

**OTIF**



**ORGANISATION INTERGOUVERNEMENTALE POUR  
LES TRANSPORTS INTERNATIONAUX FERROVIAIRES**

**ZWISCHENSTAATLICHE ORGANISATION FÜR DEN  
INTERNATIONALEN EISENBahnVERKEHR**

**INTERGOVERNMENTAL ORGANISATION FOR INTER-  
NATIONAL CARRIAGE BY RAIL**

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**Notification**

**1 January 2015 edition of RID**

**Texts adopted by the 2<sup>nd</sup> session of the RID Committee of Experts' standing working group  
(Copenhagen, 18 to 22 November 2013) for entry into force on 1 January 2015**

The Secretariat has put together a consolidated version of the amendments to RID which have been adopted for entry into force on 1 January 2015. This consolidated version should enable the Member States to begin the work of translating the amendments in good time.

In this consolidated version of the amendment texts, various texts are placed in square brackets. These texts must still be adopted by the 3<sup>rd</sup> session of the RID Committee of Experts' standing working group (Berne, 20 and 21 May 2014). Among these are those amendments decided by the RID/ADR/ADN Joint Meeting (Berne, 17 – 21 March 2014) for entry into force on 1 January 2015 (see also document ECE/TRANS/WP.15/AC.1/134/Add.2 – OTIF/RID/RC/2014-A/Add.2, Annex II).

As all the amendments also have to be endorsed by 53<sup>rd</sup> session of the RID Committee of Experts (Berne, 22 May 2014), the following amendment texts are only of a provisional nature. In accordance with the second sentence of Article 35 § 3 of COTIF 1999, which entered into force on 1 July 2006, States will be notified of the definitive amendments by no later than 31 July 2014.

For reasons of cost, only a limited number of copies of this document have been made. Delegates are asked to bring their own copies of documents to meetings. OTIF only has a small number of copies available.

## TITLE PAGE

### Table of Contents

Replace "With effect from 1 January 2013" by:

"With effect from 1 January 2015".

Replace "This text replaces the requirements of 1 January 2011." by:

"This text replaces the requirements of 1 January 2013."

Replace "The following are RID Contracting States (as at 1 July 2012):" by:

"The following are RID Contracting States (as at 1 July 2014):".

[Under the RID Contracting States, insert:

...]

## TABLE OF CONTENTS

**Chapter 1.7** Amend to read as follows:

"Chapter 1.7 General provisions concerning radioactive material".

**1.7.3** Amend to read as follows:

"**1.7.3** Management system".

**4.1.9** Amend to read as follows:

"**4.1.9** Special packing provisions for radioactive material".

**5.1.5.4** Amend to read as follows:

"**5.1.5.4** Specific provisions for excepted packages of radioactive material of Class 7".

**5.3.3** Amend to read as follows:

"**5.3.3** **Elevated temperature substance mark**".

**6.2.2.10** becomes **6.2.2.11**.

**Chapter 6.4** Amend the title to read as follows:

"**Chapter 6.4 Requirements for the construction, testing and approval of packages for radioactive material and for the approval of such material**".

**7.3.2** Delete:

"Additional".

Insert the following new rows:

- "1.1.3.10 Exemptions related to the carriage of lamps containing dangerous goods".  
"6.2.2.10 Marking of UN bundles of cylinders".

## PART 1

### Chapter 1.1

#### 1.1.2.2 Delete:

"international".

Replace "of Chapter 7.6" by:

"of Chapters 7.6 and 7.8".

#### 1.1.2.3 Delete:

"international".

#### 1.1.3.1 In the first sentence of paragraph (c), after "per packaging", insert:

", including intermediate bulk containers (IBCs) and large packagings,".

In the Note, replace "see 1.7.1.4" by:

"see also 1.7.1.4".

#### 1.1.3.2 Add the following new Note at the end of paragraph (c):

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

Amend paragraph (h) to read as follows:

"(h) (Deleted)".

#### ~~1.1.3.3~~ ~~At the end of paragraph (a), at the end of the first sentence add the following:~~

~~"used or intended for use during carriage" after "or for the operation of any of its equipment".~~

#### **1.1.3.3** Amend to read as follows:

#### **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 fuel tanks of a means of transport where it is destined for its propulsion or the operation of any of its equipment used or intended for use during carriage (e.g. cooling systems). The fuel cock between the engine and the fuel tank of motorcycles and pedal cycles with an auxiliary engine, whose tanks contain fuel, shall be closed during carriage. In addition, these motorcy-

cles and pedal cycles with an auxiliary engine shall be loaded upright and secured against falling.

(b) (Reserved)

(c) Fuel contained in the tanks of non-road mobile machinery as defined in Article 2 of Directive 97/68/EC<sup>1</sup> which is carried as a load, when it is destined for its propulsion or the operation of any of its equipment. The fuel may be carried in fixed fuel tanks connected directly to the vehicle engine and/or equipment and which meet the legal requirements. Where appropriate, this machinery shall be loaded upright and secured against falling.

<sup>1</sup> Directive 97/68/EC of the European Parliament and of the Council of 16 December 1997 on the approximation of the laws of the Member States relating to measures against the emission of gaseous and particulate pollutants from internal combustion engines to be installed in non-road mobile machinery (Official Journal of the European Communities No. L 059 of 27 February 1998.)

Renumber footnotes 1 to 14 as 2 to 15.]

**1.1.3.4** In the Note, replace "see 1.7.1.4" by:

"see also 1.7.1.4".

**1.1.3.6.3** [In the Table, amend the entry for "Class 9" under transport category 4 to read as follows:

"Class 9: UN Nos. 3268, 3499 and 3509".]

Amend the last indent to read as follows:

- "– 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."

**1.1.3.6.5** [The first amendment in the French version does not apply to the English text.]

Amend "1.1.3.2 to 1.1.3.5" to read:

"1.1.3.1 (a), (b) and (d) to (f), 1.1.3.2 to 1.1.3.5, 1.1.3.7, 1.1.3.8 and 1.1.3.9".

**1.1.3** Insert a new sub-section 1.1.3.10 to read as follows:

**"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 9001:2008 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)."

**1.1.4.2.1** In the first sentence, replace "and tank-containers and wagons containing a full load of packages with the same dangerous goods" by:

", tank-containers and MEGCs and wagons containing a wagon load made up of packages containing one and the same substance or article".

In the first sentence of paragraph (c), replace "or tank-containers or wagons containing a full load of packages with the same dangerous goods" by:

", tank-containers or MEGCs or wagons containing a wagon load made up of packages containing one and the same substance or article".

In the second sentence of paragraph (c), replace "and tank-containers" by:

", tank-containers and MEGCs".

**1.1.4.4.1** In the second sentence, after "handed over for transport", insert:

"in piggyback transport".

**1.1.4.5.3** Delete.

**1.1.5** Add the following last sentence:

"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."

## Chapter 1.2

1.2.1 In the definition of "**Approval**", replace "for the carriage of Class 7 material" by:

"for the carriage of radioactive material" (twice).

In the definition of "**Approval**", replace "6.4.22.6" by:

"6.4.22.8".

In the definition of "**Bulk container**", add the following new Note at the end:

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

Under the definition of "**Bulk container**", insert the following definition:

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

Under the definition of "**Bulk container**", insert the definitions of "**Closed bulk container**" and "**Sheeted bulk container**" contained in 6.11.1 in alphabetical order.]

In the definition of "**Carriage in bulk**", replace "in wagons or containers" by:

"in wagons, containers or bulk containers".

[The amendment to the definition of "**Closure**" in the French version does not apply to the English text.]

In the definition of "**Combination packaging**", amend the Note to read as follows:

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

Amend the definition of "**Composite packaging (plastics material)**" and the related Note to read as follows:

"**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*."

Delete the definition of "**Composite packaging (glass, porcelain or stoneware)**" and the related Note.

In the definition of "**Confinement system**", replace "for the carriage of Class 7 material" by:

"for the carriage of radioactive material".

In the definition of "**Small container**" under the definition of "**Container**", delete:

"either any overall outer dimension (length, width or height) less than 1.50 m, or".

In the definition of "**Containment system**", replace "for the carriage of Class 7 material" by:

"for the carriage of radioactive material".

In the definition of "**Criticality safety index (CSI)**", replace "for the carriage of Class 7 material" by:

"for the carriage of radioactive material".

In the definition of "**Design**", replace "for the carriage of Class 7 material" by:

"for the carriage of radioactive material".

In the definition of "**Design**", in the first sentence after "the description of", insert:

"fissile material excepted under 2.2.7.2.3.5 (f)",

In the definition of "**Exclusive use**", replace "for the carriage of Class 7 material" by:

"for the carriage of radioactive material".

In the definition of "**Exclusive use**", replace "and unloading is carried" by:

", shipment and unloading are carried" and after "consignee", insert:

", where so required by RID".

In the definition of "**Full load**", in the Note at the end, replace "Class 7" by:

"radioactive material".

In the definition of "**GHS**", replace "fourth" by:

"fifth" and "ST/SG/AC.10/30/Rev.4" by:

"ST/SG/AC.10/30/Rev.5".

In the definition of "**Manual of Tests and Criteria**", amend the text in parentheses to read:

"ST/SG/AC.10/11/Rev.5 as amended by documents ST/SG/AC.10/11/Rev.5/Amend.1 and ST/SG/AC.10/11/Rev.5/Amend.2".

In the definition of "**Maximum normal operating pressure**", replace "for the carriage of Class 7 material" by:

"for the carriage of radioactive material".

Delete the definition of "**Nominal capacity of the receptacle**".

[The amendment to the definition of "**N.O.S. entry**" in the French version does not apply to the English text.]

In the definition of "**Overpack**", replace "Class 7" by:

"radioactive material".

[In the definition of "**Open wagon**", replace "a tailboard" by:

"tailboards".]

In the definition of "**Packaging**", replace "'Composite packaging (plastics material)', 'Composite packaging (glass, porcelain or stoneware)'" by:

"'Composite packaging'".

In the definition of "**Radiation level**", replace "for the carriage of Class 7 material" by:

"for the carriage of radioactive material".

In the definition of "**Radiation level**", amend the end of the definition to read:

"millisieverts per hour or microsieverts per hour;".

In the definition of "**Radioactive contents**", replace "for the carriage of Class 7 material" by:

"for the carriage of radioactive material".

[In the definition of "**Service equipment**", in paragraph (a), replace "venting" by "breather".]

[In the definition of "**Service equipment**", in paragraphs (a) and (b), replace "emptying" by:

"discharge".]

Amend the definition of "**Shell**" to read as follows:

"**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."



In the definition of "**Small receptacle containing gas (gas cartridge)**", replace "meeting the relevant requirements of 6.2.6" by:

"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,".

¶ In the definition of "**Tank**", replace "as defined in this Part" by:

"as defined in this Section". ¶

In the definition of "**Through or into**", replace "for the carriage of Class 7 material" by:

"for the carriage of radioactive material".

In the definition of "**Transport index**", replace "for the carriage of Class 7 material" by:

"for the carriage of radioactive material".

In the definition of "**UN Model Regulations**", replace "seventeenth" by:

"eighteenth" and "(ST/SG/AC.10/1/Rev.17)" by:

"(ST/SG/AC.10/1/Rev.18)".

In the definition of "**Wagon load**", in the Note at the end, replace "Class 7" by:

"radioactive material".

Insert the following new definitions in alphabetical order:

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

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

"**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<sup>3</sup>;

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

"**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;"

"**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;"

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

["**Sheeted bulk container**", see "*Bulk container*";".]

### Chapter 1.3

1.3.2.2.2 (b) [The amendment in the French version does not apply to the English text.]

### Chapter 1.4

1.4.2.2.1 [The amendment to paragraph (b) in the German version does not apply to the English text.]

[In paragraph (f), replace "danger labels" by:

"placards".]

1.4.2.2.2 After "(b)", insert:

"(d)".

### Chapter 1.5

1.5.1.1 In footnote 11, replace "special agreements" by:

"temporary derogations".

[The amendment to the footnote in the French version does not apply to the English text.]

### Chapter 1.6

1.6.1.1 Amend to read as follows:

"1.6.1.1 Unless otherwise provided, the substances and articles of RID may be carried until 30 June 2015 in accordance with the requirements of RID<sup>12</sup> applicable up to 31 December 2014.

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

<sup>12</sup> RID edition in force from 1 January 2013."

1.6.1.10 Amend to read as follows:

"1.6.1.10 (Deleted)".

1.6.1.15 At the end, add:

"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 Amend to read as follows:

"1.6.1.16 (Deleted)".

Renumber footnotes 16 to 20 as 15 to 19.

**1.6.1.19** Amend to read as follows:

"**1.6.1.19** (Deleted)".

**1.6.1.24** Amend to read as follows:

"**1.6.1.24** (Deleted)".

**1.6.1.25** [The amendment in the French version does not apply to the English text.]

**1.6.1.26** At the end, add:

"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** Add the following new transitional measures:

"**1.6.1.28** As an exception to the provisions of 1.6.1.1, accreditations in accordance with EN ISO/IEC 17020:2004 for the purposes of 1.8.6.8, 6.2.2.11, 6.2.3.6.1, 6.8.2.4.6 and special provisions TA 4 and TT 9 of 6.8.4 shall not be recognised after 28 February 2015.

**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, placards and markings which meet the requirements of 3.4.7, 3.4.8, 3.5.4.2, 5.2.1.8.3, 5.2.2.2.1.1, 5.3.1.7.1, 5.3.3, 5.3.6, 5.5.2.3.2 and 5.5.3.6.2 applicable up to 31 December 2014 may continue to be used until 31 December 2016.

**1.6.1.31** Overpacks marked with the word "OVERPACK" in accordance with the provisions of RID applicable up to 31 December 2014 and which do not conform to the requirements of 5.1.2.1 (a) regarding the size of the letters applicable as from 1 January 2015 may continue to be used until 31 December 2015.

**1.6.1.32** Salvage packagings and salvage pressure receptacles marked with the word "SALVAGE" in accordance with the provisions of RID applicable up to 31 December 2014 and which do not conform to the requirements of 5.2.1.3 regarding the size of the letters applicable as from 1 January 2015 may continue to be used until 31 December 2015.

**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** Placards of reduced dimensions which, before 1 January 2015, could be affixed to wagons in accordance with the provisions of 5.3.1.7.4 applicable up to 31 December 2014, but which do not meet the requirement for affixing placards of reduced dimensions in accordance with the provisions of 5.3.1.7.4 applicable from 1 January 2015, shall be replaced by no later than 1 January 2018."
- 1.6.2** Add the following new transitional measures:
- "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."]
- 1.6.3.1 –  
1.6.3.3** Amend to read as follows:
- "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** 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.
- 1.6.3.3.2** 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.
- 1.6.3.3.3** 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."

- 1.6.3.24** [The amendment in the German version does not apply to the English text.]
- 1.6.3.27** [The amendment in the French version does not apply to the English text.]
- 1.6.3.40** Add the following sub-paragraph:
- "Additionally in this case special provision TE 25 specified for these substances in column (13) of Table A of Chapter 3.2 applicable from 1 January 2015 need not be applied."
- 1.6.3** Add the following new transitional measure:
- "1.6.3.44** (Reserved)".
- Add the following new transitional measure:
- ["1.6.3.x** Tank-wagons and battery-wagons
- for gases of Class 2 with classification codes containing the letter(s) F, 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 L10BH, L10CH, L10DH, L15CH, L15DH or L21DH is assigned in column (12) of Table A of Chapter 3.2,
- constructed before 1 January 2015 which do not, however, conform to the requirements of 6.8.4 (b) concerning special provision TE xx applicable from 1 January 2015 may continue to be used." ]
- ["1.6.4.8** After "in accordance with the requirements of Appendix X, 5.3.6.3", insert:
- "applicable up to 31 December 1998". ]
- ["1.6.4.31** Amend to read as follows:
- "1.6.4.31** (Deleted)". ]
- 1.6.4.37** [The amendment in the French version does not apply to the English text.]
- 1.6.6.1** Amend to read as follows:
- "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."

**1.6.6.2.1** Amend to read as follows:

**"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** Amend to read as follows:

**"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** Insert a new sub-section 1.6.6.3 to read as follows:

**"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 "FIS-SILE" 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."

Current paragraph **1.6.6.3** becomes new **1.6.6.4**.

**1.6.6.4** (former 1.6.6.3) In the first sentence, replace "programme of quality assurance" by:  
"management system".

Replace the last sentence with the following:

"No new manufacture of such special form radioactive material shall be permitted to commence."

**Chapter 1.7**

**1.7** Replace the title by:

**"General provisions concerning radioactive material".**

**1.7.1.1** Amend the second and third sentences to read:

"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** In the second sentence of the last paragraph replace "imposing requirements" by:  
"imposing conditions".

**1.7.1.4** Amend the introductory sentence to read:

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

[The amendments to paragraphs (a), (b) and (c) in the German version do not apply to the English text.]

Insert a new paragraph (d) to read as follows:

"(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;".

Current paragraphs (d) to (f) become (e) to (g).

[The amendments to paragraph (e) (former paragraph (d)) in the German version do not apply to the English text.]

Amend paragraph (f) (former (e)) to read as follows:

"(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;"

[The amendments to paragraph (g) (former paragraph (f)) in the German version do not apply to the English text.]

**1.7.1.5.1** Amend to read as follows:

**"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, 5.2.1.9, 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** Insert a new second sentence to read as follows:

"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."

**1.7.2.2** In the second sentence, delete the comma after "persons exposed".

**1.7.2.4** Amend the end of the introductory sentence to read:

"... that the effective dose either:"

At the end of paragraph (a), insert:

"or".



1.7.3 Amend to read as follows:

**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."

1.7.4.2 Replace "Class 7" by:

"radioactive material" (twice).

1.7.6 [The amendment in the French version does not apply to the English text.]

1.7.6.1 In the introductory sentence, before "non-compliance", delete:

"a".

In (a) amend the introductory sentence to read:

"The consignor, consignee, carrier and any organization involved during carriage who may be affected, as appropriate, shall be informed of the non-compliance by:".

1.7.6.1 In (b) (iv), at the end of the sentence, delete:

"and".

[The other amendments to 1.7.6.1 in the French version do not apply to the English text.]

**Chapter 1.8**

**1.8.3.9** Delete:

"applicable to the modes of transport concerned".

1.8.3.11 (b) Replace "restrictions on forwarding" by:

"forwarding restrictions".

1.8.5.3 Replace "Class 7 material" by:

"radioactive material".

**[1.8.6.4.1** After the first sentence, insert:

"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)."

**1.8.6.8** In the last but one sub-paragraph, replace "6.2.2.10" by:

"6.2.2.11".

In the last and last but one sub-paragraph, replace "EN ISO/IEC 17020:2004" by:

"EN ISO/IEC 17020:2012 (except clause 8.1.3)".

**1.8.7** In the Note, replace "6.2.2.10" by:

"6.2.2.11".

**1.8.7.1.1** In the last sub-paragraph, replace "6.2.2.10" by:

"6.2.2.11".

**1.8.7.1.4** Replace "6.2.2.10" by:

"6.2.2.11".

## **Chapter 1.10**

**[1.10.1** Add the following sub-section:

**"1.10.1.6** (Reserved)".

**1.10.4** [The amendment in the French version does not apply to the English text.]

## **PART 2**

### **Chapter 2.1**

**2.1.1.3** Add the following new paragraph at the end:

"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."

**2.1.3.5.3 (a)** Replace "for which special provision 290 of Chapter 3.3 applies" by:

"for which, except for UN 3507 URANIUM HEXAFLUORIDE, RADIOACTIVE MATERIAL, EXCEPTED PACKAGE, special provision 290 of Chapter 3.3 applies".

**2.1.3.10** [The amendment in the German version does not apply to the English text.]

**2.1.5** Add a new section 2.1.5 to read as follows:

**"2.1.5 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**

**Section 2.2.1**

**2.2.1.1.7.5** Amend Note 2 to read as follows:

**"NOTE 2:** "Flash composition" in this Table refers to pyrotechnic substances in powder form or as pyrotechnic units as presented in the firework that are used to produce an aural effect or used as a bursting charge, or propellant charge unless the time taken for the pressure rise is demonstrated to be more than 6 ms for 0.5 g of pyrotechnic substance in the HSL Flash Composition Test in Appendix 7 of the Manual of Tests and Criteria."

**2.2.1.4** Delete the entry for "**AIR BAG INFLATORS** or **AIR BAG MODULES** or **SEAT BELT PRETENSIONERS**: UN No. 0503".

Add the following new entry:

**"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."

[The amendment to "SUBSTANCES, EXPLOSIVE, VERY INSENSITIVE (SUBSTANCE, EVI), N.O.S." and "ARTICLES, EXPLOSIVE, EXTREMELY INSENSITIVE (ARTICLES EEI)" in the German version does not apply to the English text.]

**Section 2.2.2**

**2.2.2.1.2** Add a new indent 9. to read as follows:

"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."

**2.2.2.3** Insert the following new Table at the end:

"

Adsorbed gases		
Classi- fica- tion code	UN No.	Name of the substance or article
<b>9 A</b>	3511	ADSORBED GAS, N.O.S.
<b>9 O</b>	3513	ADSORBED GAS, OXIDIZING, N.O.S.
<b>9 F</b>	3510	ADSORBED GAS, FLAMMABLE, N.O.S.
<b>9 T</b>	3512	ADSORBED GAS, TOXIC, N.O.S.
<b>9 TF</b>	3514	ADSORBED GAS, TOXIC, FLAMMABLE, N.O.S.
<b>9 TC</b>	3516	ADSORBED GAS, TOXIC, CORROSIVE, N.O.S.
<b>9 TO</b>	3515	ADSORBED GAS, TOXIC, OXIDIZING, N.O.S.
<b>9 TFC</b>	3517	ADSORBED GAS, TOXIC, FLAMMABLE, CORROSIVE, N.O.S.
<b>9 TOC</b>	3518	ADSORBED GAS, TOXIC, OXIDIZING, CORROSIVE, N.O.S.

"

**Section 2.2.3**

**2.2.3.1.1** [The first amendment in the French version does not apply to the English text.]

Amend Note 3 to read as follows:

**"NOTE 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."

**[2.2.3.1.4** Amend to read as follows:

**"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 ~~[except sub-paragraph 32.3.1.7 (d)]~~, provided that:

(a) The viscosity<sup>2</sup> ~~expressed as the flowtime in seconds~~ and flash-point are in accordance with the following Table:

Kinematic viscosity (extrapolated) $\nu$ (at near-zero shear rate) mm <sup>2</sup> /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

Flow-time t in seconds	Jet diameter (mm)	Flash-point, closed-cup (°C)
$20 < t \leq 60$	4	above 17
$60 < t \leq 100$	4	above 10
$20 < t \leq 32$	6	above 5
$32 < t \leq 44$	6	above -1
$44 < t \leq 100$	6	above -5
$100 < t$	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)."

Footnote 2 unchanged.]

**2.2.3.1.5** Amend to read as follows:

**"2.2.3.1.5** 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, subsection 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, subsection 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."

### Section 2.2.43

2.2.43.1.3 Replace "light bulbs" by:

"lamps".

### Section 2.2.51

2.2.51.1.6 and

2.2.51.1.7 Amend to read as follows:

#### **"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.

##### *Assignment of packing groups*

2.2.51.1.7 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."

## Section 2.2.52

**[2.2.52.1.8** Amend the beginning to read: "Classification of organic peroxides not listed in 2.2.52.4, ...".]

## Section 2.2.61

**2.2.61.1.7.2** [The amendment in the French version does not apply to the English text.]

**[2.2.61.2.2** In the last indent, after "MERCURY FULMINATE", add:

" , WETTED".]

**2.2.61.3** Amend the text of footnote (j) to read as follows:

"(i) 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."

## Section 2.2.62

**2.2.62.1.5.5** Amend to read as follows:

"**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** Insert two new paragraphs 2.2.62.1.5.6 and 2.2.62.1.5.7 to read as follows:

"**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."

Current **2.2.62.1.5.6** and **2.2.62.1.5.7** become **2.2.62.1.5.8** and **2.2.62.1.5.9**.

## Section 2.2.7

**2.2.7** [The amendment in the French version does not apply to the English text.]

**2.2.7.1.3** Amend the definition of "**Fissile material**" as follows:

- Amend the end of the introductory text before (a) to read:

"of fissile material are the following:"

- In (a), delete:

"and".

- In (b), replace "." by:

",".

- Add the following text:

"(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."

At the end of the definition of "**Surface contaminated object**", replace "surfaces" by:

"surface".

**2.2.7.2.1.1** Amend the sentence before the Table to read as follows:

"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."

In Table 2.2.7.2.1.1, add a new heading row to read:

UN- No.	Proper shipping name and description <sup>a</sup>
------------	---

In Table 2.2.7.2.1.1, under the heading "Excepted packages" add the following new entry:

"UN 3507 URANIUM HEXAFLUORIDE, RADIOACTIVE MATERIAL, EXCEPTED PACKAGE less than 0.1 kg per package, non-fissile or fissile-excepted<sup>b,c</sup>".



In Table 2.2.7.2.1.1, for UN Nos. 2912, 3321, 3322, 2913, 2915, 3332, 2916, 2917, 3323, 2919 and 2978, insert a reference to a new note "b" after "fissile-excepted".

In Table 2.2.7.2.1.1, under the heading "Uranium hexafluoride" add the following new entry:

"UN 3507 URANIUM HEXAFLUORIDE, RADIOACTIVE MATERIAL, EXCEPTED PACKAGE less than 0.1 kg per package, non-fissile or fissile-excepted<sup>b,c</sup>".

[The amendments to UN Nos. 2909, 2910 and 2911 in the French version do not apply to the English text.]

After Table 2.2.7.2.1.1, add the following Table notes "a", "b" and "c":

<sup>a</sup> 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.

<sup>b</sup> The term "fissile-excepted" refers only to material excepted under 2.2.7.2.3.5.

<sup>c</sup> For UN No. 3507, see also special provision 369 in Chapter 3.3."

**2.2.7.2.2** Amend the heading to read:

**"2.2.7.2.2 Determination of basic radionuclide values".**

**2.2.7.2.2.1** In paragraph (b), after "concentration", insert:

"limits".

In Table 2.2.7.2.2.1, in the heading of column 4, after "concentration", insert:

"limit".

In footnote (a) after the Table, in the introductory sentence, replace "from daughter radionuclides" by:

"from their progeny".

[The amendment to footnote (b) in the German version does not apply to the English text.]

**2.2.7.2.2.2** Amend the text before the Table to read as follows:

"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<sub>2</sub> value calculated using a dose coefficient for the appropriate lung absorption type as rec-

ommended 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)."

In Table 2.2.7.2.2.2, in the heading of the fourth column, after "concentration", insert:

"limit".

**2.2.7.2.2.4** In the introductory sentence delete:

"the determination of".

In the legend for  $X(i)$  and  $X_m$  replace "concentration" by:

"concentration limit".

**2.2.7.2.3.1.2** In paragraph (a) (i), delete:

"which are intended to be processed for the use of these radionuclides".

Amend paragraph (a) (iii) to read:

"(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;"

In paragraph (a) (iv), replace ", excluding fissile material not excepted under 2.2.7.2.3.5" by:

". Fissile material may be included only if excepted under 2.2.7.2.3.5".

In paragraph (b) (i), delete:

"or".

[The amendment to paragraph (b) (ii) in the German version does not apply to the English text.]

In paragraph (c), introductory sentence, replace "meeting the requirements" by:

"that meet the requirements".

In paragraph (c) (i) replace "bitumen, ceramic, etc." by:

"bitumen and ceramic".

**2.2.7.2.3.3.5** [The amendment to (d) in the French version does not apply to the English text.]

**2.2.7.2.3.3.6** [The amendment to the introductory sentence in the French version does not apply to the English text.]

Amend paragraph (a) to read as follows:

"(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 equal to or 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;"

In paragraph (b), replace "ISO 2919:1999" by:

"ISO 2919:2012".

**2.2.7.2.3.3.8** In paragraph (b), replace "which are acceptable" by:

"provided that they are acceptable".

**2.2.7.2.3.5** Amend the first paragraph to read as follows:

"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."

Delete current paragraphs (a) and (d).

Current paragraphs (b) and (c) become new paragraphs (a) and (b).

[The amendment to paragraph (a) (former paragraph (b)) in the German version does not apply to the English text.]

Insert the following new paragraphs (c) to (f):

"(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 un-packaged 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."

Delete Table 2.2.7.2.3.5.

**2.2.7.2.3** Insert a new paragraph 2.2.7.2.3.6 to read as follows:

**"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."

**2.2.7.2.4.1.1** Amend to read as follows:

**"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."

**2.2.7.2.4.1.3** In the introductory sentence replace "only if" by:

"provided that".

[The first amendment to (a) in the French version does not apply to the English text.]

At the end of (a), delete:

"and".

Amend (b) to read as follows:

"(b) Each instrument or manufactured article bears the marking "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 marking "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 marking "RADIOACTIVE", provided that they are transported in a package that bears the marking "RADIOACTIVE" on its internal surface in such a manner that a warning of the presence of radioactive material is visible on opening the package;".

**2.2.7.2.4.1.4** Amend (b) to read as follows:

"(b) The package bears the marking "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** Insert a new paragraph 2.2.7.2.4.1.5 to read as follows:

**"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 2.2.7.2.4.5.1 and 2.2.7.2.4.1.4 (a) and (b) are met."

Current **2.2.7.2.4.1.5** becomes new **2.2.7.2.4.1.7**.

**2.2.7.2.4.1.6** Replace "only if" by:

"provided that".

[The second amendment in the French version does not apply to the English text.]

**2.2.7.2.4.1.7** (former 2.7.2.4.1.5) In the introductory sentence replace "only if" by:

"provided that".

[The other amendments in the French version do not apply to the English text.]

**2.2.7.2.4.4** In the sentence preceding paragraph (a), replace "activities greater than the following:" by:

"activities greater than either of the following:".

In (a), delete:

"or".

In the legend for C(j), delete:

"and".

**2.2.7.2.4.5** Amend to read as follows:

**"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."

**2.2.7.2.4.6.1** Replace "competent authority approval certificate" by:

"competent authority certificate of approval".

**2.2.7.2.4.6.2,**

**2.2.7.2.4.6.3** and

**2.2.7.2.4.6.4** Replace by the following new paragraph:

**"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."

**Section 2.2.9**

**2.2.9.1.10.1.3** [The amendment in the French version does not apply to the English text.]

**2.2.9.2** In the first indent, after "230" add:

", 310".

**2.2.9.3** Under classification code M 1, replace all entries by:

"2212 ASBESTOS, AMPHIBOLE (amosite, tremolite, actinolite, anthophyllite, crocidolite)

2590 ASBESTOS, CHRYSOTILE".

Under classification code M 5, replace the three entries for UN No. 3268 by:

"3268 SAFETY DEVICES, electrically initiated".

Under classification code M 11, amend the entry for UN No. 3499 to read as follows:

"3499 CAPACITOR, ELECTRIC DOUBLE LAYER (with an energy storage capacity greater than 0.3Wh)".

Under classification code M 11, after the entry for UN No. 3499, add the following entries:

3508 CAPACITOR, ASYMMETRIC (with an energy storage capacity greater than 0.3Wh)

3509 PACKAGINGS, DISCARDED, EMPTY, UNCLEANED".

## **PART 3**

### **Chapter 3.2**

**3.2.1** Under "Explanations on Table A", in the second paragraph, add the following new sentence at the end of the second indent:

"When used in this Table, an alphanumeric code starting with the letters "SP" designates a special provision of Chapter 3.3."

[The amendment to the explanation for column (1) in the French version does not apply to the English text.]

Amend the explanation for column (17) to read as follows:

**"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 code or a reference to a specific paragraph is given, 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."

**Table A**

In **column (13)**, insert "TExx" in the following cases:

- gases of Class 2 whose classification code in column (3b) includes the letter(s) F, T, TF, TC, TO, TFC or TOC and to which a tank code is assigned in column (12), and
- substances of classes 3 to 8 to which tank code L10BH, L10CH, L10DH, L15CH, L15DH or L21DH is assigned in column (12).]

Amend the entries in **column (17)** as follows:

- For the entries to which only "VW1" is assigned in column (17), replace "VW1" by:

"VC1 VC2".

[This modification concerns the following UN Nos.: 1309 PG III, 1312, 1313, 1314, 1318, 1325 PG III, 1328, 1330, 1332, 1338, 1346, 1350, 1408, 1869, 2001, 2213, 2538, 2687, 2714, 2715, 2717, 2858, 2878, 2989 PG III, 3077, 3089 PG III, 3178 PG III, 3181 PG III and 3182 PG III]

- For the entries to which "VW4" is assigned in column (17), replace "VW4" by:

"VC1 VC2 AP1".

[This modification concerns the following UN Nos.: 1361 PG III, 1362, 1363, 1364, 1365, 1373, 1376, 1379, 1386, 1932, 2008 PG III, 2009, 2210, 2217, 2545 PG III, 2546 PG III, 2793, 2881 PG III, 3189 PG III, 3190 PG III and 3497 PG III]

- For the entries to which "VW8" is assigned in column (17), replace "VW8" by:

"VC1 VC2 AP6 AP7".

[This modification concerns the following UN Nos.: 1438, 1442, 1444, 1450, 1451, 1452, 1454, 1455, 1458 PG II and III, 1459 PG II and III, 1461, 1465, 1466, 1467, 1473, 1474, 1475, 1477 PG III, 1481 PG II and III, 1484, 1485, 1486, 1487, 1488, 1489, 1492, 1493, 1494, 1495, 1498, 1499, 1502, 1505, 1506, 1507, 1508, 1513, 1942, 2067, 2469, 2720, 2721, 2722, 2723, 2724, 2725, 2726, 2728, 2880 PG III, 3215, 3377 and 3378 PG II and III]

- For UN 1841, packing group III, UN 1931, packing group III and UN 2969, packing group II, in column (17), replace "VW9" by:

"VC1 VC2".

- For the remaining entries to which "VW9" is assigned in column (17), replace "VW9" by:

"VC1 VC2 AP7".

[This modification concerns the following UN Nos.: 1544 PG III, 1548, 1549, 1550, 1551, 1557 PG III, 1564 PG III, 1566 PG III, 1579, 1588 PG III, 1601 PG III, 1616, 1655 PG III, 1663, 1673, 1690, 1709, 1740 PG III, 1759 PG III, 1773, 1794, 1812, 1884, 1907, 2020, 2025 PG III, 2026 PG III, 2074, 2077, 2214,



2215 PG III, 2233, 2237, 2239, 2280, 2291, 2331, 2430 PG III, 2440, 2446, 2473, 2475, 2503, 2505, 2506, 2507, 2508, 2509, 2512, 2516, 2570 PG III, 2578, 2579, 2585, 2588 PG III, 2651, 2655, 2659, 2660, 2674, 2698, 2713, 2716, 2729, 2757 PG III, 2759 PG III, 2761 PG III, 2763 PG III, 2771 PG III, 2775 PG III, 2777 PG III, 2779 PG III, 2781 PG III, 2783 PG III, 2786 PG III, 2802, 2803, 2811 PG III, 2823, 2834, 2853, 2854, 2855, 2856, 2862, 2865, 2869 PG III, 2871, 2875, 2876, 2905, 2923 PG III, 2967, 3027 PG III, 3143 PG III, 3146 PG III, 3147 PG III, 3249 PG III, 3253, 3259 PG III, 3260 PG III, 3261 PG III, 3262 PG III, 3263 PG III, 3283 PG III, 3284 PG III, 3285 PG III, 3288 PG III, 3345 PG III, 3349 PG III, 3427, 3438, 3439 PG III, 3453, 3457, 3458, 3459, 3460, 3462 PG III, 3464 PG III, 3465 PG III, 3466 PG III, 3467 PG III and 3495]

UN No.	Column	Amendment
0082	(9a)	Delete: "PP65".
0222	(2)	Amend to read as follows: "AMMONIUM NITRATE".
	(6)	Insert: "370".
	(8)	Add: "IBC100".
	(9a)	Against "IBC100" add: "B3 B17".
0241	(9a)	Delete: "PP65".
0331	(9a)	Delete: "PP65".
0332	(9a)	Delete: "PP65".
0503	(2)	Amend to read as follows: "SAFETY DEVICES, PYROTECHNIC".
1001	(6)	Add: "662".
1002	(6)	Add: "662".
1006	(6)	Add: "662".
1008	(6)	Insert: "373".
1009	(6)	Add: "662".
1010	(6)	Add: "662".
1011	(6)	Add: "662".
1012	(6)	Add: "662".
1013	(6)	Add: "662".
1018	(6)	Add: "662".
1020	(6)	Add: "662".

UN No.	Column	Amendment
1021	(6)	Add: "662".
1022	(6)	Add: "662".
1027	(6)	Add: "662".
1028	(6)	Add: "662".
1029	(6)	Add: "662".
1030	(6)	Add: "662".
1032	(6)	Add: "662".
1033	(6)	Add: "662".
1035	(6)	Add: "662".
1036	(6)	Add: "662".
1037	(6)	Add: "662".
1039	(6)	Add: "662".
1041	(6)	Add: "662".
1044	(9a)	Insert: "PP91".
1046	(6)	Add: "662".
1049	(6)	Add: "662".
1051	(7b)	Replace "E5" by: "E0".
1055	(6)	Add: "662".
1056	(6)	Add: "662".
1058	(6)	Add: "662".
1060	(6)	Add: "662".
1061	(6)	Add: "662".
1063	(6)	Add: "662".
1065	(6)	Add: "662".
1066	(6)	Add: "662".
1070	(6)	Add: "662".
1072	(6)	Add: "662".

UN No.	Column	Amendment
1075	(6)	Add: "662".
1077	(6)	Add: "662".
1078	(6)	Add: "662".
1080	(6)	Add: "662".
1081	(6)	Add: "662".
1082	(2)	At the end, add: "(REFRIGERANT GAS R 1113)".
1083	(6)	Add: "662".
1085	(6)	Add: "662".
1086	(6)	Add: "662".
1087	(6)	Add: "662".
1089	(7b)	Replace "E3" by: "E0".
1092	(13)	Insert: "TE25".
[1131	(13)	Insert: "TU2".]
[1133, fifth, sixth and seventh entry	(8)	Delete: "LP01".
	(10)	Delete all information.
	(11)	Delete all information.
	(12)	Delete all information.
1133, seventh entry	(9a)	Against "IBC02" in column (8), insert: "BB4".]
[1139, fifth, sixth and seventh entry	(8)	Delete: "LP01".
	(10)	Delete all information.
	(11)	Delete all information.
	(12)	Delete all information.
1139, seventh entry	(9a)	Against "IBC02" in column (8), insert: "BB4".]
[1169, fourth, fifth and sixth entry	(8)	Delete: "LP01".
	(10)	Delete all information.
	(11)	Delete all information.
	(12)	Delete all information.
1169, sixth entry	(9a)	Against "IBC02" in column (8), insert: "BB4".]

UN No.	Column	Amendment
1197, fourth, fifth and sixth entry	(8)	Delete: "LP01".
	(10)	Delete all information.
	(11)	Delete all information.
	(12)	Delete all information.
1197, sixth entry	(9a)	Against "IBC02" in column (8), insert: "BB4".
1202, second entry	(2)	Replace "EN 590:2004" by: "EN 590:2009 + A1:2010".
1210 (all entries)	(6)	Insert: "367".
1210, fifth, sixth and seventh entry	(8)	Delete: "LP01".
	(10)	Delete all information.
	(11)	Delete all information.
	(12)	Delete all information.
1210, seventh entry	(9a)	Against "IBC02" in column (8), insert: "BB4".
1228, PG II	(7b)	Replace "E2" by: "E0".
1238	(13)	Insert: "TE25".
1239	(13)	Insert: "TE25".
1244	(13)	Insert: "TE25".
1251	(13)	Insert: "TE25".
1259	(7b)	Replace "E5" by: "E0".
1261	(7b)	Replace "E2" by: "E0".
1263 (all entries)	(6)	Insert: "367".
1263, fifth, sixth and seventh entry	(8)	Delete: "LP01".
	(10)	Delete all information.
	(11)	Delete all information.
	(12)	Delete all information.
1263, seventh entry	(9a)	Against "IBC02" in column (8), insert: "BB4".
1266, fourth, fifth and	(8)	Delete: "LP01".
	(10)	Delete all information.
	(11)	Delete all information.

UN No.	Column	Amendment
sixth entry	(12)	Delete all information.
1266, sixth entry	(9a)	Against "IBC02" in column (8), insert: "BB4". <b>] ]</b>
1278	(7b)	Replace "E2" by: "E0".
<b>]1286,</b> fourth, fifth and sixth entry	(8)	Delete: "LP01".
	(10)	Delete all information.
	(11)	Delete all information.
	(12)	Delete all information.
1286, sixth entry	(9a)	Against "IBC02" in column (8), insert: "BB4". <b>] ]</b>
<b>]1287,</b> fourth, fifth and sixth entry	(8)	Delete: "LP01".
	(10)	Delete all information.
	(11)	Delete all information.
	(12)	Delete all information.
1287, sixth entry	(9a)	Against "IBC02" in column (8), insert: "BB4". <b>] ]</b>
<b>]1306,</b> fourth, fifth and sixth entry	(8)	Delete: "LP01".
	(10)	Delete all information.
	(11)	Delete all information.
	(12)	Delete all information.
1306, sixth entry	(9a)	Against "IBC02" in column (8), insert: "BB4". <b>] ]</b>
1308, PG I	(7b)	Replace "E3" by: "E0".
1331	(7b)	Replace "E1" by: "E0".
1334	<b>] (10)</b>	Add: "BK3". <b>] ]</b>
	(17)	Replace "VW2" by: "VC1 VC2 AP1".
<b>]1350</b>	(10)	Add: "BK3". <b>] ]</b>
1361, PG II	(7b)	Replace "E2" by: "E0".
1361, PG III	(7b)	Replace "E1" by: "E0".
1363	(7b)	Replace "E1" by: "E0".
1364	(7b)	Replace "E1" by: "E0".
1365	(7b)	Replace "E1" by: "E0".

UN No.	Column	Amendment
1373	(7b)	Replace "E1" by: "E0".
1376	(7b)	Replace "E1" by: "E0".
1378	(7b)	Replace "E2" by: "E0".
1379	(7b)	Replace "E1" by: "E0".
1386	(7b)	Replace "E1" by: "E0".
1394	(17)	Replace "VW5" by: "[VC1] VC2 [AP3] AP4 AP5".
1396, PG III	(17)	Replace "VW5" by: "VC2 AP4 AP5".
1398	(17)	Replace "VW5" by: "VC2 AP4 AP5".
1402, PG II	(17)	Replace "VW5" by: "[VC1] VC2 [AP3] AP4 AP5".
1405, PG II	(17)	Replace "VW7 " by: "VC1 VC2 AP3 AP4 AP5".
1405, PG III	(17)	Replace "VW5 VW7" by: "VC1 VC2 AP3 AP4 AP5".
1408	(17)	After "VC1 VC2", add: "[AP3] AP4 AP5".
1418, PG III	(17)	Replace "VW5" by: "VC2 AP4 AP5".
1435	(17)	Replace "VW5" by: "[VC1] VC2 [AP3] AP4 AP5".
1436, PG III	(17)	Replace "VW5" by: "VC2 AP4 AP5".
[1454	(10)	Add: "BK3".]
[1474	(10)	Add: "BK3".]
[1486	(10)	Add: "BK3".]
[1498	(10)	Add: "BK3".]
[1499	(10)	Add: "BK3".]
1545	(7b)	Replace "E4" by: "E0".
1560	(7b)	Replace "E5" by: "E0".
1569	(7b)	Replace "E4" by: "E0".
1580	(13)	Insert: "TE25".
1583, PG I	(7b)	Replace "E5" by: "E0".
1583, PG II	(7b)	Replace "E4" by: "E0".

UN No.	Column	Amendment
1583, PG III	(7b)	Replace "E1" by: "E0".
1603	(7b)	Replace "E4" by: "E0".
1613	(7b)	Replace "E5" by: "E0".
1614	(7b)	Replace "E5" by: "E0".
1649	(7b)	Replace "E5" by: "E0".
1672	(7b)	Replace "E5" by: "E0".
1693, PG I	(7b)	Replace "E5" by: "E0".
1693, PG II	(7b)	Replace "E4" by: "E0".
1694	(7b)	Replace "E5" by: "E0".
1697	(7b)	Replace "E4" by: "E0".
1698	(7b)	Replace "E5" by: "E0".
1699	(7b)	Replace "E5" by: "E0".
1700	(4)	Delete: "II".
1701	(7b)	Replace "E4" by: "E0".
1722	(7b)	Replace "E5" by: "E0".
1732	(7b)	Replace "E2" by: "E0".
1792	(7b)	Replace "E2" by: "E0".
1796, PG II	(7b)	Replace "E2" by: "E0".
1802	(7b)	"E2" ändern in: "E0".
1806	(7b)	Replace "E2" by: "E0".
1808	(7b)	Replace "E2" by: "E0".
1826, PG II	(7b)	Replace "E2" by: "E0".
1832	(7b)	Replace "E2" by: "E0".
1837	(7b)	Replace "E2" by: "E0".
1858	(6)	Add: "662".
1860	(6)	Add: "662".
1866,	(8)	Delete: "LP01".

UN No.	Column	Amendment
fifth, sixth and seventh entry	(10)	Delete all information.
	(11)	Delete all information.
	(12)	Delete all information.
1866, seventh entry	(9a)	Against "IBC02" in column (8), insert: "BB4".
1868	(7b)	Replace "E2" by: "E0".
1889	(7b)	Replace "E5" by: "E0".
1906	(7b)	Replace "E2" by: "E0".
1912	(6)	Add: "662".
1932	(7b)	Replace "E1" by: "E0".
1939	(7b)	Replace "E2" by: "E0".
1942	(2)	Amend to read as follows: "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".
	(10)	Add: "BK3".
1952	(6)	Add: "662".
1954	(6)	Add: "662".
1956	(6)	Add: "662".
1957	(6)	Add: "662".
1958	(6)	Add: "662".
1959	(6)	Add: "662".
1962	(6)	Add: "662".
1964	(6)	Add: "662".
1965	(6)	Add: "662".
1968	(6)	Add: "662".
1969	(6)	Add: "662".
1971	(6)	Add: "662".
1973	(6)	Add: "662".
1974	(6)	Add: "662".



UN No.	Column	Amendment
1976	(6)	Add: "662".
1978	(6)	Add: "662".
1982	(6)	Add: "662".
1983	(6)	Add: "662".
1984	(6)	Add: "662".
1993, fifth, sixth and seventh entry	(8)	Delete: "LP01".
	(10)	Delete all information.
	(11)	Delete all information.
	(12)	Delete all information.
1993, seventh entry	(9a)	Against "IBC02" in column (8), insert: "BB4".
1999, fourth, fifth and sixth entry	(8)	Delete: "LP01".
	(10)	Delete all information.
	(11)	Delete all information.
	(12)	Delete all information.
1999, sixth entry	(9a)	Against "IBC02" in column (8), insert: "BB4".
2002	(7b)	Replace "E1" by: "E0".
2006	(7b)	Replace "E1" by: "E0".
2016	(4)	Delete: "II".
2017	(4)	Delete: "II".
2025 (PG I, II and III)	(6)	After "43", insert: "66". At the end, delete: "585".
2030, PG II	(7b)	Replace "E2" by: "E0".
2034	(6)	Add: "662".
2035	(6)	Add: "662".
2036	(6)	Add: "662".
2044	(6)	Add: "662".
2067	(10)	Add: "BK3".
2073	(7b)	Replace "E1" by: "E0".

UN No.	Column	Amendment
2187	(6)	Delete: "593".
2193	(6)	Add: "662".
2200	(6)	Add: "662".
2211	(17)	Replace "VW3" by: "VC1 VC2 AP2".
2203	(6)	Add: "662".
2212	(2)	Amend to read as follows: "ASBESTOS, AMPHIBOLE (amosite, tremolite, actinolite, anthophyllite, crocidolite)".
	(6)	Add: "274".
	(7b)	Replace "E2" by: "E0".
2213	(10)	Add: "BK3".
2217	(7b)	Replace "E1" by: "E0".
2254	(7b)	Replace "E1" by: "E0".
2295	(7b)	Replace "E5" by: "E0".
2315	(17)	Replace "VW15" by: "VC1 VC2 AP9".
2363	(7b)	Replace "E3" by: "E0".
2381	(7b)	Replace "E2" by: "E0".
2404	(7b)	Replace "E2" by: "E0".
2419	(6)	Add: "662".
2422	(6)	Add: "662".
2424	(6)	Add: "662".
2438	(7b)	Replace "E5" by: "E0".
2442	(7b)	Replace "E2" by: "E0".
2443	(7b)	Replace "E2" by: "E0".
2451	(6)	Add: "662".
2452	(6)	Add: "662".
2453	(6)	Add: "662".
2454	(6)	Add: "662".

UN No.	Column	Amendment
2517	(6)	Add: "662".
2558	(7b)	Replace "E5" by: "E0".
2590	(2)	Amend to read as follows: "ASBESTOS, CHRYSOTILE".
2599	(6)	Add: "662".
2601	(6)	Add: "662".
2602	(6)	Add: "662".
2626	(7b)	Replace "E2" by: "E0".
2691	(7b)	Replace "E2" by: "E0".
2740	(7b)	Replace "E5" by: "E0".
2743	(7b)	Replace "E4" by: "E0".
2749	(7b)	Replace "E3" by: "E0".
2794	(17)	Replace "VW14" by: "VC1 VC2 AP8".
2795	(17)	Replace "VW14" by: "VC1 VC2 AP8".
2798	(7b)	Replace "E2" by: "E0".
2799	(7b)	Replace "E2" by: "E0".
2800	(17)	Replace "VW14" by: "VC1 VC2 AP8".
2813, PG III	(17)	Replace "VW5" by: "VC1 VC2 AP3 AP4 AP5".
2826	(7b)	Replace "E2" by: "E0".
2835	(7b)	Replace "E2" by: "E0".
2844	(17)	Replace "VW5 VW7" by: "VC1 VC2 AP3 AP4 AP5".
2881, PG II	(7b)	Replace "E2" by: "E0".
2908	(18)	Add: "(see 1.7.1.5.1)".
2909	(2)	[The amendment in the French version does not apply to the English text.]
	(18)	Add: "(see 1.7.1.5.1)".
2910	(2)	[The amendment in the French version does not apply to the English text.]
	(6)	Replace "325" by: "368".
	(18)	Add: "(see 1.7.1.5.1)".

UN No.	Column	Amendment
2911	(2)	[The amendment in the French version does not apply to the English text.]
	(18)	Add: "(see 1.7.1.5.1)".
2912	(10)	Add: "see 4.1.9.2.4".
	(17)	Delete: "VW16". Add: "see 4.1.9.2.4".
2913	(10)	Add: "see 4.1.9.2.4".
	(17)	Delete: "VW17". Add: "see 4.1.9.2.4".
2950	(17)	Replace "VW5" by: "VC2 AP4 AP5".
2956	(7b)	Replace "E1" by: "E0".
2968	(17)	Replace "VW5" by: "VC1 VC2 AP3 AP4 AP5".
2977	(6)	Delete: "172".
2978	(6)	Delete: "172".
3028	(17)	Replace "VW14" by: "VC1 VC2 AP8".
3048	(7b)	Replace "E5" by: "E0".
3066 (all entries)	(6)	Insert: "367".
3070	(6)	Add: "662".
3077	(6)	After "335", insert: "375".
	[(10)	Add: "BK3".]
3082	(6)	After "335", insert: "375".
3089, PG III	(8)	Replace "IBC06" by: "IBC08".
	(9a)	Against "IBC08", insert: "B4".
3090	(4)	Delete: "II".
	(6)	After "310", insert: "376 377". Delete: "661".
	(8)	Replace "P903a P903b" by: "P908 P909 LP903 LP904".

UN No.	Column	Amendment
3091	(4)	Delete: "II".
	(6)	After "360", insert: "376 377". Delete: "661".
	(8)	Replace "P903a P903b" by: "P908 P909 LP903 LP904".
3122, PG I	(7b)	Replace "E5" by: "E0".
3123, PG I	(7b)	Replace "E5" by: "E0".
3129, PG II	(7b)	Replace "E2" by: "E0".
3130, PG II	(7b)	Replace "E2" by: "E0".
3150	(8)	Replace "P208" by: "P209".
3151	(17)	Replace "VW15" by: "VC1 VC2 AP9".
3152	(17)	Replace "VW15" by: "VC1 VC2 AP9".
3153	(6)	Add: "662".
3154	(6)	Add: "662".
3156	(6)	Add: "662".
3157	(6)	Add: "662".
3159	(6)	Add: "662".
3161	(6)	Add: "662".
3163	(6)	Add: "662".
3164	(6)	After "283", insert: "371".
3170, PG II	(17)	Replace "VW6" by: "VC1 VC2 AP3 AP4 AP2".
	(18)	Insert: "CW37".
3170, PG III	(17)	Replace "VW1 VW5" by: "VC1 VC2 AP3 AP4 AP2".
	(18)	Insert: "CW37".
3175	(17)	Replace "VW3" by: "VC1 VC2 AP2".
3208, PG II	(7b)	Replace "E2" by: "E0".
3208, PG III	(17)	Replace "VW5" by: "VC1 VC2 AP3 AP4 AP5".

UN No.	Column	Amendment
3209, VG III	(17)	Replace "VW5" by: "VC1 VC2 AP3 AP4 AP5".
3220	(6)	Add: "662".
3242	(7b)	Replace "E2" by: "E0".
3243	(17)	Replace "VW10" by: "VC1 VC2 AP7".
3244	(17)	Replace "VW10" by: "VC1 VC2 AP7".
3251	(7b)	Replace "E1" by: "E0".
3252	(6)	Add: "662".
3256	(6)	Delete: "580".
3257	(6)	Delete: "580".
	(17)	Replace "VW12" by: "VC3".
3258	(6)	Delete: "580".
	(17)	Replace "VW13" by: "VC3".
3268	(2)	Amend to read as follows: "SAFETY DEVICES, electrically initiated".
	(4)	Delete: "III".
3291, first entry	(17)	Replace "VW11" by: "VC3".
3292	(4)	Delete: "II".
3294	(7b)	Replace "E5" by: "E0".
3296	(6)	Add: "662".
3297	(6)	Add: "662".
3298	(6)	Add: "662".
3299	(6)	Add: "662".
3314	(17)	Replace "VW3" by: "VC1 VC2 AP2".
3315	(7b)	Replace "E5" by: "E0".
3316, PG II and III	(7a)	Replace "0" by: "see SP 251".
	(7b)	Replace "E0" by: "see SP 340".
3336, PG I	(7b)	Replace "E3" by: "E0".

UN No.	Column	Amendment
3337	(6)	Add: "662".
3338	(6)	Add: "662".
3339	(6)	Add: "662".
3340	(6)	Add: "662".
3354	(6)	Add: "662".
3356	(4)	Delete: "II".
3374	(6)	Add: "662".
3375	(8)	Replace "P099 IBC99" by: "P505 IBC02".
	(9a)	Against "IBC02", insert: "B16".
[3377	(10)	Add: "BK3".]
[3378, PG III	(10)	Add: "BK3".]
3381	(13)	Insert: "TE25".
3383	(13)	Insert: "TE25".
3385	(13)	Insert: "TE25".
3387	(13)	Insert: "TE25".
3389	(13)	Insert: "TE25".
3393 (PG I, II and III)	(11)	Add: "TP41".
3394 (PG I, II and III)	(11)	Add: "TP41".
3395 (PG I, II and III)	(11)	Add: "TP41".
3396 (PG I, II and III)	(11)	Add: "TP41".
3397 (PG I, II and III)	(11)	Add: "TP41".
3398 (PG I, II and III)	(11)	Add: "TP41".
3399 (PG I, II and III)	(11)	Add: "TP41".

UN No.	Column	Amendment
3416	(7b)	Replace "E4" by: "E0".
3432	(17)	Replace "VW15" by: "VC1 VC2 AP9".
3448, PG I	(7b)	Replace "E5" by: "E0".
3448, PG II	(7b)	Replace "E4" by: "E0".
3450	(7b)	Replace "E5" by: "E0".
3469 (all entries)	(6)	Insert: "367".
3470	(6)	Insert "367".
3480	(4)	Delete: "II".
	(6)	After "348", insert: "376 377". Delete: "661".
	(8)	Replace "P903a P903b" by: "P908 P909 LP903 LP904".
3481	(4)	Delete: "II".
	(6)	After "360", insert: "376 377". Delete: "661".
	(8)	Replace "P903a P903b" by: "P908 P909 LP903 LP904".
3483	(7b)	Replace "E5" by: "E0".
3488	(13)	Insert: "TE25".
3490	(13)	Insert: "TE25".
3498	(7b)	Replace "E2" by: "E0".
3499	(2)	Amend to read as follows: "CAPACITOR, ELECTRIC DOUBLE LAYER (with an energy storage capacity greater than 0.3 Wh)".
3506	(4)	Delete: "III".



In Table A, add the following new entries:

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		
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
3507	URANIUM HEXAFLUORIDE, RADIOACTIVE MATERIAL, EXCEPTED PACKAGE, less than 0.1 kg per package, non-fissile or fissile-excepted	8		I	8	317 369	0	E0	P805							1			see SP 369	CE15	87
3508	CAPACITOR, ASYMMETRIC (with an energy storage capacity greater than 0.3 Wh)	9	M11		9	372	0	E0	P003							4				CE2	90
3509	PACKAGINGS, DISCARDED, EMPTY, UNCLEANED	9	M11		9	663	0	E0	P003 IBC08 LP02	RR9 BB3 LL1		BK2			4		VC2 AP10			90	
3510	ADSORBED GAS, FLAMMABLE, N.O.S.	2	9F		2.1	274	0	E0	P208		MP9					2			CW9 CW10 CW36	CE3	23
3511	ADSORBED GAS, N.O.S.	2	9A		2.2	274	0	E0	P208		MP9					3			CW9 CW10 CW36	CE3	20
3512	ADSORBED GAS, TOXIC, N.O.S.	2	9T		2.3	274	0	E0	P208		MP9					1			CW9 CW10 CW36		26
3513	ADSORBED GAS, OXIDIZING, N.O.S.	2	9O		2.2 + 5.1	274	0	E0	P208		MP9					3			CW9 CW10 CW36	CE3	25
3514	ADSORBED GAS, TOXIC, FLAMMABLE, N.O.S.	2	9TF		2.3 + 2.1	274	0	E0	P208		MP9					1			CW9 CW10 CW36		263
3515	ADSORBED GAS, TOXIC, OXIDIZING, N.O.S.	2	9TO		2.3 + 5.1	274	0	E0	P208		MP9					1			CW9 CW10 CW36		265
3516	ADSORBED GAS, TOXIC, CORROSIVE, N.O.S.	2	9TC		2.3 + 8	274	0	E0	P208		MP9					1			CW9 CW10 CW36		268
3517	ADSORBED GAS, TOXIC, FLAMMABLE, CORROSIVE, N.O.S.	2	9TF C		2.3 + 2.1 + 8	274	0	E0	P208		MP9					1			CW9 CW10 CW36		263

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		
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
3518	ADSORBED GAS, TOXIC, OXIDIZING, CORROSIVE, N.O.S.	2	9TO C		2.3 + 5.1 + 8	274	0	E0	P208		MP9					1			CW9 CW10 CW36		265
3519	BORON TRIFLUORIDE, ADSORBED	2	9TC		2.3 + 8		0	E0	P208		MP9					1			CW9 CW10 CW36		268
3520	CHLORINE, ADSORBED	2	9TO C		2.3 + 5.1 + 8		0	E0	P208		MP9					1			CW9 CW10 CW36		265
3521	SILICON TETRAFLUORIDE, ADSORBED	2	9TC		2.3 + 8		0	E0	P208		MP9					1			CW9 CW10 CW36		268
3522	ARSINE, ADSORBED	2	9TF		2.3 + 2.1		0	E0	P208		MP9					1			CW9 CW10 CW36		263
3523	GERMANE, ADSORBED	2	9TF		2.3 + 2.1		0	E0	P208		MP9					1			CW9 CW10 CW36		263
3524	PHOSPHORUS PENTAFLUORIDE, ADSORBED	2	9TC		2.3 + 8		0	E0	P208		MP9					1			CW9 CW10 CW36		268
3525	PHOSPHINE, ADSORBED	2	9TF		2.3 + 2.1		0	E0	P208		MP9					1			CW9 CW10 CW36		263
3526	HYDROGEN SELENIDE, ADSORBED	2	9TF		2.3 + 2.1		0	E0	P208		MP9					1			CW9 CW10 CW36		263

Table B

Insert the following new entries:

Name and description	UN No.	Note	NHM Code
ADSORBED GAS, N.O.S.	3511		???????
ADSORBED GAS, FLAMMABLE, N.O.S.	3510		???????
ADSORBED GAS, OXIDIZING, N.O.S.	3513		???????
ADSORBED GAS, TOXIC, N.O.S.	3512		???????
ADSORBED GAS, TOXIC, CORROSIVE, N.O.S.	3516		???????
ADSORBED GAS, TOXIC, FLAMMABLE, N.O.S.	3514		???????
ADSORBED GAS, TOXIC, FLAMMABLE, CORROSIVE, N.O.S.	3517		???????
ADSORBED GAS, TOXIC, OXIDIZING, N.O.S.	3515		???????
ADSORBED GAS, TOXIC, OXIDIZING, CORROSIVE, N.O.S.	3518		???????
ARSINE, ADSORBED	3522		???????
BORON TRIFLUORIDE, ADSORBED	3519		281290 ???????
CAPACITOR, ASYMMETRIC, (with an energy storage capacity greater than 0.3Wh)	3508		8532++
CHLORINE, ADSORBED	3520		280110 ???????
GERMANE, ADSORBED	3523		285000 ???????
HYDROGEN SELENIDE, ADSORBED	3526		281119 ???????
Mercurous chloride, see	2025		???????
PACKAGINGS, DISCARDED, EMPTY, UNCLEARED	3509		???????
PHOSPHINE, ADSORBED	3525		284800 ???????
PHOSPHORUS PENTAFLUORIDE, ADSORBED	3524		281290 ???????
SAFETY DEVICES, electrically initiated	3268		???????
SAFETY DEVICES, PYROTECHNIC	0503		870895
SILICON TETRAFLUORIDE, ADSORBED	3521		???????
URANIUM HEXAFLUORIDE, RADIOACTIVE MATERIAL, EXCEPTED PACKAGE, less than 0.1 kg per package, non-fissile or fissile-excepted	3507		???????

Amend the following entries:

Name and description	UN No.	Amendment
Actinolite: see	2590	Amend the UN number to read as follows: "2212".
AIR BAG INFLATORS	0503	Amend the name to read as follows: "Air bag inflators, see".
AIR BAG INFLATORS	3268	Amend the name to read as follows: "Air bag inflators, see".
AIR BAG MODULES	0503	Amend the name to read as follows: "Air bag modules, see".

Name and description	UN No.	Amendment
AIR BAG MODULES	3268	Amend the name to read as follows: "Air bag modules, see".
AMMONIUM NITRATE with more than 0.2% combustible substances, including any organic substance calculated as carbon, to the exclusion of any other added substance	0222	Amend the name and description to read as follows: "AMMONIUM NITRATE".
AMMONIUM NITRATE with not more than 0.2% total combustible material, including any organic substance calculated as carbon, to the exclusion of any other added substance	1942	Amend the name and description to read as follows: "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".
Anthophyllite: see	2590	Amend the UN number to read as follows: "2212".
BLUE ASBESTOS	2212	Amend the name to read as follows: "ASBESTOS, AMPHIBOLE".
BROWN ASBESTOS	2212	Delete.
CAPACITOR, electric double layer (with an energy storage capacity greater than 0.3 Wh)	3499	Amend the name to read as follows: "CAPACITOR, ELECTRIC DOUBLE LAYER (with an energy storage capacity greater than 0.3 Wh)".
Mysorite: see	2212	Delete.
RADIOACTIVE MATERIAL, EXCEPTED PACKAGE – ARTICLES MANUFACTURED FROM NATURAL URANIUM or DEPLETED URANIUM or NATURAL THORIUM	2909	[The amendment in the French version does not apply to the English text.]
RADIOACTIVE MATERIAL, EXCEPTED PACKAGE – INSTRUMENTS	2911	[The amendment in the French version does not apply to the English text.]
RADIOACTIVE MATERIAL, EXCEPTED PACKAGE – LIMITED QUANTITY OF MATERIAL	2910	[The amendment in the French version does not apply to the English text.]
Refrigerant gas R 1113: see	1082	Amend the name to read as follows: "REFRIGERANT GAS R 1113".
SEAT-BELT PRETENSIONERS	0502	Amend the name to read as follows: "Seat-belt pretensioners: see".
SEAT-BELT PRETENSIONERS	3268	Amend the name to read as follows: "Seat-belt pretensioners: see".
Tremolite: see	2590	Amend the UN number to read as follows: "2212":
WHITE ASBESTOS	2590	Amend the name to read as follows: "ASBESTOS, CHRYSOTILE".

**Chapter 3.3**

**SP 43** [The amendment in the French version does not apply to the English text.]

**SP 122** At the end, add:

", 4.1.4.2 packing instruction IBC 520 and 4.2.5.2.6 portable tank instruction T 23."

**SP 135** Amend to read as follows:

**"135** The dihydrated sodium salt of dichloroisocyanuric acid does not meet the criteria for inclusion in Class 5.1 and is not subject to RID unless meeting the criteria for inclusion in another Class."

**SP 172** Amend to read as follows:

**"172** Where a radioactive material has (a) subsidiary risk(s):

- (a) The substance shall be allocated to packing group I, II or III, if appropriate, by application of the packing group criteria provided in Part 2 corresponding to the nature of the predominant subsidiary risk;
- (b) Packages shall be labelled with subsidiary risk labels corresponding to each subsidiary risk exhibited by the material; corresponding placards shall be affixed to wagons or large containers in accordance with the relevant provisions of 5.3.1;
- (c) For the purposes of documentation and package marking, the proper shipping name shall be supplemented with the name of the constituents which most predominantly contribute to this (these) subsidiary risk(s) and which shall be enclosed in parenthesis;
- (d) The dangerous goods transport document shall indicate the label model number(s) corresponding to each subsidiary risk in parenthesis after the Class number "7" and, where assigned the packing group as required by 5.4.1.1.1 (d).

For packing, see also 4.1.9.1.5."

**SP 225** At the end, add:

"Fire extinguishers shall be manufactured, tested, approved and labelled according to the provisions applied in the country of manufacture.

**NOTE:** "Provisions applied in the country of manufacture" means the provisions applicable in the country of manufacture or those applicable in the country of use.

Fire extinguishers under this entry include:

- (a) portable fire extinguishers for manual handling and operation;
- (b) fire extinguishers for installation in aircraft;
- (c) fire extinguishers mounted on wheels for manual handling;

- (d) fire extinguishing equipment or machinery mounted on wheels or wheeled platforms or units carried similar to (small) trailers, and
- (e) fire extinguishers composed of a non-rollable pressure drum and equipment, and handled e.g. by fork lift or crane when loaded or unloaded.

**NOTE:** Pressure receptacles which contain gases for use in the above-mentioned fire extinguishers or for use in stationary fire-fighting installations shall meet the requirements of Chapter 6.2 and all requirements applicable to the relevant gas when these pressure receptacles are carried separately."

**SP 235** Amend to read as follows:

"235 This entry applies to articles which contain Class 1 explosive substances and which may also contain dangerous goods of other classes. These articles are used to enhance safety in vehicles, vessels or aircraft – e.g. air bag inflators, air bag modules, seat-belt pretensioners, and pyromechanical devices."

**SP 251** Insert the following new third paragraph:

"Where the kit contains only dangerous goods to which no packing group is assigned, no packing group need be indicated on the dangerous goods transport document."

**SP 280** Amend to read as follows:

"280 This entry applies to safety devices for vehicles, vessels or aircraft, e.g. air bag inflators, air bag modules, seat-belt pretensioners, and pyromechanical devices, which contain dangerous goods of Class 1 or of other classes, when carried as component parts and if these articles as presented for carriage have been tested in accordance with Test Series 6 (c) of Part 1 of the Manual of Tests and Criteria, with no explosion of the device, no fragmentation of device casing or pressure receptacle, and no projection hazard nor thermal effect which would significantly hinder fire-fighting or emergency response efforts in the immediate vicinity. This entry does not apply to life saving appliances described in special provision 296 (UN Nos. 2990 and 3072)."

**SP 289** Amend to read as follows:

"289 Safety devices, electrically initiated and safety devices, pyrotechnic installed in wagons, vehicles, vessels or aircraft or in completed components such as steering columns, door panels, seats, etc. are not subject to RID."

**SP 306** Amend to read as follows:

"306 This entry may only be used for substances that are too insensitive for acceptance into Class 1 when tested in accordance with Test Series 2 (see Manual of Tests and Criteria, Part I)."

**SP 309** Amend the last sentence to read as follows:

"Substances shall satisfactorily pass Tests 8 (a), (b) and (c) of Test Series 8 of the Manual of Tests and Criteria, Part I, Section 18 and be approved by the competent authority."

**SP 363** In paragraph (c), replace "orientated" by:

"oriented".

"367–  
499

(Reserved)" becomes:

"378–  
499

(Reserved)".

**SP 580**

Amend to read as follows:

"580

(Deleted)".

**SP 582**

Amend to read as follows:

"582

This entry covers, inter alia, mixtures of gases indicated by the letter R ..., with the following properties:

Mixture	Maximum vapour pressure at 70 °C (MPa)	Minimum density at 50 °C (kg/l)	Permitted technical name for purposes of 5.4.1.1
F 1	1.3	1.30	"Mixture F 1"
F 2	1.9	1.21	"Mixture F 2"
F 3	3.0	1.09	"Mixture F 3"

**NOTE 1:** 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 F 1 to F 3.

**2:** The reference densities correspond to the densities of dichlorofluoromethane (1.30 kg/l), dichlorodifluoromethane (1.21 kg/l) and chlorodifluoromethane (1.09 kg/l)."

**SP 583**

Amend to read as follows:

"583

This entry covers, inter alia, mixtures of gases with the following properties:

Mixture	Maximum vapour pressure at 70 °C (MPa)	Minimum density at 50 °C (kg/l)	Permitted technical name <sup>(a)</sup> for purposes of 5.4.1.1
A	1.1	0.525	"Mixture A" or "Butane"
A 01	1.6	0.516	"Mixture A 01" or "Butane"
A 02	1.6	0.505	"Mixture A 02" or "Butane"
A 0	1.6	0.495	"Mixture A 0" or "Butane"
A 1	2.1	0.485	"Mixture A 1"
B 1	2.6	0.474	"Mixture B 1"
B 2	2.6	0.463	"Mixture B 2"
B	2.6	0.450	"Mixture B"
C	3.1	0.440	"Mixture C" or "Propane"

- (a) For carriage in tanks, the trade names "Butane" or "Propane" may be used only as a complement."

**SP 585** Amend to read as follows:

"585 (Deleted)".

**[SP 594** Amend to read as follows:

"594 The following articles, manufactured and filled according to the provisions applied in the country of manufacture, are not subject to the requirements of RID:

- (a) UN No. 1044 fire extinguishers provided with protection against inadvertent discharge, when:
- they are packaged in a strong outer packaging; or
  - they are large fire extinguishers which meet the requirements of special packing provision PP 91 of packing instruction P 003 in 4.1.4.1;
- (b) UN No. 3164 articles, pressurized pneumatic or hydraulic, designed to withstand stresses greater than the internal gas pressure by virtue of transmission of force, intrinsic strength or construction, when they are packaged in a strong outer packaging.]

**"NOTE:** "Provisions applied in the country of manufacture" means the provisions applicable in the country of manufacture or those applicable in the country of use."

**SP 636** Amend paragraph (b) to read as follows:

"(b) Up to the intermediate processing facility, lithium cells and batteries with a gross mass of not more than 500 g each or lithium ion cells with a Watt-hour rating of not more than 20 Wh, lithium ion batteries with a Watt-hour rating of not more than 100 Wh, lithium metal cells with a lithium content of not more than 1 g and lithium metal batteries with an aggregate lithium content of not more than 2 g, whether or not contained in equipment, collected and handed over for carriage for disposal or recycling, together with or without other non-lithium cells or batteries, are not subject to the other provisions of RID including special provision 376 and paragraph 2.2.9.1.7, if they meet the following conditions:

- (i) The provisions of packing instruction P 909 of 4.1.4.1 apply except for the additional requirements 1 and 2;
- (ii) A quality assurance system is in place to ensure that the total amount of lithium cells or batteries per wagon or large container does not exceed 333 kg;

**NOTE:** The total quantity of lithium cells and batteries in the mix may be assessed by means of a statistical method included in the quality assurance system. A copy of the quality assurance records shall be made available to the competent authority upon request.

- (iii) Packages are marked "LITHIUM BATTERIES FOR DISPOSAL" or "LITHIUM BATTERIES FOR RECYCLING" as appropriate."



- SP 660** In paragraph (g) (v), replace "nominal capacity" by:  
"water capacity".
- SP 661** Amend to read as follows:
- "661** (Deleted)".
- Add the following new special provisions:
- "66** Cinnabar is not subject to the requirements of RID."
- "312** (Reserved)".
- "367** For the purposes of documentation:
- The proper shipping name "Paint related material" may be used for consignments of packages containing "Paint" and "Paint related material" in the same package;
- The proper shipping name "Paint related material, corrosive, flammable" may be used for consignments of packages containing "Paint, corrosive, flammable" and "Paint related material, corrosive, flammable" in the same package;
- The proper shipping name "Paint related material, flammable, corrosive" may be used for consignments of packages containing "Paint, flammable, corrosive" and "Paint related material, flammable, corrosive" in the same package; and
- The proper shipping name "Printing ink related material" may be used for consignments of packages containing "Printing ink" and "Printing ink related material" in the same package.
- 368** In the case of non-fissile or fissile-excepted uranium hexafluoride, the material shall be classified under UN No. 3507 or UN No. 2978.
- 369** In accordance with 2.1.3.5.3 (a), this radioactive material in an excepted package possessing corrosive properties is classified in Class 8 with a radioactive material subsidiary risk.
- Uranium hexafluoride may be classified under this entry only if the conditions of 2.2.7.2.4.1.2, 2.2.7.2.4.1.5, 2.2.7.2.4.5.2 and, for fissile-excepted material, of 2.2.7.2.3.6 are met.
- In addition to the provisions applicable to the carriage of Class 8 substances, the provisions of 5.1.3.2, 5.1.5.2.2, 5.1.5.4.1 (b), 7.5.11 CW 33 (3.1), (5.1) to (5.4) and (6) apply.
- No Class 7 label is required to be displayed.
- 370** This entry applies to:
- ammonium nitrate with more than 0.2% combustible substances, including any organic substance calculated as carbon, to the exclusion of any added substance; and

- ammonium nitrate with not more than 0.2% combustible substances, including any organic substance calculated as carbon, to the exclusion of any added substance, that is not too sensitive for acceptance into Class 1 when tested in accordance with Test Series 2 (see Manual of Tests and Criteria, Part I). See also UN No. 1942.

**371**

- (1) This entry also applies to articles, containing a small pressure receptacle with a release device. Such articles shall comply with the following requirements:
  - (a) The water capacity of the pressure receptacle shall not exceed 0.5 litres and the working pressure shall not exceed 25 bar at 15 °C;
  - (b) The minimum burst pressure of the pressure receptacle shall be at least four times the pressure of the gas at 15 °C;
  - (c) Each article shall be manufactured in such a way that unintentional firing or release is avoided under normal conditions of handling, packing, carriage and use. This may be fulfilled by an additional locking device linked to the activator;
  - (d) Each article shall be manufactured in such a way as to prevent hazardous projections of the pressure receptacle or parts of the pressure receptacle;
  - (e) Each pressure receptacle shall be manufactured from material which will not fragment upon rupture;
  - (f) The design type of the article shall be subjected to a fire test. For this test, the provisions of paragraphs 16.6.1.2 except letter g, 16.6.1.3.1 to 16.6.1.3.6, 16.6.1.3.7 (b) and 16.6.1.3.8 of the Manual of Tests and Criteria shall be applied. It shall be demonstrated that the article relieves its pressure by means of a fire degradable seal or other pressure relief device, in such a way that the pressure receptacle will not fragment and that the article or fragments of the article do not rocket more than 10 metres;
  - (g) The design type of the article shall be subjected to the following test. A stimulating mechanism shall be used to initiate one article in the middle of the packaging. There shall be no hazardous effects outside the package such as disruption of the package, metal fragments or a receptacle which passes through the packaging.
- (2) The manufacturer shall produce technical documentation of the design type, manufacture as well as the tests and their results. The manufacturer shall apply procedures to ensure that articles produced in series are made of good quality, conform to the design type and are able to meet the requirements in (1). The manufacturer shall provide such information to the competent authority on request.

**372**

This entry applies to asymmetric capacitors with an energy storage capacity greater than 0.3 Wh. Capacitors with an energy storage capacity of 0.3 Wh or less are not subject to RID.

Energy storage capacity means the energy stored in a capacitor, as calculated according to the following equation,

$$Wh = \frac{1}{2} C_N (U_R^2 - U_L^2) \times \frac{1}{3600},$$

using the nominal capacitance ( $C_N$ ), rated voltage ( $U_R$ ) and rated lower limit voltage ( $U_L$ ).

All asymmetric capacitors to which this entry applies shall meet the following conditions:

- (a) Capacitors or modules shall be protected against short circuit;
- (b) Capacitors shall be designed and constructed to safely relieve pressure that may build up in use, through a vent or a weak point in the capacitor casing. Any liquid which is released upon venting shall be contained by packaging or by equipment in which a capacitor is installed;
- (c) Capacitors shall be marked with the energy storage capacity in Wh; and
- (d) Capacitors containing an electrolyte meeting the classification criteria of any class of dangerous goods shall be designed to withstand a 95 kPa pressure differential;

Capacitors containing an electrolyte not meeting the classification criteria of any class of dangerous goods, including when configured in a module or when installed in equipment are not subject to other provisions of RID.

Capacitors containing an electrolyte meeting the classification criteria of any class of dangerous goods, with an energy storage capacity of 20 Wh or less, including when configured in a module, are not subject to other provisions of RID when the capacitors are capable of withstanding a 1.2 metre drop test unpackaged on an unyielding surface without loss of contents.

Capacitors containing an electrolyte meeting the classification criteria of any class of dangerous goods that are not installed in equipment and with an energy storage capacity of more than 20 Wh are subject to RID.

Capacitors installed in equipment and containing an electrolyte meeting the classification criteria of any class of dangerous goods, are not subject to other provisions of RID provided that the equipment is packaged in a strong outer packaging constructed of suitable material, and of adequate strength and design, in relation to the packaging's intended use and in such a manner as to prevent accidental functioning of capacitors during carriage. Large robust equipment containing capacitors may be offered for carriage unpackaged or on pallets when capacitors are afforded equivalent protection by the equipment in which they are contained.

**NOTE:** Notwithstanding the provisions of this special provision, nickel-carbon asymmetric capacitors containing Class 8 alkaline electrolytes shall be carried as UN 2795 BATTERIES, WET, FILLED WITH ALKALI, electric storage.

### 373

Neutron radiation detectors containing non-pressurized boron trifluoride gas may be carried under this entry provided that the following conditions are met:

- (a) Each radiation detector shall meet the following conditions.
  - (i) The pressure in each detector shall not exceed 105 kPa absolute at 20 °C;
  - (ii) The amount of gas shall not exceed 13 g per detector;

- (iii) Each detector shall be manufactured under a registered quality assurance programme;

**NOTE:** ISO 9001:2008 may be used for this purpose.

- (iv) Each neutron radiation detector shall be of welded metal construction with brazed metal to ceramic feed through assemblies. These detectors shall have a minimum burst pressure of 1800 kPa as demonstrated by design type qualification testing; and
- (v) Each detector shall be tested to a  $1 \times 10^{-10}$  cm<sup>3</sup>/s leaktightness standard before filling.

(b) Radiation detectors carried as individual components shall be carried as follows:

- (i) Detectors shall be packed in a sealed intermediate plastics liner with sufficient absorbent material to absorb the entire gas contents;
- (ii) They shall be packed in strong outer packaging. The completed package shall be capable of withstanding a 1.8 m drop test without leakage of gas contents from detectors;
- (iii) The total amount of gas from all detectors per outer packaging shall not exceed 52 g.

(c) Completed neutron radiation detection systems containing detectors meeting the conditions of paragraph (a) shall be carried as follows:

- (i) The detectors shall be contained in a strong sealed outer casing;
- (ii) The casing shall contain sufficient absorbent material to absorb the entire gas contents;
- (iii) The completed systems shall be packed in strong outer packagings capable of withstanding a 1.8 m drop test without leakage unless a system's outer casing affords equivalent protection.

Packing instruction P 200 of 4.1.4.1 is not applicable.

The transport document shall include the following statement:

"CARRIAGE IN ACCORDANCE WITH SPECIAL PROVISION 373".

Neutron radiation detectors containing not more than 1 g of boron trifluoride, including those with solder glass joints, are not subject to RID provided they meet the requirements in paragraph (a) and are packed in accordance with paragraph (b). Radiation detection systems containing such detectors are not subject to RID provided they are packed in accordance with paragraph (c).

**374** (Reserved)

**375** These substances when carried in single or combination packagings containing a net quantity per single or inner packaging of 5 l or less for liquids or having a net mass per single or inner packaging of 5 kg or less for solids, are not subject to any other provisions of RID 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.

**376** Lithium ion cells or batteries and lithium metal cells or batteries identified as being damaged or defective such that they do not conform to the type tested according to the applicable provisions of the Manual of Tests and Criteria shall comply with the requirements of this special provision.

For the purposes of this special provision, these may include, but are not limited to:

- Cells or batteries identified as being defective for safety reasons;
- Cells or batteries that have leaked or vented;
- Cells or batteries that cannot be diagnosed prior to carriage; or
- Cells or batteries that have sustained physical or mechanical damage.

**NOTE:** In assessing a battery as damaged or defective, the type of battery and its previous use and misuse shall be taken into account.

Cells and batteries shall be carried according to the provisions applicable to UN No. 3090, UN No. 3091, UN No. 3480 and No. UN 3481, except special provision 230 and as otherwise stated in this special provision.

Packages shall be marked "DAMAGED/DEFECTIVE LITHIUM-ION BATTERIES" or "DAMAGED/DEFECTIVE LITHIUM METAL BATTERIES", as applicable.

Cells and batteries shall be packed in accordance with packing instructions P 908 of 4.1.4.1 or LP 904 of 4.1.4.3, as applicable.

Cells and batteries liable to rapidly disassemble, dangerously react, produce a flame or a dangerous evolution of heat or a dangerous emission of toxic, corrosive or flammable gases or vapours under normal conditions of carriage shall not be carried except under conditions specified by the competent authority.

**377** Lithium ion and lithium metal cells and batteries and equipment containing such cells and batteries carried for disposal or recycling, either packed together with or packed without non-lithium batteries, may be packaged in accordance with packing instruction P 909 of 4.1.4.1.

These cells and batteries are not subject to the requirements of 2.2.9.1.7 (a) to (e).

Packages shall be marked "LITHIUM BATTERIES FOR DISPOSAL" or "LITHIUM BATTERIES FOR RECYCLING".

Identified damaged or defective batteries shall be carried in accordance with special provision 376 and packaged in accordance with P 908 of 4.1.4.1 or LP 904 of 4.1.4.3, as applicable."

**"662** Cylinders not conforming to the provisions of Chapter 6.2 which are used exclusively on board a ship or aircraft, may be carried for the purpose of filling or inspection and subsequent return, provided the cylinders are designed and constructed in accordance with a standard recognized by the competent authority of the country of approval and all the other relevant requirements of RID are met including:

- (a) The cylinders shall be carried with valve protection in conformity with 4.1.6.8;
- (b) The cylinders shall be marked and labelled in conformity with 5.2.1 and 5.2.2; and

- (c) All the relevant filling requirements of packing instruction P 200 of 4.1.4.1 shall be complied with.

The transport document shall include the following statement:

"CARRIAGE IN ACCORDANCE WITH SPECIAL PROVISION 662".

**663**

This entry may only be used for packagings, large packagings or IBCs, or parts thereof, which have contained dangerous goods which are carried for disposal, recycling or recovery of their material, other than reconditioning, repair, routine maintenance, remanufacturing or reuse, and which have been emptied to the extent that only residues of dangerous goods adhering to the packaging parts are present when they are handed over for carriage.

Scope:

Residues present in the packagings, discarded, empty, uncleaned shall only be of dangerous goods of classes 3, 4.1, 5.1, 6.1, 8 or 9. In addition, they shall not be:

- Substances assigned to packing group I or that have "0" assigned in Column (7a) of Table A of Chapter 3.2; nor
- Substances classified as desensitized explosive substances of Class 3 or Class 4.1; nor
- Substances classified as self-reactive substances of Class 4.1; nor
- Radioactive material; nor
- Asbestos (UN 2212 and UN 2590), polychlorinated biphenyls (UN 2315 and UN 3432) and polyhalogenated biphenyls or polyhalogenated terphenyls (UN 3151 and UN 3152).

General provisions:

Packagings, discarded, empty, uncleaned with residues presenting a primary or subsidiary risk of Class 5.1 shall not be packed together with other packagings, discarded, empty, uncleaned, or loaded together with other packagings, discarded, empty, uncleaned in the same container, wagon or bulk container.

Documented sorting procedures shall be implemented on the loading site to ensure compliance with the provisions applicable to this entry.

**NOTE:** All the other provisions of RID apply."

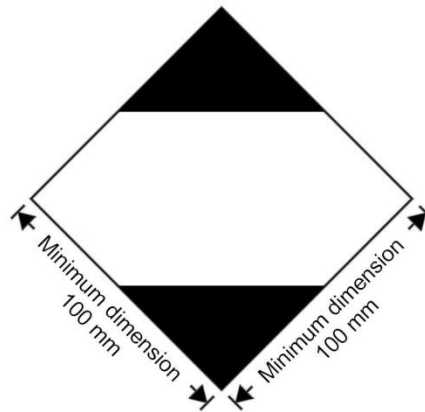
## Chapter 3.4

3.4.7 and  
3.4.8

Amend to read as follows:

**"3.4.7 Marking for packages containing limited quantities**

**3.4.7.1** Except for air transport, packages containing dangerous goods in limited quantities shall bear the marking shown in Figure 3.4.7.1:

**Figure 3.4.7.1**

Marking for packages containing limited quantities

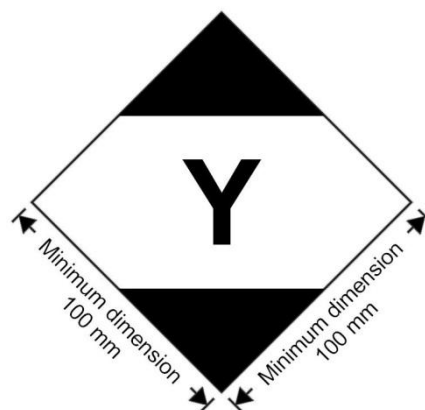
The marking shall be readily visible, legible and able to withstand open weather exposure without a substantial reduction in effectiveness.

The marking shall be in the form of a square set at an angle of 45° (diamond-shaped). The top and bottom portions and the surrounding line shall be black. The centre area shall be white or a suitable contrasting background. The minimum dimensions shall be 100 mm × 100 mm and the minimum width of the line forming the diamond shall be 2 mm. Where dimensions are not specified, all features shall be in approximate proportion to those shown.

- 3.4.7.2** If the size of the package so requires, the minimum outer dimensions shown in Figure 3.4.7.1 may be reduced to be not less than 50 mm × 50 mm provided the marking remains clearly visible. The minimum width of the line forming the diamond may be reduced to a minimum of 1 mm.

**3.4.8 Marking for packages containing limited quantities conforming to Part 3, Chapter 4 of the ICAO Technical Instructions**

- 3.4.8.1** Packages containing dangerous goods packed in conformity with the provisions of Part 3, Chapter 4 of the ICAO Technical Instructions may bear the marking shown in Figure 3.4.8.1 to certify conformity with these provisions:

**Figure 3.4.8.1**

Marking for packages containing limited quantities

conforming to Part 3, Chapter 4 of the ICAO Technical Instructions

The marking shall be readily visible, legible and able to withstand open weather exposure without a substantial reduction in effectiveness.

The marking shall be in the form of a square set at an angle of 45° (diamond-shaped). The top and bottom portions and the surrounding line shall be black. The centre area shall be white or a suitable contrasting background. The minimum dimensions shall be 100 mm × 100 mm and the minimum width of the line forming the diamond shall be 2 mm. The symbol "Y" shall be placed in the centre of the mark and shall be clearly visible. Where dimensions are not specified, all features shall be in approximate proportion to those shown.

**3.4.8.2** If the size of the package so requires, the minimum outer dimensions shown in Figure 3.4.8.1 may be reduced to be not less than 50 mm × 50 mm provided the marking remains clearly visible. The minimum width of the line forming the diamond may be reduced to a minimum of 1 mm. The symbol "Y" shall remain in approximate proportion to that shown in Figure 3.4.8.1."

**3.4.9** Amend to read as follows:

**"3.4.9** Packages containing dangerous goods bearing the marking shown in 3.4.8 with or without the additional labels and markings for air transport shall be deemed to meet the provisions of section 3.4.1 as appropriate and of sections 3.4.2 to 3.4.4 and need not bear the marking shown in 3.4.7."

**3.4.10** Amend to read as follows:

**"3.4.10** Packages containing dangerous goods in limited quantities bearing the marking shown in 3.4.7 and conforming with the provisions of the ICAO Technical Instructions, including all necessary marks and labels specified in Parts 5 and 6, shall be deemed to meet the provisions of section 3.4.1 as appropriate and of sections 3.4.2 to 3.4.4."

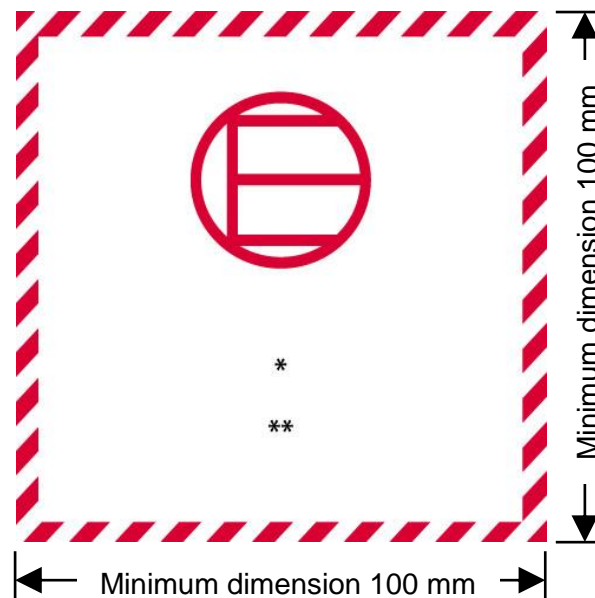


## Chapter 3.5

3.5.4.2 Amend to read as follows:

"3.5.4.2 **Excepted quantities mark**

**Figure 3.5.4.2**



Excepted quantities mark

- \* The first or only label number indicated in column (5) of Table A of Chapter 3.2 shall be shown in this location.
- \*\* The name of the consignor or of the consignee shall be shown in this location if not shown elsewhere on the package.

The marking shall be in the form of a square. The hatching and symbol shall be of the same colour, black or red, on white or suitable contrasting background. The minimum dimensions shall be 100 mm × 100 mm. Where dimensions are not specified, all features shall be in approximate proportion to those shown."

## PART 4

### Chapter 4.1

4.1.1.5 Add a new 4.1.1.5.2 to read as follows:

"4.1.1.5.2 Use of supplementary packagings within an outer packaging (e.g. an intermediate packaging or a receptacle inside a required inner packaging) additional to what is required by the packing instructions is authorized provided all relevant requirements are met, including those of 4.1.1.3, and, if appropriate, suitable cushioning is used to prevent movement within the packaging."

4.1.1.9 [The amendment in the German version does not apply to the English text.]

**4.1.1.11** At the end, add a new Note to read as follows:

**"NOTE:** When such packagings are carried for disposal, recycling or recovery of their material, they may also be carried under UN 3509 provided the conditions of special provision 663 of Chapter 3.3 are met."

**4.1.1.19** At the end, add:

"and large salvage packagings".

**4.1.1.19.1** At the end of the first sentence, add:

"and in large salvage packagings mentioned in 6.6.5.1.9".

In the second sentence, after "packaging", insert:

", including intermediate bulk container (IBC) and large packaging,".

**4.1.1.19.2** In the first and second sentence, after "salvage packaging", insert:

"or large salvage packaging".

**4.1.1.21.6** In the Table, for UN No. 1202, first and fourth entries, in Column (2b), replace "EN 590:2004" by:

"EN 590:2009 + A1:2010".

**4.1.3.1** Amend the definition of "L" to read as follows:

"L" for large packagings or "LL" for special packing provisions specific to RID."

**4.1.4.1**

**P 003** Add a new special packing provision to read as follows:

**"PP 91** For UN 1044, large fire extinguishers may also be carried unpackaged provided that the requirements of 4.1.3.8.1 (a) to (e) are met, the valves are protected by one of the methods in accordance with 4.1.6.8 (a) to (d) and other equipment mounted on the fire extinguisher is protected to prevent accidental activation. For the purpose of this special packing provision, "large fire extinguishers" means fire extinguishers as described in indents (c) to (e) of special provision 225 of Chapter 3.3."

Under "Special packing provision specific to RID and ADR:", replace "provision" by:

"provisions".

Add a new special packing provision RR 9 to read as follows:

**"RR 9** For UN 3509, packagings are not required to meet the requirements of 4.1.1.3.

Packagings meeting the requirements of 6.1.4, made leak tight or fitted with a leak tight and puncture resistant sealed liner or bag, shall be used.

When the only residues contained are solids which are not liable to become liquid at temperatures likely to be encountered during carriage, flexible packagings may be used.

When liquid residues are present, rigid packagings that provide a means of retention (e.g. absorbent material) shall be used.

Before being filled and handed over for carriage, every packaging shall be inspected to ensure that it is free from corrosion, contamination or other damage. Any packaging showing signs of reduced strength shall no longer be used (minor dents and scratches are not considered as reducing the strength of the packaging).

Packagings intended for the carriage of packagings, discarded, empty, uncleaned with residues of Class 5.1 shall be so constructed or adapted that the goods cannot come into contact with wood or any other combustible material."

**P 116** In the column for "outer packagings", amend the first entry for "bags" to read:

"woven plastics (5H1, 5H2, 5H3)".

Amend special packing provision PP 65 to read:

"**PP 65** (Deleted)".

**P 131** In the entry for "boxes", in the column for "outer packagings" add:

"plastics, solid (4H2)".

**P 137** In the entry for "boxes", in the column for "outer packagings" add:

"plastics, solid (4H2)".

**P 200** Amend the second sentence to read as follows:

"Cylinders, tubes, pressure drums and bundles of cylinders are authorised provided the special packing provisions of 4.1.6, the provisions listed below under (1) to (9) and, when referred to in the column "Special packing provisions" of Tables 1, 2 or 3, the relevant special packing provisions listed below under (10), are met."

Amend paragraph (10) as follows:

- [The amendment to special packing provision k in the German version does not apply to the English text.]
- After special packing provision "u", insert a new special packing provision "ua" to read as follows:

"ua: The interval between periodic tests may be extended to 15 years for aluminium alloy cylinders and bundles of such cylinders if the provisions of paragraph (13) of this packing instruction are applied. This shall not apply to cylinders made from aluminium alloy AA 6351. For mixtures, this provision "ua" may be applied provided all the individual gases in the mixture have been allocated "ua" in Table 1 or Table 2."

- After special packing provision "v", insert a new special packing provision "va" to read as follows:

"va: For seamless steel cylinders which are equipped with residual pressure valves (RPVs) (see note below) that have been designed and tested in accordance with EN ISO 15996:2005 + A1:2007 and for bundles of seamless steel cylinders equipped with main valve(s) with a residual pressure device, tested in accordance with EN ISO 15996:2005 + A1:2007, the interval between periodic tests may be extended to 15 years if the provisions of paragraph (13) of this packing instruction are applied. For mixtures, this provision "va" may be applied provided all the individual gases in the mixture have been allocated "va" in Table 1 or Table 2.

**NOTE:** "Residual Pressure Valve" (RPV) means a closure which incorporates a residual pressure device that prevents ingress of contaminants by maintaining a positive differential between the pressure within the cylinder and the valve outlet. In order to prevent back-flow of fluids into the cylinder from a higher pressure source a "Non-Return Valve" (NRV) function shall either be incorporated into the residual pressure device or be a discrete additional device in the cylinder valve, e.g. a regulator."

In paragraph (11), at the end of the Table, insert the following new standard:

Applicable requirement	Reference	Title of document
(10) p	EN ISO 13088:2012	Gas cylinders – Acetylene cylinder bundles – Filling conditions and filling inspection (ISO 13088:2011)

In paragraph (12) 3.4, replace "or EN 13153:2001 + A1:2003" by:

", EN 13153:2001 + A1:2003, EN ISO 14245:2010 or EN ISO 15995:2010".

Add a new paragraph (13) to read as follows:

"(13) An interval of 15 years for the periodic inspection of seamless steel and aluminium alloy cylinders and bundles of such cylinders may be granted in accordance with special packing provisions ua or va of paragraph (10), if the following provisions are applied:

#### 1. General provisions

1.1 For the application of this paragraph, the competent authority shall not delegate its tasks and duties to Xb bodies (inspection bodies of type B) or IS bodies (in-house inspection services).

1.2 The owner of the cylinders or bundles of cylinders shall apply to the competent authority for granting the 15 year interval, and shall demonstrate that the requirements of sub-paragraphs 2, 3 and 4 are met.

1.3 Cylinders manufactured since 1 January 1999 shall have been manufactured in conformity with one of the following standards:

- EN 1964-1 or EN 1964-2; or
- EN 1975; or

- EN ISO 9809-1 or EN ISO 9809-2; or
- [EN ISO 7866]; or
- Annex I, parts 1 to 3 to Council Directive 84/525/EEC<sup>a</sup> and 84/526/EEC<sup>b</sup>

as applicable at the time of manufacture (see also the Table in 6.2.4.1).

Other cylinders manufactured before 1 January 2009 in conformity with RID in accordance with a technical code accepted by the national competent authority may be accepted for a 15 year interval for periodic inspection, if they are of equivalent safety to the provisions of RID as applicable at the time of application.

**NOTE:** This provision is considered to be fulfilled if the cylinder has been reassessed according to the procedure for the reassessment of conformity described in Annex III of Directive 2010/35/EU of 16 June 2010 or Annex IV, Part II, of Directive 1999/36/EC of 29 April 1999.

Cylinders and bundles of cylinders marked with the United Nations packaging symbol specified in 6.2.2.7.2 (a) shall not be granted a 15 year interval for periodic inspection.

- 1.4 Bundles of cylinders shall be constructed such that contact between cylinders along the longitudinal axis of the cylinders does not result in external corrosion. The supports and restraining straps shall be such as to minimise the risk of corrosion to the cylinders. Shock absorbent materials used in supports shall only be allowed if they have been treated to eliminate water absorption. Examples of suitable materials are water resistant belting and rubber.
- 1.5 The owner shall submit documentary evidence to the competent authority demonstrating that the cylinders comply with the provisions of subparagraph 1.3. The competent authority shall verify that these conditions are met.
- 1.6 The competent authority shall check whether the provisions of subparagraphs 2 and 3 are fulfilled and correctly applied. If all provisions are fulfilled, it shall authorise the 15 year interval for periodic inspection for the cylinders or bundles of cylinders. In this authorisation a group of cylinders (see Note below) covered shall be clearly identified. The authorisation shall be delivered to the owner; the competent authority shall keep a copy. The owner shall keep the documents for as long as the cylinders are authorised for a 15 year interval.

**NOTE:** A group of cylinders is defined by the production dates of identical cylinders for a period, during which the applicable provisions of RID and of the technical code accepted by the competent authority have not changed in their technical content. Example: Cylinders of identical design and volume having been manufactured according to the provisions of RID applicable between 1 January 1985 and 31 December 1988 in combination with a technical code accepted by the competent authority applicable for the

same period form one group in terms of the provisions of this paragraph.

- 1.7 The owner shall ensure compliance with the provisions of RID and the authorisation given as appropriate and shall demonstrate this to the competent authority on request but at least every three years or when significant changes to the procedures are introduced.

## **2. Operational provisions**

- 2.1 Cylinders or bundles of cylinders having been granted a 15 year interval for periodic inspection shall only be filled in filling centres applying a documented and certified quality system to ensure that all the provisions of paragraph (7) of this packing instruction and the requirements and responsibilities of EN 1919:2000, EN 1920:2000 or EN 13365:2002 as applicable are fulfilled and correctly applied. The quality system, according to the ISO 9000 (series) or equivalent, shall be certified by an accredited independent body recognized by the competent authority. This includes procedures for pre- and post-fill inspections and the filling process for cylinders, bundles of cylinders and valves.

- 2.2 Aluminium alloy cylinders and bundles of such cylinders without RPVs having been granted a 15 year interval for periodic inspection shall be checked prior to every fill in accordance with a documented procedure which shall at least include the following:

- Open the cylinder valve or the main valve of the bundle of cylinders main valve to check for residual pressure;
- If gas is emitted, the cylinder or bundle of cylinders may be filled;
- If no gas is emitted, the internal condition of the cylinder or bundle of cylinders shall be checked for contamination;
- If no contamination is detected, the cylinder or bundle of cylinders may be filled.
- If contamination is detected, corrective action shall be carried out.

- 2.3 Seamless steel cylinders fitted with RPVs and bundles of seamless steel cylinders equipped with main valve(s) with a residual pressure device having been granted a 15 year interval for periodic inspection shall be checked prior to every fill in accordance with a documented procedure which shall at least include the following:

- Open the cylinder valve or bundle of cylinders main valve to check for residual pressure;
- If gas is emitted, the cylinder or bundle of cylinders may be filled;
- If no gas is emitted the functioning of the residual pressure device shall be checked;
- If the check shows that the residual pressure device has retained pressure the cylinder or bundle of cylinders may be filled;

- If the check shows that the residual pressure device has not retained pressure, the internal condition of the cylinder or bundle of cylinders shall be checked for contamination:
    - If no contamination is detected, the cylinder or bundle of cylinders may be filled following repair or replacement of the residual pressure device;
    - If contamination is detected, corrective action shall be carried out.
- 2.4 To prevent internal corrosion, only gases of high quality with very low potential contamination shall be filled into cylinders or bundles of cylinders. This is deemed to be fulfilled, if the compatibility of gases/material is acceptable in accordance with EN ISO 11114-1:2012 and EN 11114-2:2013, and the gas quality meets the specifications in EN ISO 14175:2008 or, for gases not covered in the standard, a minimum purity of 99.5% by volume and a maximum moisture content of 40 ml/m<sup>3</sup>(ppm). For nitrous oxide the values shall be a minimum purity of 98% by volume and a maximum moisture content of 70 ml/m<sup>3</sup> (ppm).
- 2.5 The owner shall ensure that the requirements of 2.1 to 2.4 are fulfilled and provide documentary evidence of this to the competent authority on request, but at least every three years or when significant changes to the procedures are introduced.
- 2.6 If a filling centre is situated in a different Contracting State to RID, the owner shall provide to the competent authority, on request, additional documentary evidence that the filling centre is monitored accordingly by the competent authority of that Contracting State to RID. See also 1.2.

### **3. Provisions for qualification and periodic inspection**

- 3.1 Cylinders and bundles of cylinders already in use, for which the conditions of sub-paragraph 2 have been met from the date of the last periodic inspection to the satisfaction of the competent authority, may have their inspection period extended to 15 years from the date of the last periodic inspection. Otherwise the change of test period from ten to fifteen years shall be made at the time of periodic inspection. The periodic inspection report shall indicate that this cylinder or bundle of cylinders shall be fitted with a residual pressure device as appropriate. Other documentary evidence may be accepted by the competent authority.
- 3.2 If a cylinder with a 15 year interval fails the pressure test by bursting or leakage or if a severe defect is detected by a non-destructive test (NDT) during a periodic inspection the owner shall investigate and produce a report on the cause of the failure and if other cylinders (e.g. of the same type or group) are affected. In the latter case, the owner shall inform the competent authority. The competent authority shall then decide on appropriate measures and inform the competent authorities of all other RID Contracting States accordingly.
- 3.3 If internal corrosion and other defects as defined in the periodic inspection standards referenced in 6.2.4 have been detected, the cylinder shall be withdrawn from use and shall not be granted any further period for filling and carriage.

3.4 Cylinders or bundles of cylinders having been granted a 15 year interval for periodic inspection shall only be fitted with valves designed and tested according to EN 849 or EN ISO 10297 as applicable at the time of manufacture (see also the Table in 6.2.4.1). After a periodic inspection a new valve shall be fitted, except that valves which have been refurbished or inspected according to EN ISO 22434:2011 may be re-fitted.

#### 4. Marking

Cylinders and bundles of cylinders having been granted a 15 year interval for periodic inspection in accordance with this paragraph shall have the date (year) of the next periodic inspection as required in section 5.2.1.6 (c) and at the same time additionally be marked clearly and legibly with "P15Y". This marking shall be removed if the cylinder or bundle of cylinders is no longer authorised for a 15 year interval for periodic inspection.

<sup>a</sup> Council directive on the approximation of the laws of the Member States relating to seamless, steel gas cylinders, published in the Official Journal of the European Communities No. L 300 of 19.11.1984.

<sup>b</sup> Council Directive on the approximation of the laws of the Member States relating to seamless, unalloyed aluminium and aluminium alloy gas cylinders, published in the Official Journal of the European Communities No. L 300 of 19.11.1984."

In Table 1, for UN Nos. 1002, 1006, 1046, 1049, 1056, 1065, 1066, 1072, 1954, 1956, 1957, 1964, 1971, 2034 and 3156, in the column for "Special packing provisions", insert:

"ua, va".

In Table 2, for UN Nos. 1013, 1070 and 1080, in the column for "Special packing provisions" against all filling ratio values, insert:

"ua, va".

In Table 2, for UN No. 1058, in the columns for test pressure and filling ratio, delete:

"Test pressure = 1.5 x working pressure".

In Table 2, for UN No. 1082, in column "Name and description", add:

"(REFRIGERANT GAS R1113)".

#### **P 203**

Existing text of paragraph (8) under "Requirements for closed cryogenic receptacles" becomes sub-paragraph "(a)" in front of the existing provision and add the following new sub-paragraph (b):

"(b) The periodic inspection and test frequencies of non-UN closed cryogenic receptacles in accordance with 6.2.3.5.2 shall not exceed 10 years."

#### **P 207**

[The amendments in the German version do not apply to the English text.]



Insert the following new packing instruction P 208:

P 208	PACKING INSTRUCTION	P 208
This instruction applies to Class 2 adsorbed gases.		
<p>(1) The following packagings are authorized provided the general packing requirements of 4.1.6.1 are met:</p> <p style="padding-left: 40px;">Cylinders specified in Chapter 6.2 and in accordance with ISO 11513:2011 or ISO 9809-1:2010.</p> <p>(2) The pressure of each filled cylinder shall be less than 101.3 kPa at 20 °C and less than 300 kPa at 50 °C.</p> <p>(3) The minimum test pressure of the cylinder shall be 21 bar.</p> <p>(4) The minimum burst pressure of the cylinder shall be 94.5 bar.</p> <p>(5) The internal pressure at 65 °C of the filled cylinder shall not exceed the test pressure of the cylinder.</p> <p>(6) The adsorbent material shall be compatible with the cylinder and shall not form harmful or dangerous compounds with the gas to be adsorbed. The gas in combination with the adsorbent material shall not affect or weaken the cylinder or cause a dangerous reaction (e.g. a catalyzing reaction).</p> <p>(7) The quality of the adsorbent material shall be verified at the time of each fill to ensure that the pressure and chemical stability requirements of this packing instruction are met each time an adsorbed gas package is offered for carriage.</p> <p>(8) The adsorbent material shall not meet the criteria of any of the classes in RID.</p> <p>(9) Requirements for cylinders and closures containing toxic gases with an LC<sub>50</sub> less than or equal to 200 ml/m<sup>3</sup> (ppm) (see Table 1) shall be as follows:</p> <ul style="list-style-type: none"> <li>a) Valve outlets shall be fitted with pressure retaining gas-tight plugs or caps having threads matching those of the valve outlets.</li> <li>b) Each valve shall either be of the packless type with non-perforated diaphragm, or be of a type which prevents leakage through or past the packing.</li> <li>c) Each cylinder and closure shall be tested for leakage after filling.</li> <li>d) Each valve shall be capable of withstanding the test pressure of the cylinder and be directly connected to the cylinder by either a taper-thread or other means which meets the requirements of ISO 10692-2:2001.</li> <li>e) Cylinders and valves shall not be fitted with a pressure relief device.</li> </ul> <p>(10) Valve outlets for cylinders containing pyrophoric gases shall be fitted with gas-tight plugs or caps having threads matching those of the valve outlets.</p> <p>(11) The filling procedure shall be in accordance with Annex A of ISO 11513:2011.</p> <p>(12) The maximum period for periodic inspections shall be 5 years.</p>		

(13) Special packing provisions that are specific to a substance (see Table 1).

*Material compatibility*

a: Aluminium alloy cylinders shall not be used.

d: When steel cylinders are used, only those bearing the "H" mark in accordance with 6.2.2.7.4 (p) are permitted.

*Gas specific provisions*

r: The filling of this gas shall be limited such that, if complete decomposition occurs, the pressure does not exceed two thirds of the test pressure of the cylinder.

*Material compatibility for n.o.s. adsorbed gas entries*

z: The construction materials of the cylinders and their accessories shall be compatible with the contents and shall not react to form harmful or dangerous compounds therewith.

**Table 1: Adsorbed gases**

UN No.	Name and description	Classification code	LC <sub>50</sub> ml/m <sup>3</sup>	Special packing provisions
3510	ADSORBED GAS, FLAMMABLE, N.O.S.	9F		z
3511	ADSORBED GAS, N.O.S.	9A		z
3512	ADSORBED GAS, TOXIC, N.O.S.	9T	≤ 5000	z
3513	ADSORBED GAS, OXIDIZING, N.O.S.	9O		z
3514	ADSORBED GAS, TOXIC, FLAMMABLE, N.O.S.	9TF	≤ 5000	z
3515	ADSORBED GAS, TOXIC, OXIDIZING, N.O.S.	9TO	≤ 5000	z
3516	ADSORBED GAS, TOXIC, CORROSIVE, N.O.S.	9TC	≤ 5000	z
3517	ADSORBED GAS, TOXIC, FLAMMABLE, CORROSIVE, N.O.S.	9TFC	≤ 5000	z
3518	ADSORBED GAS, TOXIC, OXIDIZING, CORROSIVE, N.O.S.	9TOC	≤ 5000	z
3519	BORON TRIFLUORIDE, ADSORBED	9TC	387	a
3520	CHLORINE, ADSORBED	9TOC	293	a
3521	SILICON TETRAFLUORIDE, ADSORBED	9TC	450	a
3522	ARSINE, ADSORBED	9TF	20	d
3523	GERMANE, ADSORBED	9TF	620	d, r
3524	PHOSPHORUS PENTAFLUORIDE, ADSORBED	9TC	190	
3525	PHOSPHINE, ADSORBED	9TF	20	d
3526	HYDROGEN SELENIDE, ADSORBED	9TF	2	

Renumber current **P 208** as **P 209**.

**P 404 (1)** Amend to read as follows:

"(1) Combination packagings

Outer packagings: (1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G, 4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G or 4H2)

Inner packagings: Metal receptacles with a maximum net mass of 15 kg each. Inner packagings shall be hermetically sealed and have threaded closures;

Glass receptacles, with a maximum net mass of 1 kg each, having threaded closures with gaskets, cushioned on all sides and contained in hermetically sealed metal cans.

Outer packagings shall have a maximum net mass of 125 kg."

**P 501** Amend the last entry under "Composite packaging" to read as follows:

"Glass receptacle with outer steel, aluminium, fibre or plywood drum (6PA1, 6PB1, 6PD1 or 6PG1) or with outer steel, aluminium, wooden or fibreboard box or with outer wickerwork hamper (6PA2, 6PB2, 6PC, 6PG2 or 6PD2) or with outer expanded or solid plastics packaging (6PH1 or 6PH2)."

**P 502** Amend the last entry under "Composite packaging" to read as follows:

"Glass receptacle with outer steel, aluminium, fibre or plywood drum (6PA1, 6PB1, 6PD1 or 6PG1) or with outer steel, aluminium, wooden or fibreboard box or with outer wickerwork hamper (6PA2, 6PB2, 6PC, 6PG2 or 6PD2) or with outer expanded or solid plastics packaging (6PH1 or 6PH2)."

**P 504** Amend the last entry under "Composite packaging" to read as follows:

"Glass receptacle with outer steel, aluminium, fibre or plywood drum (6PA1, 6PB1, 6PD1 or 6PG1) or with outer steel, aluminium, wooden or fibreboard box or with outer wickerwork hamper (6PA2, 6PB2, 6PC, 6PG2 or 6PD2) or with outer expanded or solid plastics packaging (6PH1 or 6PH2)."

Insert the following new packing instruction P 505:

P 505	PACKING INSTRUCTION		P 505
This instruction applies to UN No. 3375.			
The following packagings are authorized, provided that the general provisions of 4.1.1 and 4.1.3 are met:			
Combination packagings	Inner packaging maximum capacity	Outer packaging maximum net mass	
Boxes (4B, 4C1, 4C2, 4D, 4G, 4H2) or drums (1B2, 1G, 1N2, 1H2, 1D) or jerricans (3B2, 3H2) with glass, plastics or metal inner packagings	5 l	125 kg	
Single packagings	Maximum capacity		
<b>Drums</b>			
aluminium (1B1, 1B2)	250 l		
plastics (1H1, 1H2)	250 l		
<b>Jerricans</b>			
aluminium (3B1, 3B2)	60 l		
plastics (3H1, 3H2)	60 l		
<b>Composite packagings</b>			
plastics receptacle with outer aluminium drum (6HB1)	250 l		
plastics receptacle with outer fibre, plastics or plywood drum (6HG1, 6HH1, 6HD1)	250 l		
plastics receptacle with outer aluminium crate or box or plastics receptacle with outer wooden, plywood, fibreboard or solid plastics box (6HB2, 6HC, 6HD2, 6HG2 or 6HH2)	60 l		
glass receptacle with outer aluminium, fibre or plywood drum (6PB1, 6PG1, 6PD1) or with outer expanded or solid plastics plastics receptacles (6PH1 or 6PH2) or with outer aluminium crate or box or with outer wooden or fibreboard box or with outer wickerwork hamper (6PB2, 6PC, 6PG2 or 6PD2)	60 l		

**P 601 (2)** At the beginning after "consisting of metal", insert:  
"or plastics".

**P 602 (2)** At the beginning after "consisting of metal", insert:  
"or plastics".

**P 650** [The first amendment to paragraph (4) in the German version does not apply to the English text.]

Amend the mark in paragraph (4) to read as follows:



[The amendments to P 650 (6), (7) and (8) in the German version do not apply to the English text.]

**P 802** Amend paragraph (3) to read as follows:

"(3) Composite packagings: Glass receptacle with outer steel, aluminium or plywood drum (6PA1, 6PB1 or 6PD1) or with outer steel, aluminium or wooden box or with outer wickerwork hamper (6PA2, 6PB2, 6PC or 6PD2) or with outer solid plastics packaging (6PH2); maximum capacity: 60 litres."

**P 804** [The amendment to paragraph (2) in the French version does not apply to the English text.]

Insert the following new packing instruction:

P 805	PACKING INSTRUCTION	P 805
This instruction applies to UN 3507.		
The following packagings are authorized provided that the general provisions of 4.1.1 and 4.1.3 and the special packing provisions of 4.1.9.1.2, 4.1.9.1.4 and 4.1.9.1.7 are met:		
Packagings consisting of:		
(a) Metal or plastics primary receptacle(s); in		
(b) Leakproof rigid secondary packaging(s); in		
(c) A rigid outer packaging:		
Drums (1A2, 1B2, 1N2, 1H2, 1D, 1G);		
Boxes (4A, 4B, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2);		
Jerricans (3A2, 3B2, 3H2).		
<b>Additional requirements</b>		
1. Primary inner receptacles shall be packed in secondary packagings in a way that, under normal conditions of carriage, they cannot break, be punctured or leak their contents into the secondary packaging. Secondary packagings shall be secured in outer packagings with suitable cushioning material to prevent movement. If multiple primary receptacles are placed in a single secondary packaging, they shall be either individually wrapped or separated so as to prevent contact between them.		
2. The contents shall comply with the provisions of 2.2.7.2.4.5.2.		
3. The provisions of 6.4.4 shall be met.		

**Special packing provision**

In the case of fissile-excepted material, limits specified in 2.2.7.2.3.5 and 6.4.11.2 shall be met.

**P 901** After "(see special provision 251 of Chapter 3.3).", insert the following new sentence:

"Where the kit contains only dangerous goods to which no packing group is assigned, packagings shall meet the packing group II performance level."

[The amendment to the additional provision in the German version does not apply to the English text.]

**P 903a** Amend to read as follows:

<b>P 903a</b>	<b>PACKING INSTRUCTION</b>	<b>P 903a</b>
(Deleted)		

**P 903b** Amend to read as follows:

<b>P 903b</b>	<b>VERPACKUNGSANWEISUNG</b>	<b>P 903b</b>
(Deleted)		

**P 904** [The first three amendments to paragraph (2) in the German version do not apply to the English text.]

Amend the mark to read as follows:



**P 906** Amend paragraph (2) to read as follows:

"(2) For transformers and condensers and other devices:

(a) Packagings in accordance with packing instructions P 001 or P 002. The articles shall be secured with suitable cushioning material to prevent inadvertent movement during normal conditions of carriage; or

(b) Leakproof packagings which are capable of containing, in addition to the devices, at least 1.25 times the volume of the liquid PCBs, polyhalogenated biphenyls or terphenyls present in them. There shall be sufficient absorbent material in the packagings to absorb at least 1.1 times the volume of liquid which is contained in the devices. In general, transformers

and condensers shall be carried in leakproof metal packagings which are capable of holding, in addition to the transformers and condensers, at least 1.25 times the volume of the liquid present in them."

Insert the following new packing instructions P 908 and P 909:

"

P 908	PACKING INSTRUCTION	P 908
<p>This instruction applies to damaged or defective lithium ion cells and batteries and damaged or defective lithium metal cells and batteries, including those contained in equipment, of UN Nos. 3090, 3091, 3480 and 3481.</p>		
<p>The following packagings are authorized provided the general provisions of 4.1.1 and 4.1.3 are met:</p>		
<p>For cells and batteries and equipment containing cells and batteries:</p>		
<p style="padding-left: 40px;">Drums (1A2, 1B2, 1N2, 1H2, 1D, 1G);</p>		
<p style="padding-left: 40px;">Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2);</p>		
<p style="padding-left: 40px;">Jerricans (3A2, 3B2, 3H2).</p>		
<p>Packagings shall conform to the packing group II performance level.</p>		
<ol style="list-style-type: none"> <li>1. Each damaged or defective cell or battery or equipment containing such cells or batteries shall be individually packed in inner packaging and placed inside an outer packaging. The inner packaging or outer packaging shall be leak-proof to prevent the potential release of electrolyte.</li> <li>2. Each inner packaging shall be surrounded by sufficient non-combustible and non-conductive thermal insulation material to protect against a dangerous evolution of heat.</li> <li>3. Sealed packagings shall be fitted with a venting device when appropriate.</li> <li>4. Appropriate measures shall be taken to minimize the effects of vibrations and shocks, prevent movement of the cells or batteries within the package that may lead to further damage and a dangerous condition during carriage. Cushioning material that is non-combustible and non-conductive may also be used to meet this requirement.</li> <li>5. Non combustibility shall be assessed according to a standard recognized in the country where the packaging is designed or manufactured.</li> </ol>		
<p>For leaking cells or batteries, sufficient inert absorbent material shall be added to the inner or outer packaging to absorb any release of electrolyte.</p>		
<p>A cell or battery with a net mass of more than 30 kg shall be limited to one cell or battery per outer packaging.</p>		
<p><b>Additional requirement</b></p>		
<p>Cells or batteries shall be protected against short circuit.</p>		

P 909	PACKING INSTRUCTION	P 909
<p>This instruction applies to UN Nos. 3090, 3091, 3480 and 3481 carried for disposal or recycling, either packed together with or packed without non-lithium batteries.</p>		
<p>(1) Cells and batteries shall be packed in accordance with the following:</p> <ul style="list-style-type: none"> <li>(a) The following packagings are authorized, provided that the general provisions of 4.1.1 and 4.1.3, are met: Drums (1A2, 1B2, 1N2, 1H2, 1D, 1G); Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H2); and Jerricans (3A2, 3B2, 3H2).</li> <li>(b) Packagings shall conform to the packing group II performance level.</li> <li>(c) Metal packagings shall be fitted with a non-conductive lining material (e.g. plastics) of adequate strength for the intended use.</li> </ul> <p>(2) However, lithium ion cells with a Watt-hour rating of not more than 20 Wh, lithium ion batteries with a Watt-hour rating of not more than 100 Wh, lithium metal cells with a lithium content of not more than 1 g and lithium metal batteries with an aggregate lithium content of not more than 2 g may be packed in accordance with the following:</p> <ul style="list-style-type: none"> <li>(a) In strong outer packaging up to 30 kg gross mass meeting the general provisions of 4.1.1, except 4.1.1.3, and 4.1.3.</li> <li>(b) Metal packagings shall be fitted with a non-conductive lining material (e.g. plastics) of adequate strength for the intended use.</li> </ul> <p>(3) For cells or batteries contained in equipment, strong outer packagings constructed of suitable material, and of adequate strength and design in relation to the packaging capacity and its intended use, may be used. Packagings need not meet the requirements of 4.1.1.3. Large equipment may be offered for carriage unpackaged or on pallets when the cells or batteries are afforded equivalent protection by the equipment in which they are contained.</p> <p>(4) In addition, for cells or batteries with a gross mass of 12 kg or more employing a strong, impact resistant outer casing, strong outer packagings constructed of suitable material and of adequate strength and design in relation to the packaging's capacity and its intended use, may be used. Packagings need not meet the requirements of 4.1.1.3.</p>		
<p><b>Additional requirements</b></p> <ol style="list-style-type: none"> <li>1. Cells and batteries shall be designed or packed to prevent short circuits and the dangerous evolution of heat.</li> <li>2. Protection against short circuits and the dangerous evolution of heat includes, but is not limited to: <ul style="list-style-type: none"> <li>– individual protection of the battery terminals,</li> <li>– inner packaging to prevent contact between cells and batteries,</li> <li>– batteries with recessed terminals designed to protect against short circuits, or</li> <li>– the use of a non-conductive and non-combustible cushioning material to fill empty space between the cells or batteries in the packaging.</li> </ul> </li> <li>3. Cells and batteries shall be secured within the outer packaging to prevent excessive movement during carriage (e.g. by using a non-combustible and non-conductive cushioning material or through the use of a tightly closed plastics bag).</li> </ol>		



"

#### 4.1.4.2

**IBC 02** Insert the following new special provision B 16:

"**B 16** For UN No. 3375, IBCs of type 31A and 31N are not allowed without competent authority approval."

**[**Add the following new special packing provision specific to RID and ADR:

"**BB 4** For UN Nos. 1133, 1139, 1169, 1197, 1210, 1263, 1266, 1286, 1287, 1306, 1866, 1993 and 1999, assigned to packing group III in accordance with 2.2.3.1.4, IBCs with a capacity greater than 450 litres are not permitted."**]**

**IBC 04** Replace "and 21N" by:

", 21N, 31A, 31B and 31N".

**IBC 05** In paragraph (1), replace "and 21N" by:

", 21N, 31A, 31B and 31N".

In paragraph (2), replace "and 21H2" by:

", 21H2, 31H1 and 31H2".

In paragraph (3), replace "and 21HZ1" by:

", 21HZ1 and 31HZ1".

**IBC 06** In paragraph (1), replace "and 21N" by:

", 21N, 31A, 31B and 31N".

In paragraph (2), replace "and 21H2" by:

", 21H2, 31H1 and 31H2".

In paragraph (3), replace "and 21HZ2" by:

", 21HZ2 and 31HZ1".

**IBC 07** In paragraph (1), replace "and 21N" by:

", 21N, 31A, 31B and 31N".

In paragraph (2), replace "and 21H2" by:

", 21H2, 31H1 and 31H2".

In paragraph (3), replace "and 21HZ2" by:

", 21HZ2 and 31HZ1".

**IBC 08** In paragraph (1), replace "and 21N" by:

", 21N, 31A, 31B and 31N".

In paragraph (2), replace "and 21H2" by:

", 21H2, 31H1 and 31H2".

In paragraph (3), replace "and 21HZ2" by:

"21HZ2 and 31HZ1".

At the end, add:

"

<b>Special packing provision specific to RID and ADR</b>	
<b>BB 3</b>	<p>For UN 3509, IBCs are not required to meet the requirements of 4.1.1.3.</p> <p>IBCs meeting the requirements of 6.5.5, made leak tight or fitted with a leak tight and puncture resistant sealed liner or bag, shall be used.</p> <p>When the only residues are solids which are not liable to become liquid at temperatures likely to be encountered during carriage, flexible IBCs may be used.</p> <p>When liquid residues are present, rigid IBCs that provide a means of retention (e.g. absorbent material) shall be used.</p> <p>Before being filled and handed over for carriage, every IBC shall be inspected to ensure that it is free from corrosion, contamination or other damage. Any IBC showing signs of reduced strength shall no longer be used (minor dents and scratches are not considered as reducing the strength of the IBC).</p> <p>IBCs intended for the carriage of packagings, discarded, empty, uncleaned with residues of Class 5.1 shall be so constructed or adapted that the goods cannot come into contact with wood or any other combustible material.</p>

"

**IBC 100** In the first line of the packing instruction, after "0082," , insert:

"0222," .

Add the following special packing provisions B 3 and B 17:

**"B 3** For UN No. 0222, flexible IBCs shall be sift-proof and water resistant or shall be fitted with a sift-proof and water resistant liner.

**B 17** For UN No. 0222, metal IBCs are not authorized."

## 4.1.4.3

## LP 02

[The amendment to special packing provision L 2 in the German version does not apply to the English text.]

At the end, add:

"

<b>Special packing provision specific to RID and ADR</b>	
<b>LL 1</b>	<p>For UN 3509, large packagings are not required to meet the requirements of 4.1.1.3.</p> <p>Large packagings meeting the requirements of 6.6.4, made leak tight or fitted with a leak tight and puncture resistant sealed liner or bag, shall be used.</p> <p>When the only residues are solids which are not liable to become liquid at temperatures likely to be encountered during carriage, flexible large packagings may be used.</p> <p>When liquid residues are present, rigid large packagings that provide a means of retention (e.g. absorbent material) shall be used.</p> <p>Before being filled and handed over for carriage, every large packaging shall be inspected to ensure that it is free from corrosion, contamination or other damage. Any large packaging showing signs of reduced strength shall no longer be used (minor dents and scratches are not considered as reducing the strength of the large packaging).</p> <p>Large packagings intended for the carriage of packagings, discarded, empty, uncleaned with residues of Class 5.1 shall be so constructed or adapted that the goods cannot come into contact with wood or any other combustible material.</p>

"

Add the following new packing instructions LP 903 and LP 904:

"

LP 903	PACKING INSTRUCTION	LP 903
<p>This instruction applies to UN Nos. 3090, 3091, 3480 and 3481.</p>		
<p>The following large packagings are authorized for a single battery, including for a battery contained in equipment, provided that the general provisions of 4.1.1 and 4.1.3 are met:</p> <p>Rigid large packagings conforming to the packing group II performance level, made of:</p> <ul style="list-style-type: none"> <li>steel (50A);</li> <li>aluminium (50B);</li> <li>metal other than steel or aluminium (50N);</li> <li>rigid plastics (50H);</li> <li>natural wood (50C);</li> <li>plywood (50D);</li> <li>reconstituted wood (50F);</li> <li>rigid fibreboard (50G).</li> </ul> <p>The battery shall be packed so that the battery is protected against damage that may be caused by its movement or placement within the large packaging.</p>		
<p><b>Additional requirement</b></p> <p>Batteries shall be protected against short circuit.</p>		

LP 904	PACKING INSTRUCTION	LP 904
<p>This instruction applies to single damaged or defective batteries of UN Nos. 3090, 3091, 3480 and 3481, including those contained in equipment.</p>		
<p>The following large packagings are authorized for a single damaged or defective battery and for a single damaged or defective battery contained in equipment, provided the general provisions of 4.1.1 and 4.1.3 are met:</p> <p>For batteries and equipment containing batteries, large packagings made of:</p> <ul style="list-style-type: none"> <li>steel (50A)</li> <li>aluminium (50B)</li> <li>metal other than steel or aluminium (50N)</li> <li>rigid plastics (50H)</li> <li>plywood (50D)</li> </ul> <p>Packagings shall conform to the packing group II performance level.</p> <ol style="list-style-type: none"> <li>1. Each damaged or defective battery or equipment containing such a battery shall be individually packed in an inner packaging and placed inside an outer packaging. The inner packaging or outer packaging shall be leak-proof to prevent the potential release of electrolyte.</li> <li>2. Each inner packaging shall be surrounded by sufficient non-combustible and non-conductive thermal insulation material to protect against a dangerous evolution of heat.</li> <li>3. Sealed packagings shall be fitted with a venting device when appropriate.</li> <li>4. Appropriate measures shall be taken to minimize the effects of vibrations and shocks, prevent movement of the battery within the package that may lead to further damage and a dangerous condition during carriage. Cushioning material that is non-combustible and non-conductive</li> </ol>		

may also be used to meet this requirement.

5. Non combustibility shall be assessed according to a standard recognized in the country where the packaging is designed or manufactured.

For leaking batteries, sufficient inert absorbent material shall be added to the inner or outer packaging to absorb any release of electrolyte.

#### **Additional requirement**

Batteries shall be protected against short circuit.

- 4.1.6.15** In the first row of the Table, replace "ISO 11114-1:1997" by:

"ISO 11114-1:2012".

In the title of the standard "ISO 11114-1:2012", replace "Transportable gas cylinders" by:

"Gas cylinders".

In the Table, after standard "EN 13153:2001 + A1:2003", insert the following standards:

<b>Applicable paragraphs</b>	<b>Reference</b>	<b>Document title</b>
4.1.6.8 Valves with inherent protection	EN ISO 14245:2010	Gas cylinders – Specifications and testing of LPG cylinder valves – Self closing (ISO 14245:2006)
	EN ISO 15995:2010	Gas cylinders – Specifications and testing of LPG cylinder valves – Manually operated (ISO 15995:2006)

- 4.1.9** Amend the title to read:

**"4.1.9 Special packing provisions for radioactive material".**

- 4.1.9.1.3** Delete:

", other than an excepted package,".

- 4.1.9.1.6** Amend the introductory sentence to read as follows:

"Before a packaging is first used to carry radioactive material, it shall be confirmed that it has been manufactured in conformity with the design specifications to ensure compliance with the relevant provisions of RID and any applicable certificate of approval. The following requirements shall also be fulfilled, if applicable:".

In paragraph (a), replace "package" by:

"packaging".

In (b) amend the beginning of the sentence to read as follows:

"For each packaging intended for use as a Type B(U), Type B(M) or Type C package and for each packaging intended to contain fissile material ...".

Amend (c) to read as follows:

"(c) For each packaging intended to contain fissile material, it shall be ensured that the effectiveness of the criticality safety features is within the limits applicable to or specified for the design and in particular where, in order to comply with the requirements of 6.4.11.1 neutron poisons are specifically included, checks shall be performed to confirm the presence and distribution of those neutron poisons."

**4.1.9.1** Insert a new paragraph 4.1.9.1.7 to read as follows:

**"4.1.9.1.7** Before each shipment of any package, it shall be ensured that the package contains neither:

- (a) Radionuclides different from those specified for the package design; nor
- (b) Contents in a form, or physical or chemical state different from those specified for the package design."

Current paragraphs **4.1.9.1.7** to **4.1.9.1.11** become new paragraphs **4.1.9.1.8** to **4.1.9.1.12**.

**4.1.9.1.8** (former 4.1.9.1.7) Amend to read as follows:

**"4.1.9.1.8** Before each shipment of any package, it shall be ensured that all the requirements specified in the relevant provisions of RID and in the applicable certificates of approval have been fulfilled. The following requirements shall also be fulfilled, if applicable:

- (a) It shall be ensured that lifting attachments which do not meet the requirements of 6.4.2.2 have been removed or otherwise rendered incapable of being used for lifting the package, in accordance with 6.4.2.3;
- (b) Each Type B(U), Type B(M) and Type C package shall be held until equilibrium conditions have been approached closely enough to demonstrate compliance with the requirements for temperature and pressure unless an exemption from these requirements has received unilateral approval;
- (c) For each Type B(U), Type B(M) and Type C package, it shall be ensured by inspection and/or appropriate tests that all closures, valves and other openings of the containment system through which the radioactive contents might escape are properly closed and, where appropriate, sealed in the manner for which the demonstrations of compliance with the requirements of 6.4.8.8 and 6.4.10.3 were made;
- (d) For packages containing fissile material the measurement specified in 6.4.11.5 (b) and the tests to demonstrate closure of each package as specified in 6.4.11.8 shall be performed."

**4.1.9.2.2** Amend to read as follows:

**"4.1.9.2.2** For LSA material and SCO which are or contain fissile material, which is not excepted under 2.2.7.2.3.5, the applicable requirements of 7.5.11, CW 33 (4.1) and (4.2) shall be met."

**4.1.9.2** Insert a new paragraph 4.1.9.2.3 to read as follows:

**"4.1.9.2.3** For LSA material and SCO which are or contain fissile material, the applicable requirements of 6.4.11.1 shall be met."

Current paragraphs **4.1.9.2.3** and **4.1.9.2.4** become new paragraphs **4.1.9.2.4** and **4.1.9.2.5**.

**4.1.9.2.4** (former 4.1.9.2.3)

In paragraph (b), at the end, delete:

"and".

At the end of paragraph (c), replace "." by:

",".

Add a new paragraph (d) to read as follows:

"(d) Unpackaged fissile material shall meet the requirements of 2.2.7.2.3.5 (e)."

**4.1.9.2.5** (former 4.1.9.2.4) In the first sentence, replace "4.1.9.2.3" by:

"4.1.9.2.4".

Before the title of the Table, insert:

**"Table 4.1.9.2.5:"**.

In footnote "a" under the Table replace "4.1.9.2.3" by:

"4.1.9.2.4".

[The second amendment to footnote a in the French version does not apply to the English text.]

**4.1.9.3** Amend to read as follows:

**"4.1.9.3 Packages containing fissile material**

The contents of packages containing fissile material shall be as specified for the package design either directly in RID or in the certificate of approval."

**4.1.10.1** In Note 2, replace "goods" with:

"radioactive material".

**4.1.10.4**

**[MP 20** In the second sentence, delete:

"and articles".]

## Chapter 4.2

**4.2.1.9.4** [The amendment in the French version does not apply to the English text.]

**4.2.5.2.6** Amend the header to the tabulated portable tank instructions for T1 – T22 to read as follows:

"These portable tank instructions apply to liquid and solid substances of Class 1 and Classes 3 to 9. The general provisions of Section 4.2.1 and the requirements of Section 6.7.2 shall be met."

[The amendments to portable tank instruction T 50 in the German version do not apply to the English text.]

### 4.2.5.3

**TP 32** At the beginning of paragraph (b), insert:

"For UN 3375 only,".

[The second amendment to paragraph (b) of portable tank special provision TP 32 in the German version does not apply to the English text.]

Add the following new portable tank special provision:

**"TP 41** With the agreement of the competent authority, the 2.5 year internal examination may be waived or substituted by other test methods or inspection procedures, provided that the portable tank is dedicated to the carriage of the organometallic substances to which this tank special provision is assigned. However this examination is required when the conditions of 6.7.2.19.7 are met."

## Chapter 4.3

**[4.3.2.1.5** In footnote 2, replace "battery-vehicle" with:

"battery-wagon".]

**4.3.2.2.1** Amend to read as follows:

**"4.3.2.2.1** The following degrees of filling shall not be exceeded in tanks intended for the carriage of liquids at ambient temperatures:

- (a) for flammable substances, environmentally hazardous substances and flammable environmentally hazardous substances, without additional risks (e.g. toxicity or corrosivity), in tanks with a breather device or with safety valves (even where preceded by a bursting disc):

$$\text{Degree of filling} = \frac{100}{1 + \alpha (50 - t_F)} \text{ \% of capacity;}$$

- (b) for toxic or corrosive substances (whether flammable or environmentally hazardous or not) in tanks with a breather device or with safety valves (even where preceded by a bursting disc):

$$\text{Degree of filling} = \frac{98}{1 + \alpha (50 - t_F)} \text{ \% of capacity;}$$



- (c) for flammable substances, environmentally hazardous substances and slightly toxic or corrosive substances (whether flammable or environmentally hazardous or not) in hermetically closed tanks without a safety device:

$$\text{Degree of filling} = \frac{97}{1 + \alpha (50 - t_F)} \text{ \% of capacity;}$$

- (d) for highly toxic, toxic, highly corrosive or corrosive substances (whether flammable or environmentally hazardous or not) in hermetically closed tanks without a safety device:

$$\text{Degree of filling} = \frac{95}{1 + \alpha (50 - t_F)} \text{ \% of capacity.}"$$

- 4.3.3.2.5** In the Table, for UN No. 1082, in column "Name", add:

"(REFRIGERANT GAS R1113)".

- 4.3.3.3.2** Replace "(see UIC leaflet 573<sup>4</sup> (Technical conditions for the construction of tank wagons))" with:

"(see standard EN 15877-1:2012 Railway applications – Marking on railway vehicles. Part 1: Freight wagons)."

- 4.3.4.1.1** For the tank code "V", replace "non-explosion-pressure proof tank" by:

"non-explosion pressure shock resistant tank".

For the tank code "F", replace "explosion-pressure proof tank" by:

"explosion pressure shock resistant tank".

- 4.3.5** [The amendments to TU 4, TU 16 and TU 39 in the German version do not apply to the English text.]

## Chapter 4.5

- 4.5.1.1** Amend the beginning of the second sub-paragraph to read as follows:

"Wastes consisting of substances assigned to tank code L4BH in Column (12) of Table A of Chapter 3.2 or to another tank code permitted under the hierarchy in 4.3.4.1.2 may be carried ...".

- 4.5.1** Add a new 4.5.1.2 to read as follows:

- "4.5.1.2** Non waste substances may be carried in vacuum-operated waste tanks under the same conditions as mentioned under 4.5.1.1."

- [4.5.2.1** Replace "4.5.2.2 to 4.5.2.5" by:

"4.5.2.2 to 4.5.2.6".

**4.5.2** Insert a new 4.5.2.6 to read as follows:

**"4.5.2.6** When a vacuum pump/exhauster unit which may provide a source of ignition is used to fill or discharge flammable liquids, precautions shall be taken to avoid ignition of the substance or to avoid the propagation of the effects of the ignition outside the tank itself."**"]**

## **PART 5**

### **Chapter 5.1**

**5.1.2.1** In paragraph (a), add the following new sentence at the beginning of the last sub-paragraph (before "The marking of the word ..."):

"The lettering of the "OVERPACK" marking shall be at least 12 mm high."

Amend paragraph (b) to read as follows:

"(b) Orientation arrows illustrated in 5.2.1.9 shall be displayed on two opposite sides of overpacks containing packages which shall be marked in accordance with 5.2.1.9.1, unless the marking remains visible."

**5.1.3.2** Replace "Packagings, including IBCs, and tanks" by:

"Containers, tanks, IBCs, as well as other packagings and overpacks,".

**5.1.5.1.1** In the first sentence replace "for package designs" by:

"of package designs".

**5.1.5.1.4 (c)** Replace "for shipment approval" by:

"for approval of shipment (see 6.4.23.2)".

**5.1.5.2.1** In paragraph (a), insert a new sub-paragraph (iii) to read as follows:

"(iii) fissile material excepted under 2.2.7.2.3.5 (f);".

Current sub-paragraphs (iii) to (vi) become new (iv) to (vii).

In paragraph (a) (v) (former paragraph (a) (iv)) delete:

"all".

In paragraph (a) (v) (former paragraph (a) (iv)) replace "6.4.11.2" by:

"2.2.7.2.3.5, 6.4.11.2 or 6.4.11.3".

At the end of paragraph (c), replace "." by:

";".

Insert new paragraphs (d) and (e) to read as follows:

"(d) Determination of the basic radionuclide values referred to in 2.2.7.2.2.1 for individual radionuclides which are not listed in Table 2.2.7.2.2.1 (see 2.2.7.2.2.2 (a));

(e) Alternative activity limits for an exempt consignment of instruments or articles (see 2.2.7.2.2.2 (b))."

Amend the second sub-paragraph after paragraphs (a) to (e) to read as follows:

"The certificates of approval for the package design and the shipment may be combined into a single certificate."

**5.1.5.2.3** Amend the beginning of the first sentence to read:

"For package designs where it is not required that a competent authority issue a certificate of approval, the consignor ...".

**5.1.5.3.4** In the first sentence, replace "and overpacks" by:

", overpacks and containers".

In paragraph (a), replace "or overpack" by:

", overpack or container" (twice).

In (e), after "overpack", insert:

"or container".

In the title of Table 5.1.5.3.4, replace "and overpacks" by:

", overpacks and containers".

In footnote "b" to the Table, insert at end:

"except for containers (see Table D in 7.5.11 CW 33 (3.3))".

**5.1.5.3.5** Replace "design or shipment approval" by:

"approval of design or shipment".

**5.1.5.4** Amend the title to read:

**"5.1.5.4** Specific provisions for excepted packages of radioactive material of Class 7".

**5.1.5.4.1** After "excepted packages", insert:

"of radioactive material of Class 7".

**5.1.5.4.2** Amend to read as follows:

**"5.1.5.4.2** The documentation requirements of Chapter 5.4 do not apply to excepted packages of radioactive material of Class 7, except that:

- (a) The UN number preceded by the letters "UN" and the name and address of the consignor and the consignee and, if relevant, the identification mark for each competent authority certificate of approval (see 5.4.1.2.5.1 (g)) shall be shown on a transport document such as a bill of lading, air waybill or CIM or CMR consignment note;
- (b) If relevant, the requirements of 5.4.1.2.5.1 (g), 5.4.1.2.5.3 and 5.4.1.2.5.4 shall apply;
- (c) The requirements of 5.4.2 and 5.4.4 shall apply."

**5.1.5.4** Insert a new paragraph 5.1.5.4.3 to read as follows:

**"5.1.5.4.3** The requirements of 5.2.1.7.8 and 5.2.2.1.11.5 shall apply if relevant."

**5.1.5.5** In the last column of the Table, in the row for "Special form radioactive material", replace "1.6.6.3" by:

"1.6.6.4".

## **Chapter 5.2**

**5.2.1.3** Add the following new sentence at the end:

"The lettering of the "SALVAGE" marking shall be at least 12 mm high."

**5.2.1.7** Replace "for goods of Class 7" by:

"for radioactive material".

**5.2.1.7.1** Insert the following sentence at the end:

"Each overpack shall be legibly and durably marked on the outside of the overpack with an identification of either the consignor or consignee, or both unless these markings of all packages within the overpack are clearly visible."

**5.2.1.7.5** Amend the introductory sentence to read as follows:

"Each package which conforms to a design approved under one or more of paragraphs 5.1.5.2.1, 6.4.22.1 to 6.4.22.4, 6.4.23.4 to 6.4.23.7 and 6.4.24.2 shall be legibly and durably marked on the outside of the package with the following information:"

Amend paragraph (c) to read as follows:

"(c) "Type B(U)", "Type B(M)" or "Type C", in the case of a Type B(U), Type B(M) or Type C package design."

Delete paragraph (d).

5.2.1.7.7 Replace "4.1.9.2.3" by:

"4.1.9.2.4".

5.2.1.7.8 Replace "competent authority design or shipment approval" by:

"competent authority approval of design or shipment".

5.2.1.8.3 Amend to read as follows:

"5.2.1.8.3 The environmentally hazardous substance mark shall be as shown in Figure 5.2.1.8.3.

**Figure 5.2.1.8.3**



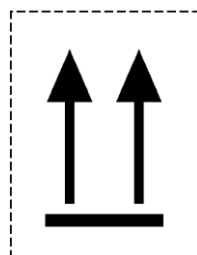
Environmentally hazardous substance mark

The marking shall be in the form of a square set at an angle of 45° (diamond-shaped). The symbol (fish and tree) shall be black on white or suitable contrasting background. The minimum dimensions shall be 100 mm × 100 mm and the minimum width of the line forming the diamond shall be 2 mm. If the size of the package so requires, the dimensions/line thickness may be reduced, provided the marking remains clearly visible. Where dimensions are not specified, all features shall be in approximate proportion to those shown.

**NOTE:** The labelling provisions of 5.2.2 apply in addition to any requirement for packages to bear the environmentally hazardous substance mark."

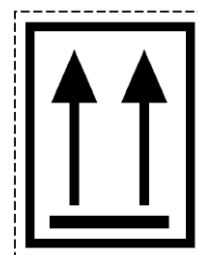
5.2.1.9.1 Number the figures and amend the caption to read as follows:

**"Figure 5.2.1.9.1.1**



or

**Figure 5.2.1.9.1.2**



Two black or red arrows on white or suitable contrasting background.  
The rectangular border is optional.

All features shall be in approximate proportion to those shown."

**5.2.2.1.11.1** Amend the first and second sentences to read as follows:

"Except when enlarged labels are used in accordance with 5.3.1.1.3, each package, overpack and container containing radioactive material shall bear the labels conforming to the applicable models Nos. 7A, 7B or 7C, according to the appropriate category. Labels shall be affixed to two opposite sides on the outside of the package or overpack or on the outside of all four sides of a container or tank."

In the fourth sentence:

– For "under 6.4.11.2" read:

"under the provisions of 2.2.7.2.3.5".

– Replace "which conform to model" by:

"conforming to model".

– Replace the last phrase by the following:

"such labels, where applicable, shall be affixed adjacent to the labels conforming to the applicable model Nos. 7A, 7B or 7C."

**5.2.2.1.11.2** In the introductory sentence, replace "models numbers 7A, 7B and 7C" by:

"the applicable model No. 7A, 7B or 7C".

In paragraph (b), amend the last sentence to read as follows:

"For fissile material, the total mass of fissile nuclides in units of grams (g), or multiples thereof, may be used in place of activity;".

**5.2.2.1.11.3** Amend to read as follows:

**"5.2.2.1.11.3** Each label conforming to the model No. 7E shall be completed with the criticality safety index (CSI) as stated in the certificate of approval applicable in the countries through or into which the consignment is carried and issued by the competent authority or as specified in 6.4.11.2 or 6.4.11.3."

**5.2.2.1.11.4** Amend to read as follows:

**"5.2.2.1.11.4** For overpacks and containers, the label conforming to model No. 7E shall bear the sum of the criticality safety indexes of all the packages contained therein."

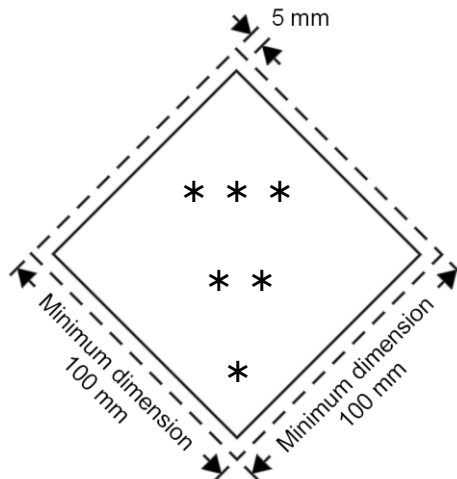
**5.2.2.1.11.5** Replace "competent authority design or shipment approval" by:

"competent authority approval of design or shipment".

**5.2.2.2.1** [The amendment in the German version does not apply to the English text.]

**5.2.2.2.1.1** Amend to read as follows:

**"5.2.2.2.1.1** Labels shall be configured as shown in Figure 5.2.2.2.1.1.

**Figure 5.2.2.1.1**

Class/division label

- \* The class or for Classes 4.1, 4.2 and 4.3, the figure "4" or for Classes 6.1 and 6.2, the figure "6", shall be shown in the bottom corner.
- \*\* Additional text/numbers/letters shall (if mandatory) or may (if optional) be shown in this bottom half.
- \*\*\* The class symbol or, for divisions 1.4, 1.5 and 1.6, the division number and for Model No 7E the word "FISSILE" shall be shown in this top half."

**5.2.2.2.1.1.1** Labels shall be displayed on a background of contrasting colour, or shall have either a dotted or solid outer boundary line.

**5.2.2.2.1.1.2** The label shall be in the form of a square set at an angle of 45° (diamond-shaped). The minimum dimensions shall be 100 mm × 100 mm and the minimum width of the line inside the edge forming the diamond shall be 2 mm. The line inside the edge shall be parallel and 5 mm from the outside of that line to the edge of the label. The line inside the edge on the upper half of the label shall be the same colour as the symbol and the line inside the edge on the lower half of the label shall be the same colour as the class or division number in the bottom corner. Where dimensions are not specified, all features shall be in approximate proportion to those shown.

**5.2.2.2.1.1.3** If the size of the package so requires the dimensions may be reduced, provided the symbols and other elements of the label remain clearly visible. The line inside the edge shall remain 5 mm to the edge of the label. The minimum width of the line inside the edge shall remain 2 mm. Dimensions for cylinders shall comply with 5.2.2.2.1.2."

## Chapter 5.3

**5.3.1.1.1** [The amendment in the German version to TU 39 does not apply to the English text.]

**5.3.1.1.3** In the last sentence, replace "the label required" by:

"the required label of model No. 7A, 7B or 7C".

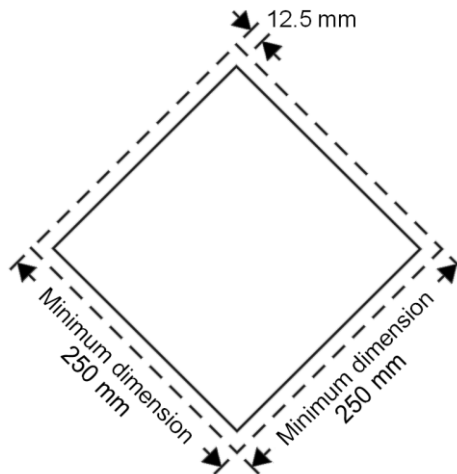
Add the following sentence at the end of the last paragraph:

"In that case, the dimensions shall be not less than 250 mm by 250 mm."

**5.3.1.7.1** Amend read as follows:

**"5.3.1.7.1** Except as provided in 5.3.1.7.2 for the Class 7 placard, and in 5.3.6.2 for the environmentally hazardous substance mark, a placard shall be configured as shown in Figure 5.3.1.7.1.

**Figure 5.3.1.7.1**



Placard (except for Class 7)

The placard shall be in the form of a square set at an angle of 45° (diamond-shaped). The minimum dimensions shall be 250 mm × 250 mm (to the edge of the placard). The line inside the edge shall be parallel and 12.5 mm from the outside of that line to the edge of the placard. The symbol and line inside the edge shall correspond in colour to the label for the class or division of the dangerous goods in question. The class or division symbol/numeral shall be positioned and sized in proportion to those prescribed in 5.2.2.2 for the corresponding class or division of the dangerous goods in question. The placard shall display the number of the class or division (and for goods in Class 1, the compatibility group letter) of the dangerous goods in question in the manner prescribed in 5.2.2.2 for the corresponding label, in digits not less than 25 mm high. Where dimensions are not specified, all features shall be in approximate proportion to those shown.

The requirements of 5.2.2.1.2 shall also apply."

**5.3.1.7.4** Amend to read as follows:

**"5.3.1.7.4** If the size and construction of the wagon are such that the available surface area is insufficient to affix the prescribed placards, their dimensions may be reduced to a minimum of 150 mm by 150 mm. In this case, the other dimensions prescribed for the symbol, lines, figures and letters do not apply."

**[5.3.2.1.1** At the end, replace "one and the same substance" with:

"one and the same substance or article".]



**5.3.2.3.2** Insert the following hazard identification number:

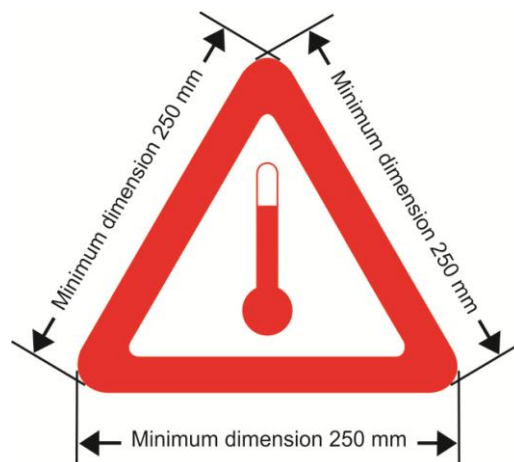
"87 Corrosive substance, radioactive".

**5.3.3** Amend to read as follows:

**"5.3.3 Elevated temperature substance mark**

Tank-wagons, tank-containers, portable tanks, special wagons or large containers or specially equipped wagons or large containers containing a substance that is carried or handed over for carriage in a liquid state at or above 100 °C or in a solid state at or above 240 °C shall bear on both sides for wagons, and on both sides and at each end for large containers, tank-containers and portable tanks, the mark shown in Figure 5.3.3.

**Figure 5.3.3**



Mark for carriage at elevated temperature

The marking shall be an equilateral triangle. The colour of the mark shall be red. The minimum dimension of the sides shall be 250 mm. Where dimensions are not specified, all features shall be in approximate proportion to those shown."

**5.3.6** Renumber the first paragraph **5.3.6.1**.

Delete:

"The provisions of section 5.3.1 concerning placards shall apply mutatis mutandis to the mark."

Add a new paragraph 5.3.6.2 as follows:

**"5.3.6.2** The environmentally hazardous substance mark for large containers, MEGCs, tank-containers, portable tanks and wagons shall be as described in 5.2.1.8.3 and Figure 5.2.1.8.3, except that the minimum dimensions shall be 250 mm × 250 mm. The other provisions of section 5.3.1 concerning placards shall apply mutatis mutandis to the mark."

## Chapter 5.4

5.4.1.1.1 (c) [The amendment in the French version does not apply to the English text.]

5.4.1.1.1 (d) In the Note replace "172 (b)" by:

"172 (d)".

5.4.1.1.3 Amend the third paragraph to read as follows:

"If the provision for waste as set out in 2.1.3.5.5 is applied, the following shall be added to the dangerous goods description required in 5.4.1.1.1 (a) to (d):

[The example after this paragraph remains unchanged.]".

5.4.1.1.17 After "(x)", add a reference to a footnote 6 to read as follows:

"<sup>6</sup> (x) shall be replaced with "1" or "2" as appropriate."

Renumber footnotes 6 to 10 as 7 to 11.

5.4.1.1 Add a new paragraph to read as follows:

**5.4.1.1.19 Special provisions for carriage of packagings, discarded, empty, uncleaned (UN 3509)**

For packagings, discarded, empty, uncleaned, the proper shipping name specified in 5.4.1.1.1 (b) shall be complemented with the words "(WITH RESIDUES OF [...])" followed by the class(es) and subsidiary risk(s) corresponding to the residues, in the class numbering order. Moreover, 5.4.1.1.1 (f) does not apply.

Example: Packagings, discarded, empty, uncleaned having contained goods of Class 4.1 packed together with packagings, discarded, empty, uncleaned having contained goods of Class 3 with a Class 6.1 subsidiary risk should be referred to in the transport document as:

"UN 3509 PACKAGINGS, DISCARDED, EMPTY, UNCLEANED (WITH RESIDUES OF 3, 4.1, 6.1), 9".

5.4.1.2.1 Amend paragraph (a) to read as follows:

"(a) The transport document shall indicate, in addition to the requirements in 5.4.1.1.1 (f):

- the total net mass, in kg, of explosive contents<sup>6)</sup> for each substance or article bearing a different UN number;
- the total net mass, in kg, of explosive contents<sup>6)</sup> for all substances and articles covered by the transport document.

<sup>6)</sup> For articles, "explosive contents" means the explosive substance contained in the article."

**5.4.1.2.5.1** In paragraph (b), replace "see last sentence of special provision 172 of Chapter 3.3" by:

"see paragraph (c) of special provision 172 of Chapter 3.3".

Amend (f) to read as follows:

"(f) For fissile material:

- (i) Shipped under one exception of 2.2.7.2.3.5 (a) to (f), reference to that paragraph;
- (ii) Shipped under 2.2.7.2.3.5 (c) to (e), the total mass of fissile nuclides;
- (iii) Contained in a package for which one of 6.4.11.2 (a) to (c) or 6.4.11.3 is applied, reference to that paragraph;
- (iv) The criticality safety index, where applicable;"

In paragraph (g), replace "competent authority approval certificate" by:

"competent authority certificate of approval".

In paragraph (g), insert before "special arrangement":

"fissile material excepted under 2.2.7.2.3.5 (f)",

**5.4.1.2.5.3** Replace "competent authorities design or shipment approval" by:

"competent authority approval of design or shipment".

**5.4.2** In footnote 12 (former footnote 10), amend paragraph .8 of 5.4.2 of the IMDG Code to read as follows:

".8 When substances presenting a risk of asphyxiation are used for cooling or conditioning purposes (such as dry ice (UN 1845) or nitrogen, refrigerated liquid (UN 1977) or argon, refrigerated liquid (UN 1951)), the container/vehicle is externally marked in accordance with 5.5.3.6 (of the IMDG Code); and".

**5.4.3.4** At the end of the last page of the "Instructions in writing according to RID", delete:

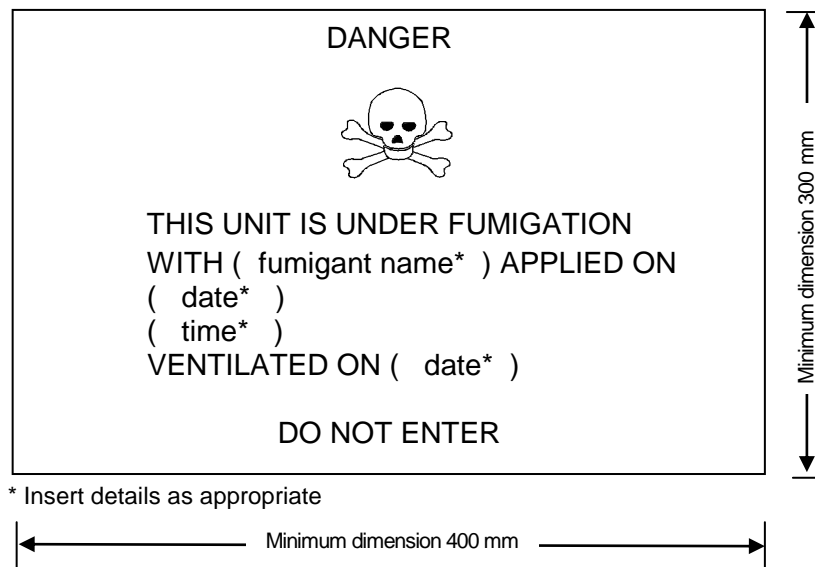
"(e.g. as described in standard EN 471)".

## Chapter 5.5

5.5.2.3.2 Amend to read as follows:

"5.5.2.3.2 The fumigation warning mark shall be as shown in Figure 5.5.2.3.2.

**Figure 5.5.2.3.2**



Fumigation warning mark

The marking shall be a rectangle. The minimum dimensions shall be 400 mm wide × 300 mm high and the minimum width of the outer line shall be 2 mm. The marking shall be in black print on a white background with lettering not less than 25 mm high. Where dimensions are not specified, all features shall be in approximate proportion to those shown."

5.5.3.1 Add new paragraphs 5.5.3.1.4 and 5.5.3.1.5 to read as follows:

"5.5.3.1.4 Wagons and containers containing substances used for cooling or conditioning purposes include wagons and containers containing substances used for cooling or conditioning purposes inside packages as well as wagons and containers with un-packaged substances used for cooling or conditioning purposes.

5.5.3.1.5 Sub-sections 5.5.3.6 and 5.5.3.7 only apply when there is an actual risk of asphyxiation in the wagon or container. It is for the participants concerned to assess this risk, taking into consideration the hazards presented by the substances being used for cooling or conditioning, the amount of substance to be carried, the duration of the journey and the types of containment to be used. ~~As a rule, it is assumed that packages containing dry ice (UN 1845) as a coolant do not present such a risk.~~"

5.5.3.2.2 Amend to read as follows:

"5.5.3.2.2 When dangerous goods are loaded in wagons or containers containing substances used for cooling or conditioning purposes any provisions of RID relevant to these dangerous goods apply in addition to the provisions of this section."

5.5.3.2.4 Amend to read as follows:

"5.5.3.2.4 Persons engaged in the handling or carriage of wagons and containers containing substances used for cooling or conditioning purposes shall be trained commensurate with their responsibilities."

5.5.3.3.2 [The amendment in the German version does not apply to the English text.]

5.5.3.3.3 Amend to read as follows:

"5.5.3.3.3 Packages containing a coolant or conditioner shall be carried in well ventilated wagons and containers. This provision does not apply when such packages are carried in insulated, refrigerated or mechanically refrigerated equipment, as defined in the Agreement on the International Carriage of Perishable Foodstuffs and on the Special Equipment to be Used for such Carriage (ATP)."

5.5.3.5.2 [The amendment in the German version does not apply to the English text.]

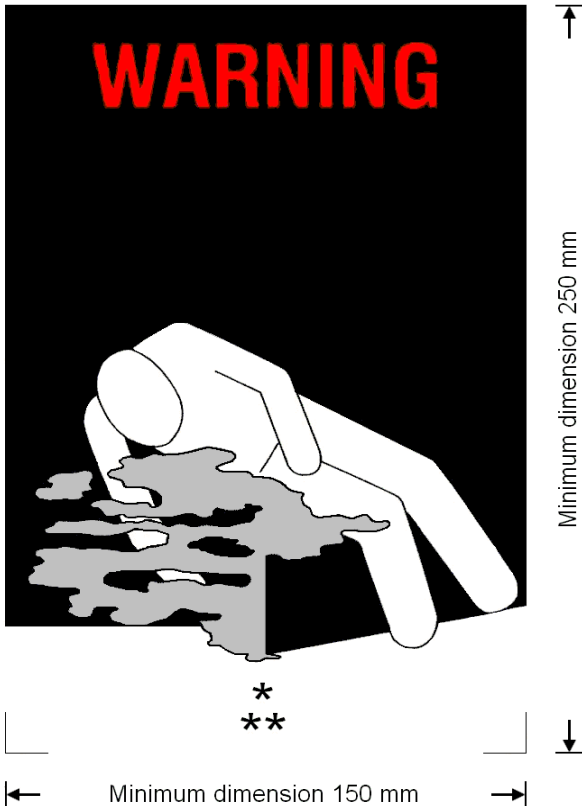
5.5.3.6.1 In the first sentence after "cooling or conditioning", add:

"purposes".

5.5.3.6.2 Amend to read as follows:

"5.5.3.6.2 The warning mark shall be as shown in Figure 5.5.3.6.2.

Figure 5.5.3.6.2



Coolant/conditioning warning mark for wagons and containers

- \* Insert the name indicated in Column (2) of Table A of Chapter 3.2 of the coolant/conditioner. The lettering shall be in capitals, all be on one line and shall be at least 25 mm high. If the length of the proper shipping name is too long to fit in the space provided, the lettering may be reduced to the maximum size possible to fit. For example: "CARBON DIOXIDE, SOLID".
- \*\* Insert "AS COOLANT" or "AS CONDITIONER" as appropriate. The lettering shall be in capitals, all be on one line and be at least 25 mm high.

The marking shall be a rectangle. The minimum dimensions shall be 150 mm wide × 250 mm high. The word "WARNING" shall be in red or white and be at least 25 mm high. Where dimensions are not specified, all features shall be in approximate proportion to those shown.

The word "WARNING" and the words "AS COOLANT" or "AS CONDITIONER", as appropriate, shall be in an official language of the country of origin and also, if that language is not English, French, German or Italian, in English, French, German or Italian, unless agreements concluded between the countries concerned in the transport operation provide otherwise."

**5.5.3.7.1** Replace "that have been cooled or conditioned" by:

"containing or having contained substances used for cooling or conditioning purposes".

## **PART 6**

### **Chapter 6.1**

**6.1.1.1** In paragraph (e), after "Packagings" insert:

"for liquids, other than combination packagings,".

**6.1.3.1** [The amendment to the third sentence in the German version does not apply to the English text.]

¶ In paragraph (a) (i), amend the second sentence to read as follows:

"This symbol shall not be used for any purpose other than certifying that a packaging, a flexible bulk container, a portable tank or a MEGC complies with the relevant requirements in Chapter 6.1, 6.2, 6.3, 6.5, 6.6, 6.7 or 6.11." ¶

[The amendment to (c) (ii) in the German version does not apply to the English text.]

In paragraph (e), insert a reference to note \* at the centre of the symbol and add the following note under the symbol:

\*\* The last two digits of the year of manufacture may be displayed at that place. In such a case, the two digits of the year in the type approval marking and in the inner circle of the clock shall be identical."

At the end of paragraph (e), insert a new Note to read as follows:

**"NOTE:** Other methods that provide the minimum required information in a durable, visible and legible form are also acceptable."

**6.1.4.8.2** [The amendment in the German version does not apply to the English text.]

**6.1.4.8.8** [The amendment in the German version does not apply to the English text.]

**6.1.4.13.4** [The amendment in the German version does not apply to the English text.]

**6.1.4.13.7** [The amendment in the German version does not apply to the English text.]

**6.1.5.1.11** [The amendment in the German version does not apply to the English text.]

**6.1.5.2.6** [The amendment in the German version does not apply to the English text.]

**6.1.6.1 f)** [The amendment in the German version does not apply to the English text.]

## Chapter 6.2

**6.2.1.1.5** Add the following new last sentence:

"The test pressure of a cylinder for an adsorbed gas shall be in accordance with packing instruction P 208 of 4.1.4.1."

**6.2.1.3.6.4.4** [The amendment in the French version does not apply to the English text.]

**6.2.2** Add the following new second sentence:

"Manufacture of new pressure receptacles or service equipment according to any particular standard in 6.2.2.1 and 6.2.2.3 is not permitted after the date shown in the right hand column of the Tables."

Add the following new note:

**"NOTE:** UN pressure receptacles and service equipment constructed according to standards applicable at the date of manufacture may continue in use subject to the periodic inspection provisions of RID."

**6.2.2.1.1** In the Table, add a new third column. Add a new first row with the following text:

Reference	Title	Applicable for manufacture

"

For ISO Standards "ISO 9809-1:1999", "ISO 9809-2:2000" and "ISO 9809-3:2000", in the third column, add:

"Until 31 December 2018".

After ISO Standard "ISO 9809-1:1999" add the following new standard:

"

ISO 9809-1:2010	Gas cylinders – Refillable seamless steel gas cylinders – Design, construction and testing – Part 1: Quenched and tempered steel cylinders	Until further notice
-----------------	--	----------------------

	with tensile strength less than 1 100 MPa	
--	---	--

"

After ISO Standard "ISO 9809-2:2000" add the following new standard:

"

ISO 9809-2:2010	Gas cylinders – Refillable seamless steel gas cylinders – Design, construction and testing – Part 2: Quenched and tempered steel cylinders with tensile strength greater than or equal to 1 100 MPa	Until further notice
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"

After ISO Standard "ISO 9809-3:2000" add the following new standard:

"

ISO 9809-3:2010	Gas cylinders – Refillable seamless steel gas cylinders – Design, construction and testing – Part 3: Normalized steel cylinders	Until further notice
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"

For all the other standards, in the column "Applicable for manufacture", add:

"Until further notice".

#### 6.2.2.1.2

In the Table, add a new third column. Add a new first row with the following text:

"

Reference	Title	Applicable for manufacture
-----------	-------	----------------------------

"

For standard "ISO 11120:1999", in the column "Applicable for manufacture", add:

"Until further notice".

#### 6.2.2.1.3

Amend the first Table to read as follows:

"

Reference	Title	Applicable for manufacture
ISO 9809-1:1999	Gas cylinders – Refillable seamless steel gas cylinders – Design, construction and testing – Part 1: Quenched and tempered steel cylinders with tensile strength less than 1 100 MPa <b>NOTE:</b> The note concerning the F factor in section 7.3 of this standard shall not be applied for UN cylinders.	Until 31 December 2018
ISO 9809-1:2010	Gas cylinders – Refillable seamless steel gas cylinders – Design, construction and testing – Part 1: Quenched and tempered steel cylinders with tensile strength less than 1 100 MPa	Until further notice
ISO 9809-3:2000	Gas cylinders – Refillable seamless steel gas cylinders – Design, construction and testing – Part 3: Normalized steel cylinders	Until 31 December 2018
ISO 9809-3:2010	Gas cylinders – Refillable seamless steel gas cylinders – Design, construction and testing – Part 3: Normalized steel cylinders	Until further notice

"

In the second Table, add a new third column. Add a new first row with the following text:

"



Reference	Title	Applicable for manufacture
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"

For both standards, in the column "Applicable for manufacture", add:

"Until further notice".

- 6.2.2.1.4** In the Table, add a new third column. Add a new first row with the following text:

"

Reference	Title	Applicable for manufacture
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"

For the standard, in the column "Applicable for manufacture", add:

"Until further notice".

- 6.2.2.1.5** In the Table, add a new third column. Add a new first row with the following text:

"

Reference	Title	Applicable for manufacture
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"

For the standard, in the column "Applicable for manufacture", add:

"Until further notice".

- 6.2.2.1** Add the following paragraphs:

- 6.2.2.1.6** The standard shown below applies to the design, construction and initial inspection and test of UN bundles of cylinders. Each cylinder in a UN bundle of cylinders shall be a UN cylinder complying with the requirements of 6.2.2. The inspection requirements related to the conformity assessment system and approval for UN bundles of cylinders shall be in accordance with 6.2.2.5.

Reference	Title	Applicable for manufacture
ISO 10961-2010	Gas cylinders – Cylinder bundles – Design, manufacture, testing and inspection	Until further notice

**NOTE:** Changing one or more cylinders of the same design type, including the same test pressure, in an existing UN bundle of cylinders does not require re-certification of the existing bundle.

- 6.2.2.1.7** The following standards apply to the design, construction and initial inspection and test of UN cylinders for adsorbed gases except that the inspection requirements related to the conformity assessment system and approval shall be in accordance with 6.2.2.5.

Reference	Title	Applicable for manufacture
ISO 11513:2011	Gas cylinders – Refillable welded steel cylinders containing materials for sub-atmospheric gas packaging (excluding acetylene) – Design, construction, testing, use and periodic inspection	Until further notice
ISO 9809-1:2010	Gas cylinders – Refillable seamless steel gas cylinders – Design, construction and testing – Part 1: Quenched and tempered steel cylinders with tensile strength less than 1 100 MPa	Until further notice

"

**6.2.2.2** Replace "ISO 11114-1:1997" by:

"ISO 11114-1:2012".

In the title for standard "ISO 11114-1:2012", delete:

"Transportable".

Delete the note at the end.

**6.2.2.3** Amend the first Table to read as follows:

"

Reference	Title	Applicable for manufacture
ISO 11117:1998	Gas cylinders – Valve protection caps and valve guards for industrial and medical gas cylinders – Design, construction and tests	Until 31 December 2014
ISO 11117:2008 + Cor 1:2009	Gas cylinders – Valve protection caps and valve guards – Design, construction and tests	Until further notice
ISO 10297:1999	Gas cylinders – Refillable gas cylinder valves – Specification and type testing	Until 31 December 2008
ISO 10297:2006	Gas cylinders – Refillable gas cylinder valves – Specification and type testing <b>NOTE:</b> The EN version of this ISO standard fulfils the requirements and may also be used.	Until further notice
ISO 13340:2001	Transportable gas cylinders – Cylinder valves for non-refillable cylinders – Specification and prototype testing	Until further notice

"

In the second Table, add a new third column. Add a new first row with the following text:

"

Reference	Title	Applicable for manufacture

"

For standard "ISO 16111:2008", in the column "Applicable for manufacture", add:

"Until further notice".

6.2.2.4 In the Table, add a new third column. Add a new first row with the following text:

Reference	Title	Applicable
-----------	-------	------------

For all standards, in the column "Applicable", add:

"Until further notice".

In the Table, after the entry for "ISO 10462:2005", add the following standard:

Reference	Title	Applicable
ISO 11513:2011	Gas cylinders – Refillable welded steel cylinders containing materials for sub-atmospheric gas packaging (excluding acetylene) – Design, construction, testing, use and periodic inspection	Until further notice

6.2.2.6.5 [The amendment in the French version does not apply to the English text.]

6.2.2.7 Amend the note to read as follows:

**NOTE:** Marking requirements for UN metal hydride storage systems are given in 6.2.2.9 and marking requirements for UN bundles of cylinders are given in 6.2.2.10."

6.2.2.7.2 In paragraph (a), amend the second sentence to read as follows:

"This symbol shall not be used for any purpose other than certifying that a packaging, a flexible bulk container, a portable tank or a MEGC complies with the relevant requirements in Chapter 6.1, 6.2, 6.3, 6.5, 6.6, 6.7 or 6.11."

6.2.2.7.4 (p) Replace "ISO 11114-1:1997" by:

"ISO 11114-1:2012".

6.2.2.7.5 [The amendment in the French version does not apply to the English text.]

6.2.2.7.7 (a) [The amendment in the German version does not apply to the English text.]

6.2.2.7.9 Amend to read as follows:

"6.2.2.7.9 (Deleted)".

6.2.2.9.2 In paragraph (a), amend the second sentence to read as follows:

"This symbol shall not be used for any purpose other than certifying that a packaging, a flexible bulk container, a portable tank or a MEGC complies with the relevant requirements in Chapter 6.1, 6.2, 6.3, 6.5, 6.6, 6.7 or 6.11;".

In paragraph (j), replace "ISO 11114-1:1997" by:

"ISO 11114-1:2012".

**6.2.2** Add the following new sub-section 6.2.2.10:

**"6.2.2.10 Marking of UN bundles of cylinders**

**6.2.2.10.1** Individual cylinders in a bundle of cylinders shall be marked in accordance with 6.2.2.7.

**6.2.2.10.2** Refillable UN bundles of cylinders shall be marked clearly and legibly with certification, operational, and manufacturing marks. These marks shall be permanently affixed (e.g. stamped, engraved, or etched) on a plate permanently attached to the frame of the bundle of cylinders. Except for the UN packaging symbol, the minimum size of the marks shall be 5 mm. The minimum size of the UN packaging symbol shall be 10 mm.

**6.2.2.10.3** The following marks shall be applied:

- (a) The certification marks specified in 6.2.2.7.2 (a), (b), (c), (d) and (e);
- (b) The operational marks specified in 6.2.2.7.3 (f), (i), (j) and the total of the mass of the frame of the bundle and all permanently attached parts (cylinders, manifold, fittings and valves). Bundles intended for the carriage of UN 1001 acetylene, dissolved and UN 3374 acetylene, solvent free shall bear the tare mass as specified in clause B.4.2 of ISO 10961:2010; and
- (c) The manufacturing marks specified in 6.2.2.7.4 (n), (o) and, where applicable, (p).

**6.2.2.10.4** The marks shall be placed in three groups:

- (a) The manufacturing marks shall be the top grouping and shall appear consecutively in the sequence given in 6.2.2.10.3 (c);
- (b) The operational marks in 6.2.2.10.3 (b) shall be the middle grouping and the operational mark specified in 6.2.2.7.3 (f) shall be immediately preceded by the operational mark specified in 6.2.2.7.3 (i) when the latter is required;
- (c) Certification marks shall be the bottom grouping and shall appear in the sequence given in 6.2.2.10.3 (a)."

Renumber current **6.2.2.10** as **6.2.2.11**.

**6.2.2.11** (former 6.2.2.10) In the three sub-paragraphs after the Table, replace "EN ISO/IEC 17020:2004" by:

"EN ISO/IEC 17020:2012 (except clause 8.1.3)".

**[6.2.3.1** Add the following new paragraph:

**"6.2.3.1.5** Acetylene cylinders shall not be fitted with fusible plugs."**]**

**6.2.3.5.1** Replace "6.2.1.6.1" by:

"6.2.1.6".

**6.2.3.5.2** Amend to read as follows:

**"6.2.3.5.2** Closed cryogenic receptacles shall be subject to periodic inspections and tests in accordance with the periodicity defined in packing instruction P 203 (8) (b) of 4.1.4.1, in accordance with the following:

- (a) Check of the external condition of the receptacle and verification of the equipment and the external markings;
- (b) The leakproofness test."

**6.2.3.6.1** In the second, third and fourth sub-paragraphs after the Table, replace "EN ISO/IEC 17020:2004" by:

"EN ISO/IEC 17020:2012 (except clause 8.1.3)".

**6.2.3.9.7** Amend to read as follows:

**["6.2.3.9.7 Marking of bundles of cylinders**

~~Markings shall be in accordance with sub-section 6.2.2.10, except that the United Nations packaging symbol specified in 6.2.2.7.2 (a) shall not be applied."~~

**6.2.3.9.7.1** Individual cylinders in a bundle of cylinders shall be marked in accordance with 6.2.3.9.1 to 6.2.3.9.6.

**6.2.3.9.7.2** Marking of bundles of cylinders shall be in accordance with 6.2.2.10.2 and 6.2.2.10.3, except that the United Nations packaging symbol specified in 6.2.2.7.2 (a) shall not be applied.

**6.2.3.9.7.3** In addition to the preceding marks, each bundle of cylinders that meets the periodic inspection and test requirements of 6.2.4.2 shall be marked indicating:

- (a) The character(s) identifying the country authorizing the body performing the periodic inspection and test, as indicated by the distinguishing sign of motor vehicles in international traffic<sup>7</sup>. This marking is not required if this body is approved by the competent authority of the country approving manufacture;
- (b) The registered mark of the body authorised by the competent authority to perform periodic inspection and testing;
- (c) The date of the periodic inspection and test, the year (two digits) followed by the month (two digits) separated by a slash (i.e. "/"). Four digits may be used to indicate the year.

The above marks shall appear consecutively in the sequence given either on the plate specified in 6.2.2.10.2 or on a separate plate permanently attached to the frame of the bundle of cylinders.

<sup>7</sup> Distinguishing signs for motor vehicles in international traffic prescribed in the Vienna Convention on Road Traffic (1968)."

Renumber footnotes 7 and 8 as 8 and 9.]

**6.2.4.1** Before the Table, insert the following sentence:

"The scope of application of each standard is defined in the scope clause of the standard unless otherwise specified in the Table below."

Amend the Table, under "for design and construction", as follows:

- For standard "EN 1800:2006", in column (4), replace "Until further notice" by:  
"Between 1 January 2009 and 31 December 2016".

- After standard "EN 1800:2006", insert the following new standard:

(1)	(2)	(3)	(4)	(5)
EN ISO 3807:2013	Gas cylinders – Acetylene cylinders – Basic requirements and type testing <b>NOTE:</b> Fusible plugs shall not be fitted.	6.2.1.1.9	Until further notice	

- For standard "EN 1975:1999 + A1:2003", in column (4), replace "Until 31 December 2014" by:

"Between 1 January 2009 and 31 December 2016".

- After standard "EN 1975:1999 + A1:2003", insert the following new row:

(1)	(2)	(3)	(4)	(5)
EN ISO 7866:2012 + AC:2014	Gas cylinders – Refillable seamless aluminium alloy gas cylinders – Design, construction and testing (ISO 7866:2012)	6.2.3.1 and 6.2.3.4	Until further notice	

- For standard "EN ISO 11120:1999", in column (4), replace "Until further notice" by:

"Between 1 July 2001 and ~~30 June 2015~~ ~~31 December 2015~~".

- For standard "EN ISO 11120:1999", in column (5), add the following new text:

"~~31 December 2015~~ for tubes marked with the letter "H" in accordance with 6.2.2.7.4 (p)".

- After standard "EN ISO 11120:1999", add the following new entry:

(1)	(2)	(3)	(4)	(5)
EN ISO 11120:1999 + A1:2013	Gas cylinders – Refillable seamless steel tubes for compressed gas transport of water capacity between 150 litres and 3 000 litres – Design, construction and testing	6.2.3.1 and 6.2.3.4	Until further notice	

- For standard "EN 13110:2012", in column (1), delete:

"except clause 9".

- In the entry for "EN 14427:2004", in column (4), replace "Until 30 June 2007" by:

"Between 1 January 2005 and 30 June 2007".

- In the entry for "EN 14427:2004 + A1:2005", in column (4), replace "Until further notice" by:

"Between 1 January 2007 and 31 December 2016".

- After "EN 14427:2004 + A1:2005", add the following new standard:

(1)	(2)	(3)	(4)	(5)
EN 14427:[2014]	LPG Equipment and accessories – Transportable refillable fully wrapped composite cylinders for LPG – Design and construction	6.2.3.1 and 6.2.3.4	Until further notice	

- For standard "EN 14893:2006 +AC:2007", in column (4), replace "Until further notice" by:

"Between 1 January 2009 and 31 December 2016".

- After standard "EN 14893:2006 +AC:2007", add the following new standard:

(1)	(2)	(3)	(4)	(5)
EN ISO 14893:[2014]	LPG equipment and accessories – Transportable LPG welded steel pressure drums with a capacity between 150 and 1 000 litres	6.2.3.1 and 6.2.3.4	Until further notice	

Amend the Table, under "for closures", as follows:

- For standard "EN ISO 10297:2006", in column (4), replace "Until further notice" by:

"Between 1 January 2009 and 31 December [2016][2018]".

- After standard "EN ISO 10297:2006", insert the following new row:

(1)	(2)	(3)	(4)	(5)
"EN ISO 10297:[2014]	Gas cylinders – Cylinder valves – Specification and type testing (ISO/DIS 10297:2012)	6.2.3.1 and 6.2.3.3	Until further notice	

- Add the following new standards:

(1)	(2)	(3)	(4)	(5)
EN ISO 14246:[2014]	Gas cylinders – Cylinder valves – Manufacturing tests and examinations (ISO 14246:2014)	6.2.3.1 and 6.2.3.4	Until further notice	
EN 13648-1:2008	Cryogenic vessels – Safety devices for protection against excessive pressure – Part 1: Safety valves for cryogenic service	6.2.3.1 and 6.2.3.4	Until further notice	
EN 1626:2008	Cryogenic vessels – Valves for cryogenic service	6.2.3.1 and 6.2.3.4	Until further notice	

]

#### 6.2.4.2

Before the Table, insert the following sentence:

"The scope of application of each standard is defined in the scope clause of the standard unless otherwise specified in the Table below."

Amend the Table as follows:

- For standard "EN 12863:2002 + A1:2005", in the last column, replace "Until further notice" by:

"Until 31 December 2016".

- After standard "EN 12863:2002 + A1:2005", insert the following new row:

(1)	(2)	(3)
EN ISO 10462:2013	Gas cylinders – Acetylene cylinders – Periodic inspection and maintenance (ISO 10462:2013)	Mandatorily from 1 January 2017

- Delete the entry for standard "EN 14189:2003".
- For standard "EN ISO 22434:2012", in column "Reference", replace "EN ISO 22434:2012" by:

"EN ISO 22434:2011".

- For standard "EN ISO 22434:2012", in column "Applicable", replace "Mandatorily from 1 January 2015" by:

"Until further notice".

- For standard "EN 1440:2008 + A1:2012 (except annexes G and H)", in column "Applicable", replace "Mandatorily from 1 January 2015" by:

"Until further notice".

- At the end of the Table, add the following new standard:

(1)	(2)	(3)
EN 15888:2014	Transportable gas cylinders – Cylinder bundles – Periodic inspection and testing	Until further notice

**6.2.6.1.5** Amend to read as follows:

**"6.2.6.1.5** The internal pressure of aerosol dispensers at 50 °C shall exceed neither two-thirds of the test pressure nor 1.32 MPa (13.2 bar). They shall be so filled that at 50 °C the liquid phase does not exceed 95% of their capacity. Small receptacles containing gas (gas cartridges) shall meet the test pressure and filling requirements of P 200 of 4.1.4.1."

**6.2.6.3** Amend to read as follows:

**"6.2.6.3 Tightness (leakproofness) test**

Each filled aerosol dispenser or gas cartridge or fuel cell cartridge shall be subjected to a test in a hot water bath in accordance with 6.2.6.3.1 or an approved water bath alternative in accordance with 6.2.6.3.2.

**6.2.6.3.1 Hot water bath test**

**6.2.6.3.1.1** The temperature of the water bath and the duration of the test shall be such that the internal pressure reaches that which would be reached at 55 °C (50 °C if the liquid phase does not exceed 95% of the capacity of the aerosol dispenser, gas cartridge



or the fuel cell cartridge at 50 °C). If the contents are sensitive to heat or if the aerosol dispensers, gas cartridges or the fuel cell cartridges are made of plastics material which softens at this test temperature, the temperature of the bath shall be set at between 20 °C and 30 °C but, in addition, one aerosol dispenser, gas cartridge or the fuel cell cartridge in 2 000 shall be tested at the higher temperature.

**6.2.6.3.1.2** No leakage or permanent deformation of an aerosol dispenser, gas cartridge or the fuel cell cartridge may occur, except that a plastic aerosol dispenser, gas cartridge or the fuel cell cartridge may be deformed through softening provided that it does not leak.

**6.2.6.3.2 Alternative methods**

With the approval of the competent authority alternative methods that provide an equivalent level of safety may be used provided that the requirements of 6.2.6.3.2.1 and, as appropriate, 6.2.6.3.2.2 or 6.2.6.3.2.3 are met.

**6.2.6.3.2.1 Quality system**

Aerosol dispenser, gas cartridge or the fuel cell cartridge fillers and component manufacturers shall have a quality system. The quality system shall implement procedures to ensure that all aerosol dispensers, gas cartridges or the fuel cell cartridges that leak or that are deformed are rejected and not offered for transport.

The quality system shall include:

- (a) A description of the organizational structure and responsibilities;
- (b) The relevant inspection and test, quality control, quality assurance, and process operation instructions that will be used;
- (c) Quality records, such as inspection reports, test data, calibration data and certificates;
- (d) Management reviews to ensure the effective operation of the quality system;
- (e) A process for control of documents and their revision;
- (f) A means for control of non-conforming aerosol dispensers, gas cartridges or the fuel cell cartridges;
- (g) Training programmes and qualification procedures for relevant personnel; and
- (h) Procedures to ensure that there is no damage to the final product.

An initial audit and periodic audits shall be conducted to the satisfaction of the competent authority. These audits shall ensure the approved system is and remains adequate and efficient. Any proposed changes to the approved system shall be notified to the competent authority in advance.

**6.2.6.3.2.2 Aerosol dispensers**

**6.2.6.3.2.2.1 Pressure and leak testing of aerosol dispensers before filling**

Each empty aerosol dispenser shall be subjected to a pressure equal to or in excess of the maximum expected in the filled aerosol dispensers at 55 °C (50 °C if the liquid phase does not exceed 95% of the capacity of the receptacle at 50 °C). This

shall be at least two-thirds of the design pressure of the aerosol dispenser. If any aerosol dispenser shows evidence of leakage at a rate equal to or greater than  $3.3 \times 10^{-2}$  mbar·l·s<sup>-1</sup> at the test pressure, distortion or other defect, it shall be rejected.

#### 6.2.6.3.2.2.2 Testing of the aerosol dispensers after filling

Prior to filling the filler shall ensure that the crimping equipment is set appropriately and the specified propellant is used.

Each filled aerosol dispenser shall be weighed and leak tested. The leak detection equipment shall be sufficiently sensitive to detect at least a leak rate of  $2.0 \times 10^{-3}$  mbar·l·s<sup>-1</sup> at 20 °C.

Any filled aerosol dispenser that shows evidence of leakage, deformation or excessive mass shall be rejected.

#### 6.2.6.3.2.3 Gas cartridges and fuel cell cartridges

##### 6.2.6.3.2.3.1 Pressure testing of gas cartridges and fuel cell cartridges

Each gas cartridge or fuel cell cartridge shall be subjected to a test pressure equal to or in excess of the maximum expected in the filled receptacle at 55 °C (50 °C if the liquid phase does not exceed 95% of the capacity of the receptacle at 50 °C). This test pressure shall be that specified for the gas cartridge or fuel cell cartridge and shall not be less than two thirds the design pressure of the gas cartridge or fuel cell cartridge. If any gas cartridge or fuel cell cartridge shows evidence of leakage at a rate equal to or greater than  $3.3 \times 10^{-2}$  mbar·l·s<sup>-1</sup> at the test pressure or distortion or any other defect, it shall be rejected.

##### 6.2.6.3.2.3.2 Leak testing gas cartridges and fuel cell cartridges

Prior to filling and sealing, the filler shall ensure that the closures (if any), and the associated sealing equipment are closed appropriately and the specified gas is used.

Each filled gas cartridge or fuel cell cartridge shall be checked for the correct mass of gas and shall be leak tested. The leak detection equipment shall be sufficiently sensitive to detect at least a leak rate of  $2.0 \times 10^{-3}$  mbar·l·s<sup>-1</sup> at 20 °C.

Any gas cartridge or fuel cell cartridge that has gas masses not in conformity with the declared mass limits or shows evidence of leakage or deformation, shall be rejected.

#### 6.2.6.3.3 [Remains unchanged]".

### Chapter 6.3

#### 6.3.4.1 [The amendment in the German version does not apply to the English text.]

#### 6.3.4.2 In paragraph (a), amend the second sentence to read as follows:

"This symbol shall not be used for any purpose other than certifying that a packaging, a flexible bulk container, a portable tank or a MEGC complies with the relevant requirements in Chapter 6.1, 6.2, 6.3, 6.5, 6.6, 6.7 or 6.11;"

**6.3.5.3.5** [The amendment in the German version does not apply to the English text.]

## **Chapter 6.4**

Amend the title to read:

**"Chapter 6.4 Requirements for the construction, testing and approval of packages for radioactive material and for the approval of such material".**

[The second amendment in the French version does not apply to the English text.]

**6.4.2** Insert a new paragraph 6.4.2.11 to read as follows:

**"6.4.2.11** A package shall be so designed that it provides sufficient shielding to ensure that, under routine conditions of carriage and with the maximum radioactive contents that the package is designed to contain, the radiation level at any point on the external surface of the package would not exceed the values specified in 2.2.7.2.4.1.2, 4.1.9.1.10 and 4.1.9.1.11, as applicable, with account taken of 7.5.11 CW 33 (3.3) (b) and (3.5)."

Current paragraphs **6.4.2.11** and **6.4.2.12** become **6.4.2.12** and **6.4.2.13** respectively.

**6.4.5.4.3** Replace "Table 4.1.9.2.4" by:

"Table 4.1.9.2.5".

**6.4.6.1** Amend the first sentence to read as follows:

"Packages designed to contain uranium hexafluoride shall meet the requirements which pertain to the radioactive and fissile properties of the material prescribed elsewhere in RID."

**6.4.6.2** At the end of paragraphs (a) and (c), before the semicolon, insert:

"except as allowed in 6.4.6.4".

**6.4.6.4** In the introductory sentence replace "the approval of the competent authority" by:

"multilateral approval".

At the end of the introductory sentence, after "if", insert:

"the packages are designed:".

In paragraphs (a) and (b) delete:

"The packages are designed".

At the end of paragraphs (a) and (b), replace "and" by:

"and/or".

In paragraph (c), delete:

"For packages designed".

In paragraph (c), replace "hexafluoride, the packages" by:  
"hexafluoride and the packages".

**6.4.8.2** Amend the end of the introductory paragraph to read:

"... which may cause one or more of the following:".

At the end of paragraphs (a) and (b), delete:

"or".

**6.4.8.8** In paragraph (b), replace "and the tests in" by:

"and either the test in".

**6.4.9.1** In the first sentence, replace "6.4.8.4, 6.4.8.5, 6.4.8.6," by:

"6.4.8.4 to 6.4.8.6".

In the second sentence, after "packages specified in" insert:

"6.4.8.4 and".

**6.4.10.3** Amend to read as follows:

**"6.4.10.3** A package shall be so designed that, if it were at the maximum normal operating pressure and subjected to:

(a) The tests specified in 6.4.15, it would restrict the loss of radioactive contents to not more than  $10^{-6}$  A<sub>2</sub> per hour; and

(b) The test sequences in 6.4.20.1,

(i) it would retain sufficient shielding to ensure that the radiation level at 1 m from the surface of the package would not exceed 10 mSv/h with the maximum radioactive contents which the package is designed to contain; and

(ii) it would restrict the accumulated loss of radioactive contents in a period of 1 week to not more than 10 A<sub>2</sub> for krypton-85 and not more than A<sub>2</sub> for all other radionuclides.

[Text of last paragraph remains unchanged.]"

**6.4.11.1** In paragraph (a), before "normal", insert:

"routine,".

Amend paragraph (b) (i) to read as follows:

"(i) of 6.4.7.2 except for unpackaged material when specifically allowed by 2.2.7.2.3.5 (e);".

At the end of paragraph (b) (ii) delete:

"and".

Amend paragraph (b) (iii) to read as follows:

"(iii) of 6.4.7.3 unless the material is excepted by 2.2.7.2.3.5;"

In paragraph (b), insert a new (iv) to read as follows:

"(iv) of 6.4.11.4 to 6.4.11.14, unless the material is excepted by 2.2.7.2.3.5, 6.4.11.2 or 6.4.11.3."

**6.4.11.2** Amend to read as follows:

**"6.4.11.2** Packages containing fissile material that meet the provisions of subparagraph (d) and one of the provisions of (a) to (c) below are excepted from the requirements of 6.4.11.4 to 6.4.11.14.

(a) Packages containing fissile material in any form provided that:

- (i) The smallest external dimension of the package is not less than 10 cm;
- (ii) The criticality safety index of the package is calculated using the following formula:

$$CSI = 50 \times 5 \times \left( \frac{\text{Mass of U - 235 in package (g)}}{Z} + \frac{\text{Mass of other fissile nuclides * in package (g)}}{280} \right)$$

\* Plutonium may be of any isotopic composition provided that the amount of Pu-241 is less than that of Pu-240 in the package

where the values of Z are taken from Table 6.4.11.2;

- (iii) The CSI of any package does not exceed 10;

(b) Packages containing fissile material in any form provided that:

- (i) The smallest external dimension of the package is not less than 30 cm;
- (ii) The package, after being subjected to the tests specified in 6.4.15.1 to 6.4.15.6:
  - Retains its fissile material contents;
  - Preserves the minimum overall outside dimensions of the package to at least 30 cm;
  - Prevents the entry of a 10 cm cube;

- (iii) The criticality safety index of the package is calculated using the following formula:

$$CSI = 50 \times 2 \times \left( \frac{\text{Mass of U-235 in package (g)}}{Z} + \frac{\text{Mass of other fissile nuclides * in package (g)}}{280} \right)$$

- \* Plutonium may be of any isotopic composition provided that the amount of Pu-241 is less than that of Pu-240 in the package

where the values of Z are taken from Table 6.4.11.2;

- (iv) The criticality safety index of any package does not exceed 10;

- (c) Packages containing fissile material in any form provided that:

- (i) The smallest external dimension of the package is not less than 10 cm;

- (ii) The package, after being subjected to the tests specified in 6.4.15.1 to 6.4.15.6:

- Retains its fissile material contents;
- Preserves the minimum overall outside dimensions of the package to at least 10 cm;
- Prevents the entry of a 10 cm cube;

- (iii) The CSI of the package is calculated using the following formula:

$$CSI = 50 \times 2 \times \left( \frac{\text{Mass of U-235 in package (g)}}{450} + \frac{\text{Mass of other fissile nuclides * in package (g)}}{280} \right)$$

- \* Plutonium may be of any isotopic composition provided that the amount of Pu-241 is less than that of Pu-240 in the package;

- (iv) The maximum mass of fissile nuclides in any package does not exceed 15 g;

- (d) The total mass of beryllium, hydrogenous material enriched in deuterium, graphite and other allotropic forms of carbon in an individual package shall not be greater than the mass of fissile nuclides in the package except where their total concentration does not exceed 1 g in any 1 000 g of material. Beryllium incorporated in copper alloys up to 4% in weight of the alloy does not need to be considered.

**Table 6.4.11.2 – Values of Z for calculation of criticality safety index in accordance with 6.4.11.2**

Enrichment <sup>a</sup>	Z
Uranium enriched up to 1.5%	2200
Uranium enriched up to 5%	850
Uranium enriched up to 10%	660
Uranium enriched up to 20%	580
Uranium enriched up to 100%	450

<sup>a</sup> If a package contains uranium with varying enrichments of U-235, then the value corresponding to the highest enrichment shall be used for Z."

**6.4.11** Insert a new paragraph 6.4.11.3 to read as follows:

**"6.4.11.3** Packages containing not more than 1 000 g of plutonium are excepted from the application of 6.4.11.4 to 6.4.11.14 provided that:

- (a) Not more than 20% of the plutonium by mass is fissile nuclides;
- (b) The criticality safety index of the package is calculated using the following formula:

$$CSI = 50 \times 2 \times \left( \frac{\text{mass of plutonium (g)}}{1000} \right);$$

- (c) If uranium is present with the plutonium, the mass of uranium shall be no more than 1% of the mass of the plutonium."

Current paragraphs **6.4.11.3** to **6.4.11.13** become new paragraphs **6.4.11.4** to **6.4.11.14**.

**6.4.11.4** (former 6.4.11.3) Replace "6.4.11.7 to 6.4.11.12" by:

"6.4.11.8 to 6.4.11.13".

**6.4.11.5** (former 6.4.11.4) Replace "6.4.11.7 to 6.4.11.12" by:

"6.4.11.8 to 6.4.11.13".

At the end of the introductory sentence, insert:

"either".

**6.4.11.8** (former 6.4.11.7) In the last sentence of the introductory paragraph, before "the following:", insert:

"either of".

In paragraphs (a) and (b) (i), replace "6.4.11.12 (b)" by:

"6.4.11.13 (b)".

**6.4.11.9** (former 6.4.11.8) In the first sentence, replace "shall be closely" by:

"is closely".

In the last sentence replace "6.4.11.12 (b)" by:

"6.4.11.13 (b)".

In the last sentence replace "6.4.11.9 (c)" by:

"6.4.11.10 (c)".

**6.4.11.10** (former 6.4.11.9) In the introductory sentence replace "6.4.11.7 and 6.4.11.8" by:

"6.4.11.8 and 6.4.11.9".

In paragraph (b), replace "6.4.11.11 (b)" by:

"6.4.11.12 (b)".

In paragraph (c), replace "6.4.11.12 (b)" by:

"6.4.11.13 (b)".

**6.4.11.13** (former 6.4.11.12) In paragraph (c), replace "6.4.11.12 (b)" by:

"6.4.11.13 (b)".

**6.4.11.14** (former 6.4.11.13) Replace "6.4.11.11 and 6.4.11.12" by:

"6.4.11.12 and 6.4.11.13".

**6.4.13** [The amendment to paragraph (b) in the French version does not apply to the English text.]

In paragraph (c) replace "6.4.11.13" by:

"6.4.11.14".

**6.4.15.5** [The first amendment in the German version does not apply to the English text.]

In paragraph (a), amend the beginning to read:

"The equivalent of 5 times ...".

[The amendment to paragraph (b) in the German version does not apply to the English text.]

**6.4.17.2** In the introductory paragraph, replace "6.4.11.12" by:

"6.4.11.13".

In paragraph (b), move the phrase "so as to suffer maximum damage" to the end of the sentence after "on the target".

In paragraph (c), insert the following new third sentence:

"The lower face of the steel plate shall have its edges and corners rounded off to a radius of not more than 6 mm."



- 6.4.19.1** Replace "6.4.11.7 to 6.4.11.12" by:  
"6.4.11.8 to 6.4.11.13".
- 6.4.19.2** Replace "6.4.11.12" by:  
"6.4.11.13".
- 6.4.20.2** In the first sentence, before "solid", insert:  
"vertical".  
  
In the second sentence replace "the probe to the surface of the specimen shall be as to cause" by:  
  
"the package specimen and the impact point on the package surface shall be such as to cause".
- 6.4.22.4** Amend to read as follows:  
  
"6.4.22.4 Each package design for fissile material which is not excepted by any of the paragraphs 2.2.7.2.3.5 (a) to (f), 6.4.11.2 and 6.4.11.3 shall require multilateral approval."
- 6.4.22** Insert the following new sub-sections 6.4.22.6 and 6.4.22.7:
- "6.4.22.6 The design for a fissile material excepted from "FISSILE" classification in accordance with 2.2.7.2.3.5 (f) shall require multilateral approval.
- 6.4.22.7** Alternative activity limits for an exempt consignment of instruments or articles in accordance with 2.2.7.2.2.2 (b) shall require multilateral approval."  
  
Current sub-sections **6.4.22.6** and **6.4.22.7** become **6.4.22.8** and **6.4.22.9**.
- 6.4.23.2** In the introductory sentence replace "shipment approval" by:  
"approval of shipment".  
  
In paragraph (c), amend the end to read as follows:  
  
"... referred to in the certificate of approval for the package design, if applicable, issued under 5.1.5.2.1 (a) (v), (vi) or (vii), are to be put into effect."
- 6.4.23.4** In paragraph (f), after "irradiated", insert:  
"nuclear".  
  
In paragraph (f) replace "6.4.11.4 (b)" by:  
"6.4.11.5 (b)".  
  
In paragraph (i), replace "quality assurance programme" by:  
"management system".

**6.4.23.5** In the introductory sentence, delete:

"for package approval".

In paragraph (a), replace "6.4.8.4, 6.4.8.5, 6.4.8.6" by:

"6.4.8.4 to 6.4.8.6".

In paragraph (d), amend the beginning of the sentence to read:

"A statement of the range".

**6.4.23.6** Replace "quality assurance programme" by:

"management system".

**6.4.23.7** Replace "quality assurance programme" by:

"management system".

**6.4.23.8** In (d) replace "quality assurance programme" by:

"management system".

**6.4.23** Insert the following new sub-sections 6.4.23.9 and 6.4.23.10:

**"6.4.23.9** An application for approval of design for fissile material excepted from "FISSILE" classification in accordance with Table 2.2.7.2.1.1, under 2.2.7.2.3.5 (f) shall include:

- (a) A detailed description of the material; particular reference shall be made to both physical and chemical states;
- (b) A statement of the tests that have been carried out and their results, or evidence based on calculation methods to show that the material is capable of meeting the requirements specified in 2.2.7.2.3.6;
- (c) A specification of the applicable management system as required in 1.7.3;
- (d) A statement of specific actions to be taken prior to shipment.

**6.4.23.10** An application for approval of alternative activity limits for an exempt consignment of instruments or articles shall include:

- (a) An identification and detailed description of the instrument or article, its intended uses and the radionuclide(s) incorporated;
- (b) The maximum activity of the radionuclide(s) in the instrument or article;
- (c) Maximum external radiation levels arising from the instrument or article;
- (d) The chemical and physical forms of the radionuclide(s) contained in the instrument or article;
- (e) Details of the construction and design of the instrument or article, particularly as related to the containment and shielding of the radionuclide in routine, normal and accident conditions of carriage;

- (f) The applicable management system, including the quality testing and verification procedures to be applied to radioactive sources, components and finished products to ensure that the maximum specified activity of radioactive material or the maximum radiation levels specified for the instrument or article are not exceeded, and that the instruments or articles are constructed according to the design specifications;
- (g) The maximum number of instruments or articles expected to be shipped per consignment and annually;
- (h) Dose assessments in accordance with the principles and methodologies 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), including individual doses to transport workers and members of the public and, if appropriate, collective doses arising from routine, normal and accident conditions of carriage, based on representative carriage scenarios the consignments are subject to."

Current paragraphs **6.4.23.9** to **6.4.23.11** become new paragraphs **6.4.23.11** to **6.4.23.13**.

**6.4.23.11** (former 6.4.23.9) In the introductory sentence, replace "approval certificate" by:

"certificate of approval".

In paragraph (a) replace "6.4.23.10 (b)" by:

"6.4.23.12 (b)".

At the end of the first sentence in paragraph (b), insert:

"or alternative activity limit for exempt consignment".

Amend the second sentence of paragraph (b) to read:

"The identification mark of the approval of shipment shall be clearly related to the identification mark of the approval of design."

In the introductory sentence of paragraph (c), replace "types of approval certificates" by:

"types of certificate of approval".

In paragraph (c), insert the following line between those corresponding to LD and T:

"FE Fissile material complying with the requirements of 2.2.7.2.3.6".

In paragraph (c), add the following line at the end of the list:

"AL Alternative activity limits for an exempt consignment of instruments or articles".

In paragraph (d), before "package design", insert:

"certificates of approval of".

In paragraph (d), after "radioactive material", delete:

"approval certificates" (twice).

In paragraph (d) replace "1.6.6.2 and 1.6.6.3" by:

"1.6.6.2 to 1.6.6.4".

**6.4.23.12** (former 6.4.23.10) In the introductory sentence replace "type codes" by:

"identification marks".

In paragraph (a), replace "6.4.23.9 (a), (b), (c) and (d)" by:

"6.4.23.11 (a), (b), (c) and (d)"

In paragraph (a), replace "design approval" by:

"approval of design".

In paragraph (a), replace "shipment approval" by:

"the approval of shipment".

In paragraph (a), for A/132/B(M)F-96, replace "package design approval certificate" by:

"certificate of approval for the package design".

In paragraph (a), for A/132/B(M)F-96T, replace "shipment approval" by:

"approval of shipment".

In paragraph (a), for A/137/X, replace "A special arrangement approval" by:

"An approval of special arrangement".

In paragraph (a), for A/139/IF-96 and A/145/H(U)-96, replace "package design approval certificate" by:

"certificate of approval for the package design".

In paragraph (b), replace "according to 6.4.23.16" by:

"in accordance with 6.4.23.20".

In paragraph (c), replace "package design approval certificate" by:

"certificate of approval for the package design" (twice)

In the last sentence of paragraph (c), replace "approval certificate" by:

"certificate of approval".

**6.4.23.13** (former 6.4.23.11) In the introductory sentence replace "approval certificate" by:

"certificate of approval".

In paragraph (i), replace "quality assurance programme" by:  
"management system".

**6.4.23** Insert a new paragraph 6.4.23.14 to read as follows:

**"6.4.23.14** Each certificate of approval issued by a competent authority for material excepted from classification as "FISSILE" shall include the following information:

- (a) Type of certificate;
- (b) The competent authority identification mark;
- (c) The issue date and an expiry date;
- (d) List of applicable national and international regulations, including the edition of the IAEA Regulations for the Safe Transport of Radioactive Material under which the exception is approved;
- (e) A description of the excepted material;
- (f) Limiting specifications for the excepted material;
- (g) A specification of the applicable management system as required in 1.7.3;
- (h) Reference to information provided by the applicant relating to specific actions to be taken prior to shipment;
- (i) If deemed appropriate by the competent authority, reference to the identity of the applicant;
- (j) Signature and identification of the certifying official;
- (k) Reference to documentation that demonstrates compliance with 2.2.7.2.3.6."

Current paragraphs **6.4.23.12** to **6.4.23.14** become new paragraphs **6.4.23.15** to **6.4.23.17**.

**6.4.23.15** (former 6.4.23.12) In the introductory sentence replace "approval certificate" by: "certificate of approval".

In paragraph (j), replace "amounts" by:  
"mass".

Amend the end of paragraph (j) to read as follows:

"... special form radioactive material, low dispersible radioactive material or fissile material excepted under 2.2.7.2.3.5 (f) if applicable;".

In paragraph (k) (v), replace "6.4.11.4 (b)" by:

"6.4.11.5 (b)".

In paragraph (r), replace "quality assurance programme" by:  
"management system".

**6.4.23.16** In the introductory sentence, replace "approval certificate" by:  
"certificate of approval".

In paragraph (i), replace "design approval certificate(s)" by:  
"certificate(s) of approval of design".

In paragraph (j), replace "amounts" by:  
"mass".

Amend the end of paragraph (j) to read as follows:

"... special form radioactive material, low dispersible radioactive material or fissile material excepted under 2.2.7.2.3.5 (f) if applicable;".

In paragraph (l), replace "quality assurance programme" by:  
"management system".

**6.4.23.17** (former 6.4.23.14) In the introductory sentence, replace "approval certificate" by:  
"certificate of approval".

In paragraph (h), replace "shipment approval" by:  
"approval of shipment".

In paragraph (l), amend the end of the second sentence to read as follows:

"... mass in grams (for fissile material the total mass of fissile nuclides or the mass for each fissile nuclide, when appropriate) and whether special form radioactive material, low dispersible radioactive material or fissile material excepted under 2.2.7.2.3.5 (f), if applicable;".

In paragraph (n), amend the introductory sentence to read as follows:

"For package designs containing fissile material which require multilateral approval of the package design in accordance with 6.4.22.4:".

In paragraph (n) (vi), replace "6.4.11.4 (b)" by:  
"6.4.11.5 (b)".

In paragraph (t), replace "quality assurance programme" by:  
"management system".

**6.4.23** Insert a new paragraph 6.4.23.18 to read as follows:

**"6.4.23.18** Each certificate issued by a competent authority for alternative activity limits for an exempt consignment of instruments or articles according to 5.1.5.2.1 (d) shall include the following information:

- (a) Type of certificate;
- (b) The competent authority identification mark;
- (c) The issue date and an expiry date;
- (d) List of applicable national and international regulations, including the edition of the IAEA Regulations for the Safe Transport of Radioactive Material under which the exemption is approved;
- (e) The identification of the instrument or article;
- (f) A description of the instrument or article;
- (g) Design specifications for the instrument or article;
- (h) A specification of the radionuclide(s), the approved alternative activity limit(s) for the exempt consignment(s) of the instrument(s) or article(s);
- (i) Reference to documentation that demonstrates compliance with 2.2.7.2.2.2 (b);
- (j) If deemed appropriate by the competent authority, reference to the identity of the applicant;
- (k) Signature and identification of the certifying official."

Current paragraphs **6.4.23.15** and **6.4.23.16** become **6.4.23.19** and **6.4.23.20** respectively.

## Chapter 6.5

**6.5.2.1.1** [The amendment to the introductory sentence before paragraph (a) in the German version does not apply to the English text.]

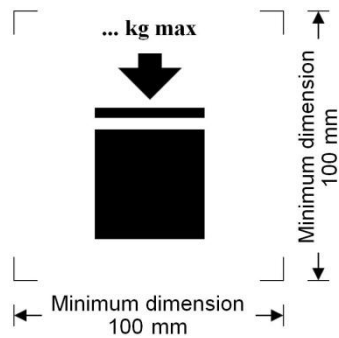
**In** paragraph (a), amend the second sentence to read as follows:

"This symbol shall not be used for any purpose other than certifying that a packaging, a flexible bulk container, a portable tank or a MEGC complies with the relevant requirements in Chapter 6.1, 6.2, 6.3, 6.5, 6.6, 6.7 or 6.11."

**6.5.2.2.2** Amend to read as follows:

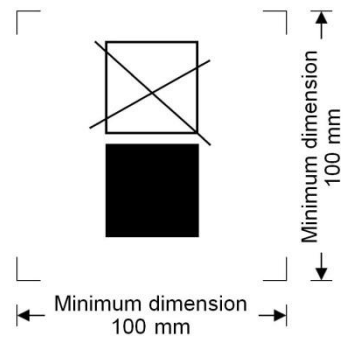
**"6.5.2.2.2** The maximum permitted stacking load applicable when the IBC is in use shall be displayed on a symbol as shown in Figure 6.5.2.2.2.1 or Figure 6.5.2.2.2.2. The symbol shall be durable and clearly visible.

"Figure 6.5.2.2.2.1



IBCs capable of being stacked

Figure 6.5.2.2.2.2



IBCs NOT capable of being stacked

The minimum dimensions shall be 100 mm × 100 mm. The letters and numbers indicating the mass shall be at least 12 mm high. The area within the printer's marks indicated by the dimensional arrows shall be square. Where dimensions are not specified, all features shall be in approximate proportion to those shown. The mass marked above the symbol shall not exceed the load imposed during the design type test (see 6.5.6.6.4) divided by 1.8."

**6.5.2.2.4**

After "The date of the manufacture of the plastics inner receptacle may alternatively be marked on the inner receptacle adjacent to the remainder of the marking." add the following new sentence:

"In such a case, the two digits of the year in the marking and in the inner circle of the clock shall be identical."

At the end, add a new Note to read as follows:

**"NOTE:** Other methods that provide the minimum required information in a durable, visible and legible form are also acceptable."

**Chapter 6.6**

**6.6.2.2**

At the beginning, replace "The letter "W"" by:

"The letters "T" or "W".

Insert a new second sentence to read as follows:

"The letter "T" signifies a large salvage packaging conforming to the requirements of 6.6.5.1.9."

[The last amendment in the French version does not apply to the English text.]

**6.6.3.1**

[The amendment to the introductory sentence before paragraph (a) in the German version does not apply to the English text.]

**I**n paragraph (a), amend the second sentence to read as follows:

"This symbol shall not be used for any purpose other than certifying that a packaging, a flexible bulk container, a portable tank or a MEGC complies with the relevant



requirements in Chapter 6.1, 6.2, 6.3, 6.5, 6.6, 6.7 or 6.11." ]

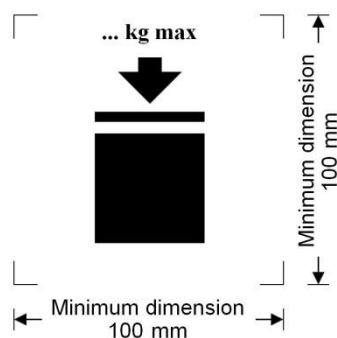
**6.6.3.2** Insert a new second example to read as follows:

"  
 (U n) 50AT/Y/05/01/B/PQRS For a large steel salvage packaging suitable for stacking;  
 2500/1000 stacking load: 2 500 kg;  
 maximum gross mass: 1 000 kg".

**6.6.3.3** Amend to read as follows:

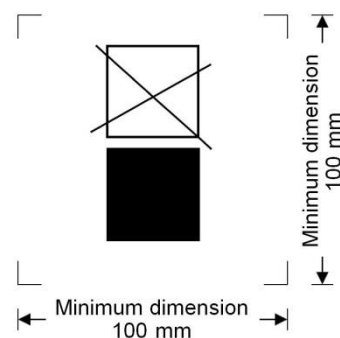
"**6.6.3.3** The maximum permitted stacking load applicable when the large packaging is in use shall be displayed on a symbol as shown in Figure 6.6.3.3.1 or Figure 6.6.3.3.2. The symbol shall be durable and clearly visible.

**"Figure 6.6.3.3.1**



Large packagings capable of being stacked

**Figure 6.6.3.3.2**



Large packagings NOT capable of being stacked

The minimum dimensions shall be 100 mm × 100 mm. The letters and numbers indicating the mass shall be at least 12 mm high. The area within the printer's marks indicated by the dimensional arrows shall be square. Where dimensions are not specified, all features shall be in approximate proportion to those shown. The mass marked above the symbol shall not exceed the load imposed during the design type test (see 6.6.5.3.3.4) divided by 1.8."

**6.6.5.1** Insert the following new paragraph 6.6.5.1.9 to read as follows:

"**6.6.5.1.9** Large salvage packagings

Large salvage packagings shall be tested and marked in accordance with the provisions applicable to packing group II large packagings intended for the carriage of solids or inner packagings, except as follows:

- (a) The test substance used in performing the tests shall be water, and the large salvage packagings shall be filled to not less than 98% of their maximum capacity. It is permissible to use additives, such as bags of lead shot, to achieve the requisite total package mass so long as they are placed so that the test results are not affected. Alternatively, in performing the drop test, the drop height may be varied in accordance with 6.6.5.3.4.4.2 (b);
- (b) Large salvage packagings shall, in addition, have been successfully subjected to the leakproofness test at 30 kPa, with the results of this test reflected in the test report required by 6.6.5.4; and

- (c) Large salvage packagings shall be marked with the letter "T" as described in 6.6.2.2."

## Chapter 6.7

**6.7.2.2.9** Insert a new paragraph 6.7.2.2.9.1 to read as follows:

"**6.7.2.2.9.1** For portable tanks that are intended for use offshore, the dynamic stresses imposed by handling in open seas shall be taken into account."

**6.7.2.2** Insert a new paragraph 6.7.2.2.17 to read as follows:

"**6.7.2.2.17** Thermal insulation directly in contact with the shell intended for substances carried at elevated temperature shall have an ignition temperature at least 50 °C higher than the maximum design temperature of the tank."

**6.7.2.5** Insert the following new paragraphs 6.7.2.5.12 to 6.7.2.5.15 to read as follows:

"**6.7.2.5.12** The heating system shall be designed or controlled so that a substance cannot reach a temperature at which the pressure in the tank exceeds its MAWP or causes other hazards (e.g. dangerous thermal decomposition).

**6.7.2.5.13** The heating system shall be designed or controlled so that power for internal heating elements shall not be available unless the heating elements are completely submerged. The temperature at the surface of the heating elements for internal heating equipment, or the temperature at the shell for external heating equipment shall, in no case, exceed 80% of the autoignition temperature (in °C) of the substance carried.

**6.7.2.5.14** If an electrical heating system is installed inside the tank, it shall be equipped with an earth leakage circuit breaker with a releasing current of less than 100 mA.

**6.7.2.5.15** Electrical switch cabinets mounted to tanks shall not have a direct connection to the tank interior and shall provide protection of at least the equivalent of type IP 56 according to IEC 144 or IEC 529."

**6.7.2.19.4** Insert the following new second sentence:

"For tanks only used for the carriage of solid substances, other than toxic or corrosive substances that do not liquefy during carriage, the hydraulic pressure test may be replaced by a suitable pressure test at 1.5 times the MAWP, subject to competent authority approval."

**6.7.2.20.1** In paragraph (c) (i), amend the second sentence to read as follows:

"This symbol shall not be used for any purpose other than certifying that a packaging, a flexible bulk container, a portable tank or a MEGC complies with the relevant requirements in Chapter 6.1, 6.2, 6.3, 6.5, 6.6, 6.7 or 6.11;".

**6.7.2.20.2** Replace "shall be marked" by:

"shall be durably marked".

**6.7.3.16.1** In paragraph (c) (i), amend the second sentence to read as follows:

"This symbol shall not be used for any purpose other than certifying that a packaging, a flexible bulk container, a portable tank or a MEGC complies with the relevant requirements in Chapter 6.1, 6.2, 6.3, 6.5, 6.6, 6.7 or 6.11;".

**6.7.3.16.2** Replace "shall be marked" by:

"shall be durably marked".

**6.7.4.15.1** In paragraph (c) (i), amend the second sentence to read as follows:

"This symbol shall not be used for any purpose other than certifying that a packaging, a flexible bulk container, a portable tank or a MEGC complies with the relevant requirements in Chapter 6.1, 6.2, 6.3, 6.5, 6.6, 6.7 or 6.11;".

**6.7.4.6.1** In the second sentence replace "fully open a pressure" by:

"fully open at a pressure".

**6.7.5.2.4 (a)** Replace "ISO 11114-1:1997" by:

"ISO 11114-1:2012".

**6.7.5.13.1** In paragraph (c) (i), amend the second sentence to read as follows:

"This symbol shall not be used for any purpose other than certifying that a packaging, a flexible bulk container, a portable tank or a MEGC complies with the relevant requirements in Chapter 6.1, 6.2, 6.3, 6.5, 6.6, 6.7 or 6.11;".

**6.7.5.13.2** Replace "shall be marked" by:

"shall be durably marked".

## Chapter 6.8

**6.8.2.1.2** Amend footnote 1 to read as follows:

<sup>1</sup> This requirement is deemed to be met if

- the notified body dedicated to the technical specification for interoperability relating to the subsystem "rolling stock – freight wagons" of the rail system in the European Union (Commission Regulation (EU) No 321/2013 of 13 March 2013) or
- the OTIF assessing entity dedicated to the uniform technical prescriptions applicable to the Rolling Stock subsystem: FREIGHT WAGONS – (Ref. A 94-02/2.2012 of 1 January 2014)

has successfully evaluated and confirmed compliance under consideration of the RID provisions."

**6.8.2.1.29** Amend footnote 6 to read as follows:

<sup>6</sup> The G1 gauge is referenced in Annex A to standard EN 15273-2:2009 Railway applications – Gauges – Part 2: Rolling stock gauge."

**6.8.2.2.1** Replace the text of the 2<sup>nd</sup> paragraph with:

"To prevent tearing of the shell due to accidental stresses, welded elements shall be fixed to the tank as follows:

- Underframe connection: securing by means of a pad ensuring distribution of dynamic loads;
- Supports for upper gangway, access ladder, drainage pipes, valve control mechanisms and other load transmission brackets: securing by means of weld-on reinforcement plate;
- Appropriate dimensioning or other protective measures (e.g. designated breaking point)."

**6.8.2.2.3** At the end of the second paragraph, replace "or the shell of the tank shall be capable of withstanding, without leakage, an explosion resulting from the passage of the flame" by:

"or the shell of the tank shall be explosion pressure shock resistant, which means being capable of withstanding without leakage, but allowing deformation, an explosion resulting from the passage of the flame".

**6.8.2.4.6** In the second indent of the last but two sub-paragraph, replace "EN ISO/IEC 17020:2004" by:

"EN ISO/IEC 17020:2012 (except clause 8.1.3)".

**6.8.2.5.2** Amend the first indent in the left-hand column to read as follows:

"– vehicle keeper marking or name of operator<sup>16)</sup>,".

<sup>16)</sup> Vehicle keeper marking in accordance with Annex PP, section PP.1 of the Uniform Technical Prescriptions applicable to rolling stock, subsystem freight wagons (UTP WAG) of the APTU Uniform Rules (Appendix F to COTIF 1999) (see [www.otif.org](http://www.otif.org)) and in accordance with paragraph 4.2.2.3 and Annex P of Commission decision 2011/314/EU of 12 May 2011 concerning the technical specification of interoperability relating to the "operation and traffic management" subsystem of the trans-European conventional rail system."

Renumber footnotes 16 to 19 as 17 to 20.

**6.8.2.6.1** Before the Table, insert the following sentence:

"The scope of application of each standard is defined in the scope clause of the standard unless otherwise specified in the Table below."

Amend the Table under "for all tanks" as follows:

- For standard "EN 14025:2008", in column (4), replace "Until further notice" by:  
"Between 1 July 2009 and 31 December 2016".

- After the standard "EN 14025:2008", insert the following new standard:

(1)	(2)	(3)	(4)	(5)
EN 14025:[2013]	Tanks for the transport of dangerous goods – Metallic pressure tanks – Design and construction	6.8.2.1 and 6.8.3.1	Until further notice	

- 6.8.2.6.2** Before the Table, insert the following sentence:

"The scope of application of each standard is defined in the scope clause of the standard unless otherwise specified in the Table below."

- 6.8.3.2.13** Replace "demountable elements" by:

"demountable tanks".

- 6.8.3.5.11** Amend the first indent in the left-hand column to read as follows:

"– vehicle keeper marking or name of operator<sup>21)</sup>;"

<sup>21)</sup> Vehicle keeper marking in accordance with Annex PP, section PP.1 of the Uniform Technical Prescriptions applicable to rolling stock, subsystem freight wagons (UTP WAG) of the APTU Uniform Rules (Appendix F to COTIF 1999) (see [www.otif.org](http://www.otif.org)) and in accordance with paragraph 4.2.2.3 and Annex P of Commission decision 2011/314/EU of 12 May 2011 concerning the technical specification of interoperability relating to the "operation and traffic management" subsystem of the trans-European conventional rail system."

Renumber footnotes 20 and 21 as 22 and 23.

- 6.8.3.6** Before the Table, insert the following sentence:

"The scope of application of each standard is defined in the scope clause of the standard unless otherwise specified in the Table below."

- 6.8.4** At the end of special provision **TE 22**, add the following sub-paragraph:

"The requirements of this special provision are deemed to be met by tank-wagons with an automatic coupling device equipped with energy absorption elements capable of absorbing at least 130 kJ at each end of the wagon."

In special provision **TE 25**, in the 9<sup>th</sup> indent of paragraph (a), replace "UIC leaflet 573<sup>21)</sup> (Technical conditions for the construction of tank-wagons)" with:

"standards EN 12663-2:2010 Railway applications – Structural requirements of railway vehicle bodies – Part 2: Freight wagons and EN 15551:2011 Railway applications – Railway rolling stock – Buffers".

In special provision **TE 25**, add a new paragraph (e) to read as follows:

"(e) Protective shield at each end of wagons fitted with automatic couplers

If a protective shield is used at each end of the wagon, the following requirements shall apply:

- the protective shield shall cover the tank end to a height of at least 1100 mm, measured from the top edge of the headstock, the couplers shall be fitted with anticreep devices to prevent unintentional uncoupling and the protective shield shall, over the entire height of the shield, be at least 1200 mm wide;
- the protective shield shall have a minimum wall thickness of 12 mm;
- the protective shield and its attachment points shall be such that the possibility of the tank ends being penetrated by the protective shield itself is minimized."

In special provisions **TA 4** and **TT 9**, replace "EN ISO/IEC 17020:2004" by:

"EN ISO/IEC 17020:2012 (except clause 8.1.3)".

In special provision **TT 8**, replace "EN 473" by:

"EN ISO 9712:2012 (Non-destructive testing – Qualification and certification of NDT personnel)".

**[6.8.4 (b)]** Insert the following new special provision TE xx (left-hand column only):

**"TE xx** Tank-wagons for substances carried in the liquid state and gases, and battery-wagons shall be equipped with a detection device that provides an immediate and clear signal to the [locomotive driver] that a derailment has occurred.

This device shall meet the requirements of the relevant technical specifications for interoperability (TSI) and OTIF's uniform technical prescriptions (UTP) (wagons, operation, tunnel safety)."

**[6.8.4 (e)]** Amend the first sentence of special provision TM 3 to read:

"Tanks shall also bear, on the plate prescribed in 6.8.2.5.1, the proper shipping name and the maximum permissible load mass in kg for this substance."

## Chapter 6.9

**6.9.2.3.2** Replace "ISO 75-1:1993" by:

"EN ISO 75-1:2013 – Plastics – Determination of temperature of deflection under load - Part 1: General test method (ISO/DIS 75-1:2013)".

**6.9.2.5** Replace "EN 61:1977" by:

"EN ISO 527-4:1997– Plastics – Determination of tensile properties – Part 4: Test conditions for isotropic and orthotropic fibre-reinforced plastic composites and EN ISO 527-5:2009– Plastics – Determination of tensile properties – Part 5: Test conditions for unidirectional fibre-reinforced plastic composites".

**6.9.2.10** Replace "EN ISO 14125:1998" by:

"EN ISO 14125:1998 + AC:2002 + A1:2011".

**6.9.4.2.1** Replace "EN ISO 527-5:1997" by:

"EN ISO 527-4:1997– Plastics – Determination of tensile properties – Part 4: Test conditions for isotropic and orthotropic fibre-reinforced plastic composites (ISO 527-4:1997) or EN ISO 527-5:2009– Plastics - Determination of tensile properties – Part 5: Test conditions for unidirectional fibre-reinforced plastic composites (ISO 527-5:2009)".

Replace "ISO 75-1:1993" by:

"EN ISO 75-1:2013 – Plastics – Determination of temperature of deflection under load - Part 1: General test method (ISO/DIS 75-1:2013)".

**6.9.4.2.2** Replace "EN ISO 527-5:1997" by:

"EN ISO 527-4:1997– Plastics – Determination of tensile properties – Part 4: Test conditions for isotropic and orthotropic fibre-reinforced plastic composites (ISO 527-4:1997) or EN ISO 527-5:2009– Plastics – Determination of tensile properties – Part 5: Test conditions for unidirectional fibre-reinforced plastic composites (ISO 527-5:2009)".

In the fourth indent, replace "ISO 14125:1998" by:

"EN ISO 14125:1998 + AC:2002 + A1:2011 – Fibre-reinforced plastic composites - Determination of flexural properties (ISO 14125:1998)".

**Chapter 6.10****6.10.3.8 (b)** Amend to read as follows:

"(b) A device to prevent immediate passage of flame shall be fitted to **[all openings]** of a vacuum pump/exhauster unit which may provide a source of ignition and which is fitted on a tank used for the carriage of flammable wastes, or the tank shall be explosion pressure shock resistant, which means being capable of withstanding without leakage, but allowing deformation, an explosion resulting from the passage of the flame;"

**Chapter 6.11****[6.11.1]** Amend to read as follows:~~After the definition of "Closed bulk container", insert the following new definition:~~

~~"Flexible bulk container means a flexible container with a capacity not exceeding 15 m<sup>3</sup> and includes liners and attached handling devices and service equipment;"~~

"6.11.1 (Reserved)".

6.11.2.3 In the Table add the following new row:  
"

flexible bulk container	BK 3
-------------------------	------

"

6.11.4 In the Note, after "BK(x)", add a reference to footnote 1. The footnote reads as follows:

"<sup>1</sup> (x) shall be replaced with "1" or "2" as appropriate."

[6.11.4.1 In the Note, after "591", insert:

", 592".]

[6.11 Add a new section 6.11.5 to read as follows:

"6.11.5 **Requirements for the design, construction, inspection and testing of BK 3 flexible bulk containers**

6.11.5.1 **Design and construction requirements**

6.11.5.1.1 Flexible bulk containers shall be sift-proof.

6.11.5.1.2 Flexible bulk containers shall be completely closed to prevent the release of contents.

6.11.5.1.3 Flexible bulk containers shall be waterproof.

6.11.5.1.4 Parts of the flexible bulk container which are in direct contact with dangerous goods:

(a) shall not be affected or significantly weakened by those dangerous goods;

(b) shall not cause a dangerous effect, e.g. catalysing a reaction or reacting with the dangerous goods; and

(c) shall not allow permeation of the dangerous goods that could constitute a danger under normal conditions of carriage.

6.11.5.2 **Service equipment and handling devices**

6.11.5.2.1 Filling and discharge devices shall be so constructed as to be protected against damage during carriage and handling. The filling and discharge devices shall be secured against unintended opening.

6.11.5.2.2 Slings of the flexible bulk container, if fitted, shall withstand pressure and dynamic forces, which can appear in normal conditions of handling and carriage.

6.11.5.2.3 The handling devices shall be strong enough to withstand repeated use.

6.11.5.3 **Inspection and testing**

6.11.5.3.1 The design type of each flexible bulk container shall be tested as provided for in 6.11.5 in accordance with procedures established by the competent authority allowing the allocation of the mark and shall be approved by this competent authority.



**6.11.5.3.2** Tests shall also be repeated after each modification of the design type, which alters the design, material or manner of construction of a flexible bulk container.

**6.11.5.3.3** Tests shall be carried out on flexible bulk containers prepared as for carriage. Flexible bulk containers shall be filled to the maximum mass at which they may be used and the contents shall be evenly distributed. The substances to be carried in the flexible bulk container may be replaced by other substances except where this would invalidate the results of the test. When another substance is used it shall have the same physical characteristics (mass, grain size, etc.) as the substance to be carried. It is permissible to use additives, such as bags of lead shot, to achieve the requisite total mass of the flexible bulk container so long as they are placed so that the test results are not affected.

**6.11.5.3.4** Flexible bulk containers shall be manufactured and tested under a quality assurance programme which satisfies the competent authority, in order to ensure that each manufactured flexible bulk container meets the requirements of this Chapter.

**6.11.5.3.5 Drop test**

**6.11.5.3.5.1** Applicability

For all types of flexible bulk containers, as a design type test.

**6.11.5.3.5.2** Preparation for testing

The flexible bulk container shall be filled to its maximum permissible gross mass.

**6.11.5.3.5.3** Method of testing

The flexible bulk container shall be dropped onto a target surface that is non-resilient and horizontal. The target surface shall be:

- (a) Integral and massive enough to be immovable;
- (b) Flat with a surface kept free from local defects capable of influencing the test results;
- (c) Rigid enough to be non-deformable under test conditions and not liable to become damaged by the tests; and
- (d) Sufficiently large to ensure that the test flexible bulk container falls entirely upon the surface.

Following the drop, the flexible bulk container shall be restored to the upright position for observation.

**6.11.5.3.5.4** Drop height shall be:

Packing group III: 0.8 m.

**6.11.5.3.5.5** Criteria for passing the test

- (a) There shall be no loss of contents. A slight discharge, e.g. from closures or stitch holes, upon impact shall not be considered to be a failure of the flexible

bulk container provided that no further leakage occurs after the container has been restored to the upright position;

- (b) There shall be no damage, which renders the flexible bulk container unsafe to be carried for salvage or for disposal.

#### **6.11.5.3.6 Top lift test**

##### **6.11.5.3.6.1 Applicability**

For all types of flexible bulk containers as a design type test.

##### **6.11.5.3.6.2 Preparation for testing**

Flexible bulk containers shall be filled to six times the maximum net mass, the load being evenly distributed.

##### **6.11.5.3.6.3 Method of testing**

A flexible bulk container shall be lifted in the manner for which it is designed until clear of the floor and maintained in that position for a period of five minutes.

##### **6.11.5.3.6.4 Criteria for passing the test**

There shall be no damage to the flexible bulk container or its lifting devices which renders the flexible bulk container unsafe for carriage or handling, and no loss of contents.

#### **6.11.5.3.7 Topple test**

##### **6.11.5.3.7.1 Applicability**

For all types of flexible bulk containers as a design type test.

##### **6.11.5.3.7.2 Preparation for testing**

The flexible bulk container shall be filled to its maximum permissible gross mass.

##### **6.11.5.3.7.3 Method of testing**

A flexible bulk container shall be toppled onto any part of its top by lifting the side furthest from the drop edge upon a target surface that is non-resilient and horizontal. The target surface shall be:

- (a) Integral and massive enough to be immovable;
- (b) Flat with a surface kept free from local defects capable of influencing the test results;
- (c) Rigid enough to be non-deformable under test conditions and not liable to become damaged by the tests; and
- (d) Sufficiently large to ensure that the tested flexible bulk container falls entirely upon the surface.

**6.11.5.3.7.4** For all flexible bulk containers, the topple height is specified as follows:

Packing group III: 0.8 m

**6.11.5.3.7.5** Criterion for passing the test

There shall be no loss of contents. A slight discharge, e.g. from closures or stitch holes, upon impact shall not be considered to be a failure of the flexible bulk container provided that no further leakage occurs.

**6.11.5.3.8** **Righting test**

**6.11.5.3.8.1** Applicability

For all types of flexible bulk containers designed to be lifted by the top or side part, as a design type test.

**6.11.5.3.8.2** Preparation for testing

The flexible bulk container shall be filled to not less than 95% of its capacity and to its maximum permissible gross mass.

**6.11.5.3.8.3** Method of testing

The flexible bulk container, lying on its side, shall be lifted at a speed of at least 0.1 m/s to an upright position, clear of the floor, by no more than half of the lifting devices.

**6.11.5.3.8.4** Criterion for passing the test

There shall be no damage to the flexible bulk container or its lifting devices which renders the flexible bulk container unsafe for carriage or handling.

**6.11.5.3.9** **Tear test**

**6.11.5.3.9.1** Applicability

For all types of flexible bulk containers as a design type test.

**6.11.5.3.9.2** Preparation for testing

The flexible bulk container shall be filled to its maximum permissible gross mass.

**6.11.5.3.9.3** Method of testing

With the flexible bulk container placed on the ground, a 300 mm cut shall be made, completely penetrating all layers of the flexible bulk container on a wall of a wide face. The cut shall be made at a 45° angle to the principal axis of the flexible bulk container, halfway between the bottom surface and the top level of the contents. The flexible bulk container shall then be subjected to a uniformly distributed superimposed load equivalent to twice the maximum gross mass. The load must be applied for at least fifteen minutes. A flexible bulk container which is designed to be lifted from the top or the side shall, after removal of the superimposed load, be lifted clear of the floor and maintained in that position for a period of fifteen minutes.

**6.11.5.3.9.4** Criterion for passing the test

The cut shall not propagate more than 25% of its original length.

**6.11.5.3.10 Stacking test**

**6.11.5.3.10.1** Applicability

For all types of flexible bulk containers as a design type test.

**6.11.5.3.10.2** Preparation for testing

The flexible bulk container shall be filled to its maximum permissible gross mass.

**6.11.5.3.10.3** Method of testing

The flexible bulk container shall be subjected to a force applied to its top surface that is four times the design load-carrying capacity for 24 hours.

**6.11.5.3.10.4** Criterion for passing the test

There shall be no loss of contents during the test or after removal of the load.

**6.11.5.4 Test report**


**6.11.5.4.1** A test report containing at least the following particulars shall be drawn up and shall be available to the users of the flexible bulk container:

1. Name and address of the test facility;
2. Name and address of applicant (where appropriate);
3. Unique test report identification;
4. Date of the test report;
5. Manufacturer of the flexible bulk container;
6. Description of the flexible bulk container design type (e.g. dimensions, materials, closures, thickness, etc) and/or photograph(s);
7. Maximum capacity/maximum permissible gross mass;
8. Characteristics of test contents, e.g. particle size for solids;
9. Test descriptions and results;
10. The test report shall be signed with the name and status of the signatory.

**6.11.5.4.2** The test report shall contain statements that the flexible bulk container prepared as for carriage was tested in accordance with the appropriate provisions of this Chapter and that the use of other containment methods or components may render it invalid. A copy of the test report shall be available to the competent authority.

### 6.11.5.5 Marking

**6.11.5.5.1** Each flexible bulk container manufactured and intended for use according to the provisions of RID shall bear markings that are durable, legible and placed in a location so as to be readily visible. Letters, numerals and symbols shall be at least 24 mm high and shall show:

- (a) The United Nations packaging symbol . This symbol shall not be used for any purpose other than certifying that a packaging, a flexible bulk container, a portable tank or a MEGC complies with the relevant requirements in Chapters 6.1, 6.2, 6.3, 6.5, 6.6, 6.7 or 6.11 ;
- (b) The code BK 3;
- (c) A capital letter designating the packing group(s) for which the design type has been approved:
- Z for packing group III only;
- (d) The month and year (last two digits) of manufacture;
- (e) The character(s) identifying the country authorizing the allocation of the mark; as indicated by the distinguishing sign for motor vehicles in international traffic<sup>2</sup>;
- (f) The name or symbol of the manufacturer and other identification of the flexible bulk container as specified by the competent authority;
- (g) The stacking test load in kg;
- (h) The maximum permissible gross mass in kg.

Marking shall be applied in the sequence shown in (a) to (h); each element of the marking, required in these subparagraphs, shall be clearly separated, e.g. by a slash or space and presented in a way that ensures that all of the parts of the mark are easily identified.

<sup>2</sup> Distinguishing sign for motor vehicles in international traffic prescribed in the Vienna Convention on Road Traffic (1968).

**6.11.5.5.2** Example of marking



BK3/Z/11 09  
RUS/NTT/MK-14-10  
56000/14000." ]

## PART 7

### [Chapter 7.1

**7.1.3** After "591 (status at 01.10.2007, 3<sup>rd</sup> edition)", insert:

"592 (status at 01.10.2013, 2<sup>nd</sup> edition)",.

At the end, after "591", insert:

", 592". ]

## Chapter 7.3

**7.3.1.1** In paragraph (a), after "identified by the code BK", insert:

"or a reference to a specific paragraph".

Amend paragraph (b) to read as follows:

"(b) a special provision, identified by the code "VC" or a reference to a specific paragraph, explicitly authorizing this mode of carriage is indicated in column (17) of Table A of Chapter 3.2 and the conditions of this special provision, together with any additional provision identified with the code(s) "AP", as laid down in 7.3.3 are satisfied in addition to those of this section."

**7.3.1.4** At the beginning, replace "Bulk solids" by:

"Substances".

**7.3.1.6** At the beginning, replace "Bulk solids" by:

"Substances".

**7.3.1.10** [The amendment in the French version does not apply to the English text.]

**7.3.2** In the title, delete the word:

"Additional".

**7.3.2.1** Add the following new first sentence:

"In addition to the general provisions of section 7.3.1, the provisions of this section are applicable."

[In the second sentence (existing first sentence), replace "codes BK1 and BK2" by "codes BK 1, BK 2 and BK 3".

At the end of the description of the meaning of BK2 replace "." by:

",".

After the description of the meaning of BK1 and BK2, insert:

"BK 3: Carriage in flexible bulk containers is permitted." ]

[**7.3.2.4** Delete:

"(code BK2)". ]

**7.3.2.6.1** [The amendment to paragraph (b) in the German version does not apply to the English text.]

[The amendment to paragraph (d) in the German version does not apply to the English text.]

[The amendment to paragraph (e) in the French version does not apply to the English text.]

**7.3.2.6.2** [The amendment to paragraph (e) in the German version does not apply to the English text.]

**7.3.2.7** Replace "4.1.9.2.3" by:

"4.1.9.2.4".

**7.3.2** Add the following new sub-sections 7.3.2.9 and 7.3.2.10 to read as follows:

**"7.3.2.9 Goods of Class 9**

**7.3.2.9.1** For UN 3509, only closed bulk containers (code BK 2) may be used. Bulk containers shall be made leak tight or fitted with a leak tight and puncture resistant sealed liner or bag, and shall have a means of retaining any free liquid that might escape during carriage, e.g. absorbent material. Packagings, discarded, empty, uncleaned with residues of Class 5.1 shall be carried in bulk containers which have been so constructed or adapted that the goods cannot come into contact with wood or any other combustible material.

**[7.3.2.10 Use of flexible bulk containers**

**7.3.2.10.1** Before a flexible bulk container is filled it shall be visually examined to ensure it is structurally serviceable, its textile slings, load-bearing structure straps, body fabric, lock device parts including metal and textile parts are free from protrusions or damage and that inner liners are free from rips, tears or any damage.

**7.3.2.10.2** For flexible bulk containers, the period of use permitted for the carriage of dangerous goods shall be two years from the date of manufacture of the flexible bulk container.

**7.3.2.10.3** A venting device shall be fitted if a dangerous accumulation of gases may develop within the flexible bulk container. The vent shall be so designed that the penetration of foreign substances or ingress of water is prevented under normal conditions of carriage.

**7.3.2.10.4** Flexible bulk containers shall be filled in such a way that when loaded the ratio of height to width does not exceed [1.2]. The maximum gross mass of the flexible bulk containers shall not exceed 14 tonnes.]"

**7.3.3** Amend to read as follows:

**"7.3.3 Provisions for carriage in bulk when the provisions of 7.3.1.1 (b) are applied**

**7.3.3.1** In addition to the general provisions of section 7.3.1, the provisions of this section are applicable, when they are shown under an entry in column (17) of Table A of Chapter 3.2. Sheeted or closed wagons or sheeted or closed containers used under this section need not be in conformity with the requirements of Chapter 6.11. The codes VC 1, VC 2 and VC 3 in column (17) of Table A of Chapter 3.2 have the following meanings:

**VC 1** Carriage in bulk in sheeted wagons, sheeted containers or sheeted bulk containers is permitted;

- VC 2** Carriage in bulk in closed wagons, closed containers or closed bulk containers is permitted;
- VC 3** Carriage in bulk is permitted in specially equipped wagons or large containers in accordance with standards specified by the competent authority of the country of origin. If the country of origin is not a Contracting State to RID, the conditions laid down shall be recognized by the competent authority of the first country Contracting State to RID reached by the consignment.
- 7.3.3.2** When the VC bulk codes are used, the following additional provisions shown in column (17) of Table A of Chapter 3.2 shall apply:
- 7.3.3.2.1 Goods of Class 4.1**
- AP 1** Wagons and containers shall have a metal body and where fitted the sheet shall be non-combustible.
- AP 2** ~~Closed~~ Wagons and ~~closed~~ containers shall have adequate ventilation.
- 7.3.3.2.2 Goods of Class 4.2**
- AP 1** Wagons and containers shall have a metal body and where fitted the sheet shall be non-combustible.
- 7.3.3.2.3 Goods of Class 4.3**
- AP 2** Wagons and containers shall have adequate ventilation.]
- AP 3** Sheeted wagons and sheeted containers shall be used only when the substance is in pieces (not in powder, granular, dust or ashes form).
- AP 4** Closed wagons and closed containers shall be equipped with hermetically closed openings used for loading and unloading to prevent the exit of gas and exclude the ingress of moisture.
- AP 5** The cargo doors of the closed wagons or closed containers shall be marked with the following in letters not less than 25 mm high:
- "WARNING  
NO VENTILATION  
OPEN WITH CAUTION"
- This shall be in a language considered appropriate by the consignor.
- 7.3.3.2.4 Goods of Class 5.1**
- AP 6** If the wagon or container is made of wood or other combustible material, an impermeable surfacing resistant to combustion or a coating of sodium silicate or similar substance shall be provided. Sheeting shall also be impermeable and non-combustible.
- AP 7** Carriage in bulk shall only be as a wagon load or full load.
- 7.3.3.2.5 Goods of Class 6.1**
- AP 7** Carriage in bulk shall only be as a wagon load or full load.



**7.3.3.2.6 Goods of Class 8**

**AP 7** Carriage in bulk shall only be as a wagon load or full load.

**AP 8** The design of the load compartment of wagons or containers shall take account of any residual currents and impacts from the batteries.

The load compartments of wagons or containers shall be of steel resistant to the corrosive substances contained in the batteries. Less resistant steels may be used when there is a sufficiently great wall thickness or a plastics lining/layer resistant to the corrosive substances.

**NOTE:** Steel exhibiting a maximum rate of progressive reduction of 0.1 mm per year under the effects of the corrosive substances may be considered as resistant.

The load compartments of wagons or containers shall not be loaded above the top of their walls.

Carriage is also permitted in small plastics containers which shall be capable of withstanding, when fully loaded, a drop from a height of 0.8 m onto a hard surface at –18 °C, without breakage.

**7.3.3.2.7 Goods of Class 9**

**AP 2** ~~Closed~~ Wagons and ~~closed~~ containers shall have adequate ventilation.

**AP 9** Carriage in bulk is permitted for solids (substances or mixtures, such as preparations or wastes) containing on average not more than 1 000 mg/kg of substance to which this UN number is assigned. At no point of the load shall the concentration of this substance or these substances be higher than 10 000 mg/kg.

**AP 10** Wagons and containers shall be made leak tight or fitted with a leak tight and puncture resistant sealed liner or bag, and shall have a means of retaining any free liquid that might escape during carriage, e.g. absorbent material. Packagings, discarded, empty, uncleaned with residues of Class 5.1 shall be carried in wagons and containers which have been so constructed or adapted that the goods cannot come into contact with wood or any other combustible material."

**Chapter 7.5**

**7.5** In the Note, replace "of this section" with:

"of this Chapter".

**7.5.1** Add the following new sub-section:

**7.5.1.6** All means of containment shall be loaded and unloaded in conformity with a handling method for which they have been designed and, where required, tested."

**7.5.2.1** Amend footnote c after the Table to read:

<sup>c</sup> Mixed loading permitted between safety devices, pyrotechnic of Division 1.4, compatibility group G, (UN No. 0503) and safety devices, electrically initiated of Class 9 (UN No. 3268)."

**7.5.7** Add the following new sub-sections:

**7.5.7.4** (Reserved)

**7.5.7.5** (Reserved)

**7.5.7.6 Loading of flexible bulk containers**

**7.5.7.6.1** Flexible bulk containers shall be carried within a wagon with rigid sides and ends that extend at least two-thirds of the height of the flexible bulk container.

**NOTE:** When loading flexible bulk containers in a wagon or container particular attention shall be paid to the guidance on the handling and stowage of dangerous goods referred to in 7.5.7.1 and to the IMO/ILO/UNECE Guidelines for Packing Cargo Transport Units (CTUs).

**7.5.7.6.2** Flexible bulk containers shall be secured by suitable means capable of restraining them in the wagon or container in a manner that will prevent any movement during carriage which would change the position of the flexible bulk container or cause it to be damaged. Movement of the flexible bulk containers may also be prevented by filling any voids by the use of dunnage or by blocking and bracing. Where restraints such as banding or straps are used, these shall not be over-tightened to cause damage or deformation to the flexible bulk containers.

**7.5.7.6.3** Flexible bulk containers shall not be stacked.]"

**7.5.11**

**CW 33** In the introductory sentence of paragraph 1.1 (b) delete:

"the critical group of".

In paragraph (3.2), replace "approval certificate" by:

"certificate of approval".

Amend the heading of paragraph (4) to read as follows:

**"(4) Additional requirements relating to carriage and storage in transit of fissile material".**

Insert a new paragraph (4.3) to read as follows:

"(4.3) Fissile material meeting one of the provisions (a) to (f) of 2.2.7.2.3.5 shall meet the following requirements:

(a) Only one of the provisions (a) to (f) of 2.2.7.2.3.5 is allowed per consignment;

(b) Only one approved fissile material in packages classified in accordance with 2.2.7.2.3.5 (f) is allowed per consignment unless multiple materials are authorized in the certificate of approval;

- (c) Fissile material in packages classified in accordance with 2.2.7.2.3.5 (c) shall be carried in a consignment with no more than 45 g of fissile nuclides;
- (d) Fissile material in packages classified in accordance with 2.2.7.2.3.5 (d) shall be carried in a consignment with no more than 15 g of fissile nuclides;
- (e) Unpackaged or packaged fissile material classified in accordance with 2.2.7.2.3.5 (e) shall be carried under exclusive use on a wagon with no more than 45 g of fissile nuclides."

Amend the end of the paragraph of paragraph (5.4) to read as follows:

"... and shall not be re-used unless the following conditions are fulfilled:

- (a) the non-fixed contamination shall not exceed the limits specified in 4.1.9.1.2;
- (b) the radiation level resulting from the fixed contamination shall not exceed 5  $\mu$ Sv/h at the surface."

At the end add the following additional provision:

**"CW 37**

Before carriage, aluminium smelting by-products or aluminium remelting by-products shall be cooled to ambient temperature prior to loading. Sheeted wagons and sheeted containers shall be waterproof. The cargo doors of the closed wagons and closed containers shall be marked with the following in letters not less than 25 mm high:

"WARNING  
CLOSED MEANS OF CONTAINMENT  
OPEN WITH CAUTION"

This shall be in a language considered appropriate by the consignor."

Insert a new Chapter 7.8 to read as follows:

**"Chapter 7.8 Piggyback transport in mixed trains (combined passenger and freight transport)**

The carriage of dangerous goods in piggyback transport in trains in which passengers are also travelling shall only be possible with the agreement of, and under the conditions specified by the competent authorities of all the countries involved in the transport operation.

**NOTE 1:** These provisions shall not affect restrictions arising from the carriers' conditions of carriage under private law.

- 2:** For carriage in the context of the rolling road (accompanied or unaccompanied) (see definition of "piggyback transport" in 1.2.1), see 1.1.4.4."