produce corrosive vapour or mist in the presence of natural moisture of the air.

2.2.8.1.2 For substances and mixtures that are corrosive to skin, general classification provisions are provided in 2.2.8.1.4. Skin corrosion refers to the production of irreversible damage to the skin, namely, visible necrosis through the epidermis and into the dermis occurring after exposure to a substance or mixture.

2.2.8.1.3 Liquids and solids which may become liquid during carriage, which are judged not to be skin corrosive shall still be considered for their potential to cause corrosion to certain metal surfaces in accordance with the criteria in 2.2.8.1.5.3 (c) (ii).

2.2.8.1.4 General classification provisions

2.2.8.1.4.1 Substances and articles of Class 8 are subdivided as follows:

- C1 - C11 Corrosive substances without subsidiary hazard and articles containing such substances:
  - C1 - C4 Acid substances:
    - C1 Inorganic, liquid;
    - C2 Inorganic, solid;
    - C3 Organic, liquid;
    - C4 Organic, solid;
  - C5 - C8 Basic substances:
    - C5 Inorganic, liquid;
    - C6 Inorganic, solid;
    - C7 Organic, liquid;
    - C8 Organic, solid;
  - C9 - C10 Other corrosive substances:
    - C9 Liquid;
    - C10 Solid;
  - C11 Articles;
- CF Corrosive substances, flammable:
  - CF1 Liquid;
  - CF2 Solid;
- CS Corrosive substances, self-heating:
  - CS1 Liquid;
  - CS2 Solid;
- CW Corrosive substances which, in contact with water, emit flammable gases:
  - CW1 Liquid;
  - CW2 Solid;
- CO Corrosive substances, oxidizing:
  - CO1 Liquid;
  - CO2 Solid;
- CT Corrosive substances, toxic and articles containing such substances:
  - CT1 Liquid;
  - CT2 Solid;
  - CT3 Articles;
- CFT Corrosive substances, flammable, liquid, toxic;
- COT Corrosive substances, oxidizing, toxic.

2.2.8.1.4.2 Substances and mixtures of Class 8 are divided among the three packing groups according to their degree of danger in carriage:

(a) Packing group I: very dangerous substances and mixtures;

(b) Packing group II: substances and mixtures presenting medium danger;

(c) Packing group III: substances and mixtures that present minor danger.

2.2.8.1.4.3 Allocation of substances listed in Table A of Chapter 3.2 to the packing groups in Class 8 has been made on the basis of experience taking into account such additional factors as inhalation risk (see 2.2.8.1.4.5) and reactivity with water (including the formation of dangerous decomposition products).

2.2.8.1.4.4 New substances and mixtures can be assigned to packing groups on the basis of the length of time of contact necessary to produce irreversible damage of intact skin tissue in accordance with the criteria in 2.2.8.1.5. Alternatively, for mixtures, the criteria in 2.2.8.1.6 can be used.

2.2.8.1.4.5 A substance or mixture meeting the criteria of Class 8 having an inhalation toxicity of dusts and mists (LC_{50}) in the range of packing group I, but toxicity through oral ingestion or dermal contact only in the range of packing group III or less, shall be allocated to Class 8 (see 2.2.61.1.7.2).

2.2.8.1.5 Packing group assignment for substances and mixtures

2.2.8.1.5.1 Existing human and animal data including information from single or repeated exposure shall be the first line of evaluation, as they give information directly relevant to effects on the skin.

2.2.8.1.5.2 In assigning the packing group in accordance with 2.2.8.1.4.4, account shall be taken of human experience in instances of accidental exposure. In the absence of human experience the assignment shall be based on data obtained from experiments in accordance with OECD Test Guideline 404[6] or 435[7]. A substance or mixture which is determined not to be corrosive in accordance with OECD Test Guideline 430[8] or 431[9] may be considered not to be corrosive to skin for the purposes of RID without further testing.

2.2.8.1.5.3 Packing groups are assigned to corrosive substances in accordance with the following criteria (see Table 2.2.8.1.5.3):

(a) Packing group I is assigned to substances that cause irreversible damage of intact skin tissue within an observation period up to 60 minutes starting after the exposure time of three minutes or less;

(b) Packing group II is assigned to substances that cause irreversible damage of intact skin tissue within an observation period up to 14 days starting after the exposure time of more than three minutes but not more than 60 minutes;

(c) Packing group III is assigned to substances that:

(i) Cause irreversible damage of intact skin tissue within an observation period up to 14 days starting after the exposure time of more than 60 minutes but not more than 4 hours; or

(ii) Are judged not to cause irreversible damage of intact skin tissue but which exhibit a corrosion rate on either steel or aluminium surfaces exceeding 6.25 mm a year at a test temperature of 55 °C when tested on both materials. For the purposes of testing steel, type S235JR+CR (1.0037 resp. St 37-2), S275J2G3+CR (1.0144 resp. St 44-3), ISO 3574 or Unified Numbering System (UNS) G10200 or a similar type or SAE 1020, and for testing aluminium, non-clad, types 7075–T6 or AZ5GU-T6 shall be used. An acceptable test is prescribed in the Manual of Tests and Criteria, Part III, Section 37.

NOTE: Where an initial test on either steel or aluminium indicates the substance being tested is corrosive the follow up test on the other metal is not required.

Table 2.2.8.1.5.3: Table summarizing the criteria in 2.2.8.1.5.3

Packing group	Exposure	Observation period	Effect
I	≤ 3 min	≤ 60 min	Irreversible damage of intact skin
II	> 3 min ≤ 1 h	≤ 14 d	Irreversible damage of intact skin
III	> 1 h ≤ 4 h	≤ 14 d	Irreversible damage of intact skin
III	–	–	Corrosion rate on either steel or aluminium surfaces exceeding 6.25 mm a year at a test temperature of 55 ºC when tested on both materials

[6] OECD Guideline for the testing of chemicals No. 404 "Acute Dermal Irritation/Corrosion" 2015.

[7] OECD Guideline for the testing of chemicals No. 435 "In Vitro Membrane Barrier Test Method for Skin Corrosion" 2015.

[8] OECD Guideline for the testing of chemicals No. 430 "In Vitro Skin Corrosion: Transcutaneous Electrical Resistance Test (TER)" 2015.

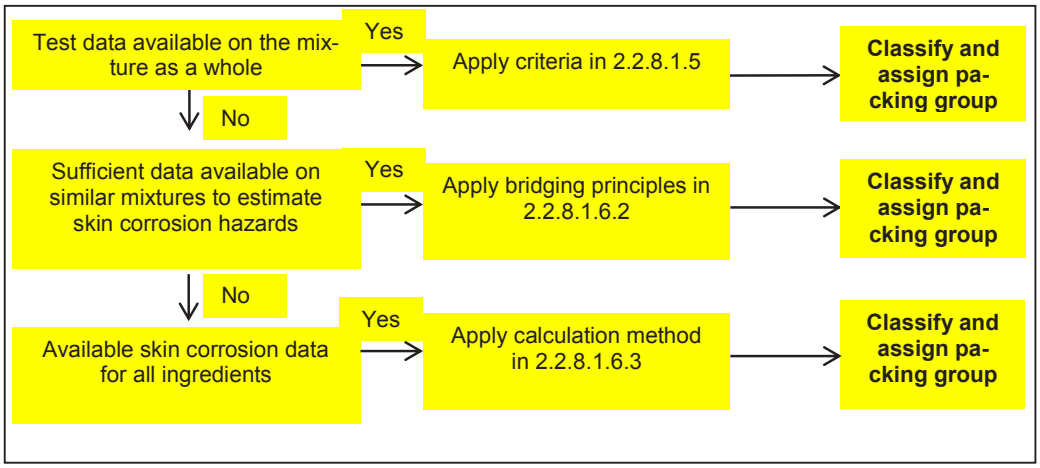
[9] OECD Guideline for the testing of chemicals No. 431 "In Vitro Skin Corrosion: Human Skin Model Test" 2015.

2.2.8.1.6 Alternative packing group assignment methods for mixtures: Step-wise approach

2.2.8.1.6.1 *General provisions*

For mixtures it is necessary to obtain or derive information that allows the criteria to be applied to the mixture for the purpose of classification and assignment of packing groups. The approach to classification and assignment of packing groups is tiered, and is dependent upon the amount of information available for the mixture itself, for similar mixtures and/or for its ingredients. The flow chart of Figure 2.2.8.1.6.1 below outlines the process to be followed.

Figure 2.2.8.1.6.1: Step-wise approach to classify and assign packing group of corrosive mixtures



2.2.8.1.6.2 *Bridging principles*

Where a mixture has not been tested to determine its skin corrosion potential, but there are sufficient data on both the individual ingredients and similar tested mixtures to adequately classify and assign a packing group for the mixture, these data will be used in accordance with the following bridging principles. This ensures that the classification process uses the available data to the greatest extent possible in characterizing the hazards of the mixture.

(a) Dilution: If a tested mixture is diluted with a diluent which does not meet the criteria for Class 8 and does not affect the packing group of other ingredients, then the new diluted mixture may be assigned to the same packing group as the original tested mixture.

NOTE: In certain cases, diluting a mixture or substance may lead to an increase in the corrosive properties. If this is the case, this bridging principle cannot be used.

(b) Batching: The skin corrosion potential of a tested production batch of a mixture can be assumed to be substantially equivalent to that of another untested production batch of the same commercial product when produced by or under the control of the same manufacturer, unless there is reason to believe there is significant variation such that the skin corrosion potential of the untested batch has changed. If the latter occurs, a new classification is necessary.

(c) Concentration of mixtures of packing group I: If a tested mixture meeting the criteria for inclusion in packing group I is concentrated, the more concentrated untested mixture may be assigned to packing group I without additional testing.

(d) Interpolation within one packing group: For three mixtures (A, B and C) with identical ingredients, where mixtures A and B have been tested and are in the same skin corrosion packing group, and where untested mixture C has the same Class 8 ingredients as mixtures A and B but has concentrations of Class 8 ingredients intermediate to the concentrations in mixtures A and B, then mixture C is assumed to be in the same skin corrosion packing group as A and B.

(e) Substantially similar mixtures: Given the following:

(i) Two mixtures: (A+B) and (C+B);

(ii) The concentration of ingredient B is the same in both mixtures;

(iii) The concentration of ingredient A in mixture (A+B) equals the concentration of ingredient C in mixture (C+B);

(iv) Data on skin corrosion for ingredients A and C are available and substantially equivalent, i.e. they are the same skin corrosion packing group and do not affect the skin corrosion potential of B.

If mixture (A+B) or (C+B) is already classified based on test data, then the other mixture may be assigned to the same packing group.

2.2.8.1.6.3 *Calculation method based on the classification of the substances*

2.2.8.1.6.3.1 Where a mixture has not been tested to determine its skin corrosion potential, nor is sufficient data available on similar mixtures, the corrosive properties of the substances in the mixture shall be considered to classify and assign a packing group.

Applying the calculation method is only allowed if there are no synergistic effects that make the mixture more corrosive than the sum of its substances. This restriction applies only if packing group II or III would be assigned to the mixture.

2.2.8.1.6.3.2 When using the calculation method, all Class 8 ingredients present at a concentration of ≥ 1% shall be taken into account, or < 1% if these ingredients are still relevant for classifying the mixture to be corrosive to skin.

2.2.8.1.6.3.3 To determine whether a mixture containing corrosive substances shall be considered a corrosive mixture and to assign a packing group, the calculation method in the flow chart in Figure 2.2.8.1.6.3 shall be applied. For this calculation method, generic concentration limits apply where 1% is used in the first step for the assessment of the packing group I substances, and where 5% is used for the other steps respectively.

2.2.8.1.6.3.4 When a specific concentration limit (SCL) is assigned to a substance following its entry in Table A of Chapter 3.2 or in a special provision, this limit shall be used instead of the generic concentration limits (GCL).

2.2.8.1.6.3.5 For this purpose, the summation formula for each step of the calculation method shall be adapted. This means that, where applicable, the generic concentration limit shall be substituted by the specific concentration limit assigned to the substance(s) (SCL_i), and the adapted formula is a weighted average of the different concentration limits assigned to the different substances in the mixture:

$$\frac{PGx_1}{GCL} + \frac{PGx_2}{SCL_2} + ... + \frac{PGx_i}{SCL_i} \geq 1,$$

where:

$PG\ x_i$ = concentration of substance 1, 2 … i in the mixture, assigned to packing group x (I, II or III)

GCL = generic concentration limit

SCL_i = specific concentration limit assigned to substance i

The criterion for a packing group is fulfilled when the result of the calculation is ≥ 1. The generic concentration limits to be used for the evaluation in each step of the calculation method are those found in Figure 2.2.8.1.6.3.

Examples for the application of the above formula can be found in the note below.

NOTE: Examples for the application of the above formula

Example 1: A mixture contains one corrosive substance in a concentration of 5% assigned to packing group I without a specific concentration limit:

Calculation for packing group I: $\frac{5}{5(GCL)} = 1$

→assign to Class 8, packing group I.

Example 2: A mixture contains three substances corrosive to skin; two of them (A and B) have specific concentration limits; for the third one (C) the generic concentration limit applies. The rest of the mixture needs not to be taken into consideration:

Substance X in the mixture and its packing group assignment within Class 8	Concentration (conc) in the mixture in %	Specific concentration limit (SCL) for packing group I	Specific concentration limit (SCL) for packing group II	Specific concentration limit (SCL) for packing group III
A, assigned to packing group I	3	30%	none	None
B, assigned to packing group I	2	20%	10%	None
C, assigned to packing group III	10	None	None	none

Calculation for packing group I:

$$\frac{3(conc\ A)}{30(SCL\ PG\ I)} + \frac{2(conc\ B)}{20(SCL\ PG\ I)} = 0.2 < 1$$

The criterion for packing group I is not fulfilled.

Calculation for packing group II:

$$\frac{3(conc\ A)}{5(GCL\ PG\ II)} + \frac{2(conc\ B)}{10(SCL\ PG\ II)} = 0.8 < 1$$

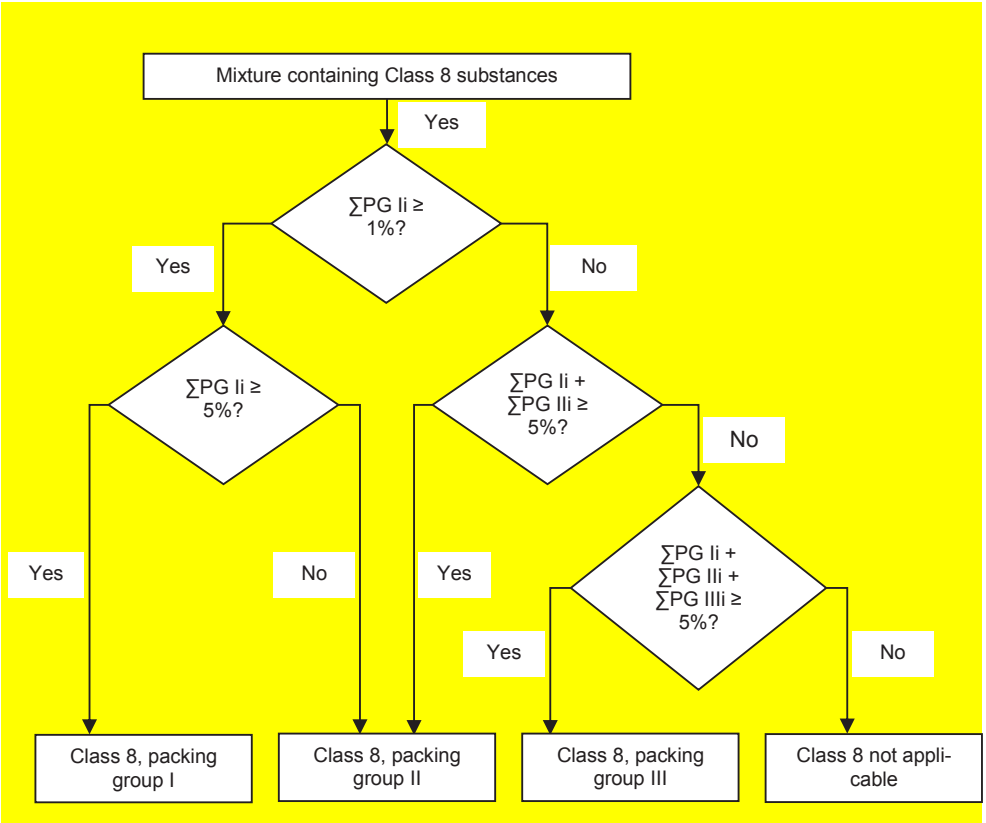
The criterion for packing group II is not fulfilled.

Calculation for packing group III:

$$\frac{3(\text{concA})}{5(\text{GCL PG III})} + \frac{2(\text{concB})}{5(\text{GCLPG III})} + \frac{10(\text{concC})}{5(\text{GCLPGIII})} = 3 \geq 1$$

The criterion for packing group III is fulfilled, the mixture shall be assigned to Class 8, packing group III.

Figure 2.2.8.1.6.3: Calculation method



2.2.8.1.7 If substances of Class 8, as a result of admixtures, come into categories of risk different from those to which the substances mentioned by name in Table A of Chapter 3.2 belong, these mixtures or solutions shall be assigned to the entries to which they belong, on the basis of their actual degree of danger.

NOTE: For the classification of solutions and mixtures (such as preparations and wastes), see also 2.1.3.

2.2.8.1.8 On the basis of the criteria set out in paragraph 2.2.8.1.6, it may also be determined whether the nature of a solution or mixture mentioned by name or containing a substance mentioned by name is such that the solution or mixture is not subject to the provisions for this class.

NOTE: UN No. 1910 CALCIUM OXIDE and UN No. 2812 SODIUM ALUMINATE, listed in the UN Model Regulations, are not subject to the provisions of RID.

2.2.8.2 Substances not accepted for carriage

2.2.8.2.1 Chemically unstable substances of Class 8 shall not be accepted for carriage unless the necessary precautions have been taken to prevent the possibility of a dangerous decomposition or polymerization under normal conditions of carriage. For the precautions necessary to prevent polymerization, see special provision 386 of Chapter 3.3. To this end particular care shall be taken to ensure that receptacles and tanks do not contain any substances liable to promote these reactions.

2.2.8.2.2 The following substances shall not be accepted for carriage:

– UN No. 1798 NITROHYDROCHLORIC ACID;

– Chemically unstable mixtures of spent sulphuric acid;

– Chemically unstable mixtures of nitrating acid or mixtures of residual sulphuric and nitric acids, not denitrated;

– Perchloric acid aqueous solution with more than 72% pure acid, by mass, or mixtures of perchloric acid with any liquid other than water.

The following substance shall not be accepted for carriage by rail:

– Sulphur trioxide, at least 99.95% pure, without inhibitor (non-stabilized).

2.2.8.3 List of collective entries

		Classification code	UN No.	Name of the substance or article
Corrosive substances <u>without</u> subsidiary hazard and articles containing such substances				
Acid	**inorganic**	**liquid C1**	2584	ALKYLSULPHONIC ACIDS, LIQUID with more than 5% free sulphuric acid or
			2584	ARYLSULPHONIC ACIDS, LIQUID with more than 5% free sulphuric acid
			2693	BISULPHITES, AQUEOUS SOLUTION, N.O.S.
			2837	BISULPHATES, AQUEOUS SOLUTION
			3264	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
		solid C2	1740	HYDROGENDIFLUORIDES, SOLID, N.O.S.
			2583	ALKYLSULPHONIC ACIDS, SOLID with more than 5% free sulphuric acid or
			2583	ARYLSULPHONIC ACIDS, SOLID with more than 5% free sulphuric acid
			3260	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.
	organic	**liquid C3**	2586	ALKYLSULPHONIC ACIDS, LIQUID with not more than 5% free sulphuric acid or
			2586	ARYLSULPHONIC ACIDS, LIQUID with not more than 5% free sulphuric acid
			2987	CHLOROSILANES, CORROSIVE, N.O.S.
			3145	ALKYLPHENOLS, LIQUID, N.O.S. (including C_2-C_{12} homologues)
			3265	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
		solid C4	2430	ALKYLPHENOLS, SOLID, N.O.S. (including C_2-C_{12} homologues)
			2585	ALKYLSULPHONIC ACIDS, SOLID with not more than 5% free sulphuric acid or
			2585	ARYLSULPHONIC ACIDS, SOLID with not more than 5% free sulphuric acid
			3261	CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S.
Basic	**inorganic**	**liquid C5**	1719	CAUSTIC ALKALI LIQUID, N.O.S.
			2797	BATTERY FLUID, ALKALI
			3266	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.
		solid C6	3262	CORROSIVE SOLID, BASIC, INORGANIC, N.O.S.
	organic	**liquid C7**	2735	AMINES, LIQUID, CORROSIVE, N.O.S. or
			2735	POLYAMINES, LIQUID, CORROSIVE, N.O.S.
			3267	CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.
		solid C8	3259	AMINES, SOLID, CORROSIVE, N.O.S., or
			3259	POLYAMINES, SOLID, CORROSIVE, N.O.S.
			3263	CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.

Other corrosive Substances	**liquid**	**C9**	1903	DISINFECTANT, LIQUID, CORROSIVE, N.O.S.
			2801	DYE, LIQUID, CORROSIVE, N.O.S. or
			2801	DYE INTERMEDIATE, LIQUID, CORROSIVE, N.O.S.
			3066	PAINT (including paint, enamel, stain, shellac, varnish, polish, liquid filler and lacquer base) or
			3066	PAINT RELATED MATERIAL (including paint thinning or reducing compound)
			1760	CORROSIVE LIQUID, N.O.S.
	solid[(a)]	**C10**	3147	DYE, SOLID, CORROSIVE, N.O.S. or
			3147	DYE INTERMEDIATE, SOLID, CORROSIVE, N.O.S.
			3244	SOLIDS CONTAINING CORROSIVE LIQUID, N.O.S.
			1759	CORROSIVE SOLID, N.O.S.
Articles		**C11**	1774	FIRE EXTINGUISHER CHARGES, corrosive liquid
			2028	BOMBS, SMOKE, NON-EXPLOSIVE with corrosive liquid, without initiating device
			2794	BATTERIES, WET, FILLED WITH ACID, electric storage
			2795	BATTERIES, WET, FILLED WITH ALKALI, electric storage
			2800	BATTERIES, WET, NON-SPILLABLE, electric storage
			3028	BATTERIES, DRY, CONTAINING POTASSIUM HYDROXIDE SOLID, electric storage
			3477	FUEL CELL CARTRIDGES containing corrosive substances, or
			3477	FUEL CELL CARTRIDGES CONTAINED IN EQUIPMENT, containing corrosive substances, or
			3477	FUEL CELL CARTRIDGES PACKED WITH EQUIPMENT, containing corrosive substances
			3547	ARTICLES CONTAINING CORROSIVE SUBSTANCE, N.O.S.

Subsidiary hazard		Classification code	UN No.	Name of the substance or article

Corrosive substances <u>with</u> subsidiary hazard and articles containing such substances

Flammable CF	**liquid**[(b)]	**CF1**	3470	PAINT, CORROSIVE, FLAMMABLE (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or
			3470	PAINT RELATED MATERIAL, CORROSIVE, FLAMMABLE (including paint thinning and reducing compound)
			2734	AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S. or
			2734	POLYAMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S.
			2986	CHLOROSILANES, CORROSIVE, FLAMMABLE, N.O.S.
			2920	CORROSIVE LIQUID, FLAMMABLE, N.O.S.
	solid	**CF2**	2921	CORROSIVE SOLID, FLAMMABLE, N.O.S.
Self-heating CS	**liquid**	**CS1**	3301	CORROSIVE LIQUID, SELF-HEATING, N.O.S.
	solid	**CS2**	3095	CORROSIVE SOLID, SELF-HEATING, N.O.S.
Water-reactive CW	**liquid**[(b)]	**CW1**	3094	CORROSIVE LIQUID, WATER-REACTIVE, N.O.S.
	solid	**CW2**	3096	CORROSIVE SOLID, WATER-REACTIVE, N.O.S.
Oxidizing CO	**liquid**	**CO1**	3093	CORROSIVE LIQUID, OXIDIZING, N.O.S.
	solid	**CO2**	3084	CORROSIVE SOLID, OXIDIZING, N.O.S.

	liquid(c)	**CT1**	3471 HYDROGENDIFLUORIDES SOLUTION, N.O.S. 2922 CORROSIVE LIQUID, TOXIC, N.O.S.
Toxic(d) **CT**	**solid**(e)	**CT2**	2923 CORROSIVE SOLID, TOXIC, N.O.S.
	articles	**CT3**	3506 MERCURY CONTAINED IN MANUFACTURED ARTICLES
Flammable, liquid, toxic(d)		**CFT**	(No collective entry with this classification code available; if need be, classification under a collective entry with a classification code to be determined according to table of precedence of hazard in 2.1.3.10.)
Oxidizing, toxic(d),(e)		**COT**	(No collective entry with this classification code available; if need be, classification under a collective entry with a classification code to be determined according to table of precedence of hazard in 2.1.3.10.)

Footnotes

(a) Mixtures of solids which are not subject to the provisions of RID and of corrosive liquids may be carried under UN No. 3244 without being subject to the classification criteria of Class 8, provided there is no free liquid visible at the time the substance is loaded or at the time the packaging, wagon or container is closed. Each packaging shall correspond to a design type which has passed the leakproofness test for packing group II level.

(b) Chlorosilanes which, in contact with water or moist air, emit flammable gases, are substances of Class 4.3.

(c) Chloroformates having predominantly toxic properties are substances of Class 6.1.

(d) Corrosive substances which are highly toxic by inhalation, as defined in 2.2.61.1.4 to 2.2.61.1.9 are substances of Class 6.1.

(e) UN No. 1690 SODIUM FLUORIDE, SOLID, UN No. 1812 POTASSIUM FLUORIDE, SOLID, UN No. 2505 AMMONIUM FLUORIDE, UN No. 2674 SODIUM FLUOROSILICATE, UN No. 2856 FLUOROSILICATES, N.O.S., UN No. 3415 SODIUM FLUORIDE SOLUTION and UN No. 3422 POTASSIUM FLUORIDE SOLUTION are substances of Class 6.1.

2.2.9 Class 9: Miscellaneous dangerous substances and articles

2.2.9.1 Criteria

2.2.9.1.1 The heading of Class 9 covers substances and articles which, during carriage, present a danger not covered by the heading of other classes.

2.2.9.1.2 The substances and articles of Class 9 are subdivided as follows:

M1 Substances which, on inhalation as fine dust, may endanger health;

M2 Substances and articles which, in the event of fire, may form dioxins;

M3 Substances evolving flammable vapour;

M4 Lithium batteries;

M5 Life-saving appliances;

M6-M8 Environmentally hazardous substances:

- M6 Pollutant to the aquatic environment, liquid;
- M7 Pollutant to the aquatic environment, solid;
- M8 Genetically modified microorganisms and organisms;

M9-M10 Elevated temperature substances:

- M9 Liquid;
- M10 Solid;

M11 Other substances and articles presenting a danger during carriage, but not meeting the definitions of another class.

Definitions and classification

2.2.9.1.3 Substances and articles classified in Class 9 are listed in Table A of Chapter 3.2. The assignment of substances and articles not mentioned by name in Table A of Chapter 3.2 to the relevant entry of that Table or of 2.2.9.3 shall be done in accordance with 2.2.9.1.4 to 2.2.9.1.8, 2.2.9.1.10, 2.2.9.1.11, 2.2.9.1.13 and 2.2.9.1.14 below.

Substances which, on inhalation as fine dust, may endanger health

2.2.9.1.4 Substances which, on inhalation as fine dust, may endanger health include asbestos and mixtures containing asbestos.

Substances and articles which, in the event of fire, may form dioxins

2.2.9.1.5 Substances and articles which, in the event of fire, may form dioxins include polychlorinated biphenyls (PCBs) and terphenyls (PCTs) and polyhalogenated biphenyls and terphenyls and mixtures containing these substances, as well as articles such as transformers, condensers and articles containing those substances or mixtures.

NOTE: Mixtures with a PCB or PCT content of not more than 50 mg/kg are not subject to the provisions of RID.

Substances evolving flammable vapour

2.2.9.1.6 Substances evolving flammable vapour include polymers containing flammable liquids with a flash-point not exceeding 55 °C.

Lithium batteries

2.2.9.1.7 Lithium batteries shall meet the following requirements, except when otherwise provided for in RID (e.g. for prototype batteries and small production runs under special provision 310 or damaged batteries under special provision 376).

NOTE: For UN 3536 LITHIUM BATTERIES INSTALLED IN CARGO TRANSPORT UNIT, see special provision 389 in Chapter 3.3.

Cells and batteries, cells and batteries contained in equipment, or cells and batteries packed with equipment, containing lithium in any form shall be assigned to UN Nos. 3090, 3091, 3480 or 3481 as appropriate. They may be carried under these entries if they meet the following provisions:

(a) Each cell or battery is of the type proved to meet the requirements of each test of the Manual of Tests and Criteria, Part III, sub-section 38.3;

NOTE: Batteries shall be of a type proved to meet the testing requirements of the Manual of Tests and Criteria, part III, sub-section 38.3, irrespective of whether the cells of which they are composed are of a tested type.

(b) Each cell and battery incorporates a safety venting device or is designed to preclude a violent rupture under normal conditions of carriage;

(c) Each cell and battery is equipped with an effective means of preventing external short circuits;

(d) Each battery containing cells or series of cells connected in parallel is equipped with effective means as necessary to prevent dangerous reverse current flow (e.g., diodes, fuses, etc.);

(e) Cells and batteries shall be manufactured under a quality management programme that includes:

(i) A description of the organizational structure and responsibilities of personnel with regard to design and product quality;

(ii) The relevant inspection and test, quality control, quality assurance, and process operation instructions that will be used;

(iii) Process controls that should include relevant activities to prevent and detect internal short circuit failure during manufacture of cells;

(iv) Quality records, such as inspection reports, test data, calibration data and certificates. Test data shall be kept and made available to the competent authority upon request;

(v) Management reviews to ensure the effective operation of the quality management programme;

(vi) A process for control of documents and their revision;

(vii) A means for control of cells or batteries that are not conforming to the type tested as mentioned in (a) above;

(viii) Training programmes and qualification procedures for relevant personnel; and

(ix) Procedures to ensure that there is no damage to the final product.

NOTE: In house quality management programmes may be accepted. Third party certification is not required, but the procedures listed in (i) to (ix) above shall be properly recorded and traceable. A copy of the quality management programme shall be made available to the competent authority upon request.

(f) Lithium batteries, containing both primary lithium metal cells and rechargeable lithium ion cells, that are not designed to be externally charged (see special provision 387 of Chapter 3.3) shall meet the following conditions:

(i) The rechargeable lithium ion cells can only be charged from the primary lithium metal cells;

(ii) Overcharge of the rechargeable lithium ion cells is precluded by design;

(iii) The battery has been tested as a lithium primary battery;

(iv) Component cells of the battery shall be of a type proved to meet the respective testing requirements of the Manual of Tests and Criteria, part III, sub-section 38.3;

(g) Manufacturers and subsequent distributors of cells or batteries manufactured after 30 June 2003 shall make available the test summary as specified in the Manual of Tests and Criteria, Part III, sub-section 38.3, paragraph 38.3.5.

Lithium batteries are not subject to the provisions of RID if they meet the requirements of special provision 188 of Chapter 3.3.

Life-saving appliances

2.2.9.1.8 Life-saving appliances include life-saving appliances and motor vehicle components which meet the descriptions of special provisions 235 or 296 of Chapter 3.3.

2.2.9.1.9 (Deleted)

2.2.9.1.10 Environmentally hazardous substances (aquatic environment)

2.2.9.1.10.1 General definitions

2.2.9.1.10.1.1 Environmentally hazardous substances include, inter alia, liquid or solid substances pollutant to the aquatic environment and solutions and mixtures of such substances (such as preparations and wastes).

For the purposes of 2.2.9.1.10,

"substance" means chemical elements and their compounds in the natural state or obtained by any production process, including any additive necessary to preserve the stability of the product and any impurities deriving from the process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition.

2.2.9.1.10.1.2 The aquatic environment may be considered in terms of the aquatic organisms that live in the water, and the aquatic ecosystem of which they are part[10]. The basis, therefore, of the identification of hazard is the aquatic toxicity of the substance or mixture, although this may be modified by further information on the degradation and bioaccumulation behaviour.

[10] This does not address aquatic pollutants for which there may be a need to consider effects beyond the aquatic environment such as the impacts on human health etc.

2.2.9.1.10.1.3 While the following classification procedure is intended to apply to all substances and mixtures, it is recognised that in some cases, e.g. metals or poorly soluble inorganic compounds, special guidance will be necessary[11].

2.2.9.1.10.1.4 The following definitions apply for acronyms or terms used in this section:

- BCF: Bioconcentration Factor;
- BOD: Biochemical Oxygen Demand;
- COD: Chemical Oxygen Demand;
- GLP: Good Laboratory Practices;
- EC_x: the concentration associated with x% response;
- EC_{50}: the effective concentration of substance that causes 50% of the maximum response;
- ErC_{50}: EC_{50} in terms of reduction of growth;
- K_{ow}: octanol/water partition coefficient;
- LC_{50} (50% lethal concentration):
  the concentration of a substance in water which causes the death of 50% (one half) in a group of test animals;
- $L(E)C_{50}$: LC_{50} or EC_{50};
- NOEC (No Observed Effect Concentration):
  the test concentration immediately below the lowest tested concentration with statistically significant adverse effect. The NOEC has no statistically significant adverse effect compared to the control;
- OECD Test Guidelines:
  Test guidelines published by the Organization for Economic Cooperation and Development (OECD).

2.2.9.1.10.2 Definitions and data requirements

2.2.9.1.10.2.1 The basic elements for classification of environmentally hazardous substances (aquatic environment) are:

(a) Acute aquatic toxicity;

(b) Chronic aquatic toxicity;

(c) Potential for or actual bioaccumulation; and

(d) Degradation (biotic or abiotic) for organic chemicals.

2.2.9.1.10.2.2 While data from internationally harmonised test methods are preferred, in practice, data from national methods may also be used where they are considered as equivalent. In general, it has been agreed that freshwater and marine species toxicity data can be considered as equivalent data and are preferably to be derived using OECD Test Guidelines or equivalent according to the principles of Good Laboratory Practices (GLP). Where such data are not available, classification shall be based on the best available data.

2.2.9.1.10.2.3 **Acute aquatic toxicity** means the intrinsic property of a substance to be injurious to an organism in a short-term aquatic exposure to that substance.

Acute (short-term) hazard, for classification purposes, means the hazard of a chemical caused by its acute toxicity to an organism during short-term aquatic exposure to that chemical.

Acute aquatic toxicity shall normally be determined using a fish 96 hour LC_{50} (OECD Test Guideline 203 or equivalent), a crustacea species 48 hour EC_{50} (OECD Test Guideline 202 or equivalent) and/or an algal species 72 or 96 hour EC_{50} (OECD Test Guideline 201 or equivalent). These species are considered as surrogate for all aquatic organisms and data on other species such as Lemna may also be considered if the test methodology is suitable.

2.2.9.1.10.2.4 **Chronic aquatic toxicity** means the intrinsic property of a substance to cause adverse effects to aquatic organisms during aquatic exposures which are determined in relation to the life-cycle of the organism.

Long-term hazard, for classification purposes, means the hazard of a chemical caused by its chronic toxicity following long-term exposure in the aquatic environment.

[11] This can be found in Annex 10 of the GHS.

Chronic toxicity data are less available than acute data and the range of testing procedures less standardised. Data generated according to the OECD Test Guidelines 210 (Fish Early Life Stage) or 211 (Daphnia Reproduction) and 201 (Algal Growth Inhibition) may be accepted. Other validated and internationally accepted tests may also be used. The NOECs or other equivalent EC_x shall be used.

2.2.9.1.10.2.5 **Bioaccumulation** means net result of uptake, transformation and elimination of a substance in an organism due to all routes of exposure (i.e. air, water, sediment/soil and food).

The potential for bioaccumulation shall normally be determined by using the octanol/water partition coefficient, usually reported as a log K_{ow} determined according to OECD Test Guidelines 107, 117 or 123. While this represents a potential to bioaccumulate, an experimentally determined Bioconcentration Factor (BCF) provides a better measure and shall be used in preference when available. A BCF shall be determined according to OECD Test Guideline 305.

2.2.9.1.10.2.6 **Degradation** means the decomposition of organic molecules to smaller molecules and eventually to carbon dioxide, water and salts.

Environmental degradation may be biotic or abiotic (e.g. hydrolysis) and the criteria used reflect this fact. Ready biodegradation is most easily defined using the biodegradability tests (A-F) of OECD Test Guideline 301. A pass level in these tests may be considered as indicative of rapid degradation in most environments. These are freshwater tests and thus the use of the results from OECD Test Guideline 306, which is more suitable for marine environments, has also been included. Where such data are not available, a BOD_5 (5 days)/COD ratio ≥ 0.5 is considered as indicative of rapid degradation.

Abiotic degradation such as hydrolysis, primary degradation, both abiotic and biotic, degradation in non-aquatic media and proven rapid degradation in the environment may all be considered in defining rapid degradability[12].

Substances are considered rapidly degradable in the environment if the following criteria are met:

(a) In 28-day ready biodegradation studies, the following levels of degradation are achieved:
   (i) Tests based on dissolved organic carbon: 70%;
   (ii) Tests based on oxygen depletion or carbon dioxide generation: 60% of theoretical maxima;

   These levels of biodegradation shall be achieved within 10 days of the start of degradation which point is taken as the time when 10% of the substance has been degraded, unless the substance is identified as a complex, multi-component substance with structurally similar constituents. In this case, and where there is sufficient justification, the 10-day window condition may be waived and the pass level applied at 28 days[13]; or

(b) In those cases where only BOD and COD data are available, when the ratio of BOD_5/COD is ≥ 0.5; or

(c) If other convincing scientific evidence is available to demonstrate that the substance can be degraded (biotically and/or abiotically) in the aquatic environment to a level above 70% within a 28 day period.

2.2.9.1.10.3 **Substance classification categories and criteria**

2.2.9.1.10.3.1 Substances shall be classified as "environmentally hazardous substances (aquatic environment)", if they satisfy the criteria for Acute 1, Chronic 1 or Chronic 2, according to Table 2.2.9.1.10.3.1. These criteria describe in detail the classification categories. They are diagrammatically summarized in Table 2.2.9.1.10.3.2.

Table 2.2.9.1.10.3.1: Categories for substances hazardous to the aquatic environment (see Note 1)

(a) Acute (short-term) aquatic hazard

Category Acute 1: (see Note 2)	
96 hr LC_{50} (for fish)	$\leq$ 1 mg/l and/or
48 hr EC_{50} (for crustacea)	$\leq$ 1 mg/l and/or
72 or 96hr ErC_{50} (for algae or other aquatic plants)	$\leq$ 1 mg/l (see Note 3)

[12] Special guidance on data interpretation is provided in Chapter 4.1 and Annex 9 of the GHS.

[13] See Chapter 4.1 and Annex 9, paragraph A9.4.2.2.3 of the GHS.

(b) Long-term aquatic hazard (see also Figure 2.2.9.1.10.3.1)

(i) Non-rapidly degradable substances (see Note 4) for which there are adequate chronic toxicity data available

Category Chronic 1: (see Note 2)	
Chronic NOEC or EC_x (for fish)	≤ 0.1 mg/l and/or
Chronic NOEC or EC_x (for crustacea)	≤ 0.1 mg/l and/or
Chronic NOEC or EC_x (for algae or other aquatic plants)	≤ 0.1 mg/l
Category Chronic 2:	
Chronic NOEC or EC_x (for fish)	≤ 1 mg/l and/or
Chronic NOEC or EC_x (for crustacea)	≤ 1 mg/l and/or
Chronic NOEC or EC_x (for algae or other aquatic plants)	≤ 1 mg/l

(ii) Rapidly degradable substances for which there are adequate chronic toxicity data available

Category Chronic 1: (see Note 2)	
Chronic NOEC or EC_x (for fish)	≤ 0.01 mg/l and/or
Chronic NOEC or EC_x (for crustacea)	≤ 0.01 mg/l and/or
Chronic NOEC or EC_x (for algae or other aquatic plants)	≤ 0.01 mg/l
Category Chronic 2:	
Chronic NOEC or EC_x (for fish)	≤ 0.1 mg/l and/or
Chronic NOEC or EC_x (for crustacea)	≤ 0.1 mg/l and/or
Chronic NOEC or EC_x (for algae or other aquatic plants)	≤ 0.1 mg/l

(iii) Substances for which adequate chronic toxicity data are not available

Category Chronic 1: (see Note 2)	
96 hr LC_{50} (for fish)	≤ 1 mg/l and/or
48 hr EC_{50} (for crustacea)	≤ 1 mg/l and/or
72 or 96hr ErC_{50} (for algae or other aquatic plants)	≤ 1 mg/l (see Note 3)
and the substance is not rapidly degradable and/or the experimentally determined BCF is ≥ 500 (or, if absent the log K_{ow} ≥ 4) (see Notes 4 and 5).	
Category Chronic 2:	
96 hr LC_{50} (for fish)	> 1 bis ≤ 10 mg/l and/or
48 hr EC_{50} (for crustacea)	> 1 bis ≤ 10 mg/l and/or
72 or 96hr ErC_{50} (for algae or other aquatic plants)	> 1 bis ≤ 10 mg/l (see Note 3)
and the substance is not rapidly degradable and/or the experimentally determined BCF is ≥ 500 (or, if absent the log K_{ow} ≥ 4 (see Notes 4 and 5).	

NOTE 1: The organisms fish, crustacea and algae are tested as surrogate species covering a range of trophic levels and taxa, and the test methods are highly standardized. Data on other organisms may also be considered, however, provided they represent equivalent species and test endpoints.

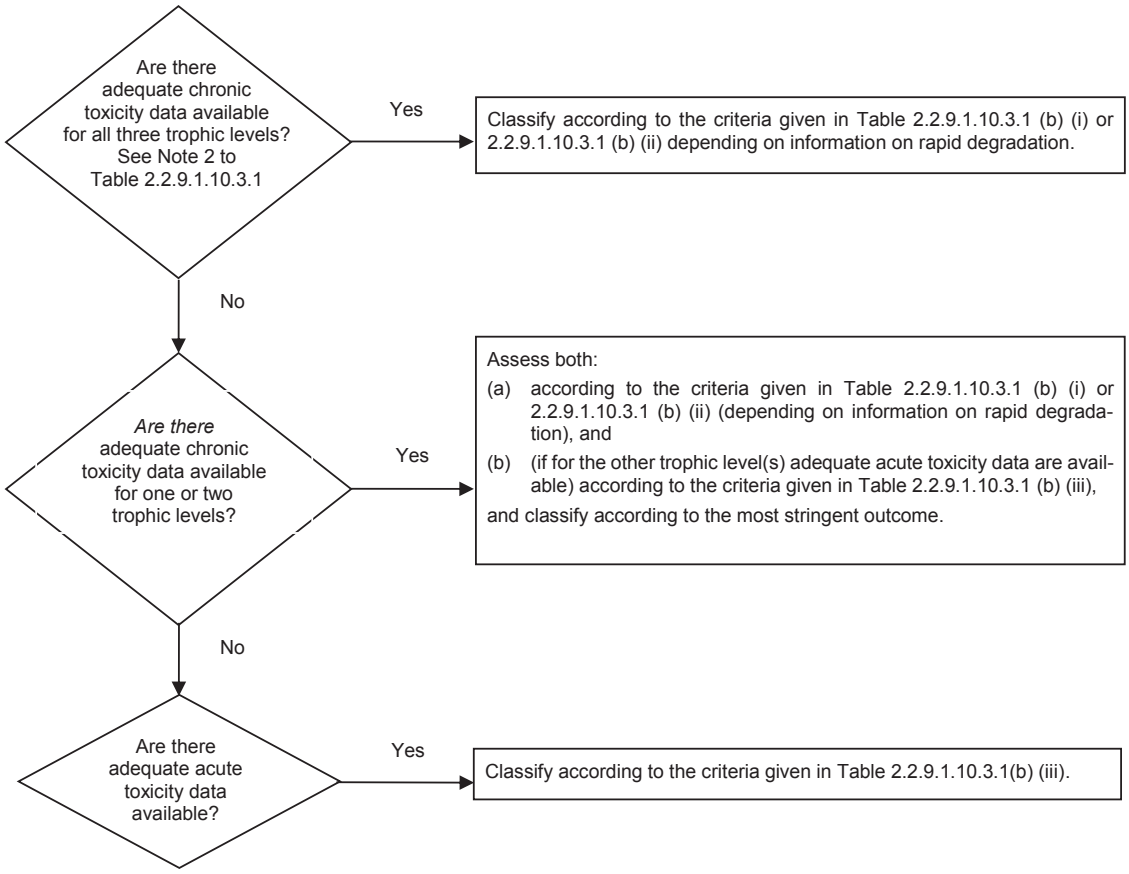
2: When classifying substances as Acute 1 and/or Chronic 1 it is necessary at the same time to indicate an appropriate M factor (see 2.2.9.1.10.4.6.4) to apply the summation method.

3: Where the algal toxicity ErC_{50} (= EC_{50} (growth rate)) falls more than 100 times below the next most sensitive species and results in a classification based solely on this effect, consideration shall be given to whether this toxicity is representative of the toxicity to aquatic plants. Where it can be shown that this is not the case, professional judgment shall be used in deciding if classification shall be applied. Classification shall be based on the ErC_{50}. In circumstances where the basis of the EC_{50} is not specified and no ErC_{50} is recorded, classification shall be based on the lowest EC_{50} available.

4: Lack of rapid degradability is based on either a lack of ready biodegradability or other evidence of lack of rapid degradation. When no useful data on degradability are available, either experimentally determined or estimated data, the substance shall be regarded as not rapidly degradable.

5: Potential to bioaccumulate, based on an experimentally derived BCF ≥ 500 or, if absent, a log K_{ow} ≥ 4 provided log K_{ow} is an appropriate descriptor for the bioaccumulation potential of the substance. Measured log K_{ow} values take precedence over estimated values and measured BCF values take precedence over log K_{ow} values.

Figure 2.2.9.1.10.3.1: Categories for substances long-term hazardous to the aquatic environment



2.2.9.1.10.3.2 The classification scheme in Table 2.2.9.1.10.3.2 below summarizes the classification criteria for substances.

Table 2.2.9.1.10.3.2: Classification scheme for substances hazardous to the aquatic environment

Classification categories			
Acute hazard (see Note 1)	**Long-term hazard** (see Note 2)		
	Adequate chronic toxicity data available		**Adequate chronic toxicity data not available** (see Note 1)
	Non-rapidly degradable substances (see Note 3)	**Rapidly degradable substances** (see Note 3)	
Category: Acute 1	**Category: Chronic 1**	**Category: Chronic 1**	**Category: Chronic 1**
$L(E)C_{50}$ ≤ 1.00	NOEC or EC_x ≤ 0.1	NOEC or EC_x ≤ 0.01	$L(E)C_{50}$ ≤ 1.00 and lack of rapid degradability and/or BCF ≥ 500 or, if absent log K_{ow} ≥ 4
	Category: Chronic 2	**Category: Chronic 2**	**Category: Chronic 2**
	0.1 < NOEC or EC_x ≤ 1	0.01 < NOEC or EC_x ≤ 0.1	1.00 < $L(E)C_{50}$ ≤ 10.0 and lack of rapid degradability and/or BCF ≥ 500 or, if absent log K_{ow} ≥ 4

NOTE 1: Acute toxicity band based on $L(E)C_{50}$ values in mg/l for fish, crustacea and/or algae or other aquatic plants (or Quantitative Structure Activity Relationships (QSAR) estimation if no experimental data[14]).

2: Substances are classified in the various chronic categories unless there are adequate chronic toxicity data available for all three trophic levels above the water solubility or above 1 mg/l. ("Adequate" means that the data sufficiently cover the endpoint of concern. Generally this would mean measured test data, but in order to avoid unnecessary testing it can on a case by case basis also be estimated data, e.g. (Q)SAR, or for obvious cases expert judgment).

3: Chronic toxicity band based on NOEC or equivalent EC_x values in mg/l for fish or crustacea or other recognized measures for chronic toxicity.

2.2.9.1.10.4 Mixtures classification categories and criteria

2.2.9.1.10.4.1 The classification system for mixtures covers the classification categories which are used for substances, meaning categories Acute 1 and Chronic 1 and 2. In order to make use of all available data for purposes of classifying the aquatic environmental hazards of the mixture, the following assumption is made and is applied where appropriate:

The "relevant ingredients" of a mixture are those which are present in a concentration equal to or greater than 0.1% (by mass) for ingredients classified as Acute and/or Chronic 1 and equal to or greater than 1% for other ingredients, unless there is a presumption (e.g. in the case of highly toxic ingredients) that an ingredient present at less than 0.1% can still be relevant for classifying the mixture for aquatic environmental hazards.

2.2.9.1.10.4.2 The approach for classification of aquatic environmental hazards is tiered, and is dependent upon the type of information available for the mixture itself and for its ingredients. Elements of the tiered approach include:

(a) Classification based on tested mixtures;

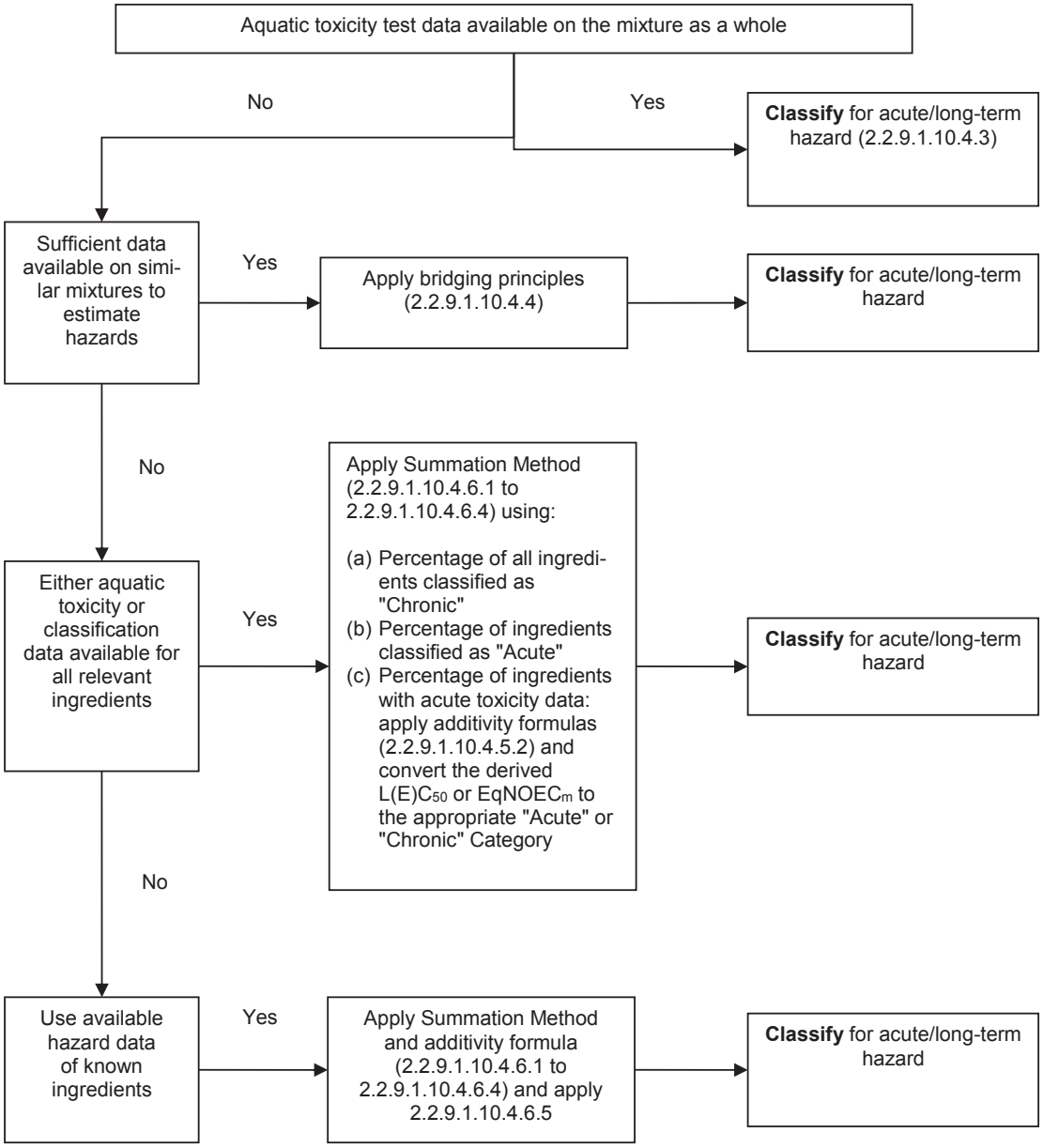
(b) Classification based on bridging principles;

(c) The use of "summation of classified ingredients" and/or an "additivity formula".

Figure 2.2.9.1.10.4.2 below outlines the process to be followed.

[14] Special guidance is provided in Chapter 4.1, paragraph 4.1.2.13 and Annex 9, Section A9.6 of the GHS.

Figure 2.2.9.1.10.4.2: Tiered approach to classification of mixtures for acute and long-term aquatic environmental hazards



2.2.9.1.10.4.3 Classification of mixtures when toxicity data are available for the complete mixture

2.2.9.1.10.4.3.1 When the mixture as a whole has been tested to determine its aquatic toxicity, this information shall be used for classifying the mixture according to the criteria that have been agreed for substances. The classification is normally based on the data for fish, crustacea and algae/plants (see 2.2.9.1.10.2.3 and 2.2.9.1.10.2.4). When adequate acute or chronic data for the mixture as a whole are lacking, "bridging principles" or "summation method" shall be applied (see 2.2.9.1.10.4.4 to 2.2.9.1.10.4.6).

2.2.9.1.10.4.3.2 The long-term hazard classification of mixtures requires additional information on degradability and in certain cases bioaccumulation. There are no degradability and bioaccumulation data for mixtures as a whole. Degradability and bioaccumulation tests for mixtures are not used as they are usually difficult to interpret, and such tests may be meaningful only for single substances.

2.2.9.1.10.4.3.3 Classification for category Acute 1

(a) When there are adequate acute toxicity test data (LC_{50} or EC_{50}) available for the mixture as a whole showing $L(E)C_{50} \leq 1$ mg/l:

Classify the mixture as Acute 1 in accordance with Table 2.2.9.1.10.3.1 (a);

(b) When there are acute toxicity test data (LC_{50}(s) or EC_{50}(s) available for the mixture as a whole showing $L(E)C_{50}$(s) > 1 mg/l, or above the water solubility:

No need to classify for acute hazard under RID.

2.2.9.1.10.4.3.4 Classification for categories Chronic 1 and 2

(a) When there are adequate chronic toxicity data (EC_x or NOEC) available for the mixture as a whole showing EC_x or NOEC of the tested mixture ≤ 1mg/l:

(i) classify the mixture as Chronic 1 or 2 in accordance with Table 2.2.9.1.10.3.1 (b) (ii) (rapidly degradable) if the available information allows the conclusion that all relevant ingredients of the mixture are rapidly degradable;

(ii) classify the mixture as Chronic 1 or 2 in all other cases in accordance with Table 2.2.9.1.10.3.1 (b) (i) (non-rapidly degradable);

(b) When there are adequate chronic toxicity data (EC_x or NOEC) available for the mixture as a whole showing EC_x(s) or NOEC(s) of the tested mixture > 1mg/l or above the water solubility:

No need to classify for long-term hazard under RID.

2.2.9.1.10.4.4 Classification of mixtures when toxicity data are not available for the complete mixture: bridging principles

2.2.9.1.10.4.4.1 Where the mixture itself has not been tested to determine its aquatic environmental hazard, but there are sufficient data on the individual ingredients and similar tested mixtures to adequately characterise the hazards of the mixture, these data shall be used in accordance with the following agreed bridging rules. This ensures that the classification process uses the available data to the greatest extent possible in characterising the hazards of the mixture without the necessity for additional testing in animals.

2.2.9.1.10.4.4.2 Dilution

Where a new mixture is formed by diluting a tested mixture or a substance with a diluent which has an equivalent or lower aquatic hazard classification than the least toxic original ingredient and which is not expected to affect the aquatic hazards of other ingredients, then the resulting mixture shall be classified as equivalent to the original tested mixture or substance. Alternatively, the method explained in 2.2.9.1.10.4.5 may be applied.

2.2.9.1.10.4.4.3 Batching

The aquatic hazard classification of a tested production batch of a mixture shall be assumed to be substantially equivalent to that of another untested production batch of the same commercial product when produced by or under the control of the same manufacturer, unless there is reason to believe there is significant variation such that the aquatic hazard classification of the untested batch has changed. If the latter occurs, new classification is necessary.

2.2.9.1.10.4.4.4 Concentration of mixtures which are classified with the most severe classification categories (Chronic 1 and Acute 1)

If a tested mixture is classified as Chronic 1 and/or Acute 1, and the ingredients of the mixture which are classified as Chronic 1 and/or Acute 1 are further concentrated, the more concentrated untested mixture shall be classified with the same classification category as the original tested mixture without additional testing.

2.2.9.1.10.4.4.5 Interpolation within one toxicity category

For three mixtures (A, B and C) with identical ingredients, where mixtures A and B have been tested and are in the same toxicity category, and where untested mixture C has the same toxicologically active ingredients as mixtures A and B but has concentrations of toxicologically active ingredients intermediate to the concentrations in mixtures A and B, then mixture C is assumed to be in the same category as A and B.

2.2.9.1.10.4.4.6 Substantially similar mixtures

Given the following:

(a) two mixtures:

(i) A + B;

(ii) C + B;

(b) the concentration of ingredient B is essentially the same in both mixtures;

(c) the concentration of ingredient A in mixture (i) equals that of ingredient C in mixture (ii);

(d) data on aquatic hazards for A and C are available and are substantially equivalent, i.e. they are in the same hazard category and are not expected to affect the aquatic toxicity of B,

If mixture (i) or (ii) is already classified based on test data, then the other mixture can be assigned the same hazard category.

2.2.9.1.10.4.5 Classification of mixtures when toxicity data are available for all ingredients or only for some ingredients of the mixture

2.2.9.1.10.4.5.1 The classification of a mixture shall be based on summation of the concentrations of its classified ingredients. The percentage of ingredients classified as "Acute" or "Chronic" will feed straight into the summation method. Details of the summation method are described in 2.2.9.1.10.4.6.1 to 2.2.9.1.10.4.6.4.

2.2.9.1.10.4.5.2 Mixtures may be made of a combination of both ingredients that are classified (as Acute 1 and/or Chronic 1, 2) and those for which adequate toxicity test data are available. When adequate toxicity data are available for more than one ingredient in the mixture, the combined toxicity of those ingredients shall be calculated using the following additivity formulas (a) or (b), depending on the nature of the toxicity data:

(a) Based on acute aquatic toxicity:

$$\frac{\sum C_i}{L(E)C_{50m}} = \sum_n \frac{C_i}{L(E)C_{50i}}$$

where:

C_i = concentration of ingredient i (mass percentage);

$L(E)C_{50i}$ = LC_{50} or EC_{50} for ingredient i (mg/l);

n = number of ingredients, and i is running from 1 to n;

$L(E)C_{50m}$ = $L(E)C_{50}$ of the part of the mixture with test data;

The calculated toxicity shall be used to assign that portion of the mixture an acute hazard category which is then subsequently used in applying the summation method;

(b) Based on chronic aquatic toxicity:

$$\frac{\sum C_i + \sum C_j}{EqNOEC_m} = \sum_n \frac{C_i}{NOEC_i} + \sum_n \frac{C_j}{0{,}1 \cdot NOEC_j}$$

where:

C_i = concentration of ingredient i (mass percentage) covering the rapidly degradable ingredients;

C_j = concentration of ingredient j (mass percentage) covering the non-rapidly degradable ingredients;

$NOEC_i$ = NOEC (or other recognized measures for chronic toxicity) for ingredient i covering the rapidly degradable ingredients, in mg/l;

$NOEC_j$ = NOEC (or other recognized measures for chronic toxicity) for ingredient j covering the non-rapidly degradable ingredients, in mg/l;

n = number of ingredients, and i and j are running from 1 to n;

$EqNOEC_m$ = equivalent NOEC of the part of the mixture with test data;

The equivalent toxicity thus reflects the fact that non-rapidly degradable substances are classified one hazard category level more "severe" than rapidly degradable substances.

The calculated equivalent toxicity shall be used to assign that portion of the mixture a long-term hazard category, in accordance with the criteria for rapidly degradable substances (Table 2.2.9.1.10.3.1 (b) (ii)), which is then subsequently used in applying the summation method.

2.2.9.1.10.4.5.3 When applying the additivity formula for part of the mixture, it is preferable to calculate the toxicity of this part of the mixture using for each ingredient toxicity values that relate to the same taxonomic group (i.e. fish, crustacea or algae) and then to use the highest toxicity (lowest value) obtained (i.e. use the most sensitive of the three groups). However, when toxicity data for each ingredient are not available in the same taxonomic group, the toxicity value of each ingredient shall be selected in the same manner that toxicity values are selected for the classification of substances, i.e. the higher toxicity (from the most sensitive test organism) is used. The calculated acute and chronic toxicity shall then be used to classify this part of the mixture as Acute 1 and/or Chronic 1 or 2 using the same criteria described for substances.

2.2.9.1.10.4.5.4 If a mixture is classified in more than one way, the method yielding the more conservative result shall be used.

2.2.9.1.10.4.6 Summation method

2.2.9.1.10.4.6.1 Classification procedure

In general a more severe classification for mixtures overrides a less severe classification, e.g. a classification with Chronic 1 overrides a classification with Chronic 2. As a consequence the classification procedure is already completed if the result of the classification is Chronic 1. A more severe classification than Chronic 1 is not possible; therefore, it is not necessary to pursue the classification procedure further.

2.2.9.1.10.4.6.2 Classification for category Acute 1

2.2.9.1.10.4.6.2.1 First, all ingredients classified as Acute 1 are considered. If the sum of the concentrations (in %) of these ingredients is greater than or equal to 25% the whole mixture shall be classified as Acute 1. If the result of the calculation is a classification of the mixture as Acute 1, the classification process is completed.

2.2.9.1.10.4.6.2.2 The classification of mixtures for acute hazards based on this summation of the concentrations of classified ingredients is summarized in Table 2.2.9.1.10.4.6.2.2 below.

Table 2.2.9.1.10.4.6.2.2: Classification of a mixture for acute hazards based on summation of the concentrations of classified ingredients

Sum of the concentrations (in %) of ingredients classified as:	Mixture classified as:
Acute 1 × M[a] ≥ 25%	Acute 1

[a] For explanation of the M factor, see 2.2.9.1.10.4.6.4.

2.2.9.1.10.4.6.3 Classification for categories Chronic 1 and 2

2.2.9.1.10.4.6.3.1 First, all ingredients classified as Chronic 1 are considered. If the sum of the concentrations (in %) of these ingredients is greater than or equal to 25% the mixture shall be classified as Chronic 1. If the result of the calculation is a classification of the mixture as Chronic 1 the classification procedure is completed.

2.2.9.1.10.4.6.3.2 In cases where the mixture is not classified as Chronic 1, classification of the mixture as Chronic 2 is considered. A mixture shall be classified as Chronic 2 if 10 times the sum of the concentrations (in %) of all ingredients classified as Chronic 1 plus the sum of the concentrations (in %) of all ingredients classified as Chronic 2 is greater than or equal to 25%. If the result of the calculation is classification of the mixture as Chronic 2, the classification process is completed.

2.2.9.1.10.4.6.3.3 The classification of mixtures for long-term hazards based on this summation of the concentrations of classified ingredients is summarized in Table 2.2.9.1.10.4.6.3.3 below.

Table 2.2.9.1.10.4.6.3.3: Classification of a mixture for long-term hazards based on summation of the concentrations of classified ingredients

Sum of the concentrations (in %) of ingredients classified as:	Mixture classified as:
Chronic 1 × M[a] ≥ 25 %	Chronic 1
(M × 10 × Chronic 1) + Chronic 2 ≥ 25 %	Chronic 2

[a] For explanation of the M factor, see 2.2.9.1.10.4.6.4.

2.2.9.1.10.4.6.4 Mixtures with highly toxic ingredients

Acute 1 or Chronic 1 ingredients with acute toxicities well below 1 mg/l and/or chronic toxicities well below 0.1 mg/l (if non-rapidly degradable) and 0.01 mg/l (if rapidly degradable) may influence the toxicity of the mixture and are given increased weight in applying the summation method. When a mixture contains ingredients classified as Acute 1 or Chronic 1, the tiered approach described in 2.2.9.1.10.4.6.2 and 2.2.9.1.10.4.6.3 shall be applied using a weighted sum by multiplying the concentrations of Acute 1 and Chronic 1 ingredients by a factor, instead of merely adding up the percentages. This means that the concentration of "Acute 1" in the left column of Table 2.2.9.1.10.4.6.2.2 and the concentration of "Chronic 1" in the left column of Table 2.2.9.1.10.4.6.3.3 are multiplied by the appropriate multiplying factor. The multiplying factors to be applied to these ingredients are defined using the toxicity value, as summarised in Table 2.2.9.1.10.4.6.4 below. Therefore, in order to classify a mixture containing Acute 1 and/or Chronic 1 ingredients, the classifier needs to be informed of the value of the M factor in order to apply the summation method. Alternatively, the additivity formula (see 2.2.9.1.10.4.5.2) may be used when toxicity data are available for all highly toxic ingredients in the mixture and there is convincing evidence that all other ingredients, including those for which specific and/or chronic acute toxicity data are not available, are of low or no toxicity and do not significantly contribute to the environmental hazard of the mixture.

Table 2.2.9.1.10.4.6.4: Multiplying factors for highly toxic ingredients of mixtures

Acute toxicity	M factor	Chronic Toxicity	M factor	
$L(E)C_{50}$ value		**NOEC value**	**NRD[a]**	**RD[b]**
$0.1 < L(E)C_{50} \leq 1$	1	$0.01 < NOEC \leq 0.1$	1	–
$0.01 < L(E)C_{50} \leq 0.1$	10	$0.001 < NOEC \leq 0.01$	10	1
$0.001 < L(E)C_{50} \leq 0.01$	100	$0.0001 < NOEC \leq 0.001$	100	10
$0.0001 < L(E)C_{50} \leq 0.001$	1000	$0.00001 < NOEC \leq 0.0001$	1000	100
$0.00001 < L(E)C_{50} \leq 0.0001$	10000	$0.000001 < NOEC \leq 0.00001$	10000	1000
(continue in factor 10 intervals)		(continue in factor 10 intervals)		

[a] Non-rapidly degradable.

[b] Rapidly degradable.

2.2.9.1.10.4.6.5 Classification of mixtures with ingredients without any useable information

In the event that no useable information on acute and/or chronic aquatic toxicity is available for one or more relevant ingredients, it is concluded that the mixture cannot be attributed (a) definitive hazard category(ies). In this situation the mixture shall be classified based on the known ingredients only.

2.2.9.1.10.5 Substances or mixtures classified as environmentally hazardous substances (aquatic environment) on the basis of Regulation 1272/2008/EC[15]

If data for classification according to the criteria of 2.2.9.1.10.3 and 2.2.9.1.10.4 are not available, a substance or mixture:

(a) Shall be classified as an environmentally hazardous substance (aquatic environment) if it has to be assigned category(ies) Aquatic Acute 1, Aquatic Chronic 1 or Aquatic Chronic 2 according to Regulation 1272/2008/EC[15];

(b) May be regarded as not being an environmentally hazardous substance (aquatic environment) if it does not have to be assigned such a category according to the said Regulation.

2.2.9.1.10.6 Assignment of substances or mixtures classified as environmentally hazardous substances (aquatic environment) according to the provisions in 2.2.9.1.10.3, 2.2.9.1.10.4 or 2.2.9.1.10.5

Substances or mixtures classified as environmentally hazardous substances (aquatic environment), not otherwise classified under RID shall be designated:

UN No. 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.; or

UN No. 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

They shall be assigned to packing group III.

Genetically modified microorganisms or organisms

2.2.9.1.11 Genetically modified microorganisms (GMMOs) and genetically modified organisms (GMOs) are microorganisms and organisms in which genetic material has been purposely altered through genetic engineering in a way that does not occur naturally. They are assigned to Class 9 (UN No. 3245) if they do not meet the definition of toxic substances or of infectious substances, but are capable of altering animals, plants or microbiological substances in a way not normally the result of natural reproduction.

NOTE 1: GMMOs and GMOs which are infectious are substances of Class 6.2, UN Nos. 2814, 2900 or 3373.

2: GMMOs or GMOs are not subject to the provisions of RID when authorized for use by the competent authorities of the countries of origin, transit and destination[16].

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[15] Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directive 67/548/EEC and 1999/45/EC; and amending Regulation (EC) No 1907/2006, published in the Official Journal of the European Union, L 353, 31 December 2008, p 1-1355.

[16] See Part C of Directive 2001/18/EC of the European Parliament and of the Council on the deliberate release into the environment of genetically modified organisms and repealing Council Directive 90/220/EEC (Official Journal of the European Communities, No. L 106, of 17 April 2001, pp 8-14) and Regulation (EC) No. 1829/2003 of the European Parliament and of the Council on genetically modified food and feed (Official Journal of the European Union, No. L 268, of 18 October 2003, pp 1-23), which set out the authorization procedures for the European Union.

3: Genetically modified live animals which, in accordance with the current state of scientific knowledge, have no known pathogenic effect on humans, animals and plants and are carried in receptacles that are suitable for safely preventing both the escape of the animals and unauthorized access to them, are not subject to the provisions of RID. The provisions specified by the International Air Transport Association (IATA) for air transport "Live Animals Regulations, LAR" can be drawn on as guidelines for suitable receptacles for the transport of live animals.

4: Live animals shall not be used to carry genetically modified microorganisms classified in Class 9 unless the substance can be carried no other way. Genetically modified live animals shall be carried under terms and conditions of the competent authorities of the countries of origin and destination.

2.2.9.1.12 (Reserved)

Elevated temperature substances

2.2.9.1.13 Elevated temperature substances include substances which are carried or handed over for carriage in the liquid state at or above 100 °C and, in the case of those with a flash-point, below their flash-point. They also include solids which are carried or handed over for carriage at or above 240 °C.

NOTE: Elevated temperature substances may be assigned to Class 9 only if they do not meet the criteria of any other class.

Other substances and articles presenting a danger during carriage but not meeting the definitions of another class

2.2.9.1.14 The following other miscellaneous substances not meeting the definitions of another class are assigned to Class 9:

Solid ammonia compounds having a flash-point below 60 °C

Low hazard dithionites

Highly volatile liquids

Substances emitting noxious fumes

Substances containing allergens

Chemical kits and first aid kits

Electric double layer capacitors (with an energy storage capacity greater than 0.3 Wh)

Vehicles, engines and machinery, internal combustion

Articles containing miscellaneous dangerous goods.

NOTE: UN No. 1845 CARBON DIOXIDE, SOLID (DRY ICE)[17],
UN No. 2216 FISH MEAL (FISH SCRAP), STABILIZED,
UN No. 2807 MAGNETIZED MATERIAL,
UN No. 3334 AVIATION REGULATED LIQUID, N.O.S.,
UN No. 3335 AVIATION REGULATED SOLID, N.O.S.
listed in the UN Model Regulations, are not subject to the provisions of RID.

Assignment of the packing groups

2.2.9.1.15 When indicated in column (4) of Table A of Chapter 3.2, substances and articles of Class 9 are assigned to one of the following packing groups according to their degree of danger:

Packing group II: substances presenting medium danger;

Packing group III: substances presenting low danger.

2.2.9.2 Substances and articles not accepted for carriage

The following substances and articles shall not be accepted for carriage:

– Lithium batteries which do not meet the relevant conditions of special provisions 188, 230, 310, 636 or 670 of Chapter 3.3.

– Uncleaned empty containment vessels for articles such as transformers, condensers and hydraulic apparatus containing substances assigned to UN Nos. 2315, 3151, 3152 or 3432.

[17] For UN No. 1845 carbon dioxide, solid (dry ice) used as a coolant, see 5.5.3.

2.2.9.3 List of entries

	Classification code	UN No.	Name of the substance or article
Miscellaneous dangerous substances and articles			
Substances which, on inhalation as fine dust, may endanger health	**M1**	2212	ASBESTOS, AMPHIBOLE (amosite, tremolite, actinolite, anthophyllite, crocidolite)
		2590	ASBESTOS, CHRYSOTILE
Substances and articles which, in the event of fire, may form dioxins	**M2**	2315	POLYCHLORINATED BIPHENYLS, LIQUID
		3432	POLYCHLORINATED BIPHENYLS, SOLID
		3151	POLYHALOGENATED BIPHENYLS, LIQUID or
		3151	HALOGENATED MONOMETHYLDIPHENYLMETHANES, LIQUID or
		3151	POLYHALOGENATED TERPHENYLS, LIQUID
		3152	POLYHALOGENATED BIPHENYLS, SOLID or
		3152	HALOGENATED MONOMETHYLDIPHENYLMETHANES, SOLID or
		3152	POLYHALOGENATED TERPHENYLS, SOLID
Substances evolving flammable vapour	**M3**	2211	POLYMERIC BEADS, EXPANDABLE, evolving flammable vapour
		3314	PLASTICS MOULDING COMPOUND in dough, sheet or extruded rope form evolving flammable vapour
Lithium batteries	**M4**	3090	LITHIUM METAL BATTERIES (including lithium alloy batteries)
		3091	LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT (including lithium alloy batteries) or
		3091	LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT (including lithium alloy batteries)
		3480	LITHIUM ION BATTERIES (including lithium ion polymer batteries)
		3481	LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT (including lithium ion polymer batteries) or
		3481	LITHIUM ION BATTERIES PACKED WITH EQUIPMENT (including lithium ion polymer batteries)
		3536	LITHIUM BATTERIES INSTALLED IN CARGO TRANSPORT UNIT lithium ion batteries or lithium metal batteries
Live-saving appliances	**M5**	2990	LIFE-SAVING APPLIANCES, SELF-INFLATING such as aircraft evacuation chutes, aircraft survival kits and maritime life-saving appliances
		3072	LIFE-SAVING APPLIANCES NOT SELF-INFLATING containing dangerous goods as equipment
		3268	SAFETY DEVICES, electrically initiated
Environmentally hazardous substances	**pollutant to the aquatic environment**	**liquid M6**	3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
		solid M7	3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
	genetically modified microorganisms and organisms M8		3245 GENETICALLY MODIFIED MICROORGANISMS or 3245 GENETICALLY MODIFIED ORGANISMS
Elevated temperature substances		**liquid M9**	3257 ELEVATED TEMPERATURE LIQUID, N.O.S., at or above 100 °C and below its flash-point (including molten metal, molten salts, etc.)
		solid M10	3258 ELEVATED TEMPERATURE SOLID, N.O.S., at or above 240 °C

Other substances and articles presenting a danger during carriage, but not meeting the definitions of another class	**M11**	Only substances and articles listed in Table A of Chapter 3.2 are subject to the provisions for Class 9 under this classification code, as follows: 1841 ACETALDEHYDE AMMONIA 1931 ZINC DITHIONITE (ZINC HYDROSULPHITE) 1941 DIBROMODIFLUOROMETHANE 1990 BENZALDEHYDE 2071 AMMONIUM NITRATE BASED FERTILIZER 2969 CASTOR BEANS or 2969 CASTOR MEAL or 2969 CASTOR POMACE or 2969 CASTOR FLAKE 3166 VEHICLE, FLAMMABLE GAS POWERED or 3166 VEHICLE, FLAMMABLE LIQUID POWERED or 3166 VEHICLE, FUEL CELL, FLAMMABLE GAS POWERED or 3166 VEHICLE, FUEL CELL, FLAMMABLE LIQUID POWERED 3171 BATTERY POWERED VEHICLE or 3171 BATTERY POWERED EQUIPMENT 3316 CHEMICAL KIT or 3316 FIRST AID KIT 3359 FUMIGATED CARGO TRANSPORT UNIT 3499 CAPACITOR, ELECTRIC DOUBLE LAYER (with an energy storage capacity greater than 0.3Wh) 3508 CAPACITOR, ASYMMETRIC (with an energy storage capacity greater than 0.3Wh) 3509 PACKAGINGS, DISCARDED, EMPTY, UNCLEANED 3363 DANGEROUS GOODS IN MACHINERY or 3363 DANGEROUS GOODS IN APPARATUS 3530 ENGINE, INTERNAL COMBUSTION or 3530 MACHINERY, INTERNAL COMBUSTION 3548 ARTICLES CONTAINING MISCELLANEOUS DANGEROUS GOODS N.O.S.

Chapter 2.3 Test methods

2.3.0 General

Unless otherwise provided for in Chapter 2.2 or in this Chapter, the test methods to be used for the classification of dangerous goods are those described in the Manual of Tests and Criteria.

2.3.1 Exudation test for blasting explosives of Type A

2.3.1.1 Blasting explosives of type A (UN No. 0081) shall, if they contain more than 40% liquid nitric ester, in addition to the testing specified in the Manual of Tests and Criteria, satisfy the following exudation test.

2.3.1.2 The apparatus for testing blasting explosive for exudation (figs. 1 to 3) consists of a hollow bronze cylinder. This cylinder, which is closed at one end by a plate of the same metal, has an internal diameter of 15.7 mm and a depth of 40 mm. It is pierced by 20 holes 0.5 mm in diameter (four sets of five holes) on the circumference. A bronze piston, cylindrically fashioned over a length of 48 mm and having a total length of 52 mm, slides into the vertically placed cylinder. The piston, whose diameter is 15.6 mm, is loaded with a mass of 2 220 g so that a pressure of 120 kPa (1.20 bar) is exerted on the base of the cylinder.

2.3.1.3 A small plug of blasting explosive weighing 5 to 8 g, 30 mm long and 15 mm in diameter, is wrapped in very fine gauze and placed in the cylinder; the piston and its loading mass are then placed on it so that the blasting explosive is subjected to a pressure of 120 kPa (1.20 bar).

The time taken for the appearance of the first signs of oily droplets (nitroglycerine) at the outer orifices of the cylinder holes is noted.

2.3.1.4 The blasting explosive is considered satisfactory if the time elapsing before the appearance of the liquid exudations is more than five minutes, the test having been carried out at a temperature of 15 °C to 25 °C.

Test of blasting explosive for exudation

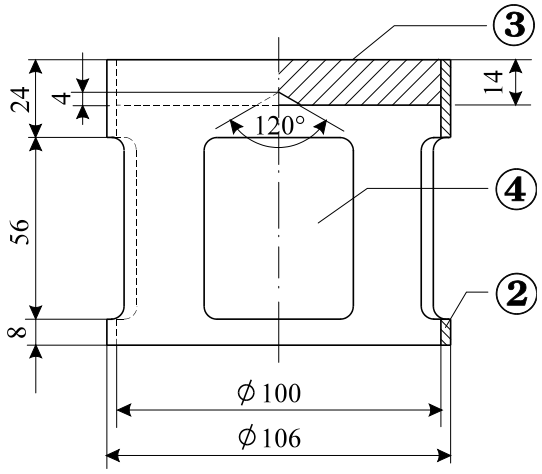


Fig. 1: Bell-form charge; mass 2220 g; capable of being suspended from a bronze piston

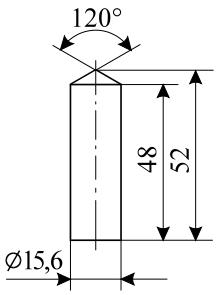


Fig. 2: Cylindrical bronze piston; dimensions in mm

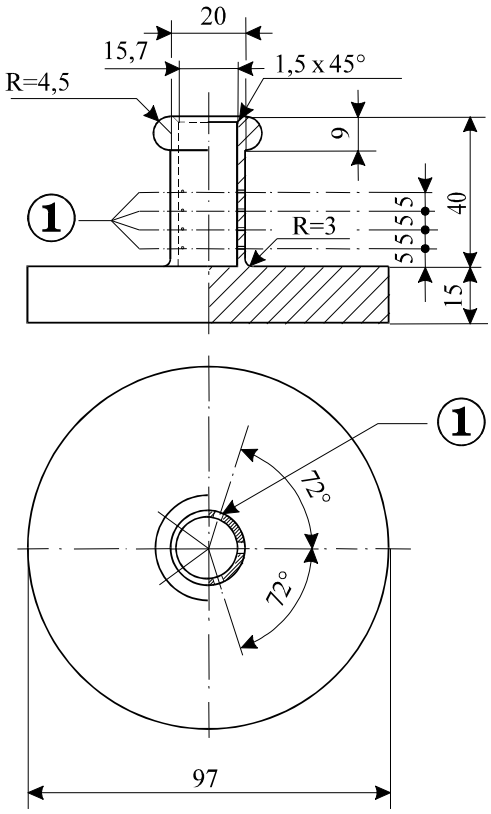


Fig. 3: Hollow bronze cylinder, closed at one end Plan and cut; dimensions in mm

Fig. 1 to 3:

(1) 4 series of 5 holes at 0.5 ∅

(2) copper

(3) lead plate with centre cone at the inferior face

(4) 4 openings, approximately 46 x 56, set at even intervals on the periphery

2.3.2 Tests relating to nitrated cellulose mixtures of Class 4.1

2.3.2.1 Nitrocellulose heated for half an hour at 132 °C shall not give off visible yellowish-brown nitrous fumes (nitrous gases). The ignition temperature shall be above 180 °C. See 2.3.2.3 to 2.3.2.8, 2.3.2.9 (a) and 2.3.2.10 below.

2.3.2.2 3 g of plasticized nitrocellulose, heated for one hour at 132 °C, shall not give off visible yellowish-brown nitrous fumes (nitrous gases). The ignition temperature shall be above 170 °C. See 2.3.2.3 to 2.3.2.8, 2.3.2.9 (b) and 2.3.2.10 below.

2.3.2.3 The test procedures set out below are to be applied when differences of opinion arise as to the acceptability of substances for carriage by rail.

2.3.2.4 If other methods or test procedures are used to verify the conditions of stability prescribed above in this section, those methods shall lead to the same findings as could be reached by the methods specified below.

2.3.2.5 In carrying out the stability tests by heating described below, the temperature of the oven containing the sample under test shall not deviate by more than 2 °C from the prescribed temperature; the prescribed duration of a 30-minute or 60-minute test shall be observed to within two minutes. The oven shall be such that the required temperature is restored not more than five minutes after insertion of the sample.

2.3.2.6 Before undergoing the tests in 2.3.2.9 and 2.3.2.10, the samples shall be dried for not less than 15 hours at the ambient temperature in a vacuum desiccator containing fused and granulated calcium chloride, the sample substance being spread in a thin layer; for this purpose, substances which are neither in powder form nor fibrous shall be ground, or grated, or cut into small pieces. The pressure in the desiccator shall be brought below 6.5 kPa (0.065 bar).

2.3.2.7 Before being dried as prescribed in 2.3.2.6 above, substances conforming to 2.3.2.2 shall undergo preliminary drying in a well-ventilated oven, with its temperature set at 70 °C, until the loss of mass per quarter-hour is less than 0.3% of the original mass.

2.3.2.8 Weakly nitrated nitrocellulose conforming to 2.3.2.1 shall first undergo preliminary drying as prescribed in 2.3.2.7 above; drying shall then be completed by keeping the nitrocellulose for at least 15 hours over concentrated sulphuric acid in a desiccator.

2.3.2.9 Test of chemical stability under heat

(a) Test of the substance listed in paragraph 2.3.2.1 above.

(i) In each of two glass test tubes having the following dimensions:

length 350 mm,

internal diameter 16 mm,

thickness of wall 1.5 mm

is placed 1 g of substance dried over calcium chloride (if necessary the drying shall be carried out after reducing the substance to pieces weighing not more than 0.05 g each). Both test tubes, completely covered with loose-fitting closures, are then so placed in an oven that at least four-fifths of their length is visible, and are kept at a constant temperature of 132 °C for 30 minutes. It is observed whether nitrous gases in the form of yellowish-brown fumes clearly visible against a white background are given off during this time.

(ii) In the absence of such fumes the substance is deemed to be stable.

(b) Test of plasticized nitrocellulose (see 2.3.2.2)

(i) 3 g of plasticized nitrocellulose are placed in glass test tubes, similar to those referred to in (a), which are then placed in an oven kept at a constant temperature of 132 °C.

(ii) The test tubes containing the plasticized nitrocellulose are kept in the oven for one hour. During this time no yellowish-brown nitrous fumes (nitrous gases) shall be visible. Observation and appraisal as in (a).

2.3.2.10 Ignition temperature (see 2.3.2.1 and 2.3.2.2)

(a) The ignition temperature is determined by heating 0.2 g of substance enclosed in a glass test tube immersed in a Wood's alloy bath. The test tube is placed in the bath when the latter has reached 100 °C. The temperature of the bath is then progressively increased by 5 °C per minute;

(b) The test tubes must have the following dimensions:

length 125 mm,

internal diameter 15 mm,

thickness of wall 0.5 mm

and shall be immersed to a depth of 20 mm;

(c) The test shall be repeated three times, the temperature at which ignition of the substance occurs, i.e., slow or rapid combustion, deflagration or detonation, being noted each time;

(d) The lowest temperature recorded in the three tests is the ignition temperature.

2.3.3 Tests relating to flammable liquids of Classes 3, 6.1 and 8

2.3.3.1 Determination of flash-point

2.3.3.1.1 The following methods for determining the flash-point of flammable liquids may be used:

International standards:

ISO 1516 (Determination of flash/no flash – Closed cup equilibrium method)

ISO 1523 (Determination of flash point – Closed cup equilibrium method)

ISO 2719 (Determination of flash point – Pensky-Martens closed cup method)

ISO 13736 (Determination of flash point – Abel closed-cup method)

ISO 3679 (Determination of flash point – Rapid equilibrium closed cup method)

ISO 3680 (Determination of flash/no flash – Rapid equilibrium closed cup method)

National standards:

American Society for Testing Materials International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, Pennsylvania, USA 19428-2959:

ASTM D3828-07a, Standard Test Methods for Flash Point by Small Scale Closed-Cup Tester

ASTM D56-05, Standard Test Method for Flash Point by Tag Closed-Cup Tester

ASTM D3278-96(2004)e1, Standard Test Methods for Flash Point of Liquids by Small Scale Closed-Cup Apparatus

ASTM D93-08, Standard Test Methods for Flash Point by Pensky-Martens Closed-Cup Tester

Association française de normalisation, AFNOR, 11, rue de Pressensé, F-93571 La Plaine Saint-Denis Cedex:

French standard NF M 07 - 019

French standards NF M 07 - 011 / NF T 30 - 050 / NF T 66 - 009

French standard NF M 07 - 036

Deutsches Institut für Normung, Burggrafenstraße 6, D-10787 Berlin:

Standard DIN 51755 (flash-points below 65 °C)

State Committee of the Council of Ministers for Standardization, RUS-113813, GSP, Moscow, M-49 Leninsky Prospect, 9:

GOST 12.1.044-84.

2.3.3.1.2 To determine the flash-point of paints, gums and similar viscous products containing solvents, only apparatus and test methods suitable for determining the flash-point for viscous liquids shall be used, in accordance with the following standards:

(a) International standard ISO 3679:1983;

(b) International standard ISO 3680:1983;

(c) International standard ISO 1523:1983;

(d) International standards EN ISO 13736 and EN ISO 2719, Method B.

2.3.3.1.3 The standards listed in 2.3.3.1.1 shall only be used for flash-point ranges which are specified therein. The possibility of chemical reactions between the substance and the sample holder shall be considered when selecting the standard to be used. The apparatus shall, as far as is consistent with safety, be placed in a draught-free position. For safety, a method utilizing a small sample size, around 2 ml, shall be used for organic peroxides and self-reactive substances (also known as "energetic" substances), or for toxic substances.

2.3.3.1.4 When the flash-point, determined by a non-equilibrium method is found to be 23 °C ± 2 °C or 60 °C ± 2 °C, it shall be confirmed for each temperature range by an equilibrium method.

2.3.3.1.5 In the event of a dispute as to the classification of a flammable liquid, the classification proposed by the consignor shall be accepted if a check-test of the flash-point, yields a result not differing by more than 2 °C from the limits (23 °C and 60 °C respectively) stated in 2.2.3.1. If the difference is more than 2 °C, a second check-test shall be carried out, and the lowest figure of the flash-points obtained in either check-test shall be adopted.

2.3.3.2 Determination of initial boiling point

The following methods for determining the initial boiling point of flammable liquids may be used:

International standards:

ISO 3924 (Petroleum products – Determination of boiling range distribution – Gas chromatography method)

ISO 4626 (Volatile organic liquids – Determination of boiling range of organic solvents used as raw materials)

ISO 3405 (Petroleum products – Determination of distillation characteristics at atmospheric pressure)

National standards:

American Society for Testing Materials International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, Pennsylvania, USA 19428-2959:

ASTM D86-07a, Standard Test Method for Distillation of Petroleum Products at Atmospheric Pressure

ASTM D1078-05, Standard Test Method for Distillation Range of Volatile Organic Liquids

Further acceptable methods:

Method A.2 as described in Part A of the Annex to Commission Regulation (EC) No 440/2008[18].

[18] Commission Regulation (EC) No 440/2008 of 30 May 2008 laying down test methods pursuant to Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (Official Journal of the European Union, No. L 142 of 31 May 2008, p.1-739 and No. L 143 of 3 June 2008, p.55).

2.3.3.3 Test for determining peroxide content

To determine the peroxide content of a liquid, the procedure is as follows:

A quantity p (about 5 g, weighed to the nearest 0.01 g) of the liquid to be titrated is placed in an Erlenmeyer flask; 20 cm^3 of acetic anhydride and about 1 g of powdered solid potassium iodide are added; the flask is shaken and, after 10 minutes, heated for 3 minutes to about 60 °C. When it has been left to cool for 5 minutes, 25 cm^3 of water are added. After this, it is left standing for half an hour, then the liberated iodine is titrated with a decinormal solution of sodium thiosulphate, no indicator being added; complete discoloration indicates the end of the reaction. If n is the number of cm^3 of thiosulphate solution required, the percentage of peroxide (calculated as H_2O_2) present in the sample is obtained by the formula:

$$\frac{17n}{100p}.$$

2.3.4 Test for determining fluidity

To determine the fluidity of liquid, viscous or pasty substances and mixtures, the following test method shall be used.

2.3.4.1 *Test apparatus*

Commercial penetrometer conforming to ISO 2137:1985, with a guide rod of 47.5 g ± 0.05 g;

sieve disc of duralumin with conical bores and a mass of 102.5 g ± 0.05 g (see Figure 1);

penetration vessel with an inside diameter of 72 mm to 80 mm for reception of the sample.

2.3.4.2 *Test procedure*

The sample is poured into the penetration vessel not less than half an hour before the measurement. The vessel is then hermetically closed and left standing until the measurement. The sample in the hermetically closed penetration vessel is heated to 35 °C ± 0.5 °C and is placed on the penetrometer table immediately prior to measurement (not more than two minutes). The point S of the sieve disc is then brought into contact with the surface of the liquid and the rate of penetration is measured.

2.3.4.3 *Evaluation of test results*

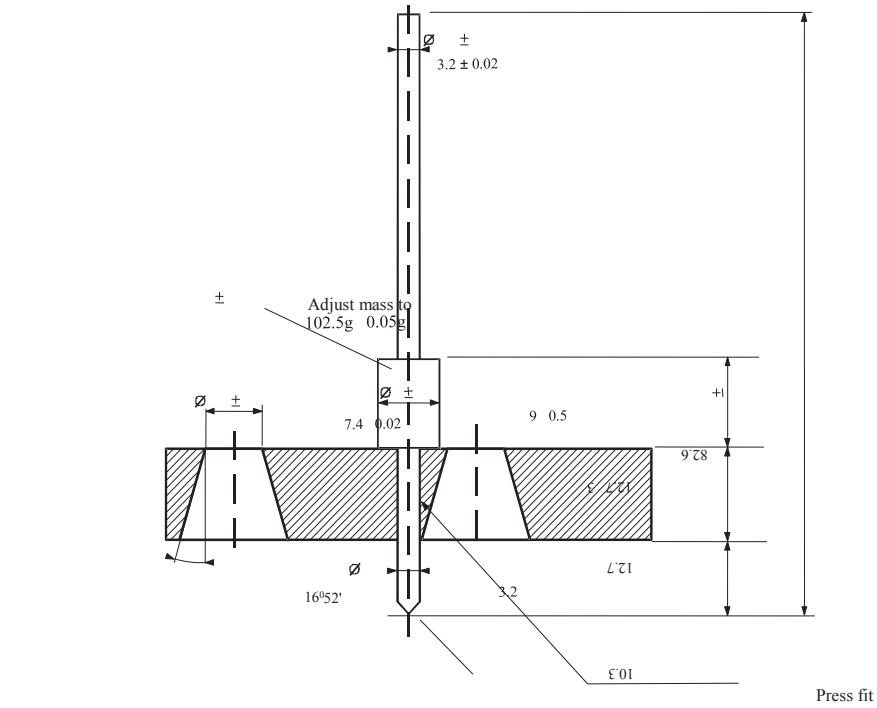
A substance is pasty if, after the centre S has been brought into contact with the surface of the sample, the penetration indicated by the dial gauge:

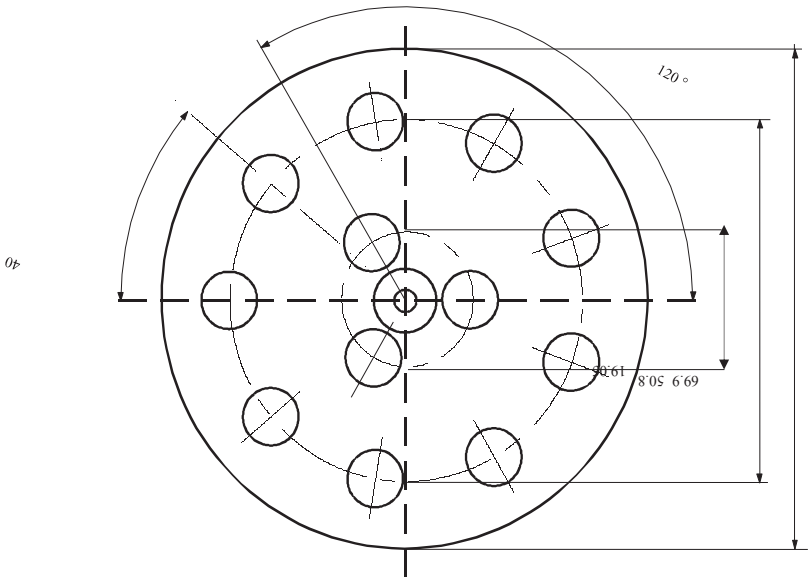
(a) after a loading time of 5 s ± 0.1 s, is less than 15.0 mm ± 0.3 mm; or

(b) after a loading time of 5 s ± 0.1 s, is greater than 15.0 mm ± 0.3 mm, but the additional penetration after another 55 s ± 0.5 s is less than 5.0 mm ± 0.5 mm.

NOTE: In the case of samples having a flow point, it is often impossible to produce a steady level surface in the penetration vessel and, hence, to establish satisfactory initial measuring conditions for the contact of the point S. Furthermore, with some samples, the impact of the sieve disc can cause an elastic deformation of the surface and, in the first few seconds, simulate a deeper penetration. In all these cases, it may be appropriate to make the evaluation in paragraph (b) above.

Figure 1
Penetrometer





Tolerances not specified are ± 0.1 mm.

2.3.5 Classification of organometallic substances in classes 4.2 and 4.3

Depending on their properties as determined in accordance with tests N.1 to N.5 of the Manual of Tests and Criteria, Part III, section 33, organometallic substances may be classified in Class 4.2 or 4.3, as appropriate, in accordance with the flowchart scheme given in Figure 2.3.5.

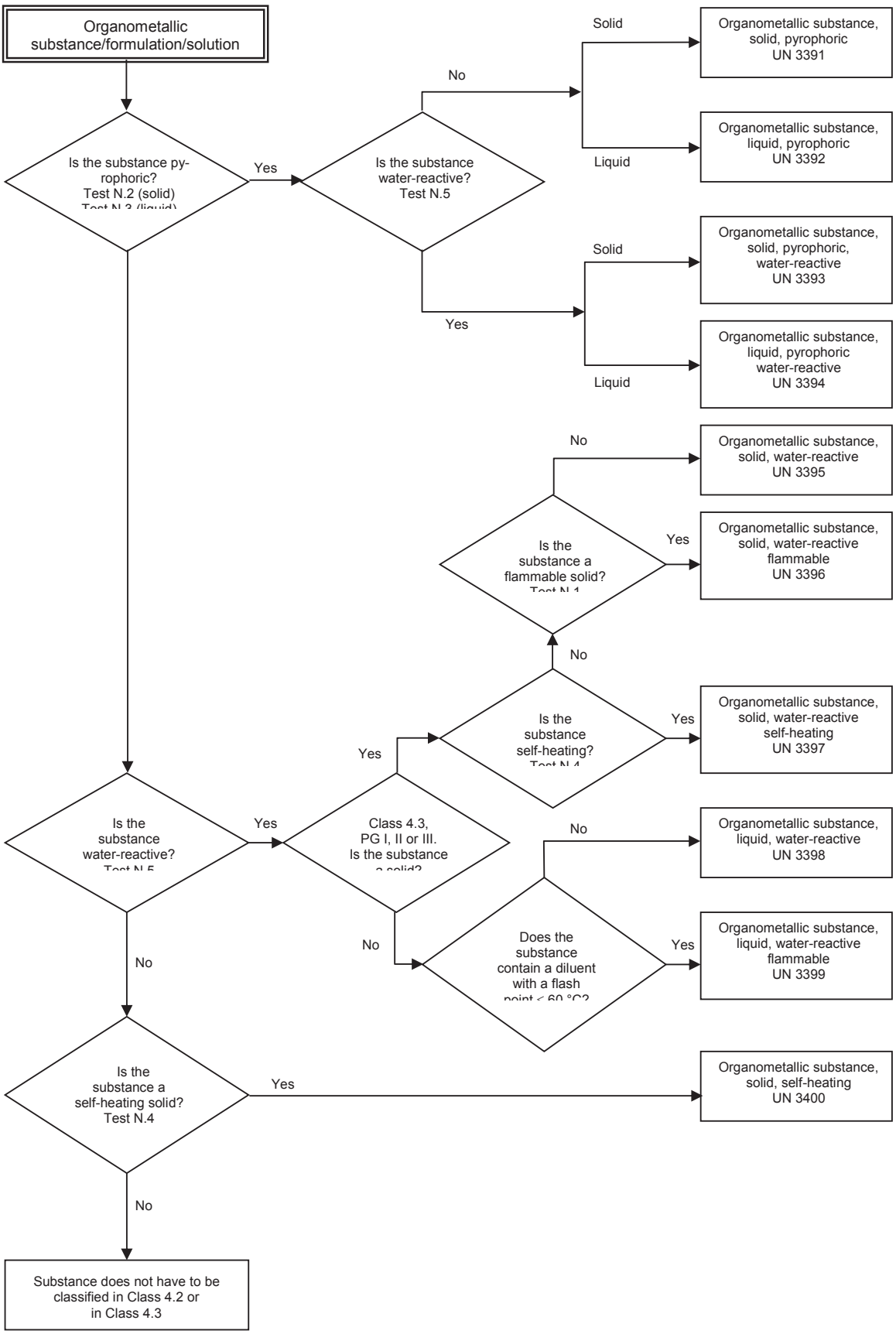
NOTE 1: Depending on their other properties and on the precedence of hazard table (see 2.1.3.10), organometallic substances may have to be classified in other classes as appropriate.

2: Flammable solutions with organometallic compounds in concentrations which are not liable to spontaneous combustion or, in contact with water, do not emit flammable gases in dangerous quantities, are substances of Class 3.

Figure 2.3.5: Flowchart scheme for the classification of organometallic substances in classes 4.2 and 4.3[(a), (b)]

(a) Test methods N.1 to N.5 can be found in the Manual of Tests and Criteria, Part III, Section 33.

(b) If applicable and testing is relevant, taking into account reactivity properties, Class 6.1 and 8 properties should be considered according to the table of precedence of hazards in 2.1.3.10.


Organometallic substance/formulation/solution
Is the substance pyrophoric? Test N.2 (solid) Test N.3 (liquid)
Yes
Is the substance water-reactive? Test N.5
No
Solid
Organometallic substance, solid, pyrophoric UN 3391
Liquid
Organometallic substance, liquid, pyrophoric UN 3392
Yes
Solid
Organometallic substance, solid, pyrophoric, water-reactive UN 3393
Liquid
Organometallic substance, liquid, pyrophoric water-reactive UN 3394
Is the substance water-reactive? Test N.5
Yes
Class 4.3, PG I, II or III. Is the substance a solid?
Yes
Is the substance self-heating? Test N.4
No
Is the substance a flammable solid? Test N.1
No
Organometallic substance, solid, water-reactive UN 3395
Yes
Organometallic substance, solid, water-reactive flammable UN 3396
Yes
Organometallic substance, solid, water-reactive self-heating UN 3397
No
Organometallic substance, liquid, water-reactive UN 3398
No
Does the substance contain a diluent with a flash point < 60 °C?
Yes
Organometallic substance, liquid, water-reactive flammable UN 3399
No
Is the substance a self-heating solid? Test N.4
Yes
Organometallic substance, solid, self-heating UN 3400
No
Substance does not have to be classified in Class 4.2 or in Class 4.3

Part 3 Dangerous goods lists, special provisions and exemptions related to limited and excepted quantities

Chapter 3.1 General

3.1.1 Introduction

In addition to the provisions referred to or given in the tables of this Part, the general requirements of each Part, Chapter and/or Section are to be observed. These general requirements are not given in the tables. When a general requirement is contradictory to a special provision, the special provision prevails.

3.1.2 Proper shipping name

NOTE: For proper shipping names used for the carriage of samples, see 2.1.4.1.

3.1.2.1 The proper shipping name is that portion of the entry most accurately describing the goods in Table A in Chapter 3.2, which is shown in upper case characters (plus any numbers, Greek letters, "sec", "tert", and the letters "m", "n", "o", "p", which form an integral part of the name). An alternative proper shipping name may be shown in brackets following the main proper shipping name [e.g., ETHANOL (ETHYL ALCOHOL)]. Portions of an entry appearing in lower case need not be considered as part of the proper shipping name.

3.1.2.2 When a combination of several distinct proper shipping names are listed under a single UN number, and these are separated by "and" or "or" in lower case or are punctuated by commas, only the most appropriate shall be shown in the transport document and package marks. Examples illustrating the selection of the proper shipping name for such entries are:

(a) UN 1057 LIGHTERS or LIGHTER REFILLS - The proper shipping name is the most appropriate of the following possible combinations:

LIGHTERS

LIGHTER REFILLS;

(b) UN 2793 FERROUS METAL BORINGS, SHAVINGS, TURNINGS or CUTTINGS in a form liable to self-heating. The proper shipping name is the most appropriate of the following combinations:

FERROUS METAL BORINGS

FERROUS METAL SHAVINGS

FERROUS METAL TURNINGS

FERROUS METAL CUTTINGS.

3.1.2.3 Proper shipping names may be used in the singular or plural as appropriate. In addition, when qualifying words are used as part of the proper shipping name, their sequence on the transport document or package markings is optional. For instance, "DIMETHYLAMINE AQUEOUS SOLUTION" may alternatively be shown "AQUEOUS SOLUTION OF DIMETHYLAMINE". Commercial or military names for goods of Class 1 which contain the proper shipping name supplemented by additional descriptive text may be used.

3.1.2.4 Many substances have an entry for both the liquid and solid state (see definitions for liquid and solid in 1.2.1), or for the solid and solution. These are allocated separate UN numbers which are not necessarily adjacent to each other.[1]

3.1.2.5 Unless it is already included in capital letters in the name indicated in Table A in Chapter 3.2, the qualifying word "MOLTEN" shall be added as part of the proper shipping name when a substance, which is a solid in accordance with the definition in 1.2.1, is offered for carriage in the molten state (e.g. ALKYLPHENOL, SOLID, N.O.S., MOLTEN).

3.1.2.6 Except for self-reactive substances and organic peroxides and unless it is already included in capital letters in the name indicated in Column (2) of Table A of Chapter 3.2, the word "STABILIZED" shall be added as part of the proper shipping name of a substance which without stabilization would be forbidden from carriage in accordance with paragraphs 2.2.x.2 due to it being liable to dangerously react under conditions normally encountered in carriage (e.g.: "TOXIC LIQUID, ORGANIC, N.O.S., STABILIZED").

When temperature control is used to stabilize such substances to prevent the development of any dangerous excess pressure, or the evolution of excessive heat, or when chemical stabilization is used in combination with temperature control, then:

[1] Details are provided in the alphabetical index (Table B of Chapter 3.2), e.g.:
NITROXYLENES, LIQUID 6.1 1665
NITROXYLENES, SOLID 6.1 3447.

(a) For liquids and solids: liquids and solids requiring temperature control[2] shall not be accepted for carriage by rail;

(b) (Reserved)

(c) For gases: the conditions of carriage shall be approved by the competent authority.

3.1.2.7 Hydrates may be carried under the proper shipping name for the anhydrous substance.

3.1.2.8 Generic or "not otherwise specified" (n.o.s.) names

3.1.2.8.1 Generic and "not otherwise specified" proper shipping names that are assigned to special provision 274 or 318 in Column (6) of Table A in Chapter 3.2 shall be supplemented with the technical name of the goods unless a national law or international convention prohibits its disclosure if it is a controlled substance. For explosives of Class 1, the dangerous goods description may be supplemented by additional descriptive text to indicate commercial or military names. Technical names shall be entered in brackets immediately following the proper shipping name. An appropriate modifier, such as "contains" or "containing" or other qualifying words such as "mixture", "solution", etc. and the percentage of the technical constituent may also be used. For example: "UN 1993 FLAMMABLE LIQUID, N.O.S. (CONTAINS XYLENE AND BENZENE), 3, II".

3.1.2.8.1.1 The technical name shall be a recognized chemical name or biological name, or other name currently used in scientific and technical handbooks, journals and texts. Trade names shall not be used for this purpose. In the case of pesticides, only ISO common name(s), other name(s) in the World Health Organization (WHO) Recommended Classification of Pesticides by Hazard and Guidelines to Classification, or the name(s) of the active substance(s) may be used.

3.1.2.8.1.2 When a mixture of dangerous goods or articles containing dangerous goods are described by one of the "N.O.S." or "generic" entries to which special provision 274 has been allocated in Column (6) of Table A in Chapter 3.2, not more than the two constituents which most predominantly contribute to the hazard or hazards of the mixture or of the articles need to be shown, excluding controlled substances when their disclosure is prohibited by national law or international convention. If a package containing a mixture is labelled with any subsidiary hazard label, one of the two technical names shown in parentheses shall be the name of the constituent which compels the use of the subsidiary hazard label.

NOTE: See 5.4.1.2.2.

3.1.2.8.1.3 Examples illustrating the selection of the proper shipping name supplemented with the technical name of goods for such n.o.s. entries are:

UN 3394 ORGANOMETALLIC SUBSTANCE, LIQUID, PYROPHORIC, WATER-REACTIVE (trimethylgallium)

UN 2902 PESTICIDE, LIQUID, TOXIC, N.O.S. (drazoxolon)

UN 3540 ARTICLES CONTAINING FLAMMABLE LIQUID, N.O.S. (pyrrolidine).

3.1.3 Solutions or mixtures

NOTE: Where a substance is specifically mentioned by name in Table A of Chapter 3.2, it shall be identified in carriage by the proper shipping name in Column (2) of Table A of Chapter 3.2. Such substances may contain technical impurities (for example those deriving from the production process) or additives for stability or other purposes that do not affect its classification. However, a substance mentioned by name containing technical impurities or additives for stability or other purposes affecting its classification shall be considered a solution or mixture (see 2.1.3.3).

3.1.3.1 A solution or mixture is not subject to RID if the characteristics, properties, form or physical state of the solution or mixture are such that it does not meet the criteria, including human experience criteria, for inclusion in any class.

3.1.3.2 A solution or mixture meeting the classification criteria of RID composed of a single predominant substance mentioned by name in Table A of Chapter 3.2 and one or more substances not subject to RID or traces of one or more substances mentioned by name in Table A of Chapter 3.2, shall be assigned the UN number and proper shipping name of the predominant substance mentioned by name in Table A of Chapter 3.2 unless:

(a) The solution or mixture is mentioned by name in Table A of Chapter 3.2;

(b) The name and description of the substance mentioned by name in Table A of Chapter 3.2 specifically indicate that they apply only to the pure substance;

(c) The class, classification code, packing group, or physical state of the solution or mixture is different from that of the substance mentioned by name in Table A of Chapter 3.2; or

---

[2] This includes all substances (including substances stabilized by chemical inhibitors) whose self-accelerating decomposition temperature (SADT) or self-accelerating polymerization temperature (SAPT) in the containment used for carriage is not more than 50 °C.

(d) The hazard characteristics and properties of the solution or mixture necessitate emergency response measures that are different from those required for the substance mentioned by name in Table A of Chapter 3.2.

Qualifying words such as "SOLUTION" or "MIXTURE", as appropriate, shall be added as part of the proper shipping name, for example, "ACETONE SOLUTION". In addition, the concentration of the mixture or solution may also be indicated after the basic description of the mixture or solution, for example, "ACETONE 75% SOLUTION".

3.1.3.3 A solution or mixture meeting the classification criteria of RID that is not mentioned by name in Table A of Chapter 3.2 and that is composed of two or more dangerous goods shall be assigned to an entry that has the proper shipping name, description, class, classification code and packing group that most precisely describe the solution or mixture.

Chapter 3.2 Dangerous goods list

3.2.1 Explanations on Table A: List of dangerous goods in UN number order

Explanations

As a rule, each row of Table A of this Chapter deals with the substance(s) or article(s) covered by a specific UN number. However, when substances or articles belonging to the same UN number have different chemical properties, physical properties and/or carriage conditions, several consecutive rows may be used for that UN number.

Each column of Table A is dedicated to a specific subject as indicated in the explanatory notes below. The intersection of columns and rows (cell) contains information concerning the subject treated in that column, for the substance(s) or article(s) of that row:

– The first four cells identify the substance(s) or article(s) belonging to that row (additional information in that respect may be given by the special provisions referred to in Column (6);
– The following cells give the applicable special provisions, either in the form of complete information or in coded form. The codes cross-refer to detailed information that is to be found in the Part, Chapter, Section and/or Sub-section indicated in the explanatory notes below. An empty cell means either that there is no special provision and that only the general requirements apply, or that the carriage restriction indicated in the explanatory notes is in force. When used in this Table, an alphanumeric code starting with the letters "SP" designates a special provision of Chapter 3.3.

The applicable general requirements are not referred to in the corresponding cells. The explanatory notes below indicate for every column the Part(s), Chapter(s), Section(s) and/or Sub-section(s) where these are to be found.

Explanatory notes for each column:

Column (1) "UN No."

Contains the UN number:

– of the dangerous substance or article if the substance or article has been assigned its own specific UN number, or

– of the generic or n.o.s. entry to which the dangerous substances or articles not mentioned by name shall be assigned in accordance with the criteria ("decision trees") of Part 2.

Column (2) "Name and description"

Contains, in upper case characters, the name of the substance or article, if the substance or article has been assigned its own specific UN number, or of the generic or n.o.s. entry to which it has been assigned in accordance with the criteria ("decision trees") of Part 2. This name shall be used as the proper shipping name or, when applicable, as part of the proper shipping name (see 3.1.2 for further details on the proper shipping name).

A descriptive text in lower case characters is added after the proper shipping name to clarify the scope of the entry if the classification and/or carriage conditions of the substance or article may be different under certain conditions.

Column (3a) "Class"

Contains the number of the class, whose heading covers the dangerous substance or article. This class number is assigned in accordance with the procedures and criteria of Part 2.

Column (3b) "Classification code"

Contains the classification code of the dangerous substance or article.

– For dangerous substances or articles of Class 1, the code consists of a division number and compatibility group letter, which are assigned in accordance with the procedures and criteria of 2.2.1.1.4.

– For dangerous substances or articles of Class 2, the code consists of a number and hazardous property group, which are explained in 2.2.2.1.2 and 2.2.2.1.3.

– For dangerous substances or articles of Classes 3, 4.1, 4.2, 4.3, 5.1, 5.2, 6.1, 6.2 and 9, the codes are explained in 2.2.x.1.2[1].

– For dangerous substances or articles of Class 8, the codes are explained in 2.2.8.1.4.1.

– Dangerous substances or articles of Class 7 do not have a classification code.

Column (4) "Packing group"

Contains the packing group number(s) (I, II or III) assigned to the dangerous substance. These packing group numbers are assigned on the basis of the procedures and criteria of Part 2. Certain articles and substances are not assigned to packing groups.

Column (5) "Labels"

Contains the model number of the labels/placards (see 5.2.2.2 and 5.3.1.7) that have to be affixed to packages, containers, tank-containers, portable tanks, MEGCs, tank-wagons, wagons with demountable tanks, battery-wagons and wagons.

The shunting labels in accordance with models Nos. 13 and 15 (see 5.3.4) indicated in brackets for some substances shall only be affixed in the following cases:

– Class 1: on both sides of wagons which comprise a full load

– Class 2: on both sides of tank-wagons, battery-wagons, wagons with demountable tanks and wagons carrying tank-containers, MEGCs and portable tanks.

However, for substances or articles of Class 7, 7X means label model No.7A, 7B or 7C as appropriate according to the category (see 5.1.5.3.4 and 5.2.2.1.11.1) or placard No. 7D (see 5.3.1.1.3 and 5.3.1.7.2).

The general provisions on labelling/placarding (e.g. number of labels, their location) are to be found in 5.2.2.1 for packages and small containers, and in 5.3.1, for large containers, tank-containers, MEGCs, portable tanks, tank-wagons, wagons with demountable tanks, battery-wagons and wagons.

NOTE: Special provisions, indicated in Column (6), may change the above labelling provisions.

Column (6) "Special provisions"

Contains the numeric codes of special provisions that have to be met. These provisions concern a wide array of subjects, mainly connected with the contents of Columns (1) to (5) (e.g. carriage prohibitions, exemptions from requirements, explanations concerning the classification of certain forms of the dangerous goods concerned and additional labelling or marking provisions), and are listed in Chapter 3.3 in numerical order. If Column (6) is empty, no special provisions apply to the contents of Columns (1) to (5) for the dangerous goods concerned.

Column (7a) "Limited quantities"

Provides the maximum quantity per inner packaging or article for carrying dangerous goods as limited quantities in accordance with Chapter 3.4.

Column (7b) "Excepted Quantities"

Contains an alphanumeric code with the following meaning:

– "E0" signifies that no exemption from the provisions of RID exists for the dangerous goods packed in excepted quantities;

– All the other alphanumerical codes starting with the letter "E" signify that the provisions of RID are not applicable if the conditions indicated in Chapter 3.5 are fulfilled.

[1] x = the class number of the dangerous substance or article, without dividing point if applicable

Column (8) "Packing instructions"

Contains the alphanumeric codes of the applicable packing instructions:

– Alphanumeric codes starting with the letter "P", which refers to packing instructions for packagings and receptacles (except IBCs and large packagings), or "R", which refers to packing instructions for light-gauge metal packagings. These are listed in 4.1.4.1 in numerical order, and specify the packagings and receptacles that are authorized. They also indicate which of the general packing provisions of 4.1.1, 4.1.2 and 4.1.3, and which of the special packing provisions of 4.1.5, 4.1.6, 4.1.7, 4.1.8 and 4.1.9 have to be met. If Column (8) does not contain a code starting with the letters "P" or "R", the dangerous goods concerned may not be carried in packagings;

– Alphanumeric codes starting with the letters "IBC" refer to packing instructions for IBCs. These are listed in 4.1.4.2 in numerical order, and specify the IBCs that are authorized. They also indicate which of the general packing provisions of 4.1.1, 4.1.2 and 4.1.3, and which of the special packing provisions of 4.1.5, 4.1.6, 4.1.7, 4.1.8 and 4.1.9 have to be met. If Column (8) does not contain a code starting with the letters "IBC", the dangerous goods concerned may not be carried in IBCs;

– Alphanumeric codes starting with the letters "LP" refer to packing instructions for large packagings. These are listed in 4.1.4.3 in numerical order, and specify the large packagings that are authorized. They also indicate which of the general packing provisions of 4.1.1, 4.1.2 and 4.1.3, and which of the special packing provisions of 4.1.5, 4.1.6, 4.1.7, 4.1.8 and 4.1.9 have to be met. If Column (8) does not contain a code starting with the letters "LP", the dangerous goods concerned cannot be carried in large packagings.

NOTE: Special packing provisions, indicated in Column (9a), may change the above packing instructions.

Column (9a) "Special packing provisions"

Contains the alphanumeric codes of the applicable special packing provisions:

– Alphanumeric codes starting with the letters "PP" or "RR" refer to special packing provisions for packagings and receptacles (except IBCs and large packagings) that have additionally to be met. These are to be found in 4.1.4.1, at the end of the relevant packing instruction (with the letter "P" or "R") referred to in Column (8). If Column (9a) does not contain a code starting with the letters "PP" or "RR", none of the special packing provisions listed at the end of the relevant packing instruction apply;

– Alphanumeric codes starting with the letter "B" or the letters "BB" refer to special packing provisions for IBCs that have additionally to be met. These are to be found in 4.1.4.2, at the end of the relevant packing instruction (with the letters "IBC") referred to in Column (8). If Column (9a) does not contain a code starting with the letter "B" or the letters "BB", none of the special packing provisions listed at the end of the relevant packing instruction apply;

– Alphanumeric codes starting with the letter "L" or the letters "LL" refer to special packing provisions for large packagings that have additionally to be met. These are to be found in 4.1.4.3, at the end of the relevant packing instruction (with the letters "LP") referred to in Column (8). If Column (9a) does not contain a code starting with the letter "L" or the letters "LL", none of the special packing provisions listed at the end of the relevant packing instruction apply.

Column (9b) "Mixed packing provisions"

Contains the alphanumeric codes starting with the letters "MP" of the applicable mixed packing provisions. These are listed in 4.1.10 in numerical order. If Column (9b) does not contain a code starting with the letters "MP", only the general requirements apply (see 4.1.1.5 and 4.1.1.6).

Column (10) "Portable tank and bulk container instructions"

Contains an alphanumeric code assigned to a portable tank instruction, in accordance with 4.2.5.2.1 to 4.2.5.2.4 and 4.2.5.2.6. This portable tank instruction corresponds to the least stringent provisions that are acceptable for the carriage of the substance in portable tanks. The codes identifying the other portable tank instructions that are also permitted for the carriage of the substance are to be found in 4.2.5.2.5. If no code is given, carriage in portable tanks is not permitted unless a competent authority approval is granted as detailed in 6.7.1.3.

The general requirements for the design, construction, equipment, type approval, testing and marking of portable tanks are to be found in Chapter 6.7. The general requirements for the use (e.g. filling) are to be found in 4.2.1 to 4.2.4.

The indication of an "(M)" means that the substance may be carried in UN MEGCs.

NOTE: Special provisions, indicated in Column (11), may change the above requirements.

May also contain alphanumeric codes starting with the letters "BK" referring to types of bulk containers described in Chapter 6.11 which may be used for the carriage of bulk goods in accordance with 7.3.1.1 (a) and 7.3.2.

Column (11) "Portable tank and bulk container special provisions"

Contains the alphanumeric codes of the portable tank special provisions that have additionally to be met. These codes, starting with the letters "TP" refer to special provisions for the construction or use of these portable tanks. They are to be found in 4.2.5.3.

NOTE: If technically relevant, these special provisions are not only applicable to the portable tanks specified in column (10), but also to the portable tanks that may be used according to the table in 4.2.5.2.5.

Column (12) "Tank codes for RID tanks"

Contains an alphanumeric code describing a tank type, in accordance with 4.3.3.1.1 (for gases of Class 2) or 4.3.4.1.1 (for substances of Classes 3 to 9). This tank type corresponds to the least stringent tank provisions that are acceptable for the carriage of the relevant substance in RID tanks. The codes describing the other permitted tank types are to be found in 4.3.3.1.2 (for gases of Class 2) or 4.3.4.1.2 (for substances of Classes 3 to 9). If no code is given, carriage in RID tanks is not permitted.

If in this column a tank code for solids (S) and for liquids (L) is indicated, this means that this substance may be offered for carriage in tanks in the solid or the liquid (molten) state. In general this provision is applicable to substances having melting points from 20 °C to 180 °C.

If for a solid, only a tank code for liquids (L) is indicated in this column, this means that this substance is only offered for carriage in tanks in the liquid (molten) state.

The general requirements for the construction, equipment, type approval, testing and marking that are not indicated in the tank code are to be found in 6.8.1, 6.8.2, 6.8.3 and 6.8.5. The general requirements for the use (e.g. maximum degree of filling, minimum test pressure) are to be found in 4.3.1 to 4.3.4.

The indication of a "(M)" after the tank code means that the substance can also be carried in battery-wagons or MEGCs.

The indication of a "(+)" after the tank code means that the alternative use of the tanks is permitted only where this is specified in the certificate of type approval.

For fibre-reinforced plastic tank-containers, see 4.4.1 and Chapter 6.9; for vacuum-operated waste tanks, see 4.5.1 and Chapter 6.10.

NOTE: Special provisions, indicated in Column (13), may change the above requirements.

Column (13) "Special provisions for RID tanks"

Contains the alphanumeric codes of the special provisions for RID tanks that have additionally to be met:

– Alphanumeric codes starting with the letters "TU" refer to special provisions for the use of these tanks. These are to be found in 4.3.5;

– Alphanumeric codes starting with the letters "TC" refer to special provisions for the construction of these tanks. These are to be found in 6.8.4 (a);

– Alphanumeric codes starting with the letters "TE" refer to special provisions concerning the items of equipment of these tanks. These are to be found in 6.8.4 (b);

– Alphanumeric codes starting with the letters "TA" refer to special provisions for the type approval of these tanks. These are to be found in 6.8.4 (c);

– Alphanumeric codes starting with the letters "TT" refer to special provisions for the testing of these tanks. These are to be found in 6.8.4 (d);

– Alphanumeric codes starting with the letters "TM" refer to special provisions for the marking of these tanks. These are to be found in 6.8.4 (e).

NOTE: If technically relevant, these special provisions are not only applicable to the tanks specified in column (12), but also to the tanks that may be used according to the hierarchies in 4.3.3.1.2 and 4.3.4.1.2.

Column (14) (Reserved)

Column (15) "Transport category"

Contains a figure indicating the transport category to which the substance or article is assigned for the purposes of exempting transport operations performed by undertakings in connection with their main business (see 1.1.3.1 (c)). When no transport category has been assigned, this is indicated by the mention "–".

Column (16) "Special provisions for carriage – Packages"

Contains the alphanumeric code(s), starting with letter "W", of the applicable special provisions (if any) for carriage in packages. These are listed in 7.2.4. General provisions concerning the carriage in packages are to be found in Chapters 7.1 and 7.2.

NOTE: In addition, special provisions indicated in Column (18), concerning loading, unloading and handling, shall be observed.

Column (17) "Special provisions for carriage – Bulk"

Contains the alphanumeric code(s), starting with letters "VC", as well as the alphanumeric code(s) starting with letters "AP", of the applicable provisions for carriage in bulk. These are listed in 7.3.3. If no special provision, identified by the code "VC" or a reference to a specific paragraph, explicitly authorizing this mode of carriage is indicated in this column, and no special provision, identified by the code "BK" or a reference to a specific paragraph, explicitly authorizing this mode of carriage is indicated in column (10), carriage in bulk is not permitted. General and additional provisions concerning carriage in bulk are to be found in Chapters 7.1 and 7.3.

NOTE: In addition, special provisions indicated in Column (18), concerning loading, unloading and handling, shall be observed.

Column (18) "Special provisions for carriage – Loading, unloading and handling"

Contains the alphanumeric code(s), starting with letters "CW", of the applicable special provisions for loading, unloading and handling. These are listed in 7.5.11. If no code is given, only the general provisions apply (see 7.5.1 to 7.5.4 and 7.5.8).

Column (19) "Colis express (express parcels)"

Contains alphanumeric codes beginning with the letters "CE" for the requirements applicable to forwarding as Colis Express (express parcels). These requirements are given in Chapter 7.6. When column 19 does not contain a code, forwarding as Colis Express (express parcels) is not permitted.

Column (20) "Hazard identification number"

Contains a two or three figure number (preceded in certain cases by the letter "X") for substances and articles of classes 2 to 9, and for substances and articles of Class 1, the classification code (see column (3b)). In the cases described in 5.3.2.1, this number shall appear in the upper half of the orange-coloured plates. The meaning of the hazard identification numbers is explained in 5.3.2.3.

UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identification No.
									Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions	Tank code	Special provisions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
0004	AMMONIUM PICRATE dry or wetted with less than 10% water, by mass	1	1.1D		1 (+13)		0	E0	P112a P112b P112c	PP26	MP20					1	W2 W3		CW1		1.1D
0005	CARTRIDGES FOR WEAPONS with bursting charge	1	1.1F		1 (+13)		0	E0	P130		MP23					1	W2		CW1		1.1F
0006	CARTRIDGES FOR WEAPONS with bursting charge	1	1.1E		1 (+13)		0	E0	P130 LP101	PP67 L1	MP21					1	W2		CW1		1.1E
0007	CARTRIDGES FOR WEAPONS with bursting charge	1	1.2F		1 (+13)		0	E0	P130		MP23					1	W2		CW1		1.2F
0009	AMMUNITION, INCENDIARY with or without burster, expelling charge or propelling charge	1	1.2G		1		0	E0	P130 LP101	PP67 L1	MP23					1	W2		CW1		1.2G
0010	AMMUNITION, INCENDIARY with or without burster, expelling charge or propelling charge	1	1.3G		1		0	E0	P130 LP101	PP67 L1	MP23					1	W2		CW1		1.3G
0012	CARTRIDGES FOR WEAPONS, INERT PROJECTILE or CARTRIDGES, SMALL ARMS	1	1.4S		1.4	364	5 kg	E0	P130		MP23 MP24					4	W2		CW1	CE1	1.4S
0014	CARTRIDGES FOR WEAPONS, BLANK or CARTRIDGES, SMALL ARMS, BLANK or CARTRIDGES FOR TOOLS, BLANK	1	1.4S		1.4	364	5 kg	E0	P130		MP23 MP24					4	W2		CW1	CE1	1.4S
0015	AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge	1	1.2G		1		0	E0	P130 LP101	PP67 L1	MP23					1	W2		CW1		1.2G
0015	AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge, containing corrosive substances	1	1.2G		1+8		0	E0	P130 LP101	PP67 L1	MP23					1	W2		CW1		1.2G
0015	AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge, containing toxic by inhalation substances	1	1.2G		1+6.1		0	E0	P130 LP101	PP67 L1	MP23					1	W2		CW1 CW28		1.2G
0016	AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge	1	1.3G		1		0	E0	P130 LP101	PP67 L1	MP23					1	W2		CW1		1.3G
0016	AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge, containing corrosive substances	1	1.3G		1+8		0	E0	P130 LP101	PP67 L1	MP23					1	W2		CW1		1.3G

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
0016	AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge, containing toxic by inhalation substances	1	1.3G		1+6.1		0	E0	P130 LP101	PP67 L1	MP23					1	W2		CW1 CW28		1.3G
0018	AMMUNITION, TEAR-PRODUCING with burster, expelling charge or propelling charge	1	1.2G		1+6.1+8		0	E0	P130 LP101	PP67 L1	MP23					1	W2				1.2G
0019	AMMUNITION, TEAR-PRODUCING with burster, expelling charge or propelling charge	1	1.3G		1+6.1+8		0	E0	P130 LP101	PP67 L1	MP23					1	W2		CW1 CW28		1.3G
0020	AMMUNITION, TOXIC with burster, expelling charge or propelling charge	1	1.2K	CARRIAGE PROHIBITED																	
0021	AMMUNITION, TOXIC with burster, expelling charge or propelling charge	1	1.3K	CARRIAGE PROHIBITED																	
0027	BLACK POWDER (GUNPOWDER), granular or as a meal	1	1.1D		1 (+13)		0	E0	P113	PP50	MP20 MP24					1	W2 W3		CW1		1.1D
0028	BLACK POWDER (GUNPOWDER), COMPRESSED or BLACK POWDER (GUNPOWDER), IN PELLETS	1	1.1D		1 (+13)		0	E0	P113	PP51	MP20 MP24					1	W2		CW1		1.1D
0029	DETONATORS, NON-ELECTRIC for blasting	1	1.1B		1 (+13)		0	E0	P131	PP68	MP23					1	W2		CW1		1.1B
0030	DETONATORS, ELECTRIC for blasting	1	1.1B		1 (+13)		0	E0	P131		MP23					1	W2		CW1		1.1B
0033	BOMBS with bursting charge	1	1.1F		1 (+13)		0	E0	P130		MP23					1	W2		CW1		1.1F
0034	BOMBS with bursting charge	1	1.1D		1 (+13)		0	E0	P130 LP101	PP67 L1	MP21					1	W2		CW1		1.1D
0035	BOMBS with bursting charge	1	1.2D		1		0	E0	P130 LP101	PP67 L1	MP21					1	W2		CW1		1.2D
0037	BOMBS, PHOTO-FLASH	1	1.1F		1 (+13)		0	E0	P130		MP23					1	W2		CW1		1.1F
0038	BOMBS, PHOTO-FLASH	1	1.1D		1 (+13)		0	E0	P130 LP101	PP67 L1	MP21					1	W2		CW1		1.1D
0039	BOMBS, PHOTO-FLASH	1	1.2G		1		0	E0	P130 LP101	PP67 L1	MP23					1	W2		CW1		1.2G
0042	BOOSTERS without detonator	1	1.1D		1 (+13)		0	E0	P132a P132b		MP21					1	W2		CW1		1.1D
0043	BURSTERS, explosive	1	1.1D		1 (+13)		0	E0	P133	PP69	MP21					1	W2		CW1		1.1D
0044	PRIMERS, CAP TYPE	1	1.4S		1.4		0	E0	P133		MP23 MP24					4	W2		CW1	CE1	1.4S

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
0048	CHARGES, DEMOLITION	1	1.1D		1 (+13)		0	E0	P130 LP101	PP67 L1	MP21					1	W2		CW1		1.1D
0049	CARTRIDGES, FLASH	1	1.1G		1 (+13)		0	E0	P135		MP23					1	W2		CW1		1.1G
0050	CARTRIDGES, FLASH	1	1.3G		1		0	E0	P135		MP23					1	W2		CW1		1.3G
0054	CARTRIDGES, SIGNAL	1	1.3G		1		0	E0	P135		MP23 MP24					1	W2		CW1		1.3G
0055	CASES, CARTRIDGE, EMPTY, WITH PRIMER	1	1.4S		1.4	364	5 kg	E0	P136		MP23					4	W2		CW1	CE1	1.4S
0056	CHARGES, DEPTH	1	1.1D		1 (+13)		0	E0	P130 LP101	PP67 L1	MP21					1	W2		CW1		1.1D
0059	CHARGES, SHAPED, without detonator	1	1.1D		1 (+13)		0	E0	P137	PP70	MP21					1	W2		CW1		1.1D
0060	CHARGES, SUPPLEMENTARY, EXPLOSIVE	1	1.1D		1 (+13)		0	E0	P132a P132b		MP21					1	W2		CW1		1.1D
0065	CORD, DETONATING, flexible	1	1.1D		1 (+13)		0	E0	P139	PP71 PP72	MP21					1	W2		CW1		1.1D
0066	CORD, IGNITER	1	1.4G		1.4		0	E0	P140		MP23					2	W2		CW1	CE1	1.4G
0070	CUTTERS, CABLE, EXPLOSIVE	1	1.4S		1.4		0	E0	P134 LP102		MP23					4	W2		CW1	CE1	1.4S
0072	CYCLOTRIMETHYLENETRINITRAMINE (CYCLONITE; HEXOGEN; RDX), WETTED with not less than 15% water, by mass	1	1.1D		1 (+15)	266	0	E0	P112a	PP45	MP20					1	W2		CW1		1.1D
0073	DETONATORS FOR AMMUNITION	1	1.1B		1 (+13)		0	E0	P133		MP23					1	W2		CW1		1.1B
0074	DIAZODINITROPHENOL, WETTED with not less than 40% water, or mixture of alcohol and water, by mass	1	1.1A	CARRIAGE PROHIBITED																	
0075	DIETHYLENEGLYCOL DINITRATE, DESENSITIZED with not less than 25% non-volatile, water-insoluble phlegmatizer, by mass	1	1.1D		1 (+15)	266	0	E0	P115	PP53 PP54 PP57 PP58	MP20					1	W2		CW1		1.1D
0076	DINITROPHENOL, dry or wetted with less than 15% water, by mass	1	1.1D		1+6.1 (+13)		0	E0	P112a P112b P112c	PP26	MP20					1	W2 W3		CW1 CW28		1.1D
0077	DINITROPHENOLATES, alkali metals, dry or wetted with less than 15% water, by mass	1	1.3C		1+6.1 (+13)		0	E0	P114a P114b	PP26	MP20					1	W2 W3		CW1 CW28		1.3C

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
0078	DINITRORESORCINOL, dry or wetted with less than 15% water, by mass	1	1.1D		1 (+13)		0	E0	P112a P112b P112c	PP26	MP20					1	W2 W3		CW1		1.1D
0079	HEXANITRODIPHENYLAMINE (DIPICRYLAMINE; HEXYL)	1	1.1D		1 (+13)		0	E0	P112b P112c		MP20					1	W2 W3		CW1		1.1D
0081	EXPLOSIVE, BLASTING, TYPE A	1	1.1D		1 (+13)	616 617	0	E0	P116	PP63 PP66	MP20					1	W2 W3		CW1		1.1D
0082	EXPLOSIVE, BLASTING, TYPE B	1	1.1D		1 (+13)	617	0	E0	P116 IBC100	PP61 PP62 B9	MP20					1	W2 W3 W12		CW1		1.1D
0083	EXPLOSIVE, BLASTING, TYPE C	1	1.1D		1 (+15)	267 617	0	E0	P116		MP20					1	W2 W3		CW1		1.1D
0084	EXPLOSIVE, BLASTING, TYPE D	1	1.1D		1 (+13)	617	0	E0	P116		MP20					1	W2		CW1		1.1D
0092	FLARES, SURFACE	1	1.3G		1		0	E0	P135		MP23					1	W2		CW1		1.3G
0093	FLARES, AERIAL	1	1.3G		1		0	E0	P135		MP23					1	W2		CW1		1.3G
0094	FLASH POWDER	1	1.1G		1 (+13)		0	E0	P113	PP49	MP20					1	W2 W3		CW1		1.1G
0099	FRACTURING DEVICES, EXPLOSIVE without detonator, for oil wells	1	1.1D		1 (+13)		0	E0	P134 LP102		MP21					1	W2		CW1		1.1D
0101	FUSE, NON-DETONATING	1	1.3G		1		0	E0	P140	PP74 PP75	MP23					1	W2		CW1		1.3G
0102	CORD (FUSE), DETONATING, metal clad	1	1.2D		1		0	E0	P139	PP71	MP21					1	W2		CW1		1.2D
0103	FUSE, IGNITER, tubular, metal clad	1	1.4G		1.4		0	E0	P140		MP23					2	W2		CW1		1.4G
0104	CORD (FUSE), DETONATING, MILD EFFECT, metal clad	1	1.4D		1.4		0	E0	P139	PP71	MP21					2	W2		CW1		1.4D
0105	FUSE, SAFETY	1	1.4S		1.4		0	E0	P140	PP73	MP23					4	W2		CW1	CE1	1.4S
0106	FUZES, DETONATING	1	1.1B		1 (+13)		0	E0	P141		MP23					1	W2		CW1		1.1B
0107	FUZES, DETONATING	1	1.2B		1 (+13)		0	E0	P141		MP23					1	W2		CW1		1.2B
0110	GRENADES, PRACTICE, hand or rifle	1	1.4S		1.4		0	E0	P141		MP23					4	W2		CW1	CE1	1.4S
0113	GUANYLNITROSAMINOGUANYLIDENE HYDRAZINE, WETTED with not less than 30% water, by mass	1	1.1A	CARRIAGE PROHIBITED																	

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
0114	GUANYLNITROSAMINOGUANYL-TETRAZENE (TETRAZENE), WETTED with not less than 30% water, or mixture of alcohol and water, by mass	1	1.1A	CARRIAGE PROHIBITED																	
0118	HEXOLITE (HEXOTOL), dry or wetted with less than 15% water, by mass	1	1.1D		1 (+13)		0	E0	P112a P112b P112c		MP20					1	W2 W3		CW1		1.1D
0121	IGNITERS	1	1.1G		1 (+13)		0	E0	P142		MP23					1	W2		CW1		1.1G
0124	JET PERFORATING GUNS, CHARGED, oil well, without detonator	1	1.1D		1 (+13)		0	E0	P101		MP21					1	W2		CW1		1.1D
0129	LEAD AZIDE, WETTED with not less than 20% water, or mixture of alcohol and water, by mass	1	1.1A	CARRIAGE PROHIBITED																	
0130	LEAD STYPHNATE (LEAD TRINITRORESORCINATE), WETTED with not less than 20% water, or mixture of alcohol and water, by mass	1	1.1A	CARRIAGE PROHIBITED																	
0131	LIGHTERS, FUSE	1	1.4S		1.4		0	E0	P142		MP23					4	W2		CW1	CE1	1.4S
0132	DEFLAGRATING METAL SALTS OF AROMATIC NITRODERIVATIVES, N.O.S.	1	1.3C		1 (+13)	274	0	E0	P114a P114b	PP26	MP2					1	W2 W3		CW1		1.3C
0133	MANNITOL HEXANITRATE (NITROMANNITE), WETTED with not less than 40% water, or mixture of alcohol and water, by mass	1	1.1D		1 (+15)	266	0	E0	P112a		MP20					1	W2		CW1		1.1D
0135	MERCURY FULMINATE, WETTED with not less than 20% water, or mixture of alcohol and water, by mass	1	1.1A	CARRIAGE PROHIBITED																	
0136	MINES with bursting charge	1	1.1F		1 (+13)		0	E0	P130		MP23					1	W2		CW1		1.1F
0137	MINES with bursting charge	1	1.1D		1 (+13)		0	E0	P130 LP101	PP67 L1	MP21					1	W2		CW1		1.1D
0138	MINES with bursting charge	1	1.2D		1		0	E0	P130 LP101	PP67 L1	MP21					1	W2		CW1		1.2D
0143	NITROGLYCERIN, DESENSITIZED with not less than 40% non-volatile water-insoluble phlegmatizer, by mass	1	1.1D		1+6.1 (+15)	266 271	0	E0	P115	PP53 PP54 PP57 PP58	MP20					1	W2		CW1 CW28		1.1D

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
0144	NITROGLYCERIN SOLUTION IN ALCOHOL with more than 1% but not more than 10% nitroglycerin	1	1.1D		1 (+13)	358	0	E0	P115	PP45 PP55 PP56 PP59 PP60	MP20					1	W2		CW1		1.1D
0146	NITROSTARCH, dry or wetted with less than 20% water, by mass	1	1.1D		1 (+15)		0	E0	P112a P112b P112c		MP20					1	W2 W3		CW1		1.1D
0147	NITRO UREA	1	1.1D		1 (+13)		0	E0	P112b		MP20					1	W2 W3		CW1		1.1D
0150	PENTAERYTHRITE TETRANITRATE (PENTAERYTHRITOL TETRANITRATE; PETN), WETTED with not less than 25% water, by mass, or DESENSITIZED with not less than 15% phlegmatizer, by mass	1	1.1D		1 (+15)	266	0	E0	P112a P112b		MP20					1	W2 W3		CW1		1.1D
0151	PENTOLITE, dry or wetted with less than 15% water, by mass	1	1.1D		1 (+13)		0	E0	P112a P112b P112c		MP20					1	W2 W3		CW1		1.1D
0153	TRINITROANILINE (PICRAMIDE)	1	1.1D		1 (+13)		0	E0	P112b P112c		MP20					1	W2 W3		CW1		1.1D
0154	TRINITROPHENOL (PICRIC ACID), dry or wetted with less than 30% water, by mass	1	1.1D		1 (+13)		0	E0	P112a P112b P112c	PP26	MP20					1	W2 W3		CW1		1.1D
0155	TRINITROCHLOROBENZENE (PICRYL CHLORIDE)	1	1.1D		1 (+13)		0	E0	P112b P112c		MP20					1	W2 W3		CW1		1.1D
0159	POWDER CAKE (POWDER PASTE), WETTED with not less than 25% water, by mass	1	1.3C		1 (+13)	266	0	E0	P111	PP43	MP20					1	W2		CW1		1.3C
0160	POWDER, SMOKELESS	1	1.1C		1 (+15)		0	E0	P114b	PP50 PP52	MP20 MP24					1	W2 W3		CW1		1.1C
0161	POWDER, SMOKELESS	1	1.3C		1 (+13)		0	E0	P114b	PP50 PP52	MP20 MP24					1	W2 W3		CW1		1.3C
0167	PROJECTILES with bursting charge	1	1.1F		1 (+13)		0	E0	P130		MP23					1	W2		CW1		1.1F
0168	PROJECTILES with bursting charge	1	1.1D		1 (+13)		0	E0	P130 LP101	PP67 L1	MP21					1	W2		CW1		1.1D
0169	PROJECTILES with bursting charge	1	1.2D		1		0	E0	P130 LP101	PP67 L1	MP21					1	W2		CW1		1.2D

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
0171	AMMUNITION, ILLUMINATING with or without burster, expelling charge or propelling charge	1	1.2G		1		0	E0	P130 LP101	PP67 L1	MP23					1	W2		CW1		1.2G
0173	RELEASE DEVICES, EXPLOSIVE	1	1.4S		1.4		0	E0	P134 LP102		MP23					4	W2		CW1	CE1	1.4S
0174	RIVETS, EXPLOSIVE	1	1.4S		1.4		0	E0	P134 LP102		MP23					4	W2		CW1	CE1	1.4S
0180	ROCKETS with bursting charge	1	1.1F		1 (+13)		0	E0	P130		MP23					1	W2		CW1		1.1F
0181	ROCKETS with bursting charge	1	1.1E		1 (+13)		0	E0	P130 LP101	PP67 L1	MP21					1	W2		CW1		1.1E
0182	ROCKETS with bursting charge	1	1.2E		1		0	E0	P130 LP101	PP67 L1	MP21					1	W2		CW1		1.2E
0183	ROCKETS with inert head	1	1.3C		1		0	E0	P130 LP101	PP67 L1	MP22					1	W2		CW1		1.3C
0186	ROCKET MOTORS	1	1.3C		1		0	E0	P130 LP101	PP67 L1	MP22 MP24					1	W2		CW1		1.3C
0190	SAMPLES, EXPLOSIVE, other than initiating explosive	1				16 274	0	E0	P101		MP2					0	W2		CW1		
0191	SIGNAL DEVICES, HAND	1	1.4G		1.4		0	E0	P135		MP23 MP24					2	W2		CW1		1.4G
0192	SIGNALS, RAILWAY TRACK, EXPLOSIVE	1	1.1G		1 (+13)		0	E0	P135		MP23					1	W2		CW1		1.1G
0193	SIGNALS, RAILWAY TRACK, EXPLOSIVE	1	1.4S		1.4		0	E0	P135		MP23					4	W2		CW1	CE1	1.4S
0194	SIGNALS, DISTRESS, ship	1	1.1G		1 (+13)		0	E0	P135		MP23 MP24					1	W2		CW1		1.1G
0195	SIGNALS, DISTRESS, ship	1	1.3G		1		0	E0	P135		MP23 MP24					1	W2		CW1		1.3G
0196	SIGNALS, SMOKE	1	1.1G		1 (+13)		0	E0	P135		MP23					1	W2		CW1		1.1G
0197	SIGNALS, SMOKE	1	1.4G		1.4		0	E0	P135		MP23 MP24					2	W2		CW1		1.4G
0204	SOUNDING DEVICES, EXPLOSIVE	1	1.2F		1 (+13)		0	E0	P134 LP102		MP23					1	W2		CW1		1.2F
0207	TETRANITROANILINE	1	1.1D		1 (+13)		0	E0	P112b P112c		MP20					1	W2 W3		CW1		1.1D
0208	TRINITROPHENYLMETHYLNITRAMINE (TETRYL)	1	1.1D		1 (+15)		0	E0	P112b P112c		MP20					1	W2 W3		CW1		1.1D

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									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
0209	TRINITROTOLUENE (TNT), dry or wetted with less than 30% water, by mass	1	1.1D		1 (+13)		0	E0	P112b P112c	PP46	MP20					1	W2 W3		CW1		1.1D
0212	TRACERS FOR AMMUNITION	1	1.3G		1		0	E0	P133	PP69	MP23					1	W2		CW1		1.3G
0213	TRINITROANISOLE	1	1.1D		1 (+13)		0	E0	P112b P112c		MP20					1	W2 W3		CW1		1.1D
0214	TRINITROBENZENE, dry or wetted with less than 30% water, by mass	1	1.1D		1 (+13)		0	E0	P112a P112b P112c		MP20					1	W2 W3		CW1		1.1D
0215	TRINITROBENZOIC ACID, dry or wetted with less than 30% water, by mass	1	1.1D		1 (+13)		0	E0	P112a P112b P112c		MP20					1	W2 W3		CW1		1.1D
0216	TRINITRO-m-CRESOL	1	1.1D		1 (+13)		0	E0	P112b P112c	PP26	MP20					1	W2 W3		CW1		1.1D
0217	TRINITRONAPHTHALENE	1	1.1D		1 (+13)		0	E0	P112b P112c		MP20					1	W2 W3		CW1		1.1D
0218	TRINITROPHENETOLE	1	1.1D		1 (+13)		0	E0	P112b P112c		MP20					1	W2 W3		CW1		1.1D
0219	TRINITRORESORCINOL (STYPHNIC ACID), dry or wetted with less than 20% water, or mixture of alcohol and water, by mass	1	1.1D		1 (+15)		0	E0	P112a P112b P112c	PP26	MP20					1	W2 W3		CW1		1.1D
0220	UREA NITRATE, dry or wetted with less than 20% water, by mass	1	1.1D		1 (+13)		0	E0	P112a P112b P112c		MP20					1	W2 W3		CW1		1.1D
0221	WARHEADS, TORPEDO with bursting charge	1	1.1D		1 (+13)		0	E0	P130 LP101	PP67 L1	MP21					1	W2		CW1		1.1D
0222	AMMONIUM NITRATE	1	1.1D		1 (+13)	370	0	E0	P112b P112c IBC100	PP47 B3 B17	MP20					1	W2 W3		CW1		1.1D
0224	BARIUM AZIDE, dry or wetted with less than 50% water, by mass	1	1.1A	CARRIAGE PROHIBITED																	
0225	BOOSTERS WITH DETONATOR	1	1.1B		1 (+13)		0	E0	P133	PP69	MP23					1	W2		CW1		1.1B
0226	CYCLOTETRAMETHYLENETETRA-NITRAMINE (HMX; OCTOGEN), WETTED with not less than 15% water, by mass	1	1.1D		1 (+15)	266	0	E0	P112a	PP45	MP20					1	W2		CW1		1.1D

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									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
0234	SODIUM DINITRO-o-CRESOLATE, dry or wetted with less than 15% water, by mass	1	1.3C		1 (+13)		0	E0	P114a P114b	PP26	MP20					1	W2 W3		CW1		1.3C
0235	SODIUM PICRAMATE, dry or wetted with less than 20% water, by mass	1	1.3C		1 (+13)		0	E0	P114a P114b	PP26	MP20					1	W2 W3		CW1		1.3C
0236	ZIRCONIUM PICRAMATE, dry or wetted with less than 20% water, by mass	1	1.3C		1 (+13)		0	E0	P114a P114b	PP26	MP20					1	W2 W3		CW1		1.3C
0237	CHARGES, SHAPED, FLEXIBLE, LINEAR	1	1.4D		1.4		0	E0	P138		MP21					2	W2		CW1		1.4D
0238	ROCKETS, LINE-THROWING	1	1.2G		1		0	E0	P130		MP23 MP24					1	W2		CW1		1.2G
0240	ROCKETS, LINE-THROWING	1	1.3G		1		0	E0	P130		MP23 MP24					1	W2		CW1		1.3G
0241	EXPLOSIVE, BLASTING, TYPE E	1	1.1D		1 (+13)	617	0	E0	P116 IBC100	PP61 PP62 B10	MP20					1	W2 W12		CW1		1.1D
0242	CHARGES, PROPELLING, FOR CANNON	1	1.3C		1		0	E0	P130		MP22					1	W2		CW1		1.3C
0243	AMMUNITION, INCENDIARY, WHITE PHOSPHORUS with burster, expelling charge or propelling charge	1	1.2H		1 (+13)		0	E0	P130 LP101	PP67 L1	MP23					1	W2		CW1		1.2H
0244	AMMUNITION, INCENDIARY, WHITE PHOSPHORUS with burster, expelling charge or propelling charge	1	1.3H		1 (+13)		0	E0	P130 LP101	PP67 L1	MP23					1	W2		CW1		1.3H
0245	AMMUNITION, SMOKE, WHITE PHOSPHORUS with burster, expelling charge or propelling charge	1	1.2H		1 (+13)		0	E0	P130 LP101	PP67 L1	MP23					1	W2		CW1		1.2H
0246	AMMUNITION, SMOKE, WHITE PHOSPHORUS with burster, expelling charge or propelling charge	1	1.3H		1 (+13)		0	E0	P130 LP101	PP67 L1	MP23					1	W2		CW1		1.3H
0247	AMMUNITION, INCENDIARY, liquid or gel, with burster, expelling charge or propelling charge	1	1.3J		1 (+13)		0	E0	P101		MP23					1	W2		CW1		1.3J
0248	CONTRIVANCES, WATER-ACTIVATED with burster, expelling charge or propelling charge	1	1.2L		1 (+13)	274	0	E0	P144	PP77	MP1					0	W2		CW1 CW4		1.2L

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
0249	CONTRIVANCES, WATER-ACTIVATED with burster, expelling charge or propelling charge	1	1.3L		1 (+13)	274	0	E0	P144	PP77	MP1					0	W2		CW1 CW4		1.3L
0250	ROCKET MOTORS WITH HYPERGOLIC LIQUIDS with or without expelling charge	1	1.3L		1 (+13)		0	E0	P101		MP1					0	W2		CW1 CW4		1.3L
0254	AMMUNITION, ILLUMINATING with or without burster, expelling charge or propelling charge	1	1.3G		1		0	E0	P130 LP101	PP67 L1	MP23					1	W2		CW1		1.3G
0255	DETONATORS, ELECTRIC for blasting	1	1.4B		1.4		0	E0	P131		MP23					2	W2		CW1		1.4B
0257	FUZES, DETONATING	1	1.4B		1.4		0	E0	P141		MP23					2	W2		CW1		1.4B
0266	OCTOLITE (OCTOL), dry or wetted with less than 15% water, by mass	1	1.1D		1 (+13)		0	E0	P112a P112b P112c		MP20					1	W2 W3		CW1		1.1D
0267	DETONATORS, NON-ELECTRIC for blasting	1	1.4B		1.4		0	E0	P131	PP68	MP23					2	W2		CW1		1.4B
0268	BOOSTERS WITH DETONATOR	1	1.2B		1 (+13)		0	E0	P133	PP69	MP23					1	W2		CW1		1.2B
0271	CHARGES, PROPELLING	1	1.1C		1 (+13)		0	E0	P143	PP76	MP22					1	W2		CW1		1.1C
0272	CHARGES, PROPELLING	1	1.3C		1		0	E0	P143	PP76	MP22					1	W2		CW1		1.3C
0275	CARTRIDGES, POWER DEVICE	1	1.3C		1		0	E0	P134 LP102		MP22					1	W2		CW1		1.3C
0276	CARTRIDGES, POWER DEVICE	1	1.4C		1.4		0	E0	P134 LP102		MP22					2	W2		CW1		1.4C
0277	CARTRIDGES, OIL WELL	1	1.3C		1		0	E0	P134 LP102		MP22					1	W2		CW1		1.3C
0278	CARTRIDGES, OIL WELL	1	1.4C		1.4		0	E0	P134 LP102		MP22					2	W2		CW1		1.4C
0279	CHARGES, PROPELLING, FOR CANNON	1	1.1C		1 (+13)		0	E0	P130		MP22					1	W2		CW1		1.1C
0280	ROCKET MOTORS	1	1.1C		1 (+13)		0	E0	P130 LP101	PP67 L1	MP22					1	W2		CW1		1.1C
0281	ROCKET MOTORS	1	1.2C		1		0	E0	P130 LP101	PP67 L1	MP22					1	W2		CW1		1.2C
0282	NITROGUANIDINE (PICRITE), dry or wetted with less than 20% water, by mass	1	1.1D		1 (+13)		0	E0	P112a P112b P112c		MP20					1	W2 W3		CW1		1.1D

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
0283	BOOSTERS without detonator	1	1.2D		1		0	E0	P132a P132b		MP21					1	W2		CW1		1.2D
0284	GRENADES, hand or rifle, with bursting charge	1	1.1D		1 (+13)		0	E0	P141		MP21					1	W2		CW1		1.1D
0285	GRENADES, hand or rifle, with bursting charge	1	1.2D		1		0	E0	P141		MP21					1	W2		CW1		1.2D
0286	WARHEADS, ROCKET with bursting charge	1	1.1D		1 (+13)		0	E0	P130 LP101	PP67 L1	MP21					1	W2		CW1		1.1D
0287	WARHEADS, ROCKET with bursting charge	1	1.2D		1		0	E0	P130 LP101	PP67 L1	MP21					1	W2		CW1		1.2D
0288	CHARGES, SHAPED, FLEXIBLE, LINEAR	1	1.1D		1 (+13)		0	E0	P138		MP21					1	W2		CW1		1.1D
0289	CORD, DETONATING, flexible	1	1.4D		1.4		0	E0	P139	PP71 PP72	MP21					2	W2		CW1		1.4D
0290	CORD (FUSE), DETONATING, metal clad	1	1.1D		1 (+13)		0	E0	P139	PP71	MP21					1	W2		CW1		1.1D
0291	BOMBS with bursting charge	1	1.2F		1 (+13)		0	E0	P130		MP23					1	W2		CW1		1.2F
0292	GRENADES, hand or rifle, with bursting charge	1	1.1F		1 (+13)		0	E0	P141		MP23					1	W2		CW1		1.1F
0293	GRENADES, hand or rifle, with bursting charge	1	1.2F		1 (+13)		0	E0	P141		MP23					1	W2		CW1		1.2F
0294	MINES with bursting charge	1	1.2F		1 (+13)		0	E0	P130		MP23					1	W2		CW1		1.2F
0295	ROCKETS with bursting charge	1	1.2F		1 (+13)		0	E0	P130		MP23					1	W2		CW1		1.2F
0296	SOUNDING DEVICES, EXPLOSIVE	1	1.1F		1 (+13)		0	E0	P134 LP102		MP23					1	W2		CW1		1.1F
0297	AMMUNITION, ILLUMINATING with or without burster, expelling charge or propelling charge	1	1.4G		1.4		0	E0	P130 LP101	PP67 L1	MP23					2	W2		CW1		1.4G
0299	BOMBS, PHOTO-FLASH	1	1.3G		1		0	E0	P130 LP101	PP67 L1	MP23					1	W2		CW1		1.3G
0300	AMMUNITION, INCENDIARY with or without burster, expelling charge or propelling charge	1	1.4G		1.4		0	E0	P130 LP101	PP67 L1	MP23					2	W2		CW1		1.4G
0301	AMMUNITION, TEAR-PRODUCING with burster, expelling charge or propelling charge	1	1.4G		1.4+6.1+8		0	E0	P130 LP101	PP67 L1	MP23					2	W2		CW1 CW28		1.4G

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									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
0303	AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge	1	1.4G		1.4		0	E0	P130 LP101	PP67 L1	MP23					2	W2		CW1		1.4G
0303	AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge, containing corrosive substances	1	1.4G		1.4+8		0	E0	P130 LP101	PP67 L1	MP23					2	W2		CW1		1.4G
0303	AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge, containing toxic by inhalation substances	1	1.4G		1.4+6.1		0	E0	P130 LP101	PP67 L1	MP23					2	W2		CW1 CW28		1.4G
0305	FLASH POWDER	1	1.3G		1		0	E0	P113	PP49	MP20					1	W2 W3		CW1		1.3G
0306	TRACERS FOR AMMUNITION	1	1.4G		1.4		0	E0	P133	PP69	MP23					2	W2		CW1		1.4G
0312	CARTRIDGES, SIGNAL	1	1.4G		1.4		0	E0	P135		MP23 MP24					2	W2		CW1		1.4G
0313	SIGNALS, SMOKE	1	1.2G		1		0	E0	P135		MP23					1	W2		CW1		1.2G
0314	IGNITERS	1	1.2G		1		0	E0	P142		MP23					1	W2		CW1		1.2G
0315	IGNITERS	1	1.3G		1		0	E0	P142		MP23					1	W2		CW1		1.3G
0316	FUZES, IGNITING	1	1.3G		1		0	E0	P141		MP23					1	W2		CW1		1.3G
0317	FUZES, IGNITING	1	1.4G		1.4		0	E0	P141		MP23					2	W2		CW1		1.4G
0318	GRENADES, PRACTICE, hand or rifle	1	1.3G		1		0	E0	P141		MP23					1	W2		CW1		1.3G
0319	PRIMERS, TUBULAR	1	1.3G		1		0	E0	P133		MP23					1	W2		CW1		1.3G
0320	PRIMERS, TUBULAR	1	1.4G		1.4		0	E0	P133		MP23					2	W2		CW1		1.4G
0321	CARTRIDGES FOR WEAPONS with bursting charge	1	1.2E		1		0	E0	P130 LP101	PP67 L1	MP21					1	W2		CW1		1.2E
0322	ROCKET MOTORS WITH HYPERGOLIC LIQUIDS with or without expelling charge	1	1.2L		1 (+13)		0	E0	P101		MP1					0	W2		CW1 CW4		1.2L
0323	CARTRIDGES, POWER DEVICE	1	1.4S		1.4	347	0	E0	P134 LP102		MP23					4	W2		CW1	CE1	1.4S
0324	PROJECTILES with bursting charge	1	1.2F		1 (+13)		0	E0	P130		MP23					1	W2		CW1		1.2F
0325	IGNITERS	1	1.4G		1.4		0	E0	P142		MP23					2	W2		CW1		1.4G
0326	CARTRIDGES FOR WEAPONS, BLANK	1	1.1C		1 (+13)		0	E0	P130		MP22					1	W2		CW1		1.1C
0327	CARTRIDGES FOR WEAPONS, BLANK or CARTRIDGES, SMALL ARMS, BLANK	1	1.3C		1		0	E0	P130		MP22					1	W2		CW1		1.3C
0328	CARTRIDGES FOR WEAPONS, INERT PROJECTILE	1	1.2C		1		0	E0	P130 LP101	PP67 L1	MP22					1	W2		CW1		1.2C

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									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
0329	TORPEDOES with bursting charge	1	1.1E		1 (+13)		0	E0	P130 LP101	PP67 L1	MP21					1	W2		CW1		1.1E
0330	TORPEDOES with bursting charge	1	1.1F		1 (+13)		0	E0	P130		MP23					1	W2		CW1		1.1F
0331	EXPLOSIVE, BLASTING, TYPE B (AGENT, BLASTING, TYPE B)	1	1.5D		1.5	617	0	E0	P116 IBC100	PP61 PP62 PP64	MP20	T1	TP1 TP17 TP32			1	W2 W12		CW1		1.5D
0332	EXPLOSIVE, BLASTING, TYPE E (AGENT, BLASTING, TYPE E)	1	1.5D		1.5	617	0	E0	P116 IBC100	PP61 PP62	MP20	T1	TP1 TP17 TP32			1	W2 W12		CW1		1.5D
0333	FIREWORKS	1	1.1G		1 (+13)	645	0	E0	P135		MP23 MP24					1	W2 W3		CW1		1.1G
0334	FIREWORKS	1	1.2G		1	645	0	E0	P135		MP23 MP24					1	W2 W3		CW1		1.2G
0335	FIREWORKS	1	1.3G		1	645	0	E0	P135		MP23 MP24					1	W2 W3		CW1		1.3G
0336	FIREWORKS	1	1.4G		1.4	645	0	E0	P135		MP23 MP24					2	W2		CW1	CE1	1.4G
0337	FIREWORKS	1	1.4S		1.4	645	0	E0	P135		MP23 MP24					4	W2		CW1	CE1	1.4S
0338	CARTRIDGES FOR WEAPONS, BLANK or CARTRIDGES, SMALL ARMS, BLANK	1	1.4C		1.4		0	E0	P130		MP22					2	W2		CW1		1.4C
0339	CARTRIDGES FOR WEAPONS, INERT PROJECTILE or CARTRIDGES, SMALL ARMS	1	1.4C		1.4		0	E0	P130		MP22					2	W2		CW1		1.4C
0340	NITROCELLULOSE, dry or wetted with less than 25% water (or alcohol), by mass	1	1.1D		1 (+15)		0	E0	P112a P112b		MP20					1	W2 W3		CW1		1.1D
0341	NITROCELLULOSE, unmodified or plasticized with less than 18% plasticizing substance, by mass	1	1.1D		1 (+15)		0	E0	P112b		MP20					1	W2 W3		CW1		1.1D
0342	NITROCELLULOSE, WETTED with not less than 25% alcohol, by mass	1	1.3C		1 (+13)	105	0	E0	P114a	PP43	MP20					1	W2		CW1		1.3C
0343	NITROCELLULOSE, PLASTICIZED with not less than 18% plasticizing substance, by mass	1	1.3C		1 (+13)	105	0	E0	P111		MP20					1	W2		CW1		1.3C

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									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
0344	PROJECTILES with bursting charge	1	1.4D		1.4		0	E0	P130 LP101	PP67 L1	MP21					2	W2		CW1		1.4D
0345	PROJECTILES, inert with tracer	1	1.4S		1.4		0	E0	P130 LP101	PP67 L1	MP23					4	W2		CW1	CE1	1.4S
0346	PROJECTILES with burster or expelling charge	1	1.2D		1		0	E0	P130 LP101	PP67 L1	MP21					1	W2		CW1		1.2D
0347	PROJECTILES with burster or expelling charge	1	1.4D		1.4		0	E0	P130 LP101	PP67 L1	MP21					2	W2		CW1		1.4D
0348	CARTRIDGES FOR WEAPONS with bursting charge	1	1.4F		1.4		0	E0	P130		MP23					2	W2		CW1		1.4F
0349	ARTICLES, EXPLOSIVE, N.O.S.	1	1.4S		1.4	178 274 347	0	E0	P101		MP2					4	W2		CW1	CE1	1.4S
0350	ARTICLES, EXPLOSIVE, N.O.S.	1	1.4B		1.4	178 274	0	E0	P101		MP2					2	W2		CW1		1.4B
0351	ARTICLES, EXPLOSIVE, N.O.S.	1	1.4C		1.4	178 274	0	E0	P101		MP2					2	W2		CW1		1.4C
0352	ARTICLES, EXPLOSIVE, N.O.S.	1	1.4D		1.4	178 274	0	E0	P101		MP2					2	W2		CW1		1.4D
0353	ARTICLES, EXPLOSIVE, N.O.S.	1	1.4G		1.4	178 274	0	E0	P101		MP2					2	W2		CW1		1.4G
0354	ARTICLES, EXPLOSIVE, N.O.S.	1	1.1L		1 (+13)	178 274	0	E0	P101		MP1					0	W2		CW1 CW4		1.1L
0355	ARTICLES, EXPLOSIVE, N.O.S.	1	1.2L		1 (+13)	178 274	0	E0	P101		MP1					0	W2		CW1 CW4		1.2L
0356	ARTICLES, EXPLOSIVE, N.O.S.	1	1.3L		1 (+13)	178 274	0	E0	P101		MP1					0	W2		CW1 CW4		1.3L
0357	SUBSTANCES, EXPLOSIVE, N.O.S.	1	1.1L		1 (+13)	178 274	0	E0	P101		MP1					0	W2		CW1 CW4		1.1L
0358	SUBSTANCES, EXPLOSIVE, N.O.S.	1	1.2L		1 (+13)	178 274	0	E0	P101		MP1					0	W2		CW1 CW4		1.2L
0359	SUBSTANCES, EXPLOSIVE, N.O.S.	1	1.3L		1 (+13)	178 274	0	E0	P101		MP1					0	W2		CW1 CW4		1.3L
0360	DETONATOR ASSEMBLIES, NON-ELECTRIC for blasting	1	1.1B		1 (+13)		0	E0	P131		MP23					1	W2		CW1		1.1B
0361	DETONATOR ASSEMBLIES, NON-ELECTRIC for blasting	1	1.4B		1.4		0	E0	P131		MP23					2	W2		CW1		1.4B

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
0362	AMMUNITION, PRACTICE	1	1.4G		1.4		0	E0	P130 LP101	PP67 L1	MP23					2	W2		CW1		1.4G
0363	AMMUNITION, PROOF	1	1.4G		1.4		0	E0	P130 LP101	PP67 L1	MP23					2	W2		CW1		1.4G
0364	DETONATORS FOR AMMUNITION	1	1.2B		1 (+13)		0	E0	P133		MP23					1	W2		CW1		1.2B
0365	DETONATORS FOR AMMUNITION	1	1.4B		1.4		0	E0	P133		MP23					2	W2		CW1		1.4B
0366	DETONATORS FOR AMMUNITION	1	1.4S		1.4	347	0	E0	P133		MP23					4	W2		CW1	CE1	1.4S
0367	FUZES, DETONATING	1	1.4S		1.4	347	0	E0	P141		MP23					4	W2		CW1	CE1	1.4S
0368	FUZES, IGNITING	1	1.4S		1.4		0	E0	P141		MP23					4	W2		CW1	CE1	1.4S
0369	WARHEADS, ROCKET with bursting charge	1	1.1F		1 (+13)		0	E0	P130		MP23					1	W2		CW1		1.1F
0370	WARHEADS, ROCKET with burster or expelling charge	1	1.4D		1.4		0	E0	P130 LP101	PP67 L1	MP21					2	W2		CW1		1.4D
0371	WARHEADS, ROCKET with burster or expelling charge	1	1.4F		1.4		0	E0	P130		MP23					2	W2		CW1		1.4F
0372	GRENADES, PRACTICE, hand or rifle	1	1.2G		1		0	E0	P141		MP23					1	W2		CW1		1.2G
0373	SIGNAL DEVICES, HAND	1	1.4S		1.4		0	E0	P135		MP23 MP24					4	W2		CW1	CE1	1.4S
0374	SOUNDING DEVICES, EXPLOSIVE	1	1.1D		1 (+13)		0	E0	P134 LP102		MP21					1	W2		CW1		1.1D
0375	SOUNDING DEVICES, EXPLOSIVE	1	1.2D		1		0	E0	P134 LP102		MP21					1	W2		CW1		1.2D
0376	PRIMERS, TUBULAR	1	1.4S		1.4		0	E0	P133		MP23					4	W2		CW1	CE1	1.4S
0377	PRIMERS, CAP TYPE	1	1.1B		1 (+13)		0	E0	P133		MP23					1	W2		CW1		1.1B
0378	PRIMERS, CAP TYPE	1	1.4B		1.4		0	E0	P133		MP23					2	W2		CW1		1.4B
0379	CASES, CARTRIDGE, EMPTY, WITH PRIMER	1	1.4C		1.4		0	E0	P136		MP22					2	W2		CW1		1.4C
0380	ARTICLES, PYROPHORIC	1	1.2L		1 (+13)		0	E0	P101		MP1					0	W2		CW1 CW4		1.2L
0381	CARTRIDGES, POWER DEVICE	1	1.2C		1		0	E0	P134 LP102		MP22					1	W2		CW1		1.2C
0382	COMPONENTS, EXPLOSIVE TRAIN, N.O.S.	1	1.2B		1 (+13)	178 274	0	E0	P101		MP2					1	W2		CW1		1.2B
0383	COMPONENTS, EXPLOSIVE TRAIN, N.O.S.	1	1.4B		1.4	178 274	0	E0	P101		MP2					2	W2		CW1		1.4B

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
0384	COMPONENTS, EXPLOSIVE TRAIN, N.O.S.	1	1.4S		1.4	178 274 347	0	E0	P101		MP2					4	W2		CW1	CE1	1.4S
0385	5-NITROBENZOTRIAZOL	1	1.1D		1 (+13)		0	E0	P112b P112c		MP20					1	W2 W3		CW1		1.1D
0386	TRINITROBENZENESULPHONIC ACID	1	1.1D		1 (+13)		0	E0	P112b P112c	PP26	MP20					1	W2 W3		CW1		1.1D
0387	TRINITROFLUORENONE	1	1.1D		1 (+13)		0	E0	P112b P112c		MP20					1	W2 W3		CW1		1.1D
0388	TRINITROTOLUENE (TNT) AND TRINITROBENZENE MIXTURE or TRINITROTOLUENE (TNT) AND HEXANITROSTILBENE MIXTURE	1	1.1D		1 (+13)		0	E0	P112b P112c		MP20					1	W2 W3		CW1		1.1D
0389	TRINITROTOLUENE (TNT) MIXTURE CONTAINING TRINITROBENZENE AND HEXANITROSTILBENE	1	1.1D		1 (+13)		0	E0	P112b P112c		MP20					1	W2 W3		CW1		1.1D
0390	TRITONAL	1	1.1D		1 (+13)		0	E0	P112b P112c		MP20					1	W2 W3		CW1		1.1D
0391	CYCLOTRIMETHYLENETRINITRAMINE (CYCLONITE; HEXOGEN; RDX) AND CYCLOTETRAMETHYLENETETRA-NITRAMINE (HMX; OCTOGEN) MIXTURE, WETTED with not less than 15% water, by mass or DESENSITIZED with not less than 10% phlegmatiser by mass	1	1.1D		1 (+15)	266	0	E0	P112a P112b		MP20					1	W2 W3		CW1		1.1D
0392	HEXANITROSTILBENE	1	1.1D		1 (+13)		0	E0	P112b P112c		MP20					1	W2 W3		CW1		1.1D
0393	HEXOTONAL	1	1.1D		1 (+13)		0	E0	P112b		MP20					1	W2 W3		CW1		1.1D
0394	TRINITRORESORCINOL (STYPHNIC ACID), WETTED with not less than 20% water, or mixture of alcohol and water, by mass	1	1.1D		1 (+15)		0	E0	P112a	PP26	MP20					1	W2		CW1		1.1D
0395	ROCKET MOTORS, LIQUID FUELLED	1	1.2J		1 (+13)		0	E0	P101		MP23					1	W2		CW1		1.2J
0396	ROCKET MOTORS, LIQUID FUELLED	1	1.3J		1 (+13)		0	E0	P101		MP23					1	W2		CW1		1.3J

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									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
0397	ROCKETS, LIQUID FUELLED with bursting charge	1	1.1J		1 (+13)		0	E0	P101		MP23					1	W2		CW1		1.1J
0398	ROCKETS, LIQUID FUELLED with bursting charge	1	1.2J		1 (+13)		0	E0	P101		MP23					1	W2		CW1		1.2J
0399	BOMBS WITH FLAMMABLE LIQUID with bursting charge	1	1.1J		1 (+13)		0	E0	P101		MP23					1	W2		CW1		1.1J
0400	BOMBS WITH FLAMMABLE LIQUID with bursting charge	1	1.2J		1 (+13)		0	E0	P101		MP23					1	W2		CW1		1.2J
0401	DIPICRYL SULPHIDE, dry or wetted with less than 10% water, by mass	1	1.1D		1 (+13)		0	E0	P112a P112b P112c		MP20					1	W2 W3		CW1		1.1D
0402	AMMONIUM PERCHLORATE	1	1.1D		1 (+13)	152	0	E0	P112b P112c		MP20					1	W2 W3		CW1		1.1D
0403	FLARES, AERIAL	1	1.4G		1.4		0	E0	P135		MP23					2	W2		CW1		1.4G
0404	FLARES, AERIAL	1	1.4S		1.4		0	E0	P135		MP23					4	W2		CW1	CE1	1.4S
0405	CARTRIDGES, SIGNAL	1	1.4S		1.4		0	E0	P135		MP23 MP24					4	W2		CW1	CE1	1.4S
0406	DINITROSOBENZENE	1	1.3C		1 (+13)		0	E0	P114b		MP20					1	W2 W3		CW1		1.3C
0407	TETRAZOL-1-ACETIC ACID	1	1.4C		1.4		0	E0	P114b		MP20					2	W2		CW1		1.4C
0408	FUZES, DETONATING with protective features	1	1.1D		1 (+13)		0	E0	P141		MP21					1	W2		CW1		1.1D
0409	FUZES, DETONATING with protective features	1	1.2D		1		0	E0	P141		MP21					1	W2		CW1		1.2D
0410	FUZES, DETONATING with protective features	1	1.4D		1.4		0	E0	P141		MP21					2	W2		CW1		1.4D
0411	PENTAERYTHRITE TETRANITRATE (PENTAERYTHRITOL TETRANITRATE; PETN) with not less than 7% wax, by mass	1	1.1D		1 (+15)	131	0	E0	P112b P112c		MP20					1	W2 W3		CW1		1.1D
0412	CARTRIDGES FOR WEAPONS with bursting charge	1	1.4E		1.4		0	E0	P130 LP101	PP67 L1	MP21					2	W2		CW1		1.4E
0413	CARTRIDGES FOR WEAPONS, BLANK	1	1.2C		1		0	E0	P130		MP22					1	W2		CW1		1.2C
0414	CHARGES, PROPELLING, FOR CANNON	1	1.2C		1		0	E0	P130		MP22					1	W2		CW1		1.2C
0415	CHARGES, PROPELLING	1	1.2C		1		0	E0	P143	PP76	MP22					1	W2		CW1		1.2C

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
0417	CARTRIDGES FOR WEAPONS, INERT PROJECTILE or CARTRIDGES, SMALL ARMS	1	1.3C		1		0	E0	P130		MP22					1	W2		CW1		1.3C
0418	FLARES, SURFACE	1	1.1G		1 (+13)		0	E0	P135		MP23					1	W2		CW1		1.1G
0419	FLARES, SURFACE	1	1.2G		1		0	E0	P135		MP23					1	W2		CW1		1.2G
0420	FLARES, AERIAL	1	1.1G		1 (+13)		0	E0	P135		MP23					1	W2		CW1		1.1G
0421	FLARES, AERIAL	1	1.2G		1		0	E0	P135		MP23					1	W2		CW1		1.2G
0424	PROJECTILES, inert with tracer	1	1.3G		1		0	E0	P130 LP101	PP67 L1	MP23					1	W2		CW1		1.3G
0425	PROJECTILES, inert with tracer	1	1.4G		1.4		0	E0	P130 LP101	PP67 L1	MP23					2	W2		CW1		1.4G
0426	PROJECTILES with burster or expelling charge	1	1.2F		1 (+13)		0	E0	P130		MP23					1	W2		CW1		1.2F
0427	PROJECTILES with burster or expelling charge	1	1.4F		1.4		0	E0	P130		MP23					2	W2		CW1		1.4F
0428	ARTICLES, PYROTECHNIC for technical purposes	1	1.1G		1 (+13)		0	E0	P135		MP23 MP24					1	W2		CW1		1.1G
0429	ARTICLES, PYROTECHNIC for technical purposes	1	1.2G		1		0	E0	P135		MP23 MP24					1	W2		CW1		1.2G
0430	ARTICLES, PYROTECHNIC for technical purposes	1	1.3G		1		0	E0	P135		MP23 MP24					1	W2		CW1		1.3G
0431	ARTICLES, PYROTECHNIC for technical purposes	1	1.4G		1.4		0	E0	P135		MP23 MP24					2	W2		CW1	CE1	1.4G
0432	ARTICLES, PYROTECHNIC for technical purposes	1	1.4S		1.4		0	E0	P135		MP23 MP24					4	W2		CW1	CE1	1.4S
0433	POWDER CAKE (POWDER PASTE), WETTED with not less than 17% alcohol, by mass	1	1.1C		1 (+13)	266	0	E0	P111		MP20					1	W2		CW1		1.1C
0434	PROJECTILES with burster or expelling charge	1	1.2G		1		0	E0	P130 LP101	PP67 L1	MP23					1	W2		CW1		1.2G
0435	PROJECTILES with burster or expelling charge	1	1.4G		1.4		0	E0	P130 LP101	PP67 L1	MP23					2	W2		CW1		1.4G
0436	ROCKETS with expelling charge	1	1.2C		1		0	E0	P130 LP101	PP67 L1	MP22					1	W2		CW1		1.2C
0437	ROCKETS with expelling charge	1	1.3C		1		0	E0	P130 LP101	PP67 L1	MP22					1	W2		CW1		1.3C

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									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
0438	ROCKETS with expelling charge	1	1.4C		1.4		0	E0	P130 LP101	PP67 L1	MP22					2	W2		CW1		1.4C
0439	CHARGES, SHAPED, without detonator	1	1.2D		1		0	E0	P137	PP70	MP21					1	W2		CW1		1.2D
0440	CHARGES, SHAPED, without detonator	1	1.4D		1.4		0	E0	P137	PP70	MP21					2	W2		CW1		1.4D
0441	CHARGES, SHAPED, without detonator	1	1.4S		1.4	347	0	E0	P137	PP70	MP23					4	W2		CW1	CE1	1.4S
0442	CHARGES, EXPLOSIVE, COMMERCIAL without detonator	1	1.1D		1 (+13)		0	E0	P137		MP21					1	W2		CW1		1.1D
0443	CHARGES, EXPLOSIVE, COMMERCIAL without detonator	1	1.2D		1		0	E0	P137		MP21					1	W2		CW1		1.2D
0444	CHARGES, EXPLOSIVE, COMMERCIAL without detonator	1	1.4D		1.4		0	E0	P137		MP21					2	W2		CW1		1.4D
0445	CHARGES, EXPLOSIVE, COMMERCIAL without detonator	1	1.4S		1.4	347	0	E0	P137		MP23					4	W2		CW1	CE1	1.4S
0446	CASES, COMBUSTIBLE, EMPTY, WITHOUT PRIMER	1	1.4C		1.4		0	E0	P136		MP22					2	W2		CW1		1.4C
0447	CASES, COMBUSTIBLE, EMPTY, WITHOUT PRIMER	1	1.3C		1		0	E0	P136		MP22					1	W2		CW1		1.3C
0448	5-MERCAPTOTETRAZOL-1-ACETIC ACID	1	1.4C		1.4		0	E0	P114b		MP20					2	W2		CW1		1.4C
0449	TORPEDOES, LIQUID FUELLED with or without bursting charge	1	1.1J		1 (+13)		0	E0	P101		MP23					1	W2		CW1		1.1J
0450	TORPEDOES, LIQUID FUELLED with inert head	1	1.3J		1 (+13)		0	E0	P101		MP23					1	W2		CW1		1.3J
0451	TORPEDOES with bursting charge	1	1.1D		1 (+13)		0	E0	P130 LP101	PP67 L1	MP21					1	W2		CW1		1.1D
0452	GRENADES, PRACTICE, hand or rifle	1	1.4G		1.4		0	E0	P141		MP23					2	W2		CW1		1.4G
0453	ROCKETS, LINE-THROWING	1	1.4G		1.4		0	E0	P130		MP23					2	W2		CW1		1.4G
0454	IGNITERS	1	1.4S		1.4		0	E0	P142		MP23					4	W2		CW1	CE1	1.4S
0455	DETONATORS, NON-ELECTRIC for blasting	1	1.4S		1.4	347	0	E0	P131	PP68	MP23					4	W2		CW1	CE1	1.4S
0456	DETONATORS, ELECTRIC for blasting	1	1.4S		1.4	347	0	E0	P131		MP23					4	W2		CW1	CE1	1.4S
0457	CHARGES, BURSTING, PLASTICS BONDED	1	1.1D		1 (+13)		0	E0	P130		MP21					1	W2		CW1		1.1D
0458	CHARGES, BURSTING, PLASTICS BONDED	1	1.2D		1		0	E0	P130		MP21					1	W2		CW1		1.2D
0459	CHARGES, BURSTING, PLASTICS BONDED	1	1.4D		1.4		0	E0	P130		MP21					2	W2		CW1		1.4D

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
0460	CHARGES, BURSTING, PLASTICS BONDED	1	1.4S		1.4	347	0	E0	P130		MP23					4	W2		CW1	CE1	1.4S
0461	COMPONENTS, EXPLOSIVE TRAIN, N.O.S.	1	1.1B		1 (+13)	178 274	0	E0	P101		MP2					1	W2		CW1		1.1B
0462	ARTICLES, EXPLOSIVE, N.O.S.	1	1.1C		1 (+13)	178 274	0	E0	P101		MP2					1	W2		CW1		1.1C
0463	ARTICLES, EXPLOSIVE, N.O.S.	1	1.1D		1 (+13)	178 274	0	E0	P101		MP2					1	W2		CW1		1.1D
0464	ARTICLES, EXPLOSIVE, N.O.S.	1	1.1E		1 (+13)	178 274	0	E0	P101		MP2					1	W2		CW1		1.1E
0465	ARTICLES, EXPLOSIVE, N.O.S.	1	1.1F		1 (+13)	178 274	0	E0	P101		MP2					1	W2		CW1		1.1F
0466	ARTICLES, EXPLOSIVE, N.O.S.	1	1.2C		1	178 274	0	E0	P101		MP2					1	W2		CW1		1.2C
0467	ARTICLES, EXPLOSIVE, N.O.S.	1	1.2D		1	178 274	0	E0	P101		MP2					1	W2		CW1		1.2D
0468	ARTICLES, EXPLOSIVE, N.O.S.	1	1.2E		1	178 274	0	E0	P101		MP2					1	W2		CW1		1.2E
0469	ARTICLES, EXPLOSIVE, N.O.S.	1	1.2F		1 (+13)	178 274	0	E0	P101		MP2					1	W2		CW1		1.2F
0470	ARTICLES, EXPLOSIVE, N.O.S.	1	1.3C		1	178 274	0	E0	P101		MP2					1	W2		CW1		1.3C
0471	ARTICLES, EXPLOSIVE, N.O.S.	1	1.4E		1.4	178 274	0	E0	P101		MP2					2	W2		CW1		1.4E
0472	ARTICLES, EXPLOSIVE, N.O.S.	1	1.4F		1.4	178 274	0	E0	P101		MP2					2	W2		CW1		1.4F
0473	SUBSTANCES, EXPLOSIVE, N.O.S.	1	1.1A	CARRIAGE PROHIBITED																	
0474	SUBSTANCES, EXPLOSIVE, N.O.S.	1	1.1C		1 (+13)	178 274	0	E0	P101		MP2					1	W2 W3		CW1		1.1C
0475	SUBSTANCES, EXPLOSIVE, N.O.S.	1	1.1D		1 (+13)	178 274	0	E0	P101		MP2					1	W2 W3		CW1		1.1D
0476	SUBSTANCES, EXPLOSIVE, N.O.S.	1	1.1G		1 (+13)	178 274	0	E0	P101		MP2					1	W2 W3		CW1		1.1G
0477	SUBSTANCES, EXPLOSIVE, N.O.S.	1	1.3C		1 (+13)	178 274	0	E0	P101		MP2					1	W2 W3		CW1		1.3C
0478	SUBSTANCES, EXPLOSIVE, N.O.S.	1	1.3G		1	178 274	0	E0	P101		MP2					1	W2 W3		CW1		1.3G

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
0479	SUBSTANCES, EXPLOSIVE, N.O.S.	1	1.4C		1.4	178 274	0	E0	P101		MP2					2	W2		CW1		1.4C
0480	SUBSTANCES, EXPLOSIVE, N.O.S.	1	1.4D		1.4	178 274	0	E0	P101		MP2					2	W2		CW1		1.4D
0481	SUBSTANCES, EXPLOSIVE, N.O.S.	1	1.4S		1.4	178 274 347	0	E0	P101		MP2					4	W2		CW1		1.4S
0482	SUBSTANCES, EXPLOSIVE, VERY INSENSITIVE (SUBSTANCES, EVI), N.O.S.	1	1.5D		1.5	178 274	0	E0	P101		MP2					1	W2		CW1		1.5D
0483	CYCLOTRIMETHYLENETRINITRAMINE (CYCLONITE; HEXOGEN; RDX), DESENSITIZED	1	1.1D		1 (+13)		0	E0	P112b P112c		MP20					1	W2 W3		CW1		1.1D
0484	CYCLOTETRAMETHYLENE-TETRANITRAMINE (HMX; OCTOGEN), DESENSITIZED	1	1.1D		1 (+13)		0	E0	P112b P112c		MP20					1	W2 W3		CW1		1.1D
0485	SUBSTANCES, EXPLOSIVE, N.O.S.	1	1.4G		1.4	178 274	0	E0	P101		MP2					2	W2 W3		CW1		1.4G
0486	ARTICLES, EXPLOSIVE, EXTREMELY INSENSITIVE (ARTICLES, EEI)	1	1.6N		1.6		0	E0	P101		MP23					2	W2		CW1		1.6N
0487	SIGNALS, SMOKE	1	1.3G		1		0	E0	P135		MP23					1	W2		CW1		1.3G
0488	AMMUNITION, PRACTICE	1	1.3G		1		0	E0	P130 LP101	PP67 L1	MP23					1	W2		CW1		1.3G
0489	DINITROGLYCOLURIL (DINGU)	1	1.1D		1 (+13)		0	E0	P112b P112c		MP20					1	W2 W3		CW1		1.1D
0490	NITROTRIAZOLONE (NTO)	1	1.1D		1 (+13)		0	E0	P112b P112c		MP20					1	W2 W3		CW1		1.1D
0491	CHARGES, PROPELLING	1	1.4C		1.4		0	E0	P143	PP76	MP22					2	W2		CW1		1.4C
0492	SIGNALS, RAILWAY TRACK, EXPLOSIVE	1	1.3G		1		0	E0	P135		MP23					1	W2		CW1		1.3G
0493	SIGNALS, RAILWAY TRACK, EXPLOSIVE	1	1.4G		1.4		0	E0	P135		MP23					2	W2		CW1		1.4G
0494	JET PERFORATING GUNS, CHARGED, oil well, without detonator	1	1.4D		1.4		0	E0	P101		MP21					2	W2		CW1		1.4D

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									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
0495	PROPELLANT, LIQUID	1	1.3C		1 (+13)	224	0	E0	P115	PP53 PP54 PP57 PP58	MP20					1	W2		CW1		1.3C
0496	OCTONAL	1	1.1D		1 (+13)		0	E0	P112b P112c		MP20					1	W2 W3		CW1		1.1D
0497	PROPELLANT, LIQUID	1	1.1C		1 (+13)	224	0	E0	P115	PP53 PP54 PP57 PP58	MP20					1	W2		CW1		1.1C
0498	PROPELLANT, SOLID	1	1.1C		1 (+13)		0	E0	P114b		MP20					1	W2		CW1		1.1C
0499	PROPELLANT, SOLID	1	1.3C		1 (+13)		0	E0	P114b		MP20					1	W2		CW1		1.3C
0500	DETONATOR ASSEMBLIES, NON-ELECTRIC for blasting	1	1.4S		1.4	347	0	E0	P131		MP23					4	W2		CW1	CE1	1.4S
0501	PROPELLANT, SOLID	1	1.4C		1.4		0	E0	P114b		MP20					2	W2		CW1		1.4C
0502	ROCKETS with inert head	1	1.2C		1		0	E0	P130 LP101	PP67 L1	MP22					1	W2		CW1		1.2C
0503	SAFETY DEVICES, PYROTECHNIC	1	1.4G		1.4	235 289	0	E0	P135		MP23					2	W2		CW1		1.4G
0504	1H-TETRAZOLE	1	1.1D		1 (+13)		0	E0	P112c	PP48	MP20					1	W2		CW1		1.1D
0505	SIGNALS, DISTRESS, ship	1	1.4G		1.4		0	E0	P135		MP23 MP24					2	W2		CW1		1.4G
0506	SIGNALS, DISTRESS, ship	1	1.4S		1.4		0	E0	P135		MP23 MP24					4	W2		CW1	CE1	1.4S
0507	SIGNALS, SMOKE	1	1.4S		1.4		0	E0	P135		MP23 MP24					4	W2		CW1	CE1	1.4S
0508	1-HYDROXYBENZOTRIAZOLE, ANHYDROUS, dry or wetted with less than 20% water, by mass	1	1.3C		1 (+13)		0	E0	P114b	PP48 PP50	MP20					1	W2 W3		CW1		1.3C
0509	POWDER, SMOKELESS	1	1.4C		1.4		0	E0	P114b	PP48	MP20 MP24					2	W2		CW1		1.4C
0510	ROCKET MOTORS	1	1.4C		1.4		0	E0	P130 LP101	PP67 L1	MP22					2	W2		CW1		1.4C

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1001	ACETYLENE, DISSOLVED	2	4F		2.1 (+13)	662	0	E0	P200		MP9			PxBN(M)	TU17 TU38 TE22 TA4 TT9	2			CW9 CW10 CW36	CE2	239
1002	AIR, COMPRESSED	2	1A		2.2 (+13)	655 660 662	120 ml	E1	P200		MP9	(M)		CxBN(M)	TA4 TT9	3			CW9 CW10	CE3	20
1003	AIR, REFRIGERATED LIQUID	2	3O		2.2+5.1 (+13)		0	E0	P203		MP9	T75	TP5 TP22	RxBN	TU7 TU19 TA4 TT9 TM6	3	W5		CW9 CW11 CW36	CE2	225
1005	AMMONIA, ANHYDROUS	2	2TC		2.3+8 (+13)	23 379	0	E0	P200		MP9	T50 (M)		PxBH(M)	TU38 TE22 TE25 TA4 TT8 TT9 TM6	1			CW9 CW10 CW36		268
1006	ARGON, COMPRESSED	2	1A		2.2 (+13)	378 653 660 662	120 ml	E1	P200		MP9	(M)		CxBN(M)	TA4 TT9	3			CW9 CW10 CW36	CE3	20
1008	BORON TRIFLUORIDE	2	2TC		2.3+8 (+13)	373	0	E0	P200		MP9	(M)		PxBH(M)	TU38 TE22 TE25 TA4 TT9 TT10 TM6	1			CW9 CW10 CW36		268
1009	BROMOTRIFLUOROMETHANE (REFRIGERANT GAS R 13B1)	2	2A		2.2 (+13)	662	120 ml	E1	P200		MP9	T50 (M)		PxBN(M)	TA4 TT9 TM6	3			CW9 CW10 CW36	CE3	20

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1010	BUTADIENES, STABILIZED or BUTADIENES AND HYDROCARBON MIXTURE, STABILIZED, having a vapour pressure at 70 °C not exceeding 1.1 MPa (11 bar) and a density at 50 °C not lower than 0.525 kg/l	2	2F		2.1 (+13)	386 618 662	0	E0	P200		MP9	T50 (M)		PxBN(M)	TU38 TE22 TA4 TT9 TM6	2			CW9 CW10 CW36	CE3	239
1011	BUTANE	2	2F		2.1 (+13)	392 657 662 674	0	E0	P200		MP9	T50 (M)		PxBN(M)	TU38 TE22 TA4 TT9 TM6	2			CW9 CW10 CW36	CE3	23
1012	BUTYLENES MIXTURE or 1-BUTYLENE or cis-2-BUTYLENE or trans-2-BUTYLENE	2	2F		2.1 (+13)	662	0	E0	P200		MP9	T50 (M)		PxBN(M)	TU38 TE22 TA4 TT9 TM6	2			CW9 CW10 CW36	CE3	23
1013	CARBON DIOXIDE	2	2A		2.2 (+13)	378 584 653 660 662	120 ml	E1	P200		MP9	(M)		PxBN(M)	TA4 TT9 TM6	3			CW9 CW10 CW36	CE3	20
1016	CARBON MONOXIDE, COMPRESSED	2	1TF		2.3+2.1 (+13)		0	E0	P200		MP9	(M)		CxBH(M)	TU38 TE22 TE25 TA4 TT9	1			CW9 CW10 CW36		263
1017	CHLORINE	2	2TOC		2.3+5.1+8 (+13)		0	E0	P200		MP9	T50 (M)	TP19	P22DH(M)	TU38 TE22 TE25 TA4 TT9 TT10 TM6	1			CW9 CW10 CW36		265
1018	CHLORODIFLUOROMETHANE (REFRIGERANT GAS R 22)	2	2A		2.2 (+13)	662	120 ml	E1	P200		MP9	T50 (M)		PxBN(M)	TA4 TT9 TM6	3			CW9 CW10 CW36	CE3	20

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1020	CHLOROPENTAFLUOROETHANE (REFRIGERANT GAS R 115)	2	2A		2.2 (+13)	662	120 ml	E1	P200		MP9	T50 (M)		PxBN(M)	TA4 TT9 TM6	3			CW9 CW10 CW36	CE3	20
1021	1-CHLORO-1,2,2,2-TETRAFLUOROETHANE (REFRIGERANT GAS R 124)	2	2A		2.2 (+13)	662	120 ml	E1	P200		MP9	T50 (M)		PxBN(M)	TA4 TT9 TM6	3			CW9 CW10 CW36	CE3	20
1022	CHLOROTRIFLUOROMETHANE (REFRIGERANT GAS R 13)	2	2A		2.2 (+13)	662	120 ml	E1	P200		MP9	(M)		PxBN(M)	TA4 TT9 TM6	3			CW9 CW10 CW36	CE3	20
1023	COAL GAS, COMPRESSED	2	1TF		2.3+2.1 (+13)		0	E0	P200		MP9	(M)		CxBH(M)	TU38 TE22 TE25 TA4 TT9	1			CW9 CW10 CW36		263
1026	CYANOGEN	2	2TF		2.3+2.1 (+13)		0	E0	P200		MP9	(M)		PxBH(M)	TU38 TE22 TE25 TA4 TT9 TM6	1			CW9 CW10 CW36		263
1027	CYCLOPROPANE	2	2F		2.1 (+13)	662	0	E0	P200		MP9	T50 (M)		PxBN(M)	TU38 TE22 TA4 TT9 TM6	2			CW9 CW10 CW36	CE3	23
1028	DICHLORODIFLUOROMETHANE (REFRIGERANT GAS R 12)	2	2A		2.2 (+13)	662	120 ml	E1	P200		MP9	T50 (M)		PxBN(M)	TA4 TT9 TM6	3			CW9 CW10 CW36	CE3	20
1029	DICHLOROFLUOROMETHANE (REFRIGERANT GAS R 21)	2	2A		2.2 (+13)	662	120 ml	E1	P200		MP9	T50 (M)		PxBN(M)	TA4 TT9 TM6	3			CW9 CW10 CW36	CE3	20
1030	1,1-DIFLUOROETHANE (REFRIGERANT GAS R 152a)	2	2F		2.1 (+13)	662	0	E0	P200		MP9	T50 (M)		PxBN(M)	TU38 TE22 TA4 TT9 TM6	2			CW9 CW10 CW36	CE3	23

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1032	DIMETHYLAMINE, ANHYDROUS	2	2F		2.1 (+13)	662	0	E0	P200		MP9	T50 (M)		PxBN(M)	TU38 TE22 TA4 TT9 TM6	2			CW9 CW10 CW36	CE3	23
1033	DIMETHYL ETHER	2	2F		2.1 (+13)	662	0	E0	P200		MP9	T50 (M)		PxBN(M)	TU38 TE22 TA4 TT9 TM6	2			CW9 CW10 CW36	CE3	23
1035	ETHANE	2	2F		2.1 (+13)	662	0	E0	P200		MP9	(M)		PxBN(M)	TU38 TE22 TA4 TT9 TM6	2			CW9 CW10 CW36	CE3	23
1036	ETHYLAMINE	2	2F		2.1 (+13)	662	0	E0	P200		MP9	T50 (M)		PxBN(M)	TU38 TE22 TA4 TT9 TM6	2			CW9 CW10 CW36	CE3	23
1037	ETHYL CHLORIDE	2	2F		2.1 (+13)	662	0	E0	P200		MP9	T50 (M)		PxBN(M)	TU38 TE22 TA4 TT9 TM6	2			CW9 CW10 CW36	CE3	23
1038	ETHYLENE, REFRIGERATED LIQUID	2	3F		2.1 (+13)		0	E0	P203		MP9	T75	TP5	RxBN	TU18 TU38 TE22 TA4 TT9 TM6	2	W5		CW9 CW11 CW36	CE2	223
1039	ETHYL METHYL ETHER	2	2F		2.1 (+13)	662	0	E0	P200		MP9	(M)		PxBN(M)	TU38 TE22 TA4 TT9 TM6	2			CW9 CW10 CW36	CE3	23

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1040	ETHYLENE OXIDE	2	2TF		2.3+2.1	342	0	E0	P200		MP9	(M)				1			CW9 CW10 CW36		263
1040	ETHYLENE OXIDE WITH NITROGEN up to a total pressure of 1 MPa (10 bar) at 50 °C	2	2TF		2.3+2.1 (+13)	342	0	E0	P200		MP9	T50 (M)	TP20	PxBH(M)	TU38 TE22 TE25 TA4 TT9 TM6	1			CW9 CW10 CW36		263
1041	ETHYLENE OXIDE AND CARBON DIOXIDE MIXTURE with more than 9% but not more than 87% ethylene oxide	2	2F		2.1 (+13)	662	0	E0	P200		MP9	T50 (M)		PxBN(M)	TU38 TE22 TA4 TT9 TM6	2			CW9 CW10 CW36	CE3	239
1043	FERTILIZER AMMONIATING SOLUTION with free ammonia	2			2.2	642										-					
1044	FIRE EXTINGUISHERS with compressed or liquefied gas	2	6A		2.2	225 594	120 ml	E0	P003	PP91	MP9					3			CW9	CE2	20
1045	FLUORINE, COMPRESSED	2	1TOC		2.3+5.1+8		0	E0	P200		MP9					1			CW9 CW10 CW36		265
1046	HELIUM, COMPRESSED	2	1A		2.2 (+13)	378 653 660 662	120 ml	E1	P200		MP9	(M)		CxBN(M)	TA4 TT9	3			CW9 CW10 CW36	CE3	20
1048	HYDROGEN BROMIDE, ANHYDROUS	2	2TC		2.3+8 (+13)		0	E0	P200		MP9	(M)		PxBH(M)	TU38 TE22 TE25 TA4 TT9 TT10 TM6	1			CW9 CW10 CW36		268
1049	HYDROGEN, COMPRESSED	2	1F		2.1 (+13)	392 662	0	E0	P200		MP9	(M)		CxBN(M)	TU38 TE22 TA4 TT9	2			CW9 CW10 CW36	CE3	23

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1050	HYDROGEN CHLORIDE, ANHYDROUS	2	2TC		2.3+8 (+13)		0	E0	P200		MP9	(M)		PxBH(M)	TU38 TE22 TE25 TA4 TT9 TT10 TM6	1			CW9 CW10 CW36		268
1051	HYDROGEN CYANIDE, STABILIZED containing less than 3% water	6.1	TF1	I	6.1+3	386 603	0	E0	P200		MP2					0			CW13 CW28 CW31		663
1052	HYDROGEN FLUORIDE, ANHYDROUS	8	CT1	I	8+6.1		0	E0	P200		MP2	T10	TP2	L21DH(+)	TU14 TU34 TU38 TC1 TE17 TE21 TE22 TE25 TA4 TT4 TT9 TM3	1			CW13 CW28 CW34		886
1053	HYDROGEN SULPHIDE	2	2TF		2.3+2.1 (+13)		0	E0	P200		MP9	(M)		PxDH(M)	TU38 TE22 TE25 TA4 TT9 TT10 TM6	1			CW9 CW10 CW36		263
1055	ISOBUTYLENE	2	2F		2.1 (+13)	662	0	E0	P200		MP9	T50 (M)		PxBN(M)	TU38 TE22 TA4 TT9 TM6	2			CW9 CW10 CW36	CE3	23
1056	KRYPTON, COMPRESSED	2	1A		2.2 (+13)	378 660 662	120 ml	E1	P200		MP9	(M)		CxBN(M)	TA4 TT9	3			CW9 CW10 CW36	CE3	20

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1057	LIGHTERS or LIGHTER REFILLS containing flammable gas	2	6F		2.1	201 654 658	0	E0	P002	PP84 RR5	MP9					2			CW9	CE2	23
1058	LIQUEFIED GASES, non-flammable, charged with nitrogen, carbon dioxide or air	2	2A		2.2 (+13)	660 662	120 ml	E1	P200		MP9	(M)		PxBN(M)	TA4 TT9 TM6	3			CW9 CW10 CW36	CE3	20
1060	METHYLACETYLENE AND PROPADIENE MIXTURE, STABILIZED such as mixture P1 or mixture P2	2	2F		2.1 (+13)	386 581 662	0	E0	P200		MP9	T50 (M)		PxBN(M)	TU38 TE22 TA4 TT9 TM6	2			CW9 CW10 CW36	CE3	239
1061	METHYLAMINE, ANHYDROUS	2	2F		2.1 (+13)	662	0	E0	P200		MP9	T50 (M)		PxBN(M)	TU38 TE22 TA4 TT9 TM6	2			CW9 CW10 CW36	CE3	23
1062	METHYL BROMIDE with not more than 2% chloropicrin	2	2T		2.3 (+13)	23	0	E0	P200		MP9	T50 (M)		PxBH(M)	TU38 TE22 TE25 TA4 TT9 TM6	1			CW9 CW10 CW36		26
1063	METHYL CHLORIDE (REFRIGERANT GAS R 40)	2	2F		2.1 (+13)	662	0	E0	P200		MP9	T50 (M)		PxBN(M)	TU38 TE22 TA4 TT9 TM6	2			CW9 CW10 CW36	CE3	23
1064	METHYL MERCAPTAN	2	2TF		2.3+2.1 (+13)		0	E0	P200		MP9	T50 (M)		PxDH(M)	TU38 TE22 TE25 TA4 TT9 TM6	1			CW9 CW10 CW36		263
1065	NEON, COMPRESSED	2	1A		2.2 (+13)	378 660 662	120 ml	E1	P200		MP9	(M)		CxBN(M)	TA4 TT9	3			CW9 CW10 CW36	CE3	20

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1066	NITROGEN, COMPRESSED	2	1A		2.2 (+13)	378 653 660 662	120 ml	E1	P200		MP9	(M)		CxBN(M)	TA4 TT9	3			CW9 CW10 CW36	CE3	20
1067	DINITROGEN TETROXIDE (NITROGEN DIOXIDE)	2	2TOC		2.3+5.1+8 (+13)		0	E0	P200		MP9	T50	TP21	PxBH(M)	TU17 TU38 TE22 TA4 TT9	1			CW9 CW10 CW36		265
1069	NITROSYL CHLORIDE	2	2TC		2.3+8		0	E0	P200		MP9					1			CW9 CW10 CW36		268
1070	NITROUS OXIDE	2	2O		2.2+5.1 (+13)	584 662	0	E0	P200		MP9	(M)		PxBN(M)	TA4 TT9 TM6	3			CW9 CW10 CW36	CE3	25
1071	OIL GAS, COMPRESSED	2	1TF		2.3+2.1 (+13)		0	E0	P200		MP9	(M)		CxBH(M)	TU38 TE22 TE25 TA4 TT9	1			CW9 CW10 CW36		263
1072	OXYGEN, COMPRESSED	2	1O		2.2+5.1 (+13)	355 655 662	0	E0	P200		MP9	(M)		CxBN(M)	TA4 TT9	3			CW9 CW10 CW36	CE3	25
1073	OXYGEN, REFRIGERATED LIQUID	2	3O		2.2+5.1 (+13)		0	E0	P203		MP9	T75	TP5 TP22	RxBN	TU7 TU19 TA4 TT9 TM6	3	W5		CW9 CW11 CW36	CE2	225
1075	PETROLEUM GASES, LIQUEFIED	2	2F		2.1 (+13)	274 392 583 639 662 674	0	E0	P200		MP9	T50 (M)		PxBN(M)	TU38 TE22 TA4 TT9 TM6	2			CW9 CW10 CW36	CE3	23

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1076	PHOSGENE	2	2TC		2.3+8 (+13)		0	E0	P200		MP9			P22DH(M)	TU17 TU38 TE22 TA4 TT9	1			CW9 CW10 CW36		268
1077	PROPYLENE	2	2F		2.1 (+13)	662	0	E0	P200		MP9	T50 (M)		PxBN(M)	TU38 TE22 TA4 TT9 TM6	2			CW9 CW10 CW36	CE3	23
1078	REFRIGERANT GAS, N.O.S., such as mixture F1, mixture F2 or mixture F3	2	2A		2.2 (+13)	274 582 662	120 ml	E1	P200		MP9	T50 (M)		PxBN(M)	TA4 TT9 TM6	3			CW9 CW10 CW36	CE3	20
1079	SULPHUR DIOXIDE	2	2TC		2.3+8 (+13)		0	E0	P200		MP9	T50 (M)	TP19	PxDH(M)	TU38 TE22 TE25 TA4 TT9 TT10 TM6	1			CW9 CW10 CW36		268
1080	SULPHUR HEXAFLUORIDE	2	2A		2.2 (+13)	660 662	120 ml	E1	P200		MP9	(M)		PxBN(M)	TA4 TT9 TM6	3			CW9 CW10 CW36	CE3	20
1081	TETRAFLUOROETHYLENE, STABILIZED	2	2F		2.1	386 662	0	E0	P200		MP9	(M)		PxBN(M)	TU38 TU40 TE22 TA4 TT9	2			CW9 CW10 CW36	CE3	239
1082	TRIFLUOROCHLOROETHYLENE, STABILIZED (REFRIGERANT GAS R 1113)	2	2TF		2.3+2.1 (+13)	386	0	E0	P200		MP9	T50 (M)		PxBH(M)	TU38 TE22 TE25 TA4 TT9 TM6	1			CW9 CW10 CW36		263

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1083	TRIMETHYLAMINE, ANHYDROUS	2	2F		2.1 (+13)	662	0	E0	P200		MP9	T50 (M)		PxBN(M)	TU38 TE22 TA4 TT9 TM6	2			CW9 CW10 CW36	CE3	23
1085	VINYL BROMIDE, STABILIZED	2	2F		2.1 (+13)	386 662	0	E0	P200		MP9	T50 (M)		PxBN(M)	TU38 TE22 TA4 TT9 TM6	2			CW9 CW10 CW36	CE3	239
1086	VINYL CHLORIDE, STABILIZED	2	2F		2.1 (+13)	386 662	0	E0	P200		MP9	T50 (M)		PxBN(M)	TU38 TE22 TA4 TT9 TM6	2			CW9 CW10 CW36	CE3	239
1087	VINYL METHYL ETHER, STABILIZED	2	2F		2.1 (+13)	386 662	0	E0	P200		MP9	T50 (M)		PxBN(M)	TU38 TE22 TA4 TT9 TM6	2			CW9 CW10 CW36	CE3	239
1088	ACETAL	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1089	ACETALDEHYDE	3	F1	I	3		0	E0	P001		MP7 MP17	T11	TP2 TP7	L4BN	TU8	1					33
1090	ACETONE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1091	ACETONE OILS	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1 TP8	LGBF		2				CE7	33
1092	ACROLEIN, STABILIZED	6.1	TF1	I	6.1+3	354 386	0	E0	P601		MP8 MP17	T22	TP2 TP7	L15CH	TU14 TU15 TU38 TE21 TE22 TE25	1			CW13 CW28 CW31		663

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1093	ACRYLONITRILE, STABILIZED	3	FT1	I	3+6.1	386	0	E0	P001		MP7 MP17	T14	TP2	L10CH	TU14 TU15 TU38 TE21 TE22	1			CW13 CW28		336
1098	ALLYL ALCOHOL	6.1	TF1	I	6.1+3	354	0	E0	P602		MP8 MP17	T20	TP2	L10CH	TU14 TU15 TU38 TE21 TE22	1			CW13 CW28 CW31		663
1099	ALLYL BROMIDE	3	FT1	I	3+6.1		0	E0	P001		MP7 MP17	T14	TP2	L10CH	TU14 TU15 TU38 TE21 TE22	1			CW13 CW28		336
1100	ALLYL CHLORIDE	3	FT1	I	3+6.1		0	E0	P001		MP7 MP17	T14	TP2	L10CH	TU14 TU15 TU38 TE21 TE22	1			CW13 CW28		336
1104	AMYL ACETATES	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1105	PENTANOLS	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1 TP29	LGBF		2				CE7	33
1105	PENTANOLS	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1106	AMYLAMINE	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T7	TP1	L4BH		2				CE7	338
1106	AMYLAMINE	3	FC	III	3+8		5 L	E1	P001 IBC03 R001		MP19	T4	TP1	L4BN		3	W12			CE4	38

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1107	AMYL CHLORIDE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1108	1-PENTENE (n-AMYLENE)	3	F1	I	3		0	E3	P001		MP7 MP17	T11	TP2	L4BN		1					33
1109	AMYL FORMATES	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1110	n-AMYL METHYL KETONE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1111	AMYL MERCAPTAN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1112	AMYL NITRATE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1113	AMYL NITRITE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1114	BENZENE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1120	BUTANOLS	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1 TP29	LGBF		2				CE7	33
1120	BUTANOLS	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1123	BUTYL ACETATES	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1123	BUTYL ACETATES	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1125	n-BUTYLAMINE	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T7	TP1	L4BH		2				CE7	338
1126	1-BROMOBUTANE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1127	CHLOROBUTANES	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1128	n-BUTYL FORMATE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1129	BUTYRALDEHYDE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1130	CAMPHOR OIL	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1131	CARBON DISULPHIDE	3	FT1	I	3+6.1		0	E0	P001	PP31	MP7 MP17	T14	TP2 TP7	L10CH	TU2 TU14 TU15 TU38 TE21 TE22	1			CW13 CW28		336
1133	ADHESIVES containing flammable liquid	3	F1	I	3		500 ml	E3	P001		MP7 MP17	T11	TP1 TP8 TP27	L4BN		1					33
1133	ADHESIVES containing flammable liquid (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	640C	5 L	E2	P001	PP1	MP19	T4	TP1 TP8	L1.5BN		2				CE7	33
1133	ADHESIVES containing flammable liquid (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	640D	5 L	E2	P001 IBC02 R001	PP1	MP19	T4	TP1 TP8	LGBF		2				CE7	33

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1133	ADHESIVES containing flammable liquid	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001	PP1	MP19	T2	TP1	LGBF		3	W12			CE4	30
1133	ADHESIVES containing flammable liquid (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa)	3	F1	III	3		5 L	E1	P001 R001	PP1	MP19					3				CE4	33
1133	ADHESIVES containing flammable liquid (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)	3	F1	III	3		5 L	E1	P001 IBC02 R001	PP1 BB4	MP19					3				CE4	33
1134	CHLOROBENZENE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1135	ETHYLENE CHLOROHYDRIN	6.1	TF1	I	6.1+3	354	0	E0	P602		MP8 MP17	T20	TP2	L10CH	TU14 TU15 TU38 TE21 TE22	1			CW13 CW28 CW31		663
1136	COAL TAR DISTILLATES, FLAMMABLE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1136	COAL TAR DISTILLATES, FLAMMABLE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1 TP29	LGBF		3	W12			CE4	30
1139	COATING SOLUTION (includes surface treatments or coatings used for industrial or other purposes such as vehicle under coating, drum or barrel lining)	3	F1	I	3		500 ml	E3	P001		MP7 MP17	T11	TP1 TP8 TP27	L4BN		1					33
1139	COATING SOLUTION (includes surface treatments or coatings used for industrial or other purposes such as vehicle under coating, drum or barrel lining) (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	640C	5 L	E2	P001		MP19	T4	TP1 TP8	L1.5BN		2				CE7	33

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1139	COATING SOLUTION (includes surface treatments or coatings used for industrial or other purposes such as vehicle under coating, drum or barrel lining) (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	640D	5 L	E2	P001 IBC02 R001		MP19	T4	TP1 TP8	LGBF		2				CE7	33
1139	COATING SOLUTION (includes surface treatments or coatings used for industrial or other purposes such as vehicle under coating, drum or barrel lining)	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1139	COATING SOLUTION (includes surface treatments or coatings used for industrial or other purposes such as vehicle under coating, drum or barrel lining) (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa)	3	F1	III	3		5 L	E1	P001 R001		MP19					3				CE4	33
1139	COATING SOLUTION (includes surface treatments or coatings used for industrial or other purposes such as vehicle under coating, drum or barrel lining) (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)	3	F1	III	3		5 L	E1	P001 IBC02 R001	BB4	MP19					3				CE4	33
1143	CROTONALDEHYDE or CROTONALDEHYDE, STABILIZED	6.1	TF1	I	6.1+3	324 354 386	0	E0	P602		MP8 MP17	T20	TP2	L10CH	TU14 TU15 TU38 TE21 TE22	1			CW13 CW28 CW31		663
1144	CROTONYLENE	3	F1	I	3		0	E3	P001		MP7 MP17	T11	TP2	L4BN		1					339
1145	CYCLOHEXANE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1146	CYCLOPENTANE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T7	TP1	LGBF		2				CE7	33

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1147	DECAHYDRO-NAPHTHALENE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1148	DIACETONE ALCOHOL	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1148	DIACETONE ALCOHOL	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1149	DIBUTYL ETHERS	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1150	1,2-DICHLOROETHYLENE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T7	TP2	LGBF		2				CE7	33
1152	DICHLOROPENTANES	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1153	ETHYLENE GLYCOL DIETHYL ETHER	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1153	ETHYLENE GLYCOL DIETHYL ETHER	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1154	DIETHYLAMINE	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T7	TP1	L4BH		2				CE7	338
1155	DIETHYL ETHER (ETHYL ETHER)	3	F1	I	3		0	E3	P001		MP7 MP17	T11	TP2	L4BN		1					33
1156	DIETHYL KETONE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1157	DIISOBUTYL KETONE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1158	DIISOPROPYLAMINE	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T7	TP1	L4BH		2				CE7	338
1159	DIISOPROPYL ETHER	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1160	DIMETHYLAMINE AQUEOUS SOLUTION	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T7	TP1	L4BH		2				CE7	338
1161	DIMETHYL CARBONATE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1162	DIMETHYLDICHLOROSILANE	3	FC	II	3+8		0	E0	P010		MP19	T10	TP2 TP7	L4BH		2				CE7	X338
1163	DIMETHYLHYDRAZINE, UNSYMMETRICAL	6.1	TFC	I	6.1+3+8	354	0	E0	P602		MP8 MP17	T20	TP2	L10CH	TU14 TU15 TU38 TE21 TE22	1			CW13 CW28 CW31		663
1164	DIMETHYL SULPHIDE	3	F1	II	3		1 L	E2	P001 IBC02	B8	MP19	T7	TP2	L1.5BN		2				CE7	33
1165	DIOXANE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1166	DIOXOLANE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1167	DIVINYL ETHER, STABILIZED	3	F1	I	3	386	0	E3	P001		MP7 MP17	T11	TP2	L4BN		1					339
1169	EXTRACTS, AROMATIC, LIQUID (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	601 640C	5 L	E2	P001		MP19	T4	TP1 TP8	L1.5BN		2				CE7	33
1169	EXTRACTS, AROMATIC, LIQUID (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	601 640D	5 L	E2	P001 IBC02 R001		MP19	T4	TP1 TP8	LGBF		2				CE7	33

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1169	EXTRACTS, AROMATIC, LIQUID	3	F1	III	3	601	5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1169	EXTRACTS, AROMATIC, LIQUID (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa)	3	F1	III	3	601	5 L	E1	P001 R001		MP19					3				CE4	33
1169	EXTRACTS, AROMATIC, LIQUID (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)	3	F1	III	3	601	5 L	E1	P001 IBC02 R001	BB4	MP19					3				CE4	33
1170	ETHANOL (ETHYL ALCOHOL) or ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)	3	F1	II	3	144 601	1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1170	ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)	3	F1	III	3	144 601	5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1171	ETHYLENE GLYCOL MONOETHYL ETHER	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1172	ETHYLENE GLYCOL MONOETHYL ETHER ACETATE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1173	ETHYL ACETATE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1175	ETHYLBENZENE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1176	ETHYL BORATE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1177	2-ETHYLBUTYL ACETATE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1178	2-ETHYLBUTYRALDEHYDE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1179	ETHYL BUTYL ETHER	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1180	ETHYL BUTYRATE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1181	ETHYL CHLOROACETATE	6.1	TF1	II	6.1+3		100 ml	E4	P001 IBC02		MP15	T7	TP2	L4BH	TU15	2			CW13 CW28 CW31	CE5	63
1182	ETHYL CHLOROFORMATE	6.1	TFC	I	6.1+3+8	354	0	E0	P602		MP8 MP17	T20	TP2	L10CH	TU14 TU15 TU38 TE21 TE22	1			CW13 CW28 CW31		663
1183	ETHYLDICHLOROSILANE	4.3	WFC	I	4.3+3+8		0	E0	P401	RR7	MP2	T14	TP2 TP7	L10DH	TU14 TU23 TU38 TE21 TE22 TM2 TM3	0	W1		CW23		X338
1184	ETHYLENE DICHLORIDE	3	FT1	II	3+6.1		1 L	E2	P001 IBC02		MP19	T7	TP1	L4BH	TU15	2			CW13 CW28	CE7	336
1185	ETHYLENEIMINE, STABILIZED	6.1	TF1	I	6.1+3	354 386	0	E0	P601		MP2	T22	TP2	L15CH	TU14 TU15 TU38 TE21 TE22 TE25	1			CW13 CW28 CW31		663

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1188	ETHYLENE GLYCOL MONOMETHYL ETHER	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1189	ETHYLENE GLYCOL MONOMETHYL ETHER ACETATE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1190	ETHYL FORMATE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1191	OCTYL ALDEHYDES	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1192	ETHYL LACTATE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1193	ETHYL METHYL KETONE (METHYL ETHYL KETONE)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1194	ETHYL NITRITE SOLUTION	3	FT1	I	3+6.1		0	E0	P001		MP7 MP17			L10CH	TU14 TU15 TU38 TE21 TE22	1			CW13 CW28		336
1195	ETHYL PROPIONATE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1196	ETHYLTRICHLOROSILANE	3	FC	II	3+8		0	E0	P010		MP19	T10	TP2 TP7	L4BH		2				CE7	X338
1197	EXTRACTS, FLAVOURING, LIQUID (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	601 640C	5 L	E2	P001		MP19	T4	TP1 TP8	L1.5BN		2				CE7	33

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1197	EXTRACTS, FLAVOURING, LIQUID (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	601 640D	5 L	E2	P001 IBC02 R001		MP19	T4	TP1 TP8	LGBF		2				CE7	33
1197	EXTRACTS, FLAVOURING, LIQUID	3	F1	III	3	601	5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1197	EXTRACTS, FLAVOURING, LIQUID (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa)	3	F1	III	3	601	5 L	E1	P001 R001		MP19					3				CE4	33
1197	EXTRACTS, FLAVOURING, LIQUID (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)	3	F1	III	3	601	5 L	E1	P001 IBC02 R001	BB4	MP19					3				CE4	33
1198	FORMALDEHYDE SOLUTION, FLAMMABLE	3	FC	III	3+8		5 L	E1	P001 IBC03 R001		MP19	T4	TP1	L4BN		3	W12			CE4	38
1199	FURALDEHYDES	6.1	TF1	II	6.1+3		100 ml	E4	P001 IBC02		MP15	T7	TP2	L4BH	TU15	2			CW13 CW28 CW31	CE5	63
1201	FUSEL OIL	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1201	FUSEL OIL	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1202	GAS OIL or DIESEL FUEL or HEATING OIL, LIGHT (flash-point not more than 60 °C)	3	F1	III	3	640K	5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1202	DIESEL FUEL complying with standard EN 590:2013 + A1:2017 or GAS OIL or HEATING OIL, LIGHT with a flash-point as specified in EN 590:2013 + A1:2017	3	F1	III	3	640L	5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1202	GAS OIL or DIESEL FUEL or HEATING OIL, LIGHT (flash-point more than 60 °C and not more than 100 °C)	3	F1	III	3	640M	5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBV		3	W12			CE4	30
1203	MOTOR SPIRIT or GASOLINE or PETROL	3	F1	II	3	243 534	1 L	E2	P001 IBC02 R001	BB2	MP19	T4	TP1	LGBF	TU9	2				CE7	33
1204	NITROGLYCERIN SOLUTION IN ALCOHOL with not more than 1% nitroglycerin	3	D	II	3	601	1 L	E0	P001 IBC02	PP5	MP2					2				CE7	33
1206	HEPTANES	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1207	HEXALDEHYDE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1208	HEXANES	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1210	PRINTING INK, flammable or PRINTING INK RELATED MATERIAL (including printing ink thinning or reducing compound), flammable	3	F1	I	3	163 367	500 ml	E3	P001		MP7 MP17	T11	TP1 TP8	L4BN		1					33
1210	PRINTING INK, flammable or PRINTING INK RELATED MATERIAL (including printing ink thinning or reducing compound), flammable (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	163 367 640C	5 L	E2	P001	PP1	MP19	T4	TP1 TP8	L1.5BN		2				CE7	33
1210	PRINTING INK, flammable or PRINTING INK RELATED MATERIAL (including printing ink thinning or reducing compound), flammable (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	163 367 640D	5 L	E2	P001 IBC02 R001	PP1	MP19	T4	TP1 TP8	LGBF		2				CE7	33

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1210	PRINTING INK, flammable or PRINTING INK RELATED MATERIAL (including printing ink thinning or reducing compound), flammable	3	F1	III	3	163 367	5 L	E1	P001 IBC03 LP01 R001	PP1	MP19	T2	TP1	LGBF		3	W12			CE4	30
1210	PRINTING INK, flammable or PRINTING INK RELATED MATERIAL (including printing ink thinning or reducing compound), flammable (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa)	3	F1	III	3	163 367	5 L	E1	P001 R001	PP1	MP19					3				CE4	33
1210	PRINTING INK, flammable or PRINTING INK RELATED MATERIAL (including printing ink thinning or reducing compound), flammable (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)	3	F1	III	3	163 367	5 L	E1	P001 IBC02 R001	PP1 BB4	MP19					3				CE4	33
1212	ISOBUTANOL (ISOBUTYL ALCOHOL)	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1213	ISOBUTYL ACETATE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1214	ISOBUTYLAMINE	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T7	TP1	L4BH		2				CE7	338
1216	ISOOCTENES	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1218	ISOPRENE, STABILIZED	3	F1	I	3	386	0	E3	P001		MP7 MP17	T11	TP2	L4BN		1					339
1219	ISOPROPANOL (ISOPROPYL ALCOHOL)	3	F1	II	3	601	1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1220	ISOPROPYL ACETATE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1221	ISOPROPYLAMINE	3	FC	I	3+8		0	E0	P001		MP7 MP17	T11	TP2	L10CH	TU14 TU38 TE21 TE22	1					338
1222	ISOPROPYL NITRATE	3	F1	II	3		1 L	E2	P001 IBC02 R001	B7	MP19					2				CE7	33
1223	KEROSENE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP2	LGBF		3	W12			CE4	30
1224	KETONES, LIQUID, N.O.S. (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	274 640C	1 L	E2	P001		MP19	T7	TP1 TP8 TP28	L1.5BN		2				CE7	33
1224	KETONES, LIQUID, N.O.S. (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	274 640D	1 L	E2	P001 IBC02 R001		MP19	T7	TP1 TP8 TP28	LGBF		2				CE7	33
1224	KETONES, LIQUID, N.O.S.	3	F1	III	3	274	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1 TP29	LGBF		3	W12			CE4	30
1228	MERCAPTANS, LIQUID, FLAMMABLE, TOXIC, N.O.S. or MERCAPTAN MIXTURE, LIQUID, FLAMMABLE, TOXIC, N.O.S.	3	FT1	II	3+6.1	274	1 L	E0	P001 IBC02		MP19	T11	TP2 TP27	L4BH	TU15	2			CW13 CW28	CE7	336
1228	MERCAPTANS, LIQUID, FLAMMABLE, TOXIC, N.O.S. or MERCAPTAN MIXTURE, LIQUID, FLAMMABLE, TOXIC, N.O.S.	3	FT1	III	3+6.1	274	5 L	E1	P001 IBC03 R001		MP19	T7	TP1 TP28	L4BH	TU15	3	W12		CW13 CW28	CE4	36
1229	MESITYL OXIDE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1230	METHANOL	3	FT1	II	3+6.1	279	1 L	E2	P001 IBC02		MP19	T7	TP2	L4BH	TU15	2			CW13 CW28	CE7	336
1231	METHYL ACETATE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1233	METHYLAMYL ACETATE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1234	METHYLAL	3	F1	II	3		1 L	E2	P001 IBC02	B8	MP19	T7	TP2	L1.5BN		2				CE7	33
1235	METHYLAMINE, AQUEOUS SOLUTION	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T7	TP1	L4BH		2				CE7	338
1237	METHYL BUTYRATE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1238	METHYL CHLOROFORMATE	6.1	TFC	I	6.1+3+8	354	0	E0	P602		MP8 MP17	T22	TP2	L15CH	TU14 TU15 TU38 TE21 TE22 TE25	1			CW13 CW28 CW31		663
1239	METHYL CHLOROMETHYL ETHER	6.1	TF1	I	6.1+3	354	0	E0	P602		MP8 MP17	T22	TP2	L15CH	TU14 TU15 TU38 TE21 TE22 TE25	1			CW13 CW28 CW31		663
1242	METHYLDICHLOROSILANE	4.3	WFC	I	4.3+3+8		0	E0	P401	RR7	MP2	T14	TP2 TP7	L10DH	TU14 TU24 TU38 TE21 TE22 TM2 TM3	0	W1		CW23		X338
1243	METHYL FORMATE	3	F1	I	3		0	E3	P001		MP7 MP17	T11	TP2	L4BN		1					33

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1244	METHYLHYDRAZINE	6.1	TFC	I	6.1+3+8	354	0	E0	P602		MP8 MP17	T22	TP2	L15CH	TU14 TU15 TU38 TE21 TE22 TE25	1			CW13 CW28 CW31		663
1245	METHYL ISOBUTYL KETONE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1246	METHYL ISOPROPENYL KETONE, STABILIZED	3	F1	II	3	386	1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	339
1247	METHYL METHACRYLATE MONOMER, STABILIZED	3	F1	II	3	386	1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	339
1248	METHYL PROPIONATE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1249	METHYL PROPYL KETONE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1250	METHYLTRICHLOROSILANE	3	FC	II	3+8		0	E0	P010		MP19	T10	TP2 TP7	L4BH		2				CE7	X338
1251	METHYL VINYL KETONE, STABILIZED	6.1	TFC	I	6.1+3+8	354 386	0	E0	P601	RR7	MP8 MP17	T22	TP2	L15CH	TU14 TU15 TU38 TE21 TE22 TE25	1			CW13 CW28 CW31		639
1259	NICKEL CARBONYL	6.1	TF1	I	6.1+3		0	E0	P601		MP2			L15CH	TU14 TU15 TU31 TU38 TE21 TE22 TE25 TM3	1			CW13 CW28 CW31		663

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1261	NITROMETHANE	3	F1	II	3		1 L	E0	P001 R001	RR2	MP19					2				CE7	33
1262	OCTANES	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1263	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning and reducing compound)	3	F1	I	3	163 367 650	500 ml	E3	P001		MP7 MP17	T11	TP1 TP8 TP27	L4BN		1					33
1263	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning and reducing compound) (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	163 367 640C 650	5 L	E2	P001	PP1	MP19	T4	TP1 TP8 TP28	L1.5BN		2				CE7	33
1263	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning and reducing compound) (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	163 367 640D 650	5 L	E2	P001 IBC02 R001	PP1	MP19	T4	TP1 TP8 TP28	LGBF		2				CE7	33
1263	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning and reducing compound)	3	F1	III	3	163 367 650	5 L	E1	P001 IBC03 LP01 R001	PP1	MP19	T2	TP1 TP29	LGBF		3	W12			CE4	30
1263	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning and reducing compound) (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa)	3	F1	III	3	163 367 650	5 L	E1	P001 R001	PP1	MP19					3				CE4	33

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1263	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning and reducing compound) (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)	3	F1	III	3	163 367 650	5 L	E1	P001 IBC02 R001	PP1 BB4	MP19					3				CE4	33
1264	PARALDEHYDE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1265	PENTANES, liquid	3	F1	I	3		0	E3	P001		MP7 MP17	T11	TP2	L4BN		1					33
1265	PENTANES, liquid	3	F1	II	3		1 L	E2	P001 IBC02	B8	MP19	T4	TP1	L1.5BN		2				CE7	33
1266	PERFUMERY PRODUCTS with flammable solvents (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	163 640C	5 L	E2	P001		MP19	T4	TP1 TP8	L1.5BN		2				CE7	33
1266	PERFUMERY PRODUCTS with flammable solvents (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	163 640D	5 L	E2	P001 IBC02 R001		MP19	T4	TP1 TP8	LGBF		2				CE7	33
1266	PERFUMERY PRODUCTS with flammable solvents	3	F1	III	3	163	5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1266	PERFUMERY PRODUCTS with flammable solvents (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa)	3	F1	III	3	163	5 L	E1	P001 R001		MP19					3				CE4	33
1266	PERFUMERY PRODUCTS with flammable solvents (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)	3	F1	III	3	163	5 L	E1	P001 IBC02 R001	BB4	MP19					3				CE4	33

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1267	PETROLEUM CRUDE OIL	3	F1	I	3	357	500 ml	E3	P001		MP7 MP17	T11	TP1 TP8	L4BN		1					33
1267	PETROLEUM CRUDE OIL (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	357 640C	1 L	E2	P001		MP19	T4	TP1 TP8	L1.5BN		2				CE7	33
1267	PETROLEUM CRUDE OIL (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	357 640D	1 L	E2	P001 IBC02 R001		MP19	T4	TP1 TP8	LGBF		2				CE7	33
1267	PETROLEUM CRUDE OIL	3	F1	III	3	357	5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1268	PETROLEUM DISTILLATES, N.O.S. or PETROLEUM PRODUCTS, N.O.S.	3	F1	I	3		500 ml	E3	P001		MP7 MP17	T11	TP1 TP8	L4BN		1					33
1268	PETROLEUM DISTILLATES, N.O.S. or PETROLEUM PRODUCTS, N.O.S. (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	640C	1 L	E2	P001		MP19	T7	TP1 TP8 TP28	L1.5BN		2				CE7	33
1268	PETROLEUM DISTILLATES, N.O.S. or PETROLEUM PRODUCTS, N.O.S. (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	640D	1 L	E2	P001 IBC02 R001		MP19	T7	TP1 TP8 TP28	LGBF		2				CE7	33
1268	PETROLEUM DISTILLATES, N.O.S. or PETROLEUM PRODUCTS, N.O.S.	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1 TP29	LGBF		3	W12			CE4	30
1272	PINE OIL	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1274	n-PROPANOL (PROPYL ALCOHOL, NORMAL)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1274	n-PROPANOL (PROPYL ALCOHOL, NORMAL)	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1275	PROPIONALDEHYDE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T7	TP1	LGBF		2				CE7	33
1276	n-PROPYL ACETATE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1277	PROPYLAMINE	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T7	TP1	L4BH		2				CE7	338
1278	1-CHLOROPROPANE	3	F1	II	3		1 L	E0	P001 IBC02	B8	MP19	T7	TP2	L1.5BN		2				CE7	33
1279	1,2-DICHLOROPROPANE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1280	PROPYLENE OXIDE	3	F1	I	3		0	E3	P001		MP7 MP17	T11	TP2 TP7	L4BN		1					33
1281	PROPYL FORMATES	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1282	PYRIDINE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP2	LGBF		2				CE7	33
1286	ROSIN OIL (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	640C	5 L	E2	P001		MP19	T4	TP1	L1.5BN		2				CE7	33
1286	ROSIN OIL (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	640D	5 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1286	ROSIN OIL	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1286	ROSIN OIL (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa)	3	F1	III	3		5 L	E1	P001 R001		MP19					3				CE4	33

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1286	ROSIN OIL (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)	3	F1	III	3		5 L	E1	P001 IBC02 R001	BB4	MP19					3				CE4	33
1287	RUBBER SOLUTION (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	640C	5 L	E2	P001		MP19	T4	TP1 TP8	L1.5BN		2				CE7	33
1287	RUBBER SOLUTION (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	640D	5 L	E2	P001 IBC02 R001		MP19	T4	TP1 TP8	LGBF		2				CE7	33
1287	RUBBER SOLUTION	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1287	RUBBER SOLUTION (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa)	3	F1	III	3		5 L	E1	P001 R001		MP19					3				CE4	33
1287	RUBBER SOLUTION (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)	3	F1	III	3		5 L	E1	P001 IBC02 R001	BB4	MP19					3				CE4	33
1288	SHALE OIL	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1 TP8	LGBF		2				CE7	33
1288	SHALE OIL	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1289	SODIUM METHYLATE SOLUTION in alcohol	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T7	TP1 TP8	L4BH		2				CE7	338
1289	SODIUM METHYLATE SOLUTION in alcohol	3	FC	III	3+8		5 L	E1	P001 IBC02 R001		MP19	T4	TP1	L4BN		3				CE4	38
1292	TETRAETHYL SILICATE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1293	TINCTURES, MEDICINAL	3	F1	II	3	601	1 L	E2	P001 IBC02 R001		MP19	T4	TP1 TP8	LGBF		2				CE7	33
1293	TINCTURES, MEDICINAL	3	F1	III	3	601	5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1294	TOLUENE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1295	TRICHLOROSILANE	4.3	WFC	I	4.3+3+8		0	E0	P401	RR7	MP2	T14	TP2 TP7	L10DH	TU14 TU25 TU38 TE21 TE22 TM2 TM3	0	W1		CW23		X338
1296	TRIETHYLAMINE	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T7	TP1	L4BH		2				CE7	338
1297	TRIMETHYLAMINE, AQUEOUS SOLUTION, not more than 50% trimethylamine, by mass	3	FC	I	3+8		0	E0	P001		MP7 MP17	T11	TP1	L10CH	TU14 TU38 TE21 TE22	1					338
1297	TRIMETHYLAMINE, AQUEOUS SOLUTION, not more than 50% trimethylamine, by mass	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T7	TP1	L4BH		2				CE7	338
1297	TRIMETHYLAMINE, AQUEOUS SOLUTION, not more than 50% trimethylamine, by mass	3	FC	III	3+8		5 L	E1	P001 IBC03 R001		MP19	T7	TP1	L4BN		3	W12			CE4	38
1298	TRIMETHYLCHLOROSILANE	3	FC	II	3+8		0	E0	P010		MP19	T10	TP2 TP7	L4BH		2				CE7	X338
1299	TURPENTINE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1300	TURPENTINE SUBSTITUTE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1300	TURPENTINE SUBSTITUTE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1301	VINYL ACETATE, STABILIZED	3	F1	II	3	386	1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	339
1302	VINYL ETHYL ETHER, STABILIZED	3	F1	I	3	386	0	E3	P001		MP7 MP17	T11	TP2	L4BN		1					339
1303	VINYLIDENE CHLORIDE, STABILIZED	3	F1	I	3	386	0	E3	P001		MP7 MP17	T12	TP2 TP7	L4BN		1					339
1304	VINYL ISOBUTYL ETHER, STABILIZED	3	F1	II	3	386	1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	339
1305	VINYLTRICHLOROSILANE	3	FC	II	3+8		0	E0	P010		MP19	T10	TP2 TP7	L4BH		2				CE7	X338
1306	WOOD PRESERVATIVES, LIQUID (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	640C	5 L	E2	P001		MP19	T4	TP1 TP8	L1.5BN		2				CE7	33
1306	WOOD PRESERVATIVES, LIQUID (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	640D	5 L	E2	P001 IBC02 R001		MP19	T4	TP1 TP8	LGBF		2				CE7	33
1306	WOOD PRESERVATIVES, LIQUID	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1306	WOOD PRESERVATIVES, LIQUID (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa)	3	F1	III	3		5 L	E1	P001 R001		MP19					3				CE4	33
1306	WOOD PRESERVATIVES, LIQUID (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)	3	F1	III	3		5 L	E1	P001 IBC02 R001	BB4	MP19					3				CE4	33

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1307	XYLENES	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
1307	XYLENES	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1308	ZIRCONIUM SUSPENDED IN A FLAMMABLE LIQUID	3	F1	I	3		0	E0	P001	PP33	MP7 MP17			L4BN		1					33
1308	ZIRCONIUM SUSPENDED IN A FLAMMABLE LIQUID (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	640C	1 L	E2	P001 R001	PP33	MP19			L1.5BN		2				CE7	33
1308	ZIRCONIUM SUSPENDED IN A FLAMMABLE LIQUID (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	640D	1 L	E2	P001 R001	PP33	MP19			LGBF		2				CE7	33
1308	ZIRCONIUM SUSPENDED IN A FLAMMABLE LIQUID	3	F1	III	3		5 L	E1	P001 R001		MP19			LGBF		3				CE4	30
1309	ALUMINIUM POWDER, COATED	4.1	F3	II	4.1		1 kg	E2	P002 IBC08	PP38 B4	MP11	T3	TP33	SGAN		2	W1			CE10	40
1309	ALUMINIUM POWDER, COATED	4.1	F3	III	4.1		5 kg	E1	P002 IBC08 LP02 R001	PP11 B3	MP11	T1	TP33	SGAV		3	W1	VC1 VC2		CE11	40
1310	AMMONIUM PICRATE, WETTED with not less than 10% water, by mass	4.1	D	I	4.1		0	E0	P406	PP26	MP2					1	W1				40
1312	BORNEOL	4.1	F1	III	4.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAV		3	W1	VC1 VC2		CE11	40
1313	CALCIUM RESINATE	4.1	F3	III	4.1		5 kg	E1	P002 IBC06 R001		MP11	T1	TP33	SGAV		3	W1	VC1 VC2		CE11	40
1314	CALCIUM RESINATE, FUSED	4.1	F3	III	4.1		5 kg	E1	P002 IBC04 R001		MP11	T1	TP33	SGAV		3	W1	VC1 VC2		CE11	40

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1318	COBALT RESINATE, PRECIPITATED	4.1	F3	III	4.1		5 kg	E1	P002 IBC06 R001		MP11	T1	TP33	SGAV		3	W1	VC1 VC2		CE11	40
1320	DINITROPHENOL, WETTED with not less than 15% water, by mass	4.1	DT	I	4.1+6.1		0	E0	P406	PP26	MP2					1	W1		CW28		46
1321	DINITROPHENOLATES, WETTED with not less than 15% water, by mass	4.1	DT	I	4.1+6.1		0	E0	P406	PP26	MP2					1	W1		CW28		46
1322	DINITRORESORCINOL, WETTED with not less than 15% water, by mass	4.1	D	I	4.1		0	E0	P406	PP26	MP2					1	W1				40
1323	FERROCERIUM	4.1	F3	II	4.1	249	1 kg	E2	P002 IBC08	B4	MP11	T3	TP33	SGAN		2	W1			CE10	40
1324	FILMS, NITROCELLULOSE BASE, gelatin coated, except scrap	4.1	F1	III	4.1		5 kg	E1	P002 R001	PP15	MP11					3	W1			CE11	40
1325	FLAMMABLE SOLID, ORGANIC, N.O.S.	4.1	F1	II	4.1	274	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	SGAN		2	W1			CE10	40
1325	FLAMMABLE SOLID, ORGANIC, N.O.S.	4.1	F1	III	4.1	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAV		3	W1	VC1 VC2		CE11	40
1326	HAFNIUM POWDER, WETTED with not less than 25% water	4.1	F3	II	4.1	586	1 kg	E2	P410 IBC06	PP40	MP11	T3	TP33	SGAN		2	W1			CE10	40
1327	Hay, Straw or Bhusa	4.1	F1	NOT SUBJECT TO RID																	
1328	HEXAMETHYLENETETRAMINE	4.1	F1	III	4.1		5 kg	E1	P002 IBC08 R001	B3	MP10	T1	TP33	SGAV		3	W1	VC1 VC2		CE11	40
1330	MANGANESE RESINATE	4.1	F3	III	4.1		5 kg	E1	P002 IBC06 R001		MP11	T1	TP33	SGAV		3	W1	VC1 VC2		CE11	40
1331	MATCHES, 'STRIKE ANYWHERE'	4.1	F1	III	4.1	293	5 kg	E0	P407	PP27	MP12					4	W1			CE11	40
1332	METALDEHYDE	4.1	F1	III	4.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAV		3	W1	VC1 VC2		CE11	40
1333	CERIUM, slabs, ingots or rods	4.1	F3	II	4.1		1 kg	E2	P002 IBC08	B4	MP11					2	W1			CE10	40

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1334	NAPHTHALENE, CRUDE or NAPHTHALENE, REFINED	4.1	F1	III	4.1	501	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1 BK1 BK2 BK3	TP33	SGAV		3	W1	VC1 VC2 AP1		CE11	40
1336	NITROGUANIDINE (PICRITE), WETTED with not less than 20% water, by mass	4.1	D	I	4.1		0	E0	P406		MP2					1	W1				40
1337	NITROSTARCH, WETTED with not less than 20% water, by mass	4.1	D	I	4.1		0	E0	P406		MP2					1	W1				40
1338	PHOSPHORUS, AMORPHOUS	4.1	F3	III	4.1		5 kg	E1	P410 IBC08 R001	B3	MP11	T1	TP33	SGAV		3	W1	VC1 VC2		CE11	40
1339	PHOSPHORUS HEPTASULPHIDE, free from yellow and white phosphorus	4.1	F3	II	4.1	602	1 kg	E2	P410 IBC04		MP11	T3	TP33	SGAN		2	W1			CE10	40
1340	PHOSPHORUS PENTASULPHIDE, free from yellow and white phosphorus	4.3	WF2	II	4.3+4.1	602	500 g	E2	P410 IBC04		MP14	T3	TP33	SGAN		0	W1		CW23	CE10	423
1341	PHOSPHORUS SESQUISULPHIDE, free from yellow and white phosphorus	4.1	F3	II	4.1	602	1 kg	E2	P410 IBC04		MP11	T3	TP33	SGAN		2	W1			CE10	40
1343	PHOSPHORUS TRISULPHIDE, free from yellow and white phosphorus	4.1	F3	II	4.1	602	1 kg	E2	P410 IBC04		MP11	T3	TP33	SGAN		2	W1			CE10	40
1344	TRINITROPHENOL (PICRIC ACID), WETTED with not less than 30% water, by mass	4.1	D	I	4.1		0	E0	P406	PP26	MP2					1	W1				40
1345	RUBBER SCRAP or RUBBER SHODDY, powdered or granulated	4.1	F1	II	4.1		1 kg	E2	P002 IBC08	B4	MP11	T3	TP33	SGAN		4	W1			CE10	40
1346	SILICON POWDER, AMORPHOUS	4.1	F3	III	4.1	32	5 kg	E1	P002 IBC08 LP02 R001	B3	MP11	T1	TP33	SGAV		3	W1	VC1 VC2		CE11	40
1347	SILVER PICRATE, WETTED with not less than 30% water, by mass	4.1	D	I	4.1		0	E0	P406	PP25 PP26	MP2					1	W1				40
1348	SODIUM DINITRO-o-CRESOLATE, WETTED with not less than 15% water, by mass	4.1	DT	I	4.1+6.1		0	E0	P406	PP26	MP2					1	W1		CW28		46
1349	SODIUM PICRAMATE, WETTED with not less than 20% water, by mass	4.1	D	I	4.1		0	E0	P406	PP26	MP2					1	W1				40

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									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1350	SULPHUR	4.1	F3	III	4.1	242	5 kg	E1	P002 IBC08 LP02 R001	B3	MP11	T1 BK1 BK2 BK3	TP33	SGAV		3	W1	VC1 VC2		CE11	40
1352	TITANIUM POWDER, WETTED with not less than 25% water	4.1	F3	II	4.1	586	1 kg	E2	P410 IBC06	PP40	MP11	T3	TP33	SGAN		2	W1			CE10	40
1353	FIBRES or FABRICS IMPREGNATED WITH WEAKLY NITRATED NITROCELLULOSE, N.O.S.	4.1	F1	III	4.1	502	5 kg	E1	P410 IBC08 R001	B3	MP11					3	W1			CE11	40
1354	TRINITROBENZENE, WETTED with not less than 30% water, by mass	4.1	D	I	4.1		0	E0	P406		MP2					1	W1				40
1355	TRINITROBENZOIC ACID, WETTED with not less than 30% water, by mass	4.1	D	I	4.1		0	E0	P406		MP2					1	W1				40
1356	TRINITROTOLUENE (TNT), WETTED with not less than 30% water, by mass	4.1	D	I	4.1		0	E0	P406		MP2					1	W1				40
1357	UREA NITRATE, WETTED with not less than 20% water, by mass	4.1	D	I	4.1	227	0	E0	P406		MP2					1	W1				40
1358	ZIRCONIUM POWDER, WETTED with not less than 25% water	4.1	F3	II	4.1	586	1 kg	E2	P410 IBC06	PP40	MP11	T3	TP33	SGAN		2	W1			CE10	40
1360	CALCIUM PHOSPHIDE	4.3	WT2	I	4.3+6.1		0	E0	P403		MP2					1	W1		CW23 CW28		X462
1361	CARBON, animal or vegetable origin	4.2	S2	II	4.2		0	E0	P002 IBC06	PP12	MP14	T3	TP33	SGAN	TU11	2	W1 W13			CE10	40
1361	CARBON, animal or vegetable origin	4.2	S2	III	4.2	665	0	E0	P002 IBC08 LP02 R001	PP12 B3	MP14	T1	TP33	SGAV		4	W1 W13	VC1 VC2 AP1		CE11	40
1362	CARBON, ACTIVATED	4.2	S2	III	4.2	646	0	E1	P002 IBC08 LP02 R001	PP11 B3	MP14	T1	TP33	SGAV		4	W1	VC1 VC2 AP1		CE11	40
1363	COPRA	4.2	S2	III	4.2		0	E0	P003 IBC08 LP02 R001	PP20 B3 B6	MP14	BK2				3	W1	VC1 VC2 AP1		CE11	40

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									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1364	COTTON WASTE, OILY	4.2	S2	III	4.2		0	E0	P003 IBC08 LP02 R001	PP19 B3 B6	MP14					3	W1	VC1 VC2 AP1		CE11	40
1365	COTTON, WET	4.2	S2	III	4.2		0	E0	P003 IBC08 LP02 R001	PP19 B3 B6	MP14					3	W1	VC1 VC2 AP1		CE11	40
1369	p-NITROSODIMETHYLANILINE	4.2	S2	II	4.2		0	E2	P410 IBC06		MP14	T3	TP33	SGAN		2	W1			CE10	40
1372	Fibres, animal or fibres, vegetable burnt, wet or damp	4.2	S2	NOT SUBJECT TO RID																	
1373	FIBRES or FABRICS, ANIMAL or VEGETABLE or SYNTHETIC, N.O.S. with oil	4.2	S2	III	4.2		0	E0	P410 IBC08 R001	B3	MP14	T1	TP33			3	W1	VC1 VC2 AP1		CE11	40
1374	FISH MEAL (FISH SCRAP), UNSTABILIZED	4.2	S2	II	4.2	300	0	E2	P410 IBC08	B4	MP14	T3	TP33			2	W1			CE10	40
1376	IRON OXIDE, SPENT or IRON SPONGE, SPENT obtained from coal gas purification	4.2	S4	III	4.2	592	0	E0	P002 IBC08 LP02 R001	B3	MP14	T1 BK2	TP33	SGAV		3	W1	VC1 VC2 AP1		CE11	40
1378	METAL CATALYST, WETTED with a visible excess of liquid	4.2	S4	II	4.2	274	0	E0	P410 IBC01	PP39	MP14	T3	TP33	SGAN		2	W1			CE10	40
1379	PAPER, UNSATURATED OIL TREATED, incompletely dried (including carbon paper)	4.2	S2	III	4.2		0	E0	P410 IBC08 R001	B3	MP14					3	W1	VC1 VC2 AP1		CE11	40
1380	PENTABORANE	4.2	ST3	I	4.2+6.1		0	E0	P601		MP2			L21DH	TU14 TU38 TC1 TE21 TE22 TE25 TM1	0	W1		CW28		333

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1381	PHOSPHORUS, WHITE or YELLOW, UNDER WATER or IN SOLUTION	4.2	ST3	I	4.2+6.1	503	0	E0	P405		MP2	T9	TP3 TP31	L10DH(+)	TU14 TU16 TU21 TU38 TE3 TE21 TE22	0	W1		CW28		46
1381	PHOSPHORUS, WHITE or YELLOW, DRY	4.2	ST4	I	4.2+6.1	503	0	E0	P405		MP2	T9	TP3 TP31	L10DH(+)	TU14 TU16 TU21 TU38 TE3 TE21 TE22	0	W1		CW28		46
1382	POTASSIUM SULPHIDE, ANHYDROUS or POTASSIUM SULPHIDE with less than 30% water of crystallization	4.2	S4	II	4.2	504	0	E2	P410 IBC06		MP14	T3	TP33	SGAN		2	W1			CE10	40
1383	PYROPHORIC METAL, N.O.S. or PYROPHORIC ALLOY, N.O.S.	4.2	S4	I	4.2	274	0	E0	P404		MP13	T21	TP7 TP33			0	W1				43
1384	SODIUM DITHIONITE (SODIUM HYDROSULPHITE)	4.2	S4	II	4.2		0	E2	P410 IBC06		MP14	T3	TP33	SGAN		2	W1			CE10	40
1385	SODIUM SULPHIDE, ANHYDROUS or SODIUM SULPHIDE with less than 30% water of crystallization	4.2	S4	II	4.2	504	0	E2	P410 IBC06		MP14	T3	TP33	SGAN		2	W1			CE10	40
1386	SEED CAKE with more than 1.5% oil and not more than 11% moisture	4.2	S2	III	4.2		0	E0	P003 IBC08 LP02 R001	PP20 B3 B6	MP14	BK2				3	W1	VC1 VC2 AP1		CE11	40
1387	Wool waste, wet	4.2	S2	NOT SUBJECT TO RID																	
1389	ALKALI METAL AMALGAM, LIQUID	4.3	W1	I	4.3	182	0	E0	P402	RR8	MP2			L10BN(+)	TU1 TE5 TT3 TM2	1	W1		CW23		X323
1390	ALKALI METAL AMIDES	4.3	W2	II	4.3	182 505	500 g	E2	P410 IBC07		MP14	T3	TP33	SGAN		0	W1		CW23	CE10	423

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									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1391	ALKALI METAL DISPERSION or ALKALINE EARTH METAL DISPERSION	4.3	W1	I	4.3	182 183 506	0	E0	P402	RR8	MP2			L10BN(+)	TU1 TE5 TT3 TM2	1	W1		CW23		X323
1392	ALKALINE EARTH METAL AMALGAM, LIQUID	4.3	W1	I	4.3	183 506	0	E0	P402		MP2			L10BN(+)	TU1 TE5 TT3 TM2	1	W1		CW23		X323
1393	ALKALINE EARTH METAL ALLOY, N.O.S.	4.3	W2	II	4.3	183 506	500 g	E2	P410 IBC07		MP14	T3	TP33	SGAN		2	W1		CW23	CE7	423
1394	ALUMINIUM CARBIDE	4.3	W2	II	4.3		500 g	E2	P410 IBC07		MP14	T3	TP33	SGAN		2	W1	VC1 VC2 AP3 AP4 AP5	CW23	CE10	423
1395	ALUMINIUM FERROSILICON POWDER	4.3	WT2	II	4.3+6.1		500 g	E2	P410 IBC05	PP40	MP14	T3	TP33	SGAN		2	W1		CW23 CW28	CE10	462
1396	ALUMINIUM POWDER, UNCOATED	4.3	W2	II	4.3		500 g	E2	P410 IBC07	PP40	MP14	T3	TP33	SGAN		2	W1		CW23	CE10	423
1396	ALUMINIUM POWDER, UNCOATED	4.3	W2	III	4.3		1 kg	E1	P410 IBC08 R001	B4	MP14	T1	TP33	SGAN		3	W1	VC2 AP4 AP5	CW23	CE11	423
1397	ALUMINIUM PHOSPHIDE	4.3	WT2	I	4.3+6.1	507	0	E0	P403		MP2					1	W1		CW23 CW28		X462
1398	ALUMINIUM SILICON POWDER, UNCOATED	4.3	W2	III	4.3	37	1 kg	E1	P410 IBC08 R001	B4	MP14	T1 BK2	TP33	SGAN		3	W1	VC2 AP4 AP5	CW23	CE11	423
1400	BARIUM	4.3	W2	II	4.3		500 g	E2	P410 IBC07		MP14	T3	TP33	SGAN		2	W1		CW23	CE10	423
1401	CALCIUM	4.3	W2	II	4.3		500 g	E2	P410 IBC07		MP14	T3	TP33	SGAN		2	W1		CW23	CE10	423
1402	CALCIUM CARBIDE	4.3	W2	I	4.3		0	E0	P403 IBC04		MP2	T9	TP7 TP33	S2.65AN(+)	TU4 TU22 TM2 TA5	1	W1		CW23		X423

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1402	CALCIUM CARBIDE	4.3	W2	II	4.3		500 g	E2	P410 IBC07		MP14	T3	TP33	SGAN		2	W1	VC1 VC2 AP3 AP4 AP5	CW23	CE10	423
1403	CALCIUM CYANAMIDE with more than 0.1% calcium carbide	4.3	W2	III	4.3	38	1 kg	E1	P410 IBC08 R001	B4	MP14	T1	TP33	SGAN		0	W1		CW23	CE11	423
1404	CALCIUM HYDRIDE	4.3	W2	I	4.3		0	E0	P403		MP2					1	W1		CW23		X423
1405	CALCIUM SILICIDE	4.3	W2	II	4.3		500 g	E2	P410 IBC07		MP14	T3	TP33	SGAN		2	W1	VC1 VC2 AP3 AP4 AP5	CW23	CE10	423
1405	CALCIUM SILICIDE	4.3	W2	III	4.3		1 kg	E1	P410 IBC08 R001	B4	MP14	T1	TP33	SGAN		3	W1	VC1 VC2 AP3 AP4 AP5	CW23	CE11	423
1407	CAESIUM	4.3	W2	I	4.3		0	E0	P403 IBC04		MP2			L10CH(+)	TU2 TU14 TU38 TE5 TE21 TE22 TT3 TM2	1	W1		CW23		X423
1408	FERROSILICON with 30% or more but less than 90% silicon	4.3	WT2	III	4.3+6.1	39	1 kg	E1	P003 IBC08 R001	PP20 B4 B6	MP14	T1 BK2	TP33	SGAN		3	W1	VC1 VC2 AP3 AP4 AP5	CW23 CW28	CE11	462
1409	METAL HYDRIDES, WATER-REACTIVE, N.O.S.	4.3	W2	I	4.3	274 508	0	E0	P403		MP2					1	W1		CW23		X423
1409	METAL HYDRIDES, WATER-REACTIVE, N.O.S.	4.3	W2	II	4.3	274 508	500 g	E2	P410 IBC04		MP14	T3	TP33	SGAN		2	W1		CW23	CE10	423
1410	LITHIUM ALUMINIUM HYDRIDE	4.3	W2	I	4.3		0	E0	P403		MP2					1	W1		CW23		X423

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1411	LITHIUM ALUMINIUM HYDRIDE, ETHEREAL	4.3	WF1	I	4.3+3		0	E0	P402	RR8	MP2					1	W1		CW23		X323
1413	LITHIUM BOROHYDRIDE	4.3	W2	I	4.3		0	E0	P403		MP2					1	W1		CW23		X423
1414	LITHIUM HYDRIDE	4.3	W2	I	4.3		0	E0	P403		MP2					1	W1		CW23		X423
1415	LITHIUM	4.3	W2	I	4.3		0	E0	P403 IBC04		MP2	T9	TP7 TP33	L10BN(+)	TU1 TE5 TT3 TM2	1	W1		CW23		X423
1417	LITHIUM SILICON	4.3	W2	II	4.3		500 g	E2	P410 IBC07		MP14	T3	TP33	SGAN		2	W1		CW23	CE10	423
1418	MAGNESIUM POWDER or MAGNESIUM ALLOYS POWDER	4.3	WS	I	4.3+4.2		0	E0	P403		MP2					1	W1		CW23		X423
1418	MAGNESIUM POWDER or MAGNESIUM ALLOYS POWDER	4.3	WS	II	4.3+4.2		0	E2	P410 IBC05		MP14	T3	TP33	SGAN		2	W1		CW23	CE10	423
1418	MAGNESIUM POWDER or MAGNESIUM ALLOYS POWDER	4.3	WS	III	4.3+4.2		0	E1	P410 IBC08 R001	B4	MP14	T1	TP33	SGAN		3	W1	VC2 AP4 AP5	CW23	CE11	423
1419	MAGNESIUM ALUMINIUM PHOSPHIDE	4.3	WT2	I	4.3+6.1		0	E0	P403		MP2					1	W1		CW23 CW28		X462
1420	POTASSIUM METAL ALLOYS, LIQUID	4.3	W1	I	4.3		0	E0	P402		MP2			L10BN(+)	TU1 TE5 TT3 TM2	1	W1		CW23		X323
1421	ALKALI METAL ALLOY, LIQUID, N.O.S.	4.3	W1	I	4.3	182	0	E0	P402	RR8	MP2			L10BN(+)	TU1 TE5 TT3 TM2	1	W1		CW23		X323
1422	POTASSIUM SODIUM ALLOYS, LIQUID	4.3	W1	I	4.3		0	E0	P402		MP2	T9	TP3 TP7 TP31	L10BN(+)	TU1 TE5 TT3 TM2	1	W1		CW23		X323

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1423	RUBIDIUM	4.3	W2	I	4.3		0	E0	P403 IBC04		MP2			L10CH(+)	TU2 TU14 TU38 TE5 TE21 TE22 TT3 TM2	1	W1		CW23		X423
1426	SODIUM BOROHYDRIDE	4.3	W2	I	4.3		0	E0	P403		MP2					1	W1		CW23		X423
1427	SODIUM HYDRIDE	4.3	W2	I	4.3		0	E0	P403		MP2					1	W1		CW23		X423
1428	SODIUM	4.3	W2	I	4.3		0	E0	P403 IBC04		MP2	T9	TP7 TP33	L10BN(+)	TU1 TE5 TT3 TM2	1	W1		CW23		X423
1431	SODIUM METHYLATE	4.2	SC4	II	4.2+8		0	E2	P410 IBC05		MP14	T3	TP33	SGAN		2	W1			CE10	48
1432	SODIUM PHOSPHIDE	4.3	WT2	I	4.3+6.1		0	E0	P403		MP2					1	W1		CW23 CW28		X462
1433	STANNIC PHOSPHIDES	4.3	WT2	I	4.3+6.1		0	E0	P403		MP2					1	W1		CW23 CW28		X462
1435	ZINC ASHES	4.3	W2	III	4.3		1 kg	E1	P002 IBC08 R001	B4	MP14	T1 BK2	TP33	SGAN		3	W1	VC1 VC2 AP3 AP4 AP5	CW23	CE11	423
1436	ZINC POWDER or ZINC DUST	4.3	WS	I	4.3+4.2		0	E0	P403		MP2					1	W1		CW23		X423
1436	ZINC POWDER or ZINC DUST	4.3	WS	II	4.3+4.2		0	E2	P410 IBC07	PP40	MP14	T3	TP33	SGAN		2	W1		CW23	CE10	423
1436	ZINC POWDER or ZINC DUST	4.3	WS	III	4.3+4.2		0	E1	P410 IBC08 R001	B4	MP14	T1	TP33	SGAN		3	W1	VC2 AP4 AP5	CW23	CE11	423
1437	ZIRCONIUM HYDRIDE	4.1	F3	II	4.1		1 kg	E2	P410 IBC04	PP40	MP11	T3	TP33	SGAN		2	W1			CE10	40
1438	ALUMINIUM NITRATE	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1 BK1 BK2	TP33	SGAV	TU3	3		VC1 VC2 AP6 AP7	CW24	CE11	50

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1439	AMMONIUM DICHROMATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33	SGAN	TU3	2	W11		CW24	CE10	50
1442	AMMONIUM PERCHLORATE	5.1	O2	II	5.1	152	1 kg	E2	P002 IBC06		MP2	T3	TP33			2	W11	VC1 VC2 AP6 AP7	CW24	CE10	50
1444	AMMONIUM PERSULPHATE	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAV	TU3	3		VC1 VC2 AP6 AP7	CW24	CE11	50
1445	BARIUM CHLORATE, SOLID	5.1	OT2	II	5.1+6.1		1 kg	E2	P002 IBC06		MP2	T3	TP33	SGAN	TU3	2	W11		CW24 CW28	CE10	56
1446	BARIUM NITRATE	5.1	OT2	II	5.1+6.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33	SGAN	TU3	2	W11		CW24 CW28	CE10	56
1447	BARIUM PERCHLORATE, SOLID	5.1	OT2	II	5.1+6.1		1 kg	E2	P002 IBC06		MP2	T3	TP33	SGAN	TU3	2	W11		CW24 CW28	CE10	56
1448	BARIUM PERMANGANATE	5.1	OT2	II	5.1+6.1		1 kg	E2	P002 IBC06		MP2	T3	TP33	SGAN	TU3	2	W11		CW24 CW28	CE10	56
1449	BARIUM PEROXIDE	5.1	OT2	II	5.1+6.1		1 kg	E2	P002 IBC06		MP2	T3	TP33	SGAN	TU3	2	W11		CW24 CW28	CE10	56
1450	BROMATES, INORGANIC, N.O.S.	5.1	O2	II	5.1	274 350	1 kg	E2	P002 IBC08	B4	MP2	T3	TP33	SGAV	TU3	2	W11	VC1 VC2 AP6 AP7	CW24	CE10	50
1451	CAESIUM NITRATE	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAV	TU3	3		VC1 VC2 AP6 AP7	CW24	CE11	50
1452	CALCIUM CHLORATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33	SGAV	TU3	2	W11	VC1 VC2 AP6 AP7	CW24	CE10	50
1453	CALCIUM CHLORITE	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33	SGAN	TU3	2	W11		CW24	CE10	50

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1454	CALCIUM NITRATE	5.1	O2	III	5.1	208	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1 BK1 BK2 BK3	TP33	SGAV	TU3	3		VC1 VC2 AP6 AP7	CW24	CE11	50
1455	CALCIUM PERCHLORATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33	SGAV	TU3	2	W11	VC1 VC2 AP6 AP7	CW24	CE10	50
1456	CALCIUM PERMANGANATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33	SGAN	TU3	2	W11		CW24	CE10	50
1457	CALCIUM PEROXIDE	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33	SGAN	TU3	2	W11		CW24	CE10	50
1458	CHLORATE AND BORATE MIXTURE	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33	SGAV	TU3	2	W11	VC1 VC2 AP6 AP7	CW24	CE10	50
1458	CHLORATE AND BORATE MIXTURE	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP2	T1	TP33	SGAV	TU3	3		VC1 VC2 AP6 AP7	CW24	CE11	50
1459	CHLORATE AND MAGNESIUM CHLORIDE MIXTURE, SOLID	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33	SGAV	TU3	2	W11	VC1 VC2 AP6 AP7	CW24	CE10	50
1459	CHLORATE AND MAGNESIUM CHLORIDE MIXTURE, SOLID	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP2	T1	TP33	SGAV	TU3	3		VC1 VC2 AP6 AP7	CW24	CE11	50
1461	CHLORATES, INORGANIC, N.O.S.	5.1	O2	II	5.1	274 351	1 kg	E2	P002 IBC06		MP2	T3	TP33	SGAV	TU3	2	W11	VC1 VC2 AP6 AP7	CW24	CE10	50
1462	CHLORITES, INORGANIC, N.O.S.	5.1	O2	II	5.1	274 352 509	1 kg	E2	P002 IBC06		MP2	T3	TP33	SGAN	TU3	2	W11		CW24	CE10	50
1463	CHROMIUM TRIOXIDE, ANHYDROUS	5.1	OTC	II	5.1+6.1+8	510	1 kg	E2	P002 IBC08	B4	MP2	T3	TP33	SGAN	TU3	2	W11		CW24 CW28	CE10	568

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1465	DIDYMIUM NITRATE	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAV	TU3	3		VC1 VC2 AP6 AP7	CW24	CE11	50
1466	FERRIC NITRATE	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAV	TU3	3		VC1 VC2 AP6 AP7	CW24	CE11	50
1467	GUANIDINE NITRATE	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAV	TU3	3		VC1 VC2 AP6 AP7	CW24	CE11	50
1469	LEAD NITRATE	5.1	OT2	II	5.1+6.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33	SGAN	TU3	2	W11		CW24 CW28	CE10	56
1470	LEAD PERCHLORATE, SOLID	5.1	OT2	II	5.1+6.1		1 kg	E2	P002 IBC06		MP2	T3	TP33	SGAN	TU3	2	W11		CW24 CW28	CE10	56
1471	LITHIUM HYPOCHLORITE, DRY or LITHIUM HYPOCHLORITE MIXTURE	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP10			SGAN	TU3	2	W11		CW24	CE10	50
1471	LITHIUM HYPOCHLORITE, DRY or LITHIUM HYPOCHLORITE MIXTURE	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAV	TU3	3			CW24	CE11	50
1472	LITHIUM PEROXIDE	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33	SGAN	TU3	2	W11		CW24	CE10	50
1473	MAGNESIUM BROMATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33	SGAV	TU3	2	W11	VC1 VC2 AP6 AP7	CW24	CE10	50
1474	MAGNESIUM NITRATE	5.1	O2	III	5.1	332	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1 BK1 BK2 BK3	TP33	SGAV	TU3	3		VC1 VC2 AP6 AP7	CW24	CE11	50
1475	MAGNESIUM PERCHLORATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33	SGAV	TU3	2	W11	VC1 VC2 AP6 AP7	CW24	CE10	50

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1476	MAGNESIUM PEROXIDE	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33	SGAN	TU3	2	W11		CW24	CE10	50
1477	NITRATES, INORGANIC, N.O.S.	5.1	O2	II	5.1	511	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	SGAN	TU3	2	W11		CW24	CE10	50
1477	NITRATES, INORGANIC, N.O.S.	5.1	O2	III	5.1	511	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAV	TU3	3		VC1 VC2 AP6 AP7	CW24	CE11	50
1479	OXIDIZING SOLID, N.O.S.	5.1	O2	I	5.1	274	0	E0	P503 IBC05		MP2					1	W10		CW24		55
1479	OXIDIZING SOLID, N.O.S.	5.1	O2	II	5.1	274	1 kg	E2	P002 IBC08	B4	MP2	T3	TP33	SGAN	TU3	2	W11		CW24	CE10	50
1479	OXIDIZING SOLID, N.O.S.	5.1	O2	III	5.1	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP2	T1	TP33	SGAN	TU3	3			CW24	CE11	50
1481	PERCHLORATES, INORGANIC, N.O.S.	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33	SGAV	TU3	2	W11	VC1 VC2 AP6 AP7	CW24	CE10	50
1481	PERCHLORATES, INORGANIC, N.O.S.	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP2	T1	TP33	SGAV	TU3	3		VC1 VC2 AP6 AP7	CW24	CE11	50
1482	PERMANGANATES, INORGANIC, N.O.S.	5.1	O2	II	5.1	274 353	1 kg	E2	P002 IBC06		MP2	T3	TP33	SGAN	TU3	2	W11		CW24	CE10	50
1482	PERMANGANATES, INORGANIC, N.O.S.	5.1	O2	III	5.1	274 353	5 kg	E1	P002 IBC08 LP02 R001	B3	MP2	T1	TP33	SGAN	TU3	3			CW24	CE11	50
1483	PEROXIDES, INORGANIC, N.O.S.	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33	SGAN	TU3	2	W11		CW24	CE10	50
1483	PEROXIDES, INORGANIC, N.O.S.	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP2	T1	TP33	SGAN	TU3	3			CW24	CE11	50

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1484	POTASSIUM BROMATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33	SGAV	TU3	2	W11	VC1 VC2 AP6 AP7	CW24	CE10	50
1485	POTASSIUM CHLORATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33	SGAV	TU3	2	W11	VC1 VC2 AP6 AP7	CW24	CE10	50
1486	POTASSIUM NITRATE	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1 BK1 BK2 BK3	TP33	SGAV	TU3	3		VC1 VC2 AP6 AP7	CW24	CE11	50
1487	POTASSIUM NITRATE AND SODIUM NITRITE MIXTURE	5.1	O2	II	5.1	607	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	SGAV	TU3	2	W11	VC1 VC2 AP6 AP7	CW24	CE10	50
1488	POTASSIUM NITRITE	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	SGAV	TU3	2	W11	VC1 VC2 AP6 AP7	CW24	CE10	50
1489	POTASSIUM PERCHLORATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33	SGAV	TU3	2	W11	VC1 VC2 AP6 AP7	CW24	CE10	50
1490	POTASSIUM PERMANGANATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33	SGAN	TU3	2	W11		CW24	CE10	50
1491	POTASSIUM PEROXIDE	5.1	O2	I	5.1		0	E0	P503 IBC06		MP2					1	W10		CW24		55
1492	POTASSIUM PERSULPHATE	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAV	TU3	3		VC1 VC2 AP6 AP7	CW24	CE11	50
1493	SILVER NITRATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	SGAV	TU3	2	W11	VC1 VC2 AP6 AP7	CW24	CE10	50

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1494	SODIUM BROMATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33	SGAV	TU3	2	W11	VC1 VC2 AP6 AP7	CW24	CE10	50
1495	SODIUM CHLORATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3 BK1 BK2	TP33	SGAV	TU3	2	W11	VC1 VC2 AP6 AP7	CW24	CE10	50
1496	SODIUM CHLORITE	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33	SGAN	TU3	2	W11		CW24	CE10	50
1498	SODIUM NITRATE	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1 BK1 BK2 BK3	TP33	SGAV	TU3	3		VC1 VC2 AP6 AP7	CW24	CE11	50
1499	SODIUM NITRATE AND POTASSIUM NITRATE MIXTURE	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1 BK1 BK2 BK3	TP33	SGAV	TU3	3		VC1 VC2 AP6 AP7	CW24	CE11	50
1500	SODIUM NITRITE	5.1	OT2	III	5.1+6.1		5 kg	E1	P002 IBC08 R001	B3	MP10	T1	TP33	SGAN	TU3	3			CW24 CW28	CE11	56
1502	SODIUM PERCHLORATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33	SGAV	TU3	2	W11	VC1 VC2 AP6 AP7	CW24	CE10	50
1503	SODIUM PERMANGANATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33	SGAN	TU3	2	W11		CW24	CE10	50
1504	SODIUM PEROXIDE	5.1	O2	I	5.1		0	E0	P503 IBC05		MP2					1	W10		CW24		55
1505	SODIUM PERSULPHATE	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAV	TU3	3		VC1 VC2 AP6 AP7	CW24	CE11	50
1506	STRONTIUM CHLORATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33	SGAV	TU3	2	W11	VC1 VC2 AP6 AP7	CW24	CE10	50

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1507	STRONTIUM NITRATE	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAV	TU3	3		VC1 VC2 AP6 AP7	CW24	CE11	50
1508	STRONTIUM PERCHLORATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33	SGAV	TU3	2	W11	VC1 VC2 AP6 AP7	CW24	CE10	50
1509	STRONTIUM PEROXIDE	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33	SGAN	TU3	2	W11		CW24	CE10	50
1510	TETRANITROMETHANE	6.1	TO1	I	6.1+5.1	354 609	0	E0	P602		MP8 MP17			L10CH	TU14 TU15 TU38 TE21 TE22	1			CW13 CW28 CW31		665
1511	UREA HYDROGEN PEROXIDE	5.1	OC2	III	5.1+8		5 kg	E1	P002 IBC08 R001	B3	MP2	T1	TP33	SGAN	TU3	3			CW24	CE11	58
1512	ZINC AMMONIUM NITRITE	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	SGAN	TU3	2	W11		CW24	CE10	50
1513	ZINC CHLORATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33	SGAV	TU3	2	W11	VC1 VC2 AP6 AP7	CW24	CE10	50
1514	ZINC NITRATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	SGAN	TU3	2	W11		CW24	CE10	50
1515	ZINC PERMANGANATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33	SGAN	TU3	2	W11		CW24	CE10	50
1516	ZINC PEROXIDE	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33	SGAN	TU3	2	W11		CW24	CE10	50
1517	ZIRCONIUM PICRAMATE, WETTED with not less than 20% water, by mass	4.1	D	I	4.1		0	E0	P406	PP26	MP2					1	W1				40
1541	ACETONE CYANOHYDRIN, STABILIZED	6.1	T1	I	6.1	354	0	E0	P602		MP8 MP17	T20	TP2	L10CH	TU14 TU15 TU38 TE21 TE22	1			CW13 CW28 CW31		669

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1544	ALKALOIDS, SOLID, N.O.S. or ALKALOID SALTS, SOLID, N.O.S.	6.1	T2	I	6.1	43 274	0	E5	P002 IBC07		MP18	T6	TP33	S10AH	TU15	1	W10		CW13 CW28 CW31		66
1544	ALKALOIDS, SOLID, N.O.S. or ALKALOID SALTS, SOLID, N.O.S.	6.1	T2	II	6.1	43 274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH L4BH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1544	ALKALOIDS, SOLID, N.O.S. or ALKALOID SALTS, SOLID, N.O.S.	6.1	T2	III	6.1	43 274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAH L4BH	TU15	2		VC1 VC2 AP7	CW13 CW28 CW31	CE11	60
1545	ALLYL ISOTHIOCYANATE, STABILIZED	6.1	TF1	II	6.1+3	386	100 ml	E0	P001 IBC02		MP15	T7	TP2	L4BH	TU15	2			CW13 CW28 CW31	CE5	639
1546	AMMONIUM ARSENATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1547	ANILINE	6.1	T1	II	6.1	279	100 ml	E4	P001 IBC02		MP15	T7	TP2	L4BH	TU15	2			CW13 CW28 CW31	CE5	60
1548	ANILINE HYDROCHLORIDE	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAH	TU15	2		VC1 VC2 AP7	CW13 CW28 CW31	CE11	60
1549	ANTIMONY COMPOUND, INORGANIC, SOLID, N.O.S.	6.1	T5	III	6.1	45 274 512	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAH L4BH	TU15	2		VC1 VC2 AP7	CW13 CW28 CW31	CE11	60
1550	ANTIMONY LACTATE	6.1	T5	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAH L4BH	TU15	2		VC1 VC2 AP7	CW13 CW28 CW31	CE11	60
1551	ANTIMONY POTASSIUM TARTRATE	6.1	T5	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAH L4BH	TU15	2		VC1 VC2 AP7	CW13 CW28 CW31	CE11	60

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1553	ARSENIC ACID, LIQUID	6.1	T4	I	6.1		0	E5	P001		MP8 MP17	T20	TP2 TP7	L10CH	TU14 TU15 TU38 TE21 TE22	1			CW13 CW28 CW31		66
1554	ARSENIC ACID, SOLID	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH L4BH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1555	ARSENIC BROMIDE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH L4BH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1556	ARSENIC COMPOUND, LIQUID, N.O.S., inorganic, including: Arsenates, n.o.s., Arsenites, n.o.s.; and Arsenic sulphides, n.o.s.	6.1	T4	I	6.1	43 274	0	E5	P001		MP8 MP17	T14	TP2 TP27	L10CH	TU14 TU15 TU38 TE21 TE22	1			CW13 CW28 CW31		66
1556	ARSENIC COMPOUND, LIQUID, N.O.S., inorganic, including: Arsenates, n.o.s., Arsenites, n.o.s.; and Arsenic sulphides, n.o.s.	6.1	T4	II	6.1	43 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27	L4BH	TU15	2			CW13 CW28 CW31	CE5	60
1556	ARSENIC COMPOUND, LIQUID, N.O.S., inorganic, including: Arsenates, n.o.s., Arsenites, n.o.s.; and Arsenic sulphides, n.o.s.	6.1	T4	III	6.1	43 274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28	L4BH	TU15	2	W12		CW13 CW28 CW31	CE8	60
1557	ARSENIC COMPOUND, SOLID, N.O.S., inorganic, including: Arsenates, n.o.s.; Arsenites, n.o.s.; and Arsenic sulphides, n.o.s.	6.1	T5	I	6.1	43 274	0	E5	P002 IBC07		MP18	T6	TP33	S10AH L10CH	TU15 TU38 TE22	1	W10		CW13 CW28 CW31		66
1557	ARSENIC COMPOUND, SOLID, N.O.S., inorganic, including: Arsenates, n.o.s.; Arsenites, n.o.s.; and Arsenic sulphides, n.o.s.	6.1	T5	II	6.1	43 274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH L4BH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1557	ARSENIC COMPOUND, SOLID, N.O.S., inorganic, including: Arsenates, n.o.s.; Arsenites, n.o.s.; and Arsenic sulphides, n.o.s.	6.1	T5	III	6.1	43 274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAH L4BH	TU15	2		VC1 VC2 AP7	CW13 CW28 CW31	CE11	60

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1558	ARSENIC	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1559	ARSENIC PENTOXIDE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1560	ARSENIC TRICHLORIDE	6.1	T4	I	6.1		0	E0	P602		MP8 MP17	T14	TP2	L10CH	TU14 TU15 TU38 TE21 TE22	1			CW13 CW28 CW31		66
1561	ARSENIC TRIOXIDE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1562	ARSENICAL DUST	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1564	BARIUM COMPOUND, N.O.S.	6.1	T5	II	6.1	177 274 513 587	500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH L4BH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1564	BARIUM COMPOUND, N.O.S.	6.1	T5	III	6.1	177 274 513 587	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAH L4BH	TU15	2		VC1 VC2 AP7	CW13 CW28 CW31	CE11	60
1565	BARIUM CYANIDE	6.1	T5	I	6.1		0	E5	P002 IBC07		MP18	T6	TP33	S10AH	TU15	1	W10		CW13 CW28 CW31		66
1566	BERYLLIUM COMPOUND, N.O.S.	6.1	T5	II	6.1	274 514	500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH L4BH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1566	BERYLLIUM COMPOUND, N.O.S.	6.1	T5	III	6.1	274 514	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAH L4BH	TU15	2		VC1 VC2 AP7	CW13 CW28 CW31	CE11	60

UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identification No.
									Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions	Tank code	Special provisions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1567	BERYLLIUM POWDER	6.1	TF3	II	6.1+4.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	64
1569	BROMOACETONE	6.1	TF1	II	6.1+3		0	E0	P602		MP15	T20	TP2	L4BH	TU15	2			CW13 CW28 CW31	CE5	63
1570	BRUCINE	6.1	T2	I	6.1	43	0	E5	P002 IBC07		MP18	T6	TP33	S10AH L10CH	TU14 TU15 TU38 TE21 TE22	1	W10		CW13 CW28 CW31		66
1571	BARIUM AZIDE, WETTED with not less than 50% water, by mass	4.1	DT	I	4.1+6.1	568	0	E0	P406		MP2					1	W1		CW28		46
1572	CACODYLIC ACID	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1573	CALCIUM ARSENATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1574	CALCIUM ARSENATE AND CALCIUM ARSENITE MIXTURE, SOLID	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1575	CALCIUM CYANIDE	6.1	T5	I	6.1		0	E5	P002 IBC07		MP18	T6	TP33	S10AH	TU15	1	W10		CW13 CW28 CW31		66
1577	CHLORODINITROBENZENES, LIQUID	6.1	T1	II	6.1	279	100 ml	E4	P001 IBC02		MP15	T7	TP2	L4BH	TU15	2			CW13 CW28 CW31	CE5	60
1578	CHLORONITROBENZENES, SOLID	6.1	T2	II	6.1	279	500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1579	4-CHLORO-o-TOLUIDINE HYDROCHLORIDE, SOLID	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAH L4BH	TU15	2		VC1 VC2 AP7	CW13 CW28 CW31	CE11	60

UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identification No.
									Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions	Tank code	Special provisions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1580	CHLOROPICRIN	6.1	T1	I	6.1	354	0	E0	P601		MP8 MP17	T22	TP2	L15CH	TU14 TU15 TU38 TE21 TE22 TE25	1			CW13 CW28 CW31		66
1581	CHLOROPICRIN AND METHYL BROMIDE MIXTURE with more than 2% chloropicrin	2	2T		2.3 (+13)		0	E0	P200		MP9	T50 (M)		PxBH(M)	TU38 TE22 TE25 TA4 TT9 TM6	1			CW9 CW10 CW36		26
1582	CHLOROPICRIN AND METHYL CHLORIDE MIXTURE	2	2T		2.3 (+13)		0	E0	P200		MP9	T50 (M)		PxBH(M)	TU38 TE22 TE25 TA4 TT9 TM6	1			CW9 CW10 CW36		26
1583	CHLOROPICRIN MIXTURE, N.O.S.	6.1	T1	I	6.1	274 315 515	0	E0	P602		MP8 MP17			L10CH	TU14 TU15 TU38 TE21 TE22	1			CW13 CW28 CW31		66
1583	CHLOROPICRIN MIXTURE, N.O.S.	6.1	T1	II	6.1	274 515	100 ml	E0	P001 IBC02		MP15			L4BH	TU15	2			CW13 CW28 CW31	CE5	60
1583	CHLOROPICRIN MIXTURE, N.O.S.	6.1	T1	III	6.1	274 515	5 L	E0	P001 IBC03 LP01 R001		MP19			L4BH	TU15	2	W12		CW13 CW28 CW31	CE8	60
1585	COPPER ACETOARSENITE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1586	COPPER ARSENITE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1587	COPPER CYANIDE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1588	CYANIDES, INORGANIC, SOLID, N.O.S.	6.1	T5	I	6.1	47 274	0	E5	P002 IBC07		MP18	T6	TP33	S10AH	TU15	1	W10		CW13 CW28 CW31	CE13	66
1588	CYANIDES, INORGANIC, SOLID, N.O.S.	6.1	T5	II	6.1	47 274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1588	CYANIDES, INORGANIC, SOLID, N.O.S.	6.1	T5	III	6.1	47 274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAH	TU15	2		VC1 VC2 AP7	CW13 CW28 CW31	CE11	60
1589	CYANOGEN CHLORIDE, STABILIZED	2	2TC		2.3+8	386	0	E0	P200		MP9					1			CW9 CW10 CW36		268
1590	DICHLOROANILINES, LIQUID	6.1	T1	II	6.1	279	100 ml	E4	P001 IBC02		MP15	T7	TP2	L4BH	TU15	2			CW13 CW28 CW31	CE5	60
1591	o-DICHLOROBENZENE	6.1	T1	III	6.1	279	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	L4BH	TU15	2	W12		CW13 CW28 CW31	CE8	60
1593	DICHLOROMETHANE	6.1	T1	III	6.1	516	5 L	E1	P001 IBC03 LP01 R001	B8	MP19	T7	TP2	L4BH	TU15	2	W12		CW13 CW28 CW31	CE8	60
1594	DIETHYL SULPHATE	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2	L4BH	TU15	2			CW13 CW28 CW31	CE5	60
1595	DIMETHYL SULPHATE	6.1	TC1	I	6.1+8	354	0	E0	P602		MP8 MP17	T20	TP2	L10CH	TU14 TU15 TU38 TE21 TE22	1			CW13 CW28 CW31		668

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1596	DINITROANILINES	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH L4BH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1597	DINITROBENZENES, LIQUID	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2	L4BH	TU15	2			CW13 CW28 CW31	CE5	60
1597	DINITROBENZENES, LIQUID	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2	L4BH	TU15	2	W12		CW13 CW28 CW31	CE8	60
1598	DINITRO-o-CRESOL	6.1	T2	II	6.1	43	500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH L4BH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1599	DINITROPHENOL SOLUTION	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2	L4BH	TU15	2			CW13 CW28 CW31	CE5	60
1599	DINITROPHENOL SOLUTION	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	L4BH	TU15	2	W12		CW13 CW28 CW31	CE8	60
1600	DINITROTOLUENES, MOLTEN	6.1	T1	II	6.1		0	E0				T7	TP3	L4BH	TU15	0			CW13 CW31		60
1601	DISINFECTANT, SOLID, TOXIC, N.O.S.	6.1	T2	I	6.1	274	0	E5	P002 IBC07		MP18	T6	TP33	S10AH L10CH	TU15 TU38 TE22	1	W10		CW13 CW28 CW31		66
1601	DISINFECTANT, SOLID, TOXIC, N.O.S.	6.1	T2	II	6.1	274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH L4BH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1601	DISINFECTANT, SOLID, TOXIC, N.O.S.	6.1	T2	III	6.1	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAH L4BH	TU15	2		VC1 VC2 AP7	CW13 CW28 CW31	CE11	60
1602	DYE, LIQUID, TOXIC, N.O.S. or DYE INTERMEDIATE, LIQUID, TOXIC, N.O.S.	6.1	T1	I	6.1	274	0	E5	P001		MP8 MP17			L10CH	TU14 TU15 TU38 TE21 TE22	1			CW13 CW28 CW31		66

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1602	DYE, LIQUID, TOXIC, N.O.S. or DYE INTERMEDIATE, LIQUID, TOXIC, N.O.S.	6.1	T1	II	6.1	274	100 ml	E4	P001 IBC02		MP15			L4BH	TU15	2			CW13 CW28 CW31	CE5	60
1602	DYE, LIQUID, TOXIC, N.O.S. or DYE INTERMEDIATE, LIQUID, TOXIC, N.O.S.	6.1	T1	III	6.1	274	5 L	E1	P001 IBC03 LP01 R001		MP19			L4BH	TU15	2	W12		CW13 CW28 CW31	CE8	60
1603	ETHYL BROMOACETATE	6.1	TF1	II	6.1+3		100 ml	E0	P001 IBC02		MP15	T7	TP2	L4BH	TU15	2			CW13 CW28 CW31	CE5	63
1604	ETHYLENEDIAMINE	8	CF1	II	8+3		1 L	E2	P001 IBC02		MP15	T7	TP2	L4BN		2				CE6	83
1605	ETHYLENE DIBROMIDE	6.1	T1	I	6.1	354	0	E0	P602		MP8 MP17	T20	TP2	L10CH	TU14 TU15 TU38 TE21 TE22	1			CW13 CW28 CW31		66
1606	FERRIC ARSENATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1607	FERRIC ARSENITE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1608	FERROUS ARSENATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1611	HEXAETHYL TETRAPHOSPHATE	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2	L4BH	TU15	2			CW13 CW28 CW31	CE5	60
1612	HEXAETHYL TETRAPHOSPHATE AND COMPRESSED GAS MIXTURE	2	1T		2.3 (+13)		0	E0	P200		MP9	(M)		CxBH(M)	TU38 TE22 TE25 TA4 TT9	1			CW9 CW10 CW36		26

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1613	HYDROCYANIC ACID, AQUEOUS SOLUTION (HYDROGEN CYANIDE, AQUEOUS SOLUTION) with not more than 20% hydrogen cyanide	6.1	TF1	I	6.1+3	48	0	E0	P601		MP8 MP17	T14	TP2	L15DH(+)	TU14 TU15 TU38 TE21 TE22 TE25	0			CW13 CW28 CW31		663
1614	HYDROGEN CYANIDE, STABILIZED, containing less than 3% water and absorbed in a porous inert material	6.1	TF1	I	6.1+3	386 603	0	E0	P099 P601	RR10	MP2					0			CW13 CW28 CW31		663
1616	LEAD ACETATE	6.1	T5	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAH L4BH	TU15	2		VC1 VC2 AP7	CW13 CW28 CW31	CE11	60
1617	LEAD ARSENATES	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1618	LEAD ARSENITES	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1620	LEAD CYANIDE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1621	LONDON PURPLE	6.1	T5	II	6.1	43	500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1622	MAGNESIUM ARSENATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1623	MERCURIC ARSENATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1624	MERCURIC CHLORIDE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1625	MERCURIC NITRATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1626	MERCURIC POTASSIUM CYANIDE	6.1	T5	I	6.1		0	E5	P002 IBC07		MP18	T6	TP33	S10AH	TU15	1	W10		CW13 CW28 CW31		66
1627	MERCUROUS NITRATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1629	MERCURY ACETATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1630	MERCURY AMMONIUM CHLORIDE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1631	MERCURY BENZOATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1634	MERCURY BROMIDES	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1636	MERCURY CYANIDE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1637	MERCURY GLUCONATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1638	MERCURY IODIDE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1639	MERCURY NUCLEATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1640	MERCURY OLEATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1641	MERCURY OXIDE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1642	MERCURY OXYCYANIDE, DESENSITIZED	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1643	MERCURY POTASSIUM IODIDE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1644	MERCURY SALICYLATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1645	MERCURY SULPHATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1646	MERCURY THIOCYANATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1647	METHYL BROMIDE AND ETHYLENE DIBROMIDE MIXTURE, LIQUID	6.1	T1	I	6.1	354	0	E0	P602		MP8 MP17	T20	TP2	L10CH	TU14 TU15 TU38 TE21 TE22	1			CW13 CW28 CW31		66
1648	ACETONITRILE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T7	TP2	LGBF		2				CE7	33
1649	MOTOR FUEL ANTI-KNOCK MIXTURE	6.1	T3	I	6.1		0	E0	P602		MP8 MP17	T14	TP2	L10CH	TU14 TU15 TU38 TE21 TE22 TT6	1			CW13 CW28 CW31		66
1650	beta-NAPHTHYLAMINE, SOLID	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH L4BH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1651	NAPHTHYLTHIOUREA	6.1	T2	II	6.1	43	500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1652	NAPHTHYLUREA	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1653	NICKEL CYANIDE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH L4BH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1654	NICOTINE	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15			L4BH	TU15	2			CW13 CW28 CW31	CE5	60
1655	NICOTINE COMPOUND, SOLID, N.O.S. or NICOTINE PREPARATION, SOLID, N.O.S.	6.1	T2	I	6.1	43 274	0	E5	P002 IBC07		MP18	T6	TP33	S10AH L10CH	TU15 TU38 TE22	1	W10		CW13 CW28 CW31		66
1655	NICOTINE COMPOUND, SOLID, N.O.S. or NICOTINE PREPARATION, SOLID, N.O.S.	6.1	T2	II	6.1	43 274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH L4BH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1655	NICOTINE COMPOUND, SOLID, N.O.S. or NICOTINE PREPARATION, SOLID, N.O.S.	6.1	T2	III	6.1	43 274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAH L4BH	TU15	2		VC1 VC2 AP7	CW13 CW28 CW31	CE11	60
1656	NICOTINE HYDROCHLORIDE, LIQUID or SOLUTION	6.1	T1	II	6.1	43	100 ml	E4	P001 IBC02		MP15			L4BH	TU15	2			CW13 CW28 CW31	CE5	60
1656	NICOTINE HYDROCHLORIDE, LIQUID or SOLUTION	6.1	T1	III	6.1	43	5 L	E1	P001 IBC03 LP01 R001		MP19			L4BH	TU15	2	W12		CW13 CW28 CW31	CE8	60
1657	NICOTINE SALICYLATE	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH L4BH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1658	NICOTINE SULPHATE, SOLUTION	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2	L4BH	TU15	2			CW13 CW28 CW31	CE5	60
1658	NICOTINE SULPHATE, SOLUTION	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2	L4BH	TU15	2	W12		CW13 CW28 CW31	CE8	60

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1659	NICOTINE TARTRATE	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH L4BH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1660	NITRIC OXIDE, COMPRESSED	2	1TOC		2.3+5.1+8		0	E0	P200		MP9					1			CW9 CW10 CW36		265
1661	NITROANILINES (o-, m-, p-)	6.1	T2	II	6.1	279	500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH L4BH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1662	NITROBENZENE	6.1	T1	II	6.1	279	100 ml	E4	P001 IBC02		MP15	T7	TP2	L4BH	TU15	2			CW13 CW28 CW31	CE5	60
1663	NITROPHENOLS (o-, m-, p-)	6.1	T2	III	6.1	279	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAH L4BH	TU15	2		VC1 VC2 AP7	CW13 CW28 CW31	CE11	60
1664	NITROTOLUENES, LIQUID	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2	L4BH	TU15	2			CW13 CW28 CW31	CE5	60
1665	NITROXYLENES, LIQUID	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2	L4BH	TU15	2			CW13 CW28 CW31	CE5	60
1669	PENTACHLOROETHANE	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2	L4BH	TU15	2			CW13 CW28 CW31	CE5	60
1670	PERCHLOROMETHYL MERCAPTAN	6.1	T1	I	6.1	354	0	E0	P602		MP8 MP17	T20	TP2	L10CH	TU14 TU15 TU38 TE21 TE22	1			CW13 CW28 CW31		66
1671	PHENOL, SOLID	6.1	T2	II	6.1	279	500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1672	PHENYLCARBYLAMINE CHLORIDE	6.1	T1	I	6.1		0	E0	P602		MP8 MP17	T14	TP2	L10CH	TU14 TU15 TU38 TE21 TE22	1			CW13 CW28 CW31		66
1673	PHENYLENEDIAMINES (o-, m-, p-)	6.1	T2	III	6.1	279	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAH L4BH	TU15	2		VC1 VC2 AP7	CW13 CW28 CW31	CE11	60
1674	PHENYLMERCURIC ACETATE	6.1	T3	II	6.1	43	500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH L4BH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1677	POTASSIUM ARSENATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1678	POTASSIUM ARSENITE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1679	POTASSIUM CUPROCYANIDE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1680	POTASSIUM CYANIDE, SOLID	6.1	T5	I	6.1		0	E5	P002 IBC07		MP18	T6	TP33	S10AH	TU15	1	W10		CW13 CW28 CW31		66
1683	SILVER ARSENITE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1684	SILVER CYANIDE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1685	SODIUM ARSENATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1686	SODIUM ARSENITE, AQUEOUS SOLUTION	6.1	T4	II	6.1	43	100 ml	E4	P001 IBC02		MP15	T7	TP2	L4BH	TU15	2			CW13 CW28 CW31	CE5	60

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1686	SODIUM ARSENITE, AQUEOUS SOLUTION	6.1	T4	III	6.1	43	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP2	L4BH	TU15	2	W12		CW13 CW28 CW31	CE8	60
1687	SODIUM AZIDE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10					2	W11		CW13 CW28 CW31	CE9	60
1688	SODIUM CACODYLATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1689	SODIUM CYANIDE, SOLID	6.1	T5	I	6.1		0	E5	P002 IBC07		MP18	T6	TP33	S10AH	TU15	1	W10		CW13 CW28 CW31		66
1690	SODIUM FLUORIDE, SOLID	6.1	T5	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAH	TU15	2		VC1 VC2 AP7	CW13 CW28 CW31	CE11	60
1691	STRONTIUM ARSENITE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1692	STRYCHNINE or STRYCHNINE SALTS	6.1	T2	I	6.1		0	E5	P002 IBC07		MP18	T6	TP33	S10AH	TU15	1	W10		CW13 CW28 CW31		66
1693	TEAR GAS SUBSTANCE, LIQUID, N.O.S.	6.1	T1	I	6.1	274	0	E0	P001		MP8 MP17			L10CH	TU14 TU15 TU38 TE21 TE22	1			CW13 CW28 CW31		66
1693	TEAR GAS SUBSTANCE, LIQUID, N.O.S.	6.1	T1	II	6.1	274	0	E0	P001 IBC02		MP15			L4BH	TU15	2			CW13 CW28 CW31	CE5	60
1694	BROMOBENZYL CYANIDES, LIQUID	6.1	T1	I	6.1	138	0	E0	P001		MP8 MP17	T14	TP2	L10CH	TU14 TU15 TU38 TE21 TE22	1			CW13 CW28 CW31		66

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1695	CHLOROACETONE, STABILIZED	6.1	TFC	I	6.1+3+8	354	0	E0	P602		MP8 MP17	T20	TP2	L10CH	TU14 TU15 TU38 TE21 TE22	1			CW13 CW28 CW31		663
1697	CHLOROACETOPHENONE, SOLID	6.1	T2	II	6.1		0	E0	P002 IBC08	B4	MP10	T3	TP33	SGAH L4BH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1698	DIPHENYLAMINE CHLOROARSINE	6.1	T3	I	6.1		0	E0	P002		MP18	T6	TP33	S10AH	TU15	1			CW13 CW28 CW31		66
1699	DIPHENYLCHLOROARSINE, LIQUID	6.1	T3	I	6.1		0	E0	P001		MP8 MP17			L10CH	TU14 TU15 TU38 TE21 TE22	1			CW13 CW28 CW31		66
1700	TEAR GAS CANDLES	6.1	TF3		6.1+4.1		0	E0	P600							2			CW13 CW28 CW31		64
1701	XYLYL BROMIDE, LIQUID	6.1	T1	II	6.1		0	E0	P001 IBC02		MP15	T7	TP2	L4BH	TU15	2			CW13 CW28 CW31	CE5	60
1702	1,1,2,2-TETRACHLOROETHANE	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2	L4BH	TU15	2			CW13 CW28 CW31	CE5	60
1704	TETRAETHYL DITHIOPYROPHOSPHATE	6.1	T1	II	6.1	43	100 ml	E4	P001 IBC02		MP15	T7	TP2	L4BH	TU15	2			CW13 CW28 CW31	CE5	60
1707	THALLIUM COMPOUND, N.O.S.	6.1	T5	II	6.1	43 274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH L4BH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1708	TOLUIDINES, LIQUID	6.1	T1	II	6.1	279	100 ml	E4	P001 IBC02		MP15	T7	TP2	L4BH	TU15	2			CW13 CW28 CW31	CE5	60

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1709	2,4-TOLUYLENEDIAMINE, SOLID	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAH L4BH	TU15	2		VC1 VC2 AP7	CW13 CW28 CW31	CE11	60
1710	TRICHLOROETHYLENE	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	L4BH	TU15	2	W12		CW13 CW28 CW31	CE8	60
1711	XYLIDINES, LIQUID	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2	L4BH	TU15	2			CW13 CW28 CW31	CE5	60
1712	ZINC ARSENATE, ZINC ARSENITE or ZINC ARSENATE AND ZINC ARSENITE MIXTURE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1713	ZINC CYANIDE	6.1	T5	I	6.1		0	E5	P002 IBC07		MP18	T6	TP33	S10AH	TU15	1	W10		CW13 CW28 CW31		66
1714	ZINC PHOSPHIDE	4.3	WT2	I	4.3+6.1		0	E0	P403		MP2					1	W1		CW23 CW28		X462
1715	ACETIC ANHYDRIDE	8	CF1	II	8+3		1 L	E2	P001 IBC02		MP15	T7	TP2	L4BN		2				CE6	83
1716	ACETYL BROMIDE	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2	L4BN		2				CE6	80
1717	ACETYL CHLORIDE	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T8	TP2	L4BH		2				CE7	X338
1718	BUTYL ACID PHOSPHATE	8	C3	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	L4BN		3	W12			CE8	80
1719	CAUSTIC ALKALI LIQUID, N.O.S.	8	C5	II	8	274	1 L	E2	P001 IBC02		MP15	T11	TP2 TP27	L4BN		2				CE6	80
1719	CAUSTIC ALKALI LIQUID, N.O.S.	8	C5	III	8	274	5 L	E1	P001 IBC03 R001		MP19	T7	TP1 TP28	L4BN		3	W12			CE8	80

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1722	ALLYL CHLOROFORMATE	6.1	TFC	I	6.1+3+8		0	E0	P001		MP8 MP17	T14	TP2	L10CH	TU14 TU15 TU38 TE21 TE22	1			CW13 CW28 CW31		668
1723	ALLYL IODIDE	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T7	TP2	L4BH		2				CE7	338
1724	ALLYLTRICHLOROSILANE, STABILIZED	8	CF1	II	8+3	386	0	E0	P010		MP15	T10	TP2 TP7	L4BN		2				CE6	X839
1725	ALUMINIUM BROMIDE, ANHYDROUS	8	C2	II	8	588	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	SGAN		2	W11			CE10	80
1726	ALUMINIUM CHLORIDE, ANHYDROUS	8	C2	II	8	588	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	SGAN		2	W11			CE10	80
1727	AMMONIUM HYDROGENDIFLUORIDE, SOLID	8	C2	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	SGAN		2	W11			CE10	80
1728	AMYLTRICHLOROSILANE	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7	L4BN		2				CE6	X80
1729	ANISOYL CHLORIDE	8	C4	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	SGAN L4BN		2	W11			CE10	80
1730	ANTIMONY PENTACHLORIDE, LIQUID	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2	L4BN		2				CE6	X80
1731	ANTIMONY PENTACHLORIDE SOLUTION	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2	L4BN		2				CE6	80
1731	ANTIMONY PENTACHLORIDE SOLUTION	8	C1	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	L4BN		3	W12			CE8	80
1732	ANTIMONY PENTAFLUORIDE	8	CT1	II	8+6.1		1 L	E0	P001 IBC02		MP15	T7	TP2	L4BN		2			CW13 CW28	CE6	86
1733	ANTIMONY TRICHLORIDE	8	C2	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	SGAN L4BN		2	W11			CE10	80
1736	BENZOYL CHLORIDE	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2	L4BN		2				CE6	80
1737	BENZYL BROMIDE	6.1	TC1	II	6.1+8		0	E4	P001 IBC02		MP15	T8	TP2	L4BH	TU15	2			CW13 CW28 CW31	CE5	68

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1738	BENZYL CHLORIDE	6.1	TC1	II	6.1+8		0	E4	P001 IBC02		MP15	T8	TP2	L4BH	TU15	2			CW13 CW28 CW31	CE5	68
1739	BENZYL CHLOROFORMATE	8	C9	I	8		0	E0	P001		MP8 MP17	T10	TP2	L10BH	TU38 TE22	1					88
1740	HYDROGENDIFLUORIDES, SOLID, N.O.S.	8	C2	II	8	517	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	SGAN		2	W11			CE10	80
1740	HYDROGENDIFLUORIDES, SOLID, N.O.S.	8	C2	III	8	517	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAV		3		VC1 VC2 AP7		CE11	80
1741	BORON TRICHLORIDE	2	2TC		2.3+8		0	E0	P200		MP9	(M)				1			CW9 CW10 CW36		268
1742	BORON TRIFLUORIDE ACETIC ACID COMPLEX, LIQUID	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2	L4BN		2				CE6	80
1743	BORON TRIFLUORIDE PROPIONIC ACID COMPLEX, LIQUID	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2	L4BN		2				CE6	80
1744	BROMINE or BROMINE SOLUTION	8	CT1	I	8+6.1		0	E0	P804		MP2	T22	TP2 TP10	L21DH(+)	TU14 TU33 TU38 TU43 TC5 TE21 TE22 TE25 TT2 TM3 TM5	1			CW13 CW28		886
1745	BROMINE PENTAFLUORIDE	5.1	OTC	I	5.1+6.1+8		0	E0	P200		MP2	T22	TP2	L10DH	TU3 TU38 TE16 TE22	1			CW24 CW28		568
1746	BROMINE TRIFLUORIDE	5.1	OTC	I	5.1+6.1+8		0	E0	P200		MP2	T22	TP2	L10DH	TU3 TU38 TE16 TE22	1			CW24 CW28		568

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1747	BUTYLTRICHLOROSILANE	8	CF1	II	8+3		0	E0	P010		MP15	T10	TP2 TP7	L4BN		2				CE6	X83
1748	CALCIUM HYPOCHLORITE, DRY or CALCIUM HYPOCHLORITE MIXTURE, DRY with more than 39% available chlorine (8.8% available oxygen)	5.1	O2	II	5.1	314	1 kg	E2	P002 IBC08	B4 B13	MP10			SGAN	TU3	2	W11		CW24 CW35	CE10	50
1748	CALCIUM HYPOCHLORITE, DRY or CALCIUM HYPOCHLORITE MIXTURE, DRY with more than 39% available chlorine (8.8% available oxygen)	5.1	O2	III	5.1	316	5 kg	E1	P002 IBC08 R001	B4 B13	MP10			SGAV	TU3	3			CW24 CW35	CE11	50
1749	CHLORINE TRIFLUORIDE	2	2TOC		2.3+5.1+8 (+13)		0	E0	P200		MP9	(M)		PxBH(M)	TU38 TE22 TE25 TA4 TT9 TM6	1			CW9 CW10 CW16 CW36		265
1750	CHLOROACETIC ACID SOLUTION	6.1	TC1	II	6.1+8		100 ml	E4	P001 IBC02		MP15	T7	TP2	L4BH	TU15	2			CW13 CW28 CW31	CE5	68
1751	CHLOROACETIC ACID, SOLID	6.1	TC2	II	6.1+8		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	68
1752	CHLOROACETYL CHLORIDE	6.1	TC1	I	6.1+8	354	0	E0	P602		MP8 MP17	T20	TP2	L10CH	TU14 TU15 TU38 TE21 TE22	1			CW13 CW28 CW31		668
1753	CHLOROPHENYLTRICHLOROSILANE	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7	L4BN		2				CE6	X80
1754	CHLOROSULPHONIC ACID (with or without sulphur trioxide)	8	C1	I	8		0	E0	P001		MP8 MP17	T20	TP2	L10BH	TU38 TE22	1					X88
1755	CHROMIC ACID SOLUTION	8	C1	II	8	518	1 L	E2	P001 IBC02		MP15	T8	TP2	L4BN	TU42	2				CE6	80
1755	CHROMIC ACID SOLUTION	8	C1	III	8	518	5 L	E1	P001 IBC02 LP01 R001		MP19	T4	TP1	L4BN	TU42	3				CE8	80

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1756	CHROMIC FLUORIDE, SOLID	8	C2	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	SGAN		2	W11			CE10	80
1757	CHROMIC FLUORIDE SOLUTION	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2	L4BN		2				CE6	80
1757	CHROMIC FLUORIDE SOLUTION	8	C1	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	L4BN		3	W12			CE8	80
1758	CHROMIUM OXYCHLORIDE	8	C1	I	8		0	E0	P001		MP8 MP17	T10	TP2	L10BH	TU38 TE22	1					X88
1759	CORROSIVE SOLID, N.O.S.	8	C10	I	8	274	0	E0	P002 IBC07		MP18	T6	TP33	S10AN L10BH	TU38 TE22	1	W10				88
1759	CORROSIVE SOLID, N.O.S.	8	C10	II	8	274	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	SGAN L4BN		2	W11			CE10	80
1759	CORROSIVE SOLID, N.O.S.	8	C10	III	8	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAV L4BN		3		VC1 VC2 AP7		CE11	80
1760	CORROSIVE LIQUID, N.O.S.	8	C9	I	8	274	0	E0	P001		MP8 MP17	T14	TP2 TP27	L10BH	TU38 TE22	1					88
1760	CORROSIVE LIQUID, N.O.S.	8	C9	II	8	274	1 L	E2	P001 IBC02		MP15	T11	TP2 TP27	L4BN		2				CE6	80
1760	CORROSIVE LIQUID, N.O.S.	8	C9	III	8	274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1 TP28	L4BN		3	W12			CE8	80
1761	CUPRIETHYLENEDIAMINE SOLUTION	8	CT1	II	8+6.1		1 L	E2	P001 IBC02		MP15	T7	TP2	L4BN		2			CW13 CW28	CE6	86
1761	CUPRIETHYLENEDIAMINE SOLUTION	8	CT1	III	8+6.1		5 L	E1	P001 IBC03 R001		MP19	T7	TP1 TP28	L4BN		3	W12		CW13 CW28	CE8	86
1762	CYCLOHEXENYLTRICHLOROSILANE	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7	L4BN		2				CE6	X80
1763	CYCLOHEXYLTRICHLOROSILANE	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7	L4BN		2				CE6	X80
1764	DICHLOROACETIC ACID	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2	L4BN		2				CE6	80

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1765	DICHLOROACETYL CHLORIDE	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2	L4BN		2				CE6	X80
1766	DICHLOROPHENYLTRICHLOROSILANE	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7	L4BN		2				CE6	X80
1767	DIETHYLDICHLOROSILANE	8	CF1	II	8+3		0	E0	P010		MP15	T10	TP2 TP7	L4BN		2				CE6	X83
1768	DIFLUOROPHOSPHORIC ACID, ANHYDROUS	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2	L4BN		2				CE6	80
1769	DIPHENYLDICHLOROSILANE	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7	L4BN		2				CE6	X80
1770	DIPHENYLMETHYL BROMIDE	8	C10	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	SGAN L4BN		2	W11			CE10	80
1771	DODECYLTRICHLOROSILANE	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7	L4BN		2				CE6	X80
1773	FERRIC CHLORIDE, ANHYDROUS	8	C2	III	8	590	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAV		3		VC1 VC2 AP7		CE11	80
1774	FIRE EXTINGUISHER CHARGES, corrosive liquid	8	C11	II	8		1 L	E0	P001	PP4						2				CE6	80
1775	FLUOROBORIC ACID	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2	L4BN		2				CE6	80
1776	FLUOROPHOSPHORIC ACID, ANHYDROUS	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2	L4BN		2				CE6	80
1777	FLUOROSULPHONIC ACID	8	C1	I	8		0	E0	P001		MP8 MP17	T10	TP2	L10BH	TU38 TE22	1					88
1778	FLUOROSILICIC ACID	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2	L4BN	TU42	2				CE6	80
1779	FORMIC ACID with more than 85% acid by mass	8	CF1	II	8+3		1 L	E2	P001 IBC02		MP15	T7	TP2	L4BN	TU42	2				CE6	83
1780	FUMARYL CHLORIDE	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2	L4BN		2				CE6	80
1781	HEXADECYLTRICHLOROSILANE	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7	L4BN		2				CE6	X80
1782	HEXAFLUOROPHOSPHORIC ACID	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2	L4BN		2				CE6	80

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1783	HEXAMETHYLENEDIAMINE SOLUTION	8	C7	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2	L4BN		2				CE6	80
1783	HEXAMETHYLENEDIAMINE SOLUTION	8	C7	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	L4BN		3	W12			CE8	80
1784	HEXYLTRICHLOROSILANE	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7	L4BN		2				CE6	X80
1786	HYDROFLUORIC ACID AND SULPHURIC ACID MIXTURE	8	CT1	I	8+6.1		0	E0	P001		MP8 MP17	T10	TP2	L10DH	TU14 TU38 TE21 TE22 TT4	1			CW13 CW28		886
1787	HYDRIODIC ACID	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2	L4BN		2				CE6	80
1787	HYDRIODIC ACID	8	C1	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	L4BN		3	W12			CE8	80
1788	HYDROBROMIC ACID	8	C1	II	8	519	1 L	E2	P001 IBC02		MP15	T7	TP2	L4BN	TU42	2				CE6	80
1788	HYDROBROMIC ACID	8	C1	III	8	519	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	L4BN	TU42	3	W12			CE8	80
1789	HYDROCHLORIC ACID	8	C1	II	8	520	1 L	E2	P001 IBC02		MP15	T8	TP2	L4BN	TU42	2				CE6	80
1789	HYDROCHLORIC ACID	8	C1	III	8	520	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	L4BN	TU42	3	W12			CE8	80

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1790	HYDROFLUORIC ACID with more than 85% hydrogen fluoride	8	CT1	I	8+6.1	640l	0	E0	P802		MP2	T10	TP2	L21DH(+)	TU14 TU34 TU38 TC1 TE17 TE21 TE22 TE25 TA4 TT4 TT9 TM3	1			CW13 CW28		886
1790	HYDROFLUORIC ACID with more than 60% but not more than 85% hydrogen fluoride	8	CT1	I	8+6.1	640J	0	E0	P001	PP81	MP8 MP17	T10	TP2	L10DH	TU14 TU38 TE21 TE22 TT4	1			CW13 CW28		886
1790	HYDROFLUORIC ACID with not more than 60% hydrogen fluoride	8	CT1	II	8+6.1		1 L	E2	P001 IBC02		MP15	T8	TP2	L4DH	TU14 TE17 TE21 TT4	2			CW13 CW28	CE6	86
1791	HYPOCHLORITE SOLUTION	8	C9	II	8	521	1 L	E2	P001 IBC02	PP10 B5	MP15	T7	TP2 TP24	L4BV(+)	TU42 TE11	2				CE6	80
1791	HYPOCHLORITE SOLUTION	8	C9	III	8	521	5 L	E1	P001 IBC02 LP01 R001	B5	MP19	T4	TP2 TP24	L4BV(+)	TU42 TE11	3				CE8	80
1792	IODINE MONOCHLORIDE, SOLID	8	C2	II	8		1 kg	E0	P002 IBC08	B4	MP10	T7	TP2	SGAN L4BN		2	W11			CE10	80
1793	ISOPROPYL ACID PHOSPHATE	8	C3	III	8		5 L	E1	P001 IBC02 LP01 R001		MP19	T4	TP1	L4BN		3				CE8	80
1794	LEAD SULPHATE with more than 3% free acid	8	C2	II	8	591	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	SGAN		2	W11	VC1 VC2 AP7		CE10	80

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1796	NITRATING ACID MIXTURE with more than 50% nitric acid	8	CO1	I	8+5.1		0	E0	P001		MP8 MP17	T10	TP2	L10BH	TU38 TC6 TE22 TT1	1			CW24		885
1796	NITRATING ACID MIXTURE with not more than 50% nitric acid	8	C1	II	8		1 L	E0	P001 IBC02		MP15	T8	TP2	L4BN		2				CE6	80
1798	NITROHYDROCHLORIC ACID	8	COT	CARRIAGE PROHIBITED																	
1799	NONYLTRICHLOROSILANE	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7	L4BN		2				CE6	X80
1800	OCTADECYLTRICHLOROSILANE	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7	L4BN		2				CE6	X80
1801	OCTYLTRICHLOROSILANE	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7	L4BN		2				CE6	X80
1802	PERCHLORIC ACID with not more than 50% acid, by mass	8	CO1	II	8+5.1	522	1 L	E0	P001 IBC02		MP3	T7	TP2	L4BN		2			CW24	CE6	85
1803	PHENOLSULPHONIC ACID, LIQUID	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2	L4BN	TU42	2				CE6	80
1804	PHENYLTRICHLOROSILANE	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7	L4BN		2				CE6	X80
1805	PHOSPHORIC ACID, SOLUTION	8	C1	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	L4BN	TU42	3	W12			CE8	80
1806	PHOSPHORUS PENTACHLORIDE	8	C2	II	8		1 kg	E0	P002 IBC08	B4	MP10	T3	TP33	SGAN		2	W11			CE10	80
1807	PHOSPHORUS PENTOXIDE	8	C2	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	SGAN		2	W11			CE10	80
1808	PHOSPHORUS TRIBROMIDE	8	C1	II	8		1 L	E0	P001 IBC02		MP15	T7	TP2	L4BN		2				CE6	X80
1809	PHOSPHORUS TRICHLORIDE	6.1	TC3	I	6.1+8	354	0	E0	P602		MP8 MP17	T20	TP2	L10CH	TU14 TU15 TU38 TE21 TE22	1			CW13 CW28 CW31		668

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1810	PHOSPHORUS OXYCHLORIDE	6.1	TC3	I	6.1+8	354	0	E0	P602		MP8 MP17	T20	TP2	L10CH	TU14 TU15 TU38 TE21 TE22	1			CW13 CW28 CW31		X668
1811	POTASSIUM HYDROGENDIFLUORIDE, SOLID	8	CT2	II	8+6.1		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	SGAN		2	W11		CW13 CW28	CE10	86
1812	POTASSIUM FLUORIDE, SOLID	6.1	T5	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAH	TU15	2		VC1 VC2 AP7	CW13 CW28 CW31	CE11	60
1813	POTASSIUM HYDROXIDE, SOLID	8	C6	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	SGAN		2	W11			CE10	80
1814	POTASSIUM HYDROXIDE SOLUTION	8	C5	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2	L4BN	TU42	2				CE6	80
1814	POTASSIUM HYDROXIDE SOLUTION	8	C5	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	L4BN	TU42	3	W12			CE8	80
1815	PROPIONYL CHLORIDE	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T7	TP1	L4BH		2				CE7	338
1816	PROPYLTRICHLOROSILANE	8	CF1	II	8+3		0	E0	P010		MP15	T10	TP2 TP7	L4BN		2				CE6	X83
1817	PYROSULPHURYL CHLORIDE	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2	L4BN		2				CE6	X80
1818	SILICON TETRACHLORIDE	8	C1	II	8		0	E0	P010		MP15	T10	TP2 TP7	L4BN		2				CE6	X80
1819	SODIUM ALUMINATE SOLUTION	8	C5	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2	L4BN	TU42	2				CE6	80
1819	SODIUM ALUMINATE SOLUTION	8	C5	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	L4BN	TU42	3	W12			CE8	80
1823	SODIUM HYDROXIDE, SOLID	8	C6	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	SGAN		2	W11			CE10	80
1824	SODIUM HYDROXIDE SOLUTION	8	C5	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2	L4BN	TU42	2				CE6	80

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									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1824	SODIUM HYDROXIDE SOLUTION	8	C5	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	L4BN	TU42	3	W12			CE8	80
1825	SODIUM MONOXIDE	8	C6	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	SGAN		2	W11			CE10	80
1826	NITRATING ACID MIXTURE, SPENT, with more than 50% nitric acid	8	CO1	I	8+5.1	113	0	E0	P001		MP8 MP17	T10	TP2	L10BH	TU38 TE22	1			CW24		885
1826	NITRATING ACID MIXTURE, SPENT, with not more than 50% nitric acid	8	C1	II	8	113	1 L	E0	P001 IBC02		MP15	T8	TP2	L4BN		2				CE6	80
1827	STANNIC CHLORIDE, ANHYDROUS	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2	L4BN		2				CE6	X80
1828	SULPHUR CHLORIDES	8	C1	I	8		0	E0	P602		MP8 MP17	T20	TP2	L10BH	TU38 TE22	1					X88
1829	SULPHUR TRIOXIDE, STABILIZED	8	C1	I	8	386 623	0	E0	P001		MP8 MP17	T20	TP4 TP26	L10BH	TU32 TU38 TE13 TE22 TT5 TM3	1					X88
1830	SULPHURIC ACID with more than 51% acid	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2	L4BN	TU42	2				CE6	80
1831	SULPHURIC ACID, FUMING	8	CT1	I	8+6.1		0	E0	P602		MP8 MP17	T20	TP2	L10BH	TU38 TE22	1			CW13 CW28		X886
1832	SULPHURIC ACID, SPENT	8	C1	II	8	113	1 L	E0	P001 IBC02		MP15	T8	TP2	L4BN	TU42	2				CE6	80
1833	SULPHUROUS ACID	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2	L4BN		2				CE6	80
1834	SULPHURYL CHLORIDE	6.1	TC3	I	6.1+8	354	0	E0	P602		MP8 MP17	T20	TP2	L10CH	TU14 TU15 TU38 TE21 TE22	1			CW13 CW28 CW31		X668
1835	TETRAMETHYLAMMONIUM HYDROXIDE SOLUTION	8	C7	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2	L4BN		2				CE6	80

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1835	TETRAMETHYLAMMONIUM HYDROXIDE SOLUTION	8	C7	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2	L4BN		3	W12			CE8	80
1836	THIONYL CHLORIDE	8	C1	I	8		0	E0	P802		MP8 MP17	T10	TP2	L10BH	TU38 TE22	1					X88
1837	THIOPHOSPHORYL CHLORIDE	8	C1	II	8		1 L	E0	P001 IBC02		MP15	T7	TP2	L4BN		2				CE6	X80
1838	TITANIUM TETRACHLORIDE	6.1	TC3	I	6.1+8	354	0	E0	P602		MP8 MP17	T20	TP2	L10CH	TU14 TU15 TU38 TE21 TE22	1			CW13 CW28 CW31		X668
1839	TRICHLOROACETIC ACID	8	C4	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	SGAN L4BN		2	W11			CE10	80
1840	ZINC CHLORIDE SOLUTION	8	C1	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	L4BN	TU42	3	W12			CE8	80
1841	ACETALDEHYDE AMMONIA	9	M11	III	9		5 kg	E1	P002 IBC08 LP02 R001	B3 B6	MP10	T1	TP33	SGAV		3		VC1 VC2	CW31	CE11	90
1843	AMMONIUM DINITRO-o-CRESOLATE, SOLID	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1845	Carbon dioxide, solid (Dry ice)	9	M11	NOT SUBJECT TO RID except for 5.5.3																	
1846	CARBON TETRACHLORIDE	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2	L4BH	TU15	2			CW13 CW28 CW31	CE5	60
1847	POTASSIUM SULPHIDE, HYDRATED with not less than 30% water of crystallization	8	C6	II	8	523	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	SGAN L4BN		2	W11			CE10	80
1848	PROPIONIC ACID with not less than 10% and less than 90% acid by mass	8	C3	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	L4BN		3	W12			CE8	80

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1849	SODIUM SULPHIDE, HYDRATED with not less than 30% water	8	C6	II	8	523	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	SGAN L4BN		2	W11			CE10	80
1851	MEDICINE, LIQUID, TOXIC, N.O.S.	6.1	T1	II	6.1	221 601	100 ml	E4	P001		MP15			L4BH	TU15	2			CW13 CW28 CW31	CE5	60
1851	MEDICINE, LIQUID, TOXIC, N.O.S.	6.1	T1	III	6.1	221 601	5 L	E1	P001 LP01 R001		MP19			L4BH	TU15	2			CW13 CW28 CW31	CE8	60
1854	BARIUM ALLOYS, PYROPHORIC	4.2	S4	I	4.2		0	E0	P404		MP13	T21	TP7 TP33			0	W1				43
1855	CALCIUM, PYROPHORIC or CALCIUM ALLOYS, PYROPHORIC	4.2	S4	I	4.2		0	E0	P404		MP13					0	W1				43
1856	Rags, oily	4.2	S2	NOT SUBJECT TO RID																	
1857	Textile waste, wet	4.2	S2	NOT SUBJECT TO RID																	
1858	HEXAFLUOROPROPYLENE (REFRIGERANT GAS R 1216)	2	2A		2.2 (+13)	662	120 ml	E1	P200		MP9	T50 (M)		PxBN(M)	TA4 TT9 TM6	3			CW9 CW10 CW36	CE3	20
1859	SILICON TETRAFLUORIDE	2	2TC		2.3+8 (+13)		0	E0	P200		MP9	(M)		PxBH(M)	TU38 TE22 TE25 TA4 TT9 TM6	1			CW9 CW10 CW36		268
1860	VINYL FLUORIDE, STABILIZED	2	2F		2.1 (+13)	386 662	0	E0	P200		MP9	(M)		PxBN(M)	TU38 TE22 TA4 TT9 TM6	2			CW9 CW10 CW36	CE3	239
1862	ETHYL CROTONATE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP2	LGBF		2				CE7	33
1863	FUEL, AVIATION, TURBINE ENGINE	3	F1	I	3		500 ml	E3	P001		MP7 MP17	T11	TP1 TP8 TP28	L4BN		1					33
1863	FUEL, AVIATION, TURBINE ENGINE (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	640C	1 L	E2	P001		MP19	T4	TP1 TP8	L1.5BN		2				CE7	33

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1863	FUEL, AVIATION, TURBINE ENGINE (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	640D	1 L	E2	P001 IBC02 R001		MP19	T4	TP1 TP8	LGBF		2				CE7	33
1863	FUEL, AVIATION, TURBINE ENGINE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1865	n-PROPYL NITRATE	3	F1	II	3		1 L	E2	P001 IBC02 R001	B7	MP19					2				CE7	33
1866	RESIN SOLUTION, flammable	3	F1	I	3		500 ml	E3	P001		MP7 MP17	T11	TP1 TP8 TP28	L4BN		1					33
1866	RESIN SOLUTION, flammable (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	640C	5 L	E2	P001	PP1	MP19	T4	TP1 TP8	L1.5BN		2				CE7	33
1866	RESIN SOLUTION, flammable (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	640D	5 L	E2	P001 IBC02 R001	PP1	MP19	T4	TP1 TP8	LGBF		2				CE7	33
1866	RESIN SOLUTION, flammable	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001	PP1	MP19	T2	TP1	LGBF		3	W12			CE4	30
1866	RESIN SOLUTION, flammable (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa)	3	F1	III	3		5 L	E1	P001 R001	PP1	MP19					3				CE4	33
1866	RESIN SOLUTION, flammable (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)	3	F1	III	3		5 L	E1	P001 IBC02 R001	PP1 BB4	MP19					3				CE4	33
1868	DECABORANE	4.1	FT2	II	4.1+6.1		1 kg	E0	P002 IBC06		MP10	T3	TP33	SGAN		2	W1		CW28	CE10	46
1869	MAGNESIUM or MAGNESIUM ALLOYS with more than 50% magnesium in pellets, turnings or ribbons	4.1	F3	III	4.1	59	5 kg	E1	P002 IBC08 LP02 R001	B3	MP11	T1	TP33	SGAV		3	W1	VC1 VC2		CE11	40
1870	POTASSIUM BOROHYDRIDE	4.3	W2	I	4.3		0	E0	P403		MP2					1	W1		CW23		X423

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									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1871	TITANIUM HYDRIDE	4.1	F3	II	4.1		1 kg	E2	P410 IBC04	PP40	MP11	T3	TP33	SGAN		2	W1			CE10	40
1872	LEAD DIOXIDE	5.1	OT2	III	5.1+6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP2	T1	TP33	SGAN	TU3	3			CW24 CW28	CE11	56
1873	PERCHLORIC ACID with more than 50% but not more than 72% acid, by mass	5.1	OC1	I	5.1+8	60	0	E0	P502	PP28	MP3	T10	TP1	L4DN(+)	TU3 TU28 TE16	1			CW24		558
1884	BARIUM OXIDE	6.1	T5	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAH L4BH	TU15	2		VC1 VC2 AP7	CW13 CW28 CW31	CE11	60
1885	BENZIDINE	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH L4BH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1886	BENZYLIDENE CHLORIDE	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2	L4BH	TU15	2			CW13 CW28 CW31	CE5	60
1887	BROMOCHLOROMETHANE	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	L4BH	TU15	2	W12		CW13 CW28 CW31	CE8	60
1888	CHLOROFORM	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2	L4BH	TU15	2	W12		CW13 CW28 CW31	CE8	60
1889	CYANOGEN BROMIDE	6.1	TC2	I	6.1+8		0	E0	P002		MP18	T6	TP33	S10AH L10CH	TU14 TU15 TU38 TE21 TE22	1			CW13 CW28 CW31		668
1891	ETHYL BROMIDE	6.1	T1	II	6.1		100 ml	E4	P001 IBC02	B8	MP15	T7	TP2	L4BH	TU15	2			CW13 CW28 CW31	CE5	60

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1892	ETHYLDICHLOROARSINE	6.1	T3	I	6.1	354	0	E0	P602		MP8 MP17	T20	TP2	L10CH	TU14 TU15 TU38 TE21 TE22	1			CW13 CW28 CW31		66
1894	PHENYLMERCURIC HYDROXIDE	6.1	T3	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1895	PHENYLMERCURIC NITRATE	6.1	T3	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
1897	TETRACHLOROETHYLENE	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	L4BH	TU15	2	W12		CW13 CW28 CW31	CE8	60
1898	ACETYL IODIDE	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2	L4BN		2				CE6	80
1902	DIISOOCTYL ACID PHOSPHATE	8	C3	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	L4BN		3	W12			CE8	80
1903	DISINFECTANT, LIQUID, CORROSIVE, N.O.S.	8	C9	I	8	274	0	E0	P001		MP8 MP17			L10BH	TU38 TE22	1					88
1903	DISINFECTANT, LIQUID, CORROSIVE, N.O.S.	8	C9	II	8	274	1 L	E2	P001 IBC02		MP15			L4BN		2				CE6	80
1903	DISINFECTANT, LIQUID, CORROSIVE, N.O.S.	8	C9	III	8	274	5 L	E1	P001 IBC03 LP01 R001		MP19			L4BN		3	W12			CE8	80
1905	SELENIC ACID	8	C2	I	8		0	E0	P002 IBC07		MP18	T6	TP33	S10AN		1	W10				88
1906	SLUDGE ACID	8	C1	II	8		1 L	E0	P001 IBC02		MP15	T8	TP2 TP28	L4BN	TU42	2				CE6	80
1907	SODA LIME with more than 4% sodium hydroxide	8	C6	III	8	62	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAV		3		VC1 VC2 AP7		CE11	80

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1908	CHLORITE SOLUTION	8	C9	II	8	521	1 L	E2	P001 IBC02		MP15	T7	TP2 TP24	L4BV(+)	TE11	2				CE6	80
1908	CHLORITE SOLUTION	8	C9	III	8	521	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP2 TP24	L4BV(+)	TE11	3	W12			CE8	80
1910	Calcium oxide	8	C6	NOT SUBJECT TO RID																	
1911	DIBORANE	2	2TF		2.3+2.1		0	E0	P200		MP9					1			CW9 CW10 CW36		263
1912	METHYL CHLORIDE AND METHYLENE CHLORIDE MIXTURE	2	2F		2.1 (+13)	228 662	0	E0	P200		MP9	T50 (M)		PxBN(M)	TU38 TE22 TA4 TT9 TM6	2			CW9 CW10 CW36	CE3	23
1913	NEON, REFRIGERATED LIQUID	2	3A		2.2 (+13)	593	120 ml	E1	P203		MP9	T75	TP5	RxBN	TU19 TA4 TT9 TM6	3	W5		CW9 CW11 CW36	CE2	22
1914	BUTYL PROPIONATES	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1915	CYCLOHEXANONE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1916	2,2'-DICHLORODIETHYL ETHER	6.1	TF1	II	6.1+3		100 ml	E4	P001 IBC02		MP15	T7	TP2	L4BH	TU15	2			CW13 CW28 CW31	CE5	63
1917	ETHYL ACRYLATE, STABILIZED	3	F1	II	3	386	1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	339
1918	ISOPROPYLBENZENE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1919	METHYL ACRYLATE, STABILIZED	3	F1	II	3	386	1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	339
1920	NONANES	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
1921	PROPYLENEIMINE, STABILIZED	3	FT1	I	3+6.1	386	0	E0	P001		MP2	T14	TP2	L15CH	TU14 TU15 TU38 TE21 TE22 TE25	1			CW13 CW28		336
1922	PYRROLIDINE	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T7	TP1	L4BH		2				CE7	338
1923	CALCIUM DITHIONITE (CALCIUM HYDROSULPHITE)	4.2	S4	II	4.2		0	E2	P410 IBC06		MP14	T3	TP33	SGAN		2	W1			CE10	40
1928	METHYL MAGNESIUM BROMIDE IN ETHYL ETHER	4.3	WF1	I	4.3+3		0	E0	P402	RR8	MP2			L10DH	TU4 TU14 TU22 TU38 TE21 TE22 TM2	0	W1		CW23		X323
1929	POTASSIUM DITHIONITE (POTASSIUM HYDROSULPHITE)	4.2	S4	II	4.2		0	E2	P410 IBC06		MP14	T3	TP33	SGAN		2	W1			CE10	40
1931	ZINC DITHIONITE (ZINC HYDROSULPHITE)	9	M11	III	9		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAV		3		VC1 VC2	CW31	CE11	90
1932	ZIRCONIUM SCRAP	4.2	S4	III	4.2	524 592	0	E0	P002 IBC08 LP02 R001	B3	MP14	T1	TP33	SGAN		3	W1	VC1 VC2 AP1		CE11	40

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1935	CYANIDE SOLUTION, N.O.S.	6.1	T4	I	6.1	274 525	0	E5	P001		MP8 MP17	T14	TP2 TP27	L10CH	TU14 TU15 TU38 TE21 TE22	1			CW13 CW28 CW31		66
1935	CYANIDE SOLUTION, N.O.S.	6.1	T4	II	6.1	274 525	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27	L4BH	TU15	2			CW13 CW28 CW31	CE5	60
1935	CYANIDE SOLUTION, N.O.S.	6.1	T4	III	6.1	274 525	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28	L4BH	TU15	2	W12		CW13 CW28 CW31	CE8	60
1938	BROMOACETIC ACID SOLUTION	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2	L4BN		2				CE6	80
1938	BROMOACETIC ACID SOLUTION	8	C3	III	8		5 L	E1	P001 IBC02 LP01 R001		MP19	T7	TP2	L4BN		3				CE8	80
1939	PHOSPHORUS OXYBROMIDE	8	C2	II	8		1 kg	E0	P002 IBC08	B4	MP10	T3	TP33	SGAN		2	W11			CE10	80
1940	THIOGLYCOLIC ACID	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2	L4BN		2				CE6	80
1941	DIBROMODIFLUOROMETHANE	9	M11	III	9		5 L	E1	P001 LP01 R001		MP15	T11	TP2	L4BN		3			CW31	CE8	90
1942	AMMONIUM NITRATE with not more than 0.2% combustible substances, including any organic substance calculated as carbon, to the exclusion of any other added substance	5.1	O2	III	5.1	306 611	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1 BK1 BK2 BK3	TP33	SGAV	TU3	3		VC1 VC2 AP6 AP7	CW24	CE11	50
1944	MATCHES, SAFETY (book, card or strike on box)	4.1	F1	III	4.1	293	5 kg	E1	P407 R001		MP11					4	W1			CE11	40
1945	MATCHES, WAX 'VESTA'	4.1	F1	III	4.1	293	5 kg	E1	P407 R001		MP11					4	W1			CE11	40

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1950	AEROSOLS, asphyxiant	2	5A		2.2	190 327 344 625	1 L	E0	P207 LP200	PP87 RR6 L2	MP9					3	W14		CW9 CW12	CE2	20
1950	AEROSOLS, corrosive	2	5C		2.2+8	190 327 344 625	1 L	E0	P207 LP200	PP87 RR6 L2	MP9					1	W14		CW9 CW12	CE2	28
1950	AEROSOLS, corrosive, oxidizing	2	5CO		2.2+ 5.1+8	190 327 344 625	1 L	E0	P207 LP200	PP87 RR6 L2	MP9					1	W14		CW9 CW12	CE2	285
1950	AEROSOLS, flammable	2	5F		2.1	190 327 344 625	1 L	E0	P207 LP200	PP87 RR6 L2	MP9					2	W14		CW9 CW12	CE2	23
1950	AEROSOLS, flammable, corrosive	2	5FC		2.1+8	190 327 344 625	1 L	E0	P207 LP200	PP87 RR6 L2	MP9					1	W14		CW9 CW12	CE2	238
1950	AEROSOLS, oxidizing	2	5O		2.2+5.1	190 327 344 625	1 L	E0	P207 LP200	PP87 RR6 L2	MP9					3	W14		CW9 CW12	CE2	25
1950	AEROSOLS, toxic	2	5T		2.2+ 6.1	190 327 344 625	120 ml	E0	P207 LP200	PP87 RR6 L2	MP9					1	W14		CW9 CW12 CW28		26
1950	AEROSOLS, toxic, corrosive	2	5TC		2.2+ 6.1+8	190 327 344 625	120 ml	E0	P207 LP200	PP87 RR6 L2	MP9					1	W14		CW9 CW12 CW28		268
1950	AEROSOLS, toxic, flammable	2	5TF		2.1+ 6.1	190 327 344 625	120 ml	E0	P207 LP200	PP87 RR6 L2	MP9					1	W14		CW9 CW12 CW28		263

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1950	AEROSOLS, toxic, flammable, corrosive	2	5TFC		2.1+ 6.1+8	190 327 344 625	120 ml	E0	P207 LP200	PP87 RR6 L2	MP9					1	W14		CW9 CW12 CW28		263
1950	AEROSOLS, toxic, oxidizing	2	5TO		2.2+ 5.1+ 6.1	190 327 344 625	120 ml	E0	P207 LP200	PP87 RR6 L2	MP9					1	W14		CW9 CW12 CW28		265
1950	AEROSOLS, toxic, oxidizing, corrosive	2	5TOC		2.2+ 5.1+ 6.1+8	190 327 344 625	120 ml	E0	P207 LP200	PP87 RR6 L2	MP9					1	W14		CW9 CW12 CW28		265
1951	ARGON, REFRIGERATED LIQUID	2	3A		2.2 (+13)	593	120 ml	E1	P203		MP9	T75	TP5	RxBN	TU19 TA4 TT9 TM6	3	W5		CW9 CW11 CW36	CE2	22
1952	ETHYLENE OXIDE AND CARBON DIOXIDE MIXTURE with not more than 9% ethylene oxide	2	2A		2.2 (+13)	660 662	120 ml	E1	P200		MP9	(M)		PxBN(M)	TA4 TT9 TM6	3			CW9 CW10 CW36	CE3	20
1953	COMPRESSED GAS, TOXIC, FLAMMABLE, N.O.S.	2	1TF		2.3+2.1 (+13)	274	0	E0	P200		MP9	(M)		CxBH(M)	TU6 TU38 TE22 TE25 TA4 TT9	1			CW9 CW10 CW36		263
1954	COMPRESSED GAS, FLAMMABLE, N.O.S.	2	1F		2.1 (+13)	274 392 662	0	E0	P200		MP9	(M)		CxBN(M)	TU38 TE22 TA4 TT9	2			CW9 CW10 CW36	CE3	23
1955	COMPRESSED GAS, TOXIC, N.O.S.	2	1T		2.3 (+13)	274	0	E0	P200		MP9	(M)		CxBH(M)	TU6 TU38 TE22 TE25 TA4 TT9	1			CW9 CW10 CW36		26

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1956	COMPRESSED GAS, N.O.S.	2	1A		2.2 (+13)	274 378 655 660 662	120 ml	E1	P200		MP9	(M)		CxBN(M)	TA4 TT9	3			CW9 CW10 CW36	CE3	20
1957	DEUTERIUM, COMPRESSED	2	1F		2.1 (+13)	662	0	E0	P200		MP9	(M)		CxBN(M)	TU38 TE22 TA4 TT9	2			CW9 CW10 CW36	CE3	23
1958	1,2-DICHLORO-1,1,2,2-TETRAFLUOROETHANE (REFRIGERANT GAS R 114)	2	2A		2.2 (+13)	662	120 ml	E1	P200		MP9	T50 (M)		PxBN(M)	TA4 TT9 TM6	3			CW9 CW10 CW36	CE3	20
1959	1,1-DIFLUOROETHYLENE (REFRIGERANT GAS R 1132a)	2	2F		2.1 (+13)	662	0	E0	P200		MP9	(M)		PxBN(M)	TU38 TE22 TA4 TT9 TM6	2			CW9 CW10 CW36	CE3	239
1961	ETHANE, REFRIGERATED LIQUID	2	3F		2.1 (+13)		0	E0	P203		MP9	T75	TP5	RxBN	TU18 TU38 TE22 TA4 TT9 TM6	2	W5		CW9 CW11 CW36	CE2	223
1962	ETHYLENE	2	2F		2.1 (+13)	662	0	E0	P200		MP9	(M)		PxBN(M)	TU38 TE22 TA4 TT9 TM6	2			CW9 CW10 CW36	CE3	23
1963	HELIUM, REFRIGERATED LIQUID	2	3A		2.2 (+13)	593	120 ml	E1	P203		MP9	T75	TP5 TP34	RxBN	TU19 TA4 TT9 TM6	3	W5		CW9 CW11 CW36	CE2	22
1964	HYDROCARBON GAS MIXTURE, COMPRESSED, N.O.S.	2	1F		2.1 (+13)	274 662	0	E0	P200		MP9	(M)		CxBN(M)	TU38 TE22 TA4 TT9	2			CW9 CW10 CW36	CE3	23

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1965	HYDROCARBON GAS MIXTURE, LIQUEFIED, N.O.S. such as mixtures A, A01, A02, A0, A1, B1, B2, B or C	2	2F		2.1 (+13)	274 392 583 662 674	0	E0	P200		MP9	T50 (M)		PxBN(M)	TU38 TE22 TA4 TT9 TM6	2			CW9 CW10 CW36	CE3	23
1966	HYDROGEN, REFRIGERATED LIQUID	2	3F		2.1 (+13)		0	E0	P203		MP9	T75	TP5 TP34	RxBN	TU18 TU38 TE22 TA4 TT9 TM6	2	W5		CW9 CW11 CW36	CE2	223
1967	INSECTICIDE GAS, TOXIC, N.O.S.	2	2T		2.3 (+13)	274	0	E0	P200		MP9	(M)		PxBH(M)	TU6 TU38 TE22 TE25 TA4 TT9 TM6	1			CW9 CW10 CW36		26
1968	INSECTICIDE GAS, N.O.S.	2	2A		2.2 (+13)	274 662	120 ml	E1	P200		MP9	(M)		PxBN(M)	TA4 TT9 TM6	3			CW9 CW10 CW36	CE3	20
1969	ISOBUTANE	2	2F		2.1 (+13)	392 657 662 674	0	E0	P200		MP9	T50 (M)		PxBN(M)	TU38 TE22 TA4 TT9 TM6	2			CW9 CW10 CW36	CE3	23
1970	KRYPTON, REFRIGERATED LIQUID	2	3A		2.2 (+13)	593	120 ml	E1	P203		MP9	T75	TP5	RxBN	TU19 TA4 TT9 TM6	3	W5		CW9 CW11 CW36	CE2	22
1971	METHANE, COMPRESSED or NATURAL GAS, COMPRESSED with high methane content	2	1F		2.1 (+13)	392 662	0	E0	P200		MP9	(M)		CxBN(M)	TU38 TE22 TA4 TT9	2			CW9 CW10 CW36	CE3	23

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1972	METHANE, REFRIGERATED LIQUID or NATURAL GAS, REFRIGERATED LIQUID with high methane content	2	3F		2.1 (+13)	392	0	E0	P203		MP9	T75	TP5	RxBN	TU18 TU38 TE22 TA4 TT9 TM6	2	W5		CW9 CW11 CW36	CE2	223
1973	CHLORODIFLUOROMETHANE AND CHLOROPENTAFLUOROETHANE MIXTURE with fixed boiling point, with approximately 49% chlorodifluoromethane (REFRIGERANT GAS R 502)	2	2A		2.2 (+13)	662	120 ml	E1	P200		MP9	T50 (M)		PxBN(M)	TA4 TT9 TM6	3			CW9 CW10 CW36	CE3	20
1974	CHLORODIFLUOROBROMOMETHANE (REFRIGERANT GAS R 12B1)	2	2A		2.2 (+13)	662	120 ml	E1	P200		MP9	T50 (M)		PxBN(M)	TA4 TT9 TM6	3			CW9 CW10 CW36	CE3	20
1975	NITRIC OXIDE AND DINITROGEN TETROXIDE MIXTURE (NITRIC OXIDE AND NITROGEN DIOXIDE MIXTURE)	2	2TOC		2.3+5.1+8		0	E0	P200		MP9					1			CW9 CW10 CW36		265
1976	OCTAFLUOROCYCLOBUTANE (REFRIGERANT GAS RC 318)	2	2A		2.2 (+13)	662	120 ml	E1	P200		MP9	T50 (M)		PxBN(M)	TA4 TT9 TM6	3			CW9 CW10 CW36	CE3	20
1977	NITROGEN, REFRIGERATED LIQUID	2	3A		2.2 (+13)	345 346 593	120 ml	E1	P203		MP9	T75	TP5	RxBN	TU19 TA4 TT9 TM6	3	W5		CW9 CW11 CW36	CE2	22
1978	PROPANE	2	2F		2.1 (+13)	392 657 662 674	0	E0	P200		MP9	T50 (M)		PxBN(M)	TU38 TE22 TA4 TT9 TM6	2			CW9 CW10 CW36	CE3	23
1982	TETRAFLUOROMETHANE (REFRIGERANT GAS R 14)	2	2A		2.2 (+13)	662	120 ml	E1	P200		MP9	(M)		PxBN(M)	TA4 TT9 TM6	3			CW9 CW10 CW36	CE3	20
1983	1-CHLORO-2,2,2-TRIFLUOROETHANE (REFRIGERANT GAS R 133a)	2	2A		2.2 (+13)	662	120 ml	E1	P200		MP9	T50 (M)		PxBN(M)	TA4 TT9 TM6	3			CW9 CW10 CW36	CE3	20

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1984	TRIFLUOROMETHANE (REFRIGERANT GAS R 23)	2	2A		2.2 (+13)	662	120 ml	E1	P200		MP9	(M)		PxBN(M)	TA4 TT9 TM6	3			CW9 CW10 CW36	CE3	20
1986	ALCOHOLS, FLAMMABLE, TOXIC, N.O.S.	3	FT1	I	3+6.1	274	0	E0	P001		MP7 MP17	T14	TP2 TP27	L10CH	TU14 TU15 TU38 TE21 TE22	1			CW13 CW28		336
1986	ALCOHOLS, FLAMMABLE, TOXIC, N.O.S.	3	FT1	II	3+6.1	274	1 L	E2	P001 IBC02		MP19	T11	TP2 TP27	L4BH	TU15	2			CW13 CW28	CE7	336
1986	ALCOHOLS, FLAMMABLE, TOXIC, N.O.S.	3	FT1	III	3+6.1	274	5 L	E1	P001 IBC03 R001		MP19	T7	TP1 TP28	L4BH	TU15	3	W12		CW13 CW28	CE4	36
1987	ALCOHOLS, N.O.S. (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	274 601 640C	1 L	E2	P001		MP19	T7	TP1 TP8 TP28	L1.5BN		2				CE7	33
1987	ALCOHOLS, N.O.S. (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	274 601 640D	1 L	E2	P001 IBC02 R001		MP19	T7	TP1 TP8 TP28	LGBF		2				CE7	33
1987	ALCOHOLS, N.O.S.	3	F1	III	3	274 601	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1 TP29	LGBF		3	W12			CE4	30
1988	ALDEHYDES, FLAMMABLE, TOXIC, N.O.S.	3	FT1	I	3+6.1	274	0	E0	P001		MP7 MP17	T14	TP2 TP27	L10CH	TU14 TU15 TU38 TE21 TE22	1			CW13 CW28		336
1988	ALDEHYDES, FLAMMABLE, TOXIC, N.O.S.	3	FT1	II	3+6.1	274	1 L	E2	P001 IBC02		MP19	T11	TP2 TP27	L4BH	TU15	2			CW13 CW28	CE7	336
1988	ALDEHYDES, FLAMMABLE, TOXIC, N.O.S.	3	FT1	III	3+6.1	274	5 L	E1	P001 IBC03 R001		MP19	T7	TP1 TP28	L4BH	TU15	3	W12		CW13 CW28	CE4	36
1989	ALDEHYDES, N.O.S.	3	F1	I	3	274	0	E3	P001		MP7 MP17	T11	TP1 TP27	L4BN		1					33

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1989	ALDEHYDES, N.O.S. (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	274 640C	1 L	E2	P001		MP19	T7	TP1 TP8 TP28	L1.5BN		2				CE7	33
1989	ALDEHYDES, N.O.S. (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	274 640D	1 L	E2	P001 IBC02 R001		MP19	T7	TP1 TP8 TP28	LGBF		2				CE7	33
1989	ALDEHYDES, N.O.S.	3	F1	III	3	274	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1 TP29	LGBF		3	W12			CE4	30
1990	BENZALDEHYDE	9	M11	III	9		5 L	E1	P001 IBC03 LP01 R001		MP15	T2	TP1	LGBV		3	W12		CW31	CE8	90
1991	CHLOROPRENE, STABILIZED	3	FT1	I	3+6.1	386	0	E0	P001		MP7 MP17	T14	TP2 TP6	L10CH	TU14 TU15 TU38 TE21 TE22	1			CW13 CW28		336
1992	FLAMMABLE LIQUID, TOXIC, N.O.S.	3	FT1	I	3+6.1	274	0	E0	P001		MP7 MP17	T14	TP2 TP27	L10CH	TU14 TU15 TU38 TE21 TE22	1			CW13 CW28		336
1992	FLAMMABLE LIQUID, TOXIC, N.O.S.	3	FT1	II	3+6.1	274	1 L	E2	P001 IBC02		MP19	T7	TP2	L4BH	TU15	2			CW13 CW28	CE7	336
1992	FLAMMABLE LIQUID, TOXIC, N.O.S.	3	FT1	III	3+6.1	274	5 L	E1	P001 IBC03 R001		MP19	T7	TP1 TP28	L4BH	TU15	3	W12		CW13 CW28	CE4	36
1993	FLAMMABLE LIQUID, N.O.S.	3	F1	I	3	274	0	E3	P001		MP7 MP17	T11	TP1 TP27	L4BN		1					33
1993	FLAMMABLE LIQUID, N.O.S. (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	274 601 640C	1 L	E2	P001		MP19	T7	TP1 TP8 TP28	L1.5BN		2				CE7	33
1993	FLAMMABLE LIQUID, N.O.S. (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	274 601 640D	1 L	E2	P001 IBC02 R001		MP19	T7	TP1 TP8 TP28	LGBF		2				CE7	33

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1993	FLAMMABLE LIQUID, N.O.S.	3	F1	III	3	274 601	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1 TP29	LGBF		3	W12			CE4	30
1993	FLAMMABLE LIQUID, N.O.S. (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa)	3	F1	III	3	274 601	5 L	E1	P001 R001		MP19					3				CE4	33
1993	FLAMMABLE LIQUID, N.O.S. (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)	3	F1	III	3	274 601	5 L	E1	P001 IBC02 R001	BB4	MP19					3				CE4	33
1994	IRON PENTACARBONYL	6.1	TF1	I	6.1+3	354	0	E0	P601		MP2	T22	TP2	L15CH	TU14 TU15 TU31 TU38 TE21 TE22 TE25 TM3	1			CW13 CW28 CW31		663
1999	TARS, LIQUID, including road oils, and cutback bitumens (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	640C	5 L	E2	P001		MP19	T3	TP3 TP29	L1.5BN		2				CE7	33
1999	TARS, LIQUID, including road oils, and cutback bitumens (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	640D	5 L	E2	P001 IBC02 R001		MP19	T3	TP3 TP29	LGBF		2				CE7	33
1999	TARS, LIQUID, including road oils, and cutback bitumens	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T1	TP3	LGBF		3	W12			CE4	30
1999	TARS, LIQUID, including road oils, and cutback bitumens (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa)	3	F1	III	3		5 L	E1	P001 R001		MP19					3				CE4	33

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
1999	TARS, LIQUID, including road oils, and cutback bitumens (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)	3	F1	III	3		5 L	E1	P001 IBC02 R001	BB4	MP19					3				CE4	33
2000	CELLULOID in block, rods, rolls, sheets, tubes, etc., except scrap	4.1	F1	III	4.1	383 502	5 kg	E1	P002 LP02 R001	PP7	MP11					3	W1			CE11	40
2001	COBALT NAPHTHENATES, POWDER	4.1	F3	III	4.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP11	T1	TP33	SGAV		3	W1	VC1 VC2		CE11	40
2002	CELLULOID, SCRAP	4.2	S2	III	4.2	526 592	0	E0	P002 IBC08 LP02 R001	PP8 B3	MP14					3	W1			CE11	40
2004	MAGNESIUM DIAMIDE	4.2	S4	II	4.2		0	E2	P410 IBC06		MP14	T3	TP33	SGAN		2	W1			CE10	40
2006	PLASTICS, NITROCELLULOSE-BASED, SELF-HEATING, N.O.S.	4.2	S2	III	4.2	274 528	0	E0	P002 R001		MP14					3	W1			CE11	40
2008	ZIRCONIUM POWDER, DRY	4.2	S4	I	4.2	524 540	0	E0	P404		MP13	T21	TP7 TP33			0	W1				43
2008	ZIRCONIUM POWDER, DRY	4.2	S4	II	4.2	524 540	0	E2	P410 IBC06		MP14	T3	TP33	SGAN		2	W1			CE10	40
2008	ZIRCONIUM POWDER, DRY	4.2	S4	III	4.2	524 540	0	E1	P002 IBC08 LP02 R001	B3	MP14	T1	TP33	SGAN		3	W1	VC1 VC2 AP1		CE11	40
2009	ZIRCONIUM, DRY, finished sheets, strip or coiled wire	4.2	S4	III	4.2	524 592	0	E1	P002 LP02 R001		MP14					3	W1	VC1 VC2 AP1		CE11	40
2010	MAGNESIUM HYDRIDE	4.3	W2	I	4.3		0	E0	P403		MP2					1	W1		CW23		X423
2011	MAGNESIUM PHOSPHIDE	4.3	WT2	I	4.3+6.1		0	E0	P403		MP2					1	W1		CW23 CW28		X462
2012	POTASSIUM PHOSPHIDE	4.3	WT2	I	4.3+6.1		0	E0	P403		MP2					1	W1		CW23 CW28		X462

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
2013	STRONTIUM PHOSPHIDE	4.3	WT2	I	4.3+6.1		0	E0	P403		MP2					1	W1		CW23 CW28		X462
2014	HYDROGEN PEROXIDE, AQUEOUS SOLUTION with not less than 20% but not more than 60% hydrogen peroxide (stabilized as necessary)	5.1	OC1	II	5.1+8		1 L	E2	P504 IBC02	PP10 B5	MP15	T7	TP2 TP6 TP24	L4BV(+)	TU3 TC2 TE8 TE11 TT1	2			CW24	CE6	58
2015	HYDROGEN PEROXIDE, AQUEOUS SOLUTION, STABILIZED with more than 70% hydrogen peroxide	5.1	OC1	I	5.1+8	640N	0	E0	P501		MP2	T9	TP2 TP6 TP24	L4DV(+)	TU3 TU28 TC2 TE8 TE9 TE16 TT1	1	W5		CW24		559
2015	HYDROGEN PEROXIDE, AQUEOUS SOLUTION, STABILIZED with more than 60% hydrogen peroxide and not more than 70% hydrogen peroxide	5.1	OC1	I	5.1+8	640O	0	E0	P501		MP2	T9	TP2 TP6 TP24	L4BV(+)	TU3 TU28 TC2 TE7 TE8 TE9 TE16 TT1	1	W5		CW24		559
2016	AMMUNITION, TOXIC, NON-EXPLOSIVE without burster or expelling charge, non-fuzed	6.1	T2		6.1		0	E0	P600		MP10					2			CW13 CW28 CW31	CE9	60
2017	AMMUNITION, TEAR-PRODUCING, NON-EXPLOSIVE without burster or expelling charge, non-fuzed	6.1	TC2		6.1+8		0	E0	P600							2			CW13 CW28 CW31		68
2018	CHLOROANILINES, SOLID	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH L4BH	TU15	2	W11		CW13 CW28 CW31	CE9	60
2019	CHLOROANILINES, LIQUID	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2	L4BH	TU15	2			CW13 CW28 CW31	CE5	60

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									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
2020	CHLOROPHENOLS, SOLID	6.1	T2	III	6.1	205	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAH	TU15	2		VC1 VC2 AP7	CW13 CW28 CW31	CE11	60
2021	CHLOROPHENOLS, LIQUID	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	L4BH	TU15	2	W12		CW13 CW28 CW31	CE8	60
2022	CRESYLIC ACID	6.1	TC1	II	6.1+8		100 ml	E4	P001 IBC02		MP15	T7	TP2	L4BH	TU15	2			CW13 CW28 CW31	CE5	68
2023	EPICHLOROHYDRIN	6.1	TF1	II	6.1+3	279	100 ml	E4	P001 IBC02		MP15	T7	TP2	L4BH	TU15	2			CW13 CW28 CW31	CE5	63
2024	MERCURY COMPOUND, LIQUID, N.O.S.	6.1	T4	I	6.1	43 274	0	E5	P001		MP8 MP17			L10CH	TU14 TU15 TU38 TE21 TE22	1			CW13 CW28 CW31		66
2024	MERCURY COMPOUND, LIQUID, N.O.S.	6.1	T4	II	6.1	43 274	100 ml	E4	P001 IBC02		MP15			L4BH	TU15	2			CW13 CW28 CW31	CE5	60
2024	MERCURY COMPOUND, LIQUID, N.O.S.	6.1	T4	III	6.1	43 274	5 L	E1	P001 IBC03 LP01 R001		MP19			L4BH	TU15	2	W12		CW13 CW28 CW31	CE8	60
2025	MERCURY COMPOUND, SOLID, N.O.S.	6.1	T5	I	6.1	43 66 274 529	0	E5	P002 IBC07		MP18	T6	TP33	S10AH	TU15	1	W10		CW13 CW28 CW31		66
2025	MERCURY COMPOUND, SOLID, N.O.S.	6.1	T5	II	6.1	43 66 274 529	500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
2025	MERCURY COMPOUND, SOLID, N.O.S.	6.1	T5	III	6.1	43 66 274 529	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAH	TU15	2		VC1 VC2 AP7	CW13 CW28 CW31	CE11	60
2026	PHENYLMERCURIC COMPOUND, N.O.S.	6.1	T3	I	6.1	43 274	0	E5	P002 IBC07		MP18	T6	TP33	S10AH L10CH	TU14 TU15 TU38 TE21 TE22	1	W10		CW13 CW28 CW31		66
2026	PHENYLMERCURIC COMPOUND, N.O.S.	6.1	T3	II	6.1	43 274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH L4BH	TU15	2	W11		CW13 CW28 CW31	CE9	60
2026	PHENYLMERCURIC COMPOUND, N.O.S.	6.1	T3	III	6.1	43 274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAH L4BH	TU15	2		VC1 VC2 AP7	CW13 CW28 CW31	CE11	60
2027	SODIUM ARSENITE, SOLID	6.1	T5	II	6.1	43	500 g	E4	P002 IBC08	B4	MP10	T3	TP33	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
2028	BOMBS, SMOKE, NON-EXPLOSIVE with corrosive liquid, without initiating device	8	C11	II	8		0	E0	P803							2					80
2029	HYDRAZINE, ANHYDROUS	8	CFT	I	8+3+6.1		0	E0	P001		MP8 MP17					1			CW13 CW28		886
2030	HYDRAZINE AQUEOUS SOLUTION, with more than 37% hydrazine by mass	8	CT1	I	8+6.1	530	0	E0	P001		MP8 MP17	T10	TP2	L10BH	TU38 TE22	1			CW13 CW28		886
2030	HYDRAZINE AQUEOUS SOLUTION, with more than 37% hydrazine by mass	8	CT1	II	8+6.1	530	1 L	E0	P001 IBC02		MP15	T7	TP2	L4BN		2			CW13 CW28	CE6	86
2030	HYDRAZINE AQUEOUS SOLUTION, with more than 37% hydrazine by mass	8	CT1	III	8+6.1	530	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	L4BN		3	W12		CW13 CW28	CE6	86
2031	NITRIC ACID, other than red fuming, with more than 70% nitric acid	8	CO1	I	8+5.1		0	E0	P001	PP81	MP8 MP17	T10	TP2	L10BH	TU38 TC6 TE22 TT1	1			CW24		885

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
2031	NITRIC ACID, other than red fuming, with at least 65%, but not more than 70% nitric acid	8	CO1	II	8+5.1		1 L	E2	P001 IBC02	PP81 B15	MP15	T8	TP2	L4BN	TU42	2			CW24	CE6	85
2031	NITRIC ACID, other than red fuming, with less than 65% nitric acid	8	C1	II	8		1 L	E2	P001 IBC02	PP81 B15	MP15	T8	TP2	L4BN	TU42	2				CE6	80
2032	NITRIC ACID, RED FUMING	8	COT	I	8+5.1+6.1		0	E0	P602		MP8 MP17	T20	TP2	L10BH	TU38 TC6 TE22 TT1	1			CW13 CW24 CW28		856
2033	POTASSIUM MONOXIDE	8	C6	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	SGAN		2	W11			CE10	80
2034	HYDROGEN AND METHANE MIXTURE, COMPRESSED	2	1F		2.1 (+13)	662	0	E0	P200		MP9	(M)		CxBN(M)	TU38 TE22 TA4 TT9	2			CW9 CW10 CW36	CE3	23
2035	1,1,1-TRIFLUOROETHANE (REFRIGERANT GAS R 143a)	2	2F		2.1 (+13)	662	0	E0	P200		MP9	T50 (M)		PxBN(M)	TU38 TE22 TA4 TT9 TM6	2			CW9 CW10 CW36	CE3	23
2036	XENON	2	2A		2.2 (+13)	378 660 662	120 ml	E1	P200		MP9	(M)		PxBN(M)	TA4 TT9 TM6	3			CW9 CW10 CW36	CE3	20
2037	RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES) without a release device, non-refillable	2	5A		2.2	191 303 344	1 L	E0	P003	PP17 RR6	MP9					3			CW9 CW12	CE2	20
2037	RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES) without a release device, non-refillable	2	5F		2.1	191 303 344	1 L	E0	P003	PP17 RR6	MP9					2			CW9 CW12	CE2	23
2037	RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES) without a release device, non-refillable	2	5O		2.2+5.1	191 303 344	1 L	E0	P003	PP17 RR6	MP9					3			CW9 CW12	CE2	25
2037	RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES) without a release device, non-refillable	2	5T		2.3	303 344	120 ml	E0	P003	PP17 RR6	MP9					1			CW9 CW12		26

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
2037	RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES) without a release device, non-refillable	2	5TC		2.3+8	303 344	120 ml	E0	P003	PP17 RR6	MP9					1			CW9 CW12		268
2037	RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES) without a release device, non-refillable	2	5TF		2.3+2.1	303 344	120 ml	E0	P003	PP17 RR6	MP9					1			CW9 CW12		263
2037	RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES) without a release device, non-refillable	2	5TFC		2.3+2.1+8	303 344	120 ml	E0	P003	PP17 RR6	MP9					1			CW9 CW12		263
2037	RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES) without a release device, non-refillable	2	5TO		2.3+5.1	303 344	120 ml	E0	P003	PP17 RR6	MP9					1			CW9 CW12		265
2037	RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES) without a release device, non-refillable	2	5TOC		2.3+5.1+8	303 344	120 ml	E0	P003	PP17 RR6	MP9					1			CW9 CW12		265
2038	DINITROTOLUENES, LIQUID	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2	L4BH	TU15	2			CW13 CW28 CW31	CE5	60
2044	2,2-DIMETHYLPROPANE	2	2F		2.1 (+13)	662	0	E0	P200		MP9	(M)		PxBN(M)	TU38 TE22 TA4 TT9 TM6	2			CW9 CW10 CW36	CE3	23
2045	ISOBUTYRALDEHYDE (ISOBUTYL ALDEHYDE)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
2046	CYMENES	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
2047	DICHLOROPROPENES	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
2047	DICHLOROPROPENES	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
2048	DICYCLOPENTADIENE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
2049	DIETHYLBENZENE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
2050	DIISOBUTYLENE, ISOMERIC COMPOUNDS	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
2051	2-DIMETHYLAMINOETHANOL	8	CF1	II	8+3		1 L	E2	P001 IBC02		MP15	T7	TP2	L4BN		2				CE6	83
2052	DIPENTENE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
2053	METHYL ISOBUTYL CARBINOL	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
2054	MORPHOLINE	8	CF1	I	8+3		0	E0	P001		MP8 MP17	T10	TP2	L10BH	TU38 TE22	1					883
2055	STYRENE MONOMER, STABILIZED	3	F1	III	3	386	5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	39
2056	TETRAHYDROFURAN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
2057	TRIPROPYLENE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
2057	TRIPROPYLENE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
2058	VALERALDEHYDE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	33
2059	NITROCELLULOSE SOLUTION, FLAMMABLE with not more than 12.6% nitrogen, by dry mass, and not more than 55% nitrocellulose	3	D	I	3	198 531	0	E0	P001		MP7 MP17	T11	TP1 TP8 TP27	L4BN		1					33
2059	NITROCELLULOSE SOLUTION, FLAMMABLE with not more than 12.6% nitrogen, by dry mass, and not more than 55% nitrocellulose (vapour pressure at 50 °C more than 110 kPa)	3	D	II	3	198 531 640C	1 L	E0	P001 IBC02		MP19	T4	TP1 TP8	L1.5BN		2				CE7	33
2059	NITROCELLULOSE SOLUTION, FLAMMABLE with not more than 12.6% nitrogen, by dry mass, and not more than 55% nitrocellulose (vapour pressure at 50 °C not more than 110 kPa)	3	D	II	3	198 531 640D	1 L	E0	P001 IBC02 R001		MP19	T4	TP1 TP8	LGBF		2				CE7	33
2059	NITROCELLULOSE SOLUTION, FLAMMABLE with not more than 12.6% nitrogen, by dry mass, and not more than 55% nitrocellulose	3	D	III	3	198 531	5 L	E0	P001 IBC03 LP01 R001		MP19	T2	TP1	LGBF		3	W12			CE4	30
2067	AMMONIUM NITRATE BASED FERTILIZER	5.1	O2	III	5.1	306 307	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1 BK1 BK2 BK3	TP33	SGAV	TU3	3		VC1 VC2 AP6 AP7	CW24	CE11	50
2071	AMMONIUM NITRATE BASED FERTILIZER	9	M11			193															
2073	AMMONIA SOLUTION, relative density less than 0.880 at 15 °C in water, with more than 35% but not more than 50% ammonia	2	4A		2.2 (+13)	532	120 ml	E0	P200		MP9	(M)		PxBN(M)	TA4 TT9 TM6	3			CW9 CW10	CE2	20
2074	ACRYLAMIDE, SOLID	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAH L4BH	TU15	2		VC1 VC2 AP7	CW13 CW28 CW31	CE11	60

UN No.	Name and description	Class	Classifi-cation code	Packing group	Labels	Special provi-sions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identifi-cation No.
									Packing instructions	Special packing provisions	Mixed packing provi-sions	Instruc-tions	Special provi-sions	Tank code	Special provi-sions		Packages	Bulk	Loading, unloading and handling		
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4/3.5.1.2		4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	4.3	4.3.5, 6.8.4	1.1.3.1(c)	7.2.4	7.3.3	7.5.11	7.6	5.3.2.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
2075	CHLORAL, ANHYDROUS, STABILIZED	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2	L4BH	TU15	2			CW13 CW28 CW31	CE5	69
2076	CRESOLS, LIQUID	6.1	TC1	II	6.1+8		100 ml	E4	P001 IBC02		MP15	T7	TP2	L4BH	TU15	2			CW13 CW28 CW31	CE5	68
2077	alpha-NAPHTHYLAMINE	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	SGAH L4BH	TU15	2		VC1 VC2 AP7	CW13 CW28 CW31	CE11	60
2078	TOLUENE DIISOCYANATE	6.1	T1	II	6.1	279	100 ml	E4	P001 IBC02		MP15	T7	TP2	L4BH	TU15	2			CW13 CW28 CW31	CE5	60
2079	DIETHYLENETRIAMINE	8	C7	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2	L4BN		2				CE6	80
2186	HYDROGEN CHLORIDE, REFRIGERATED LIQUID	2	3TC	CARRIAGE PROHIBITED																	
2187	CARBON DIOXIDE, REFRIGERATED LIQUID	2	3A		2.2 (+13)		120 ml	E1	P203		MP9	T75	TP5	RxBN	TU19 TA4 TT9 TM6	3	W5		CW9 CW11 CW36	CE2	22
2188	ARSINE	2	2TF		2.3+2.1		0	E0	P200		MP9					1			CW9 CW10 CW36		263
2189	DICHLOROSILANE	2	2TFC		2.3+2.1+8 (+13)		0	E0	P200		MP9	(M)		PxBH(M)	TU38 TE22 TE25 TA4 TT9 TM6	1			CW9 CW10 CW36		263
2190	OXYGEN DIFLUORIDE, COMPRESSED	2	1TOC		2.3+5.1+8		0	E0	P200		MP9					1			CW9 CW10 CW36		265