



Organisation intergouvernementale pour les transports internationaux ferroviaires  
Zwischenstaatliche Organisation für den internationalen Eisenbahnverkehr  
Intergovernmental Organisation for International Carriage by Rail

[OTIF/RID/NOT/2017]

2 May 2017

Original: English/French

## **Notification**

### **1 January 2017 edition of RID**

### **Texts adopted by the 5<sup>th</sup> session of the RID Committee of Experts' standing working group (Zagreb, 23 to 27 November 2015) for entry into force on 1 January 2017**

The Secretariat has put together a consolidated version of the amendments to RID which have been adopted for entry into force on 1 January 2017. This consolidated version should enable the Member States to begin the work of translating the amendments in good time.

The amendment texts highlighted in grey in this consolidated version were already adopted at the 5<sup>th</sup> session of the RID Committee of Experts' standing working group (Zagreb, 23 to 27 November 2015). Texts not highlighted still have to be adopted by the 6<sup>th</sup> session of the standing working group (Berne, 23 to 25 May 2016). This particularly includes those amendments adopted by the RID/ADR/ADN Joint Meeting (Berne, 14 to 18 March 2016) for a date of entry into force of 1 January 2017 (see also document OTIF/RID/RC/2016-A/Add.2 – ECE/TRANS/WP.15/AC.1/142/Add.2 Annexes II and III).

As all the amendments also have to be endorsed by 54<sup>th</sup> session of the RID Committee of Experts (Berne, 23 May 2016), 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 2016.

## TITLE PAGE

Replace "With effect from 1 January 2015" by:

"With effect from 1 January 2017".

Replace "This text replaces the requirements of 1 January 2013." by:

"This text replaces the requirements of 1 January 2015."

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

"The following are RID Contracting States (as at 1 July 2016):".

Under the RID Contracting States, after "Armenia,", insert:

"Azerbaijan,".

Under the RID Contracting States, after "Iran,", insert:

"Ireland,".

Under the RID Contracting States, after "Spain,", insert:

"Sweden,".

Delete the subsequent paragraph beginning with "Ireland and Sweden ...".

## TABLE OF CONTENTS

**1.1.3.3** [The amendment to the French and German version does not apply to the English text.]

**2.2.41** After "self-reactive substances", insert:

", polymerizing substances".

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

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

Insert the following lines:

**1.4.3.8** Entity in charge of maintenance (ECM)".

## PART 1

### Chapter 1.1

**1.1.3.2** At the end of paragraph (a), add the following Note:

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

Amend paragraph (b) to read:

"(b) (Deleted)".

### 1.1.3.3

[The amendments to the title, to paragraph (a) and the new footnote in the French and German version do not apply to the English text.]

At the end of paragraph (a), add the following Note:

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

Amend paragraphs (b) and (c) to read as follows:

"(b) (Deleted)

(c) (Deleted)".

Delete footnote 1.

Current footnote 2 becomes footnote 1.

### 1.1.3.6.3

In the second column of the Table, for transport category 0, for Class 9, replace "apparatus" by:

"articles".

Amend the second column of the Table, for transport category 2 as follows:

– In the first line, delete:

"or articles".

– In the third line, after "substances" add:

"and articles".

– Under "Class 4.1", add at the end:

", 3531 and 3532".

– After Class 4.1, add the following text:

"Class 4.3: UN No. 3292  
Class 5.1: UN No. 3356".

– Amend the row for Class 6.1 to read as follows:

"Class 6.1: UN Nos. 1700, 2016 and 2017 and substances belonging to packing group III".

– For class 9, replace "UN No. 3245" by:

"UN Nos. 3090, 3091, 3245, 3480 and 3481".

Amend the second column of the Table, for transport category 3 as follows:

– In the first line, delete:

"and articles".

– For class 8, replace "and 3477" by:

", 3477 and 3506".

Amend the second column of the Table, for transport category 4 as follows:

– For Class 9, replace "and 3509" by:

", 3508 and 3509".

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

**1.1.3.8** Replace "1.1.3.2 (b) to (g)" by:

"1.1.3.2 (c) to (g)".

**1.1.3.10** In paragraph (b), in the Note after subparagraph (i), replace "ISO 9001:2008" by:

"ISO 9001".

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

**1.1.4.2.1** In the first sentence, replace "a wagon load" by:

"a full load".

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

In paragraph (a), replace "shall bear markings" by:

"shall bear marks".

In paragraph (c), in the first sentence, replace "a wagon load" by:

"a full load".

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

**1.1.4.4.1** Amend "Transport units and trailers" to read:

"Road vehicles".

Delete footnote 3.

Current footnotes 4 and 5 become footnotes 3 and 4.

After the second indent, insert a new third indent to read as follows:

"– polymerizing substances of Class 4.1 requiring temperature control (UN Nos. 3533 and 3544);".

**1.1.4.4.2** Replace "markings" by:

"marks" (4 times).

In the heading and in paragraphs (a) and (b), replace "transport units or trailers" by:

"road vehicles".

**1.1.4.4.4** Replace "markings" by:

"marks" (twice).

In the heading, replace "transport units or trailers" by:

"road vehicles".

**1.1.4.6** Replace "markings" by:

"marks".

## **Chapter 1.2**

**1.2.1** In the definition of "**Aerosol or aerosol dispenser**", after "means", insert:

"an article consisting of".

In the second sentence of the definition of "**Unilateral approval**" under the definition of "**Approval**", replace "by the *competent authority* of the first RID Contracting State reached by the consignment" by:

"by the *competent authority* of an RID Contracting State".

Amend the definition for "**Cargo transport unit**" to read as follows and delete the related Note:

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

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

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

[The amendment to the definition of "**Composite IBC with plastics inner receptacle**" in the German version does not apply to the English text.]

In the definition of "**Filler**", replace "loads" by:

"fills".

Amend the definition of "**full load**" as follows:

- Replace "of a *large container*" by:

"of a *wagon or large container*".

- The Note becomes Note 1.

- Add a new Note 2 to read as follows:

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

In the definition of "**GHS**", replace "fifth edition" by:

"sixth revised edition" and replace "ST/SG/AC.10/30/Rev.5" by:

"ST/SG/AC.10/30/Rev.6".

In the definition of "**Large salvage packaging**", replace "or leaking" by:

", leaking or non-conforming".

In the definition of "**Loader**", in paragraph (b), replace "or *portable tank*" by:

", *portable tank or road vehicle*".

In the definition of "**Manual of Tests and Criteria**", replace "fifth revised edition" by:

"sixth revised edition".

In the definition of "**Manual of Tests and Criteria**", replace "ST/SG/AC.10/11/Rev.5, Amend.1 and Amend.2" by:

"ST/SG/AC.10/11/Rev.6".

Amend the definition of "**Maximum working pressure (gauge pressure)**" as follows:

- Amend the introductory sentence to read as follows:

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

- [The second and third amendments in the French version do not apply to the English text.]

- After the definition, insert a Note 1 to read as follows:

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

- Renumber Notes 1 and 2 as Notes 2 and 3.

In the definition of "**Piggyback transport**", replace "transport units or trailers within the meaning of ADR" by:

"road vehicles within the meaning of ADR".

In the definition of "**Piggyback transport**", replace "transport units within the meaning of ADR" by:

"road vehicles within the meaning of ADR".

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

[The amendment to the definition of "**Reference steel**" in the German version does not apply to the English text.]

[The amendment to the definition of "**Rigid plastics IBC**" in the German version does not apply to the English text.]

In the definition of "**Salvage pressure receptacle**" replace "1 000" by:

"3 000".

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

In the definition of "**Tube**", replace "a seamless transportable *pressure receptacle* of" by:

"a transportable *pressure receptacle* of seamless or composite construction having".

In the definition of "**unloader**", in paragraph (a), replace "or *portable tank*" by:

", *portable tank* or *road vehicle*".

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

"nineteenth" and "(ST/SG/AC.10/1/Rev.18)" by:

"(ST/SG/AC.10/1/Rev.19)".

In the definition of "**Vacuum-operated waste tank**", replace "loading and unloading" by:

"filling and discharging".

Delete the definition of "**wagon load**".

Insert the following new definitions:

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;".

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

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

"**Entity in charge of maintenance (ECM)**" means the entity in accordance with the Uniform Rules concerning the Technical Admission of Railway Material used in International Traffic (ATMF – Appendix G to COTIF) and certified in accordance with Annex A<sup>5</sup> thereto, that is in charge of the maintenance of a wagon;

<sup>5</sup> Appendix G is harmonised with the European legislation, particularly Directives 2004/49/EC (Articles 3 and 14 a) and 2008/57/EC (Articles 2 and 33) on the elements related to ECM. Annex A to ATMF is equivalent to Regulation (EU) 445/2011 and deals with the certification system of entities in charge of the maintenance of freight wagons."

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

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

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

**NOTE:** For *portable tanks*, see 6.7.4.1."

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

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

"**Road vehicle**" means motor vehicle, articulated vehicle, trailer or semi-trailer within the meaning of *ADR*;"

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

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

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

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

## Chapter 1.3

1.3.2.2 In paragraph (a), replace "orange-coloured marking" by:

"orange-coloured plates".



**Chapter 1.4**

**1.4.2.1.1** In paragraph (c), replace "markings" by:

"marks".

In paragraph (e), amend the text after "empty uncleaned wagons" to read as follows:

"and bulk containers are placarded, marked and labelled in accordance with Chapter 5.3 and that empty uncleaned tanks are closed and present the same degree of leakproofness as if they were full."

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

In paragraph (d), in the Note, before "4.3.2.4.4", insert:

"4.3.2.3.7,".

Amend paragraph (f) to read as follows:

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

**1.4.2.2** Insert new 1.4.2.2.7 and 1.4.2.2.8 to read as follows:

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

The requirements of this paragraph are considered to have been complied with if appendices A and B of UIC Leaflet 472 ("Braking sheet and consist list for international freight trains")<sup>13</sup> are applied.

<sup>13</sup> Version of the UIC leaflet applicable as from 1 July 2015.

**1.4.2.2.8** The carrier shall ensure that the information to be made available to the entity in charge of maintenance (ECM) as defined in Article 15a § 3 of ATMF – Appendix G to COTIF – and in Article 5 of Annex A to ATMF also covers the tank and its equipment."

**1.4.3.1.1** In paragraph (c), delete ", when loading dangerous goods in a wagon, or a large or small container,".

In paragraph (d), amend the text after "concerning placarding," to read as follows:

"marking and orange-coloured plates on the wagon or large container conforming to Chapter 5.3."

**1.4.3.3** Amend paragraph (h) to read as follows:

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

**1.4.3.5** In the introductory sentence, before the colon, insert a reference to a footnote which reads as follows:

"<sup>14</sup> The tank-wagon operator may transfer the organisation of inspections according to Chapter 6.8 to an entity in charge of maintenance (ECM)."

Delete paragraph (b) and current footnote<sup>13</sup>.

Current footnotes 14 to 22 become footnotes 15 to 23.

Previous paragraph (c) becomes paragraph (b). At the end of new paragraph (b), replace "." by:

",".

Add the following paragraphs:

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

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

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

**1.4.3.7** Delete the Note after the heading.

**1.4.3.7.1** In paragraph (c), at the end, add:

"and handling".

In paragraph (f), amend the end to read as follows:

"... display placards, marks and orange-coloured plates that had been displayed in accordance with Chapter 5.3."

**1.4.3** Insert new 1.4.3.8 to read as follows:

**"1.4.3.8 Entity in charge of maintenance (ECM)**

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

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

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

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

**Chapter 1.6**

**1.6.1.1** Amend "30 June 2015" to read:

"30 June 2017".

Amend "31 December 2014" to read:

"31 December 2016".

In footnote 15, amend "1 January 2013" to read:

"1 January 2015".

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

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

**1.6.1.20** Amend to read as follows:

"1.6.1.20 (Deleted)".

**1.6.1.25** Amend to read as follows:

"1.6.1.25 Cylinders of 60 litres water capacity or less marked with a UN number in accordance with the provisions of RID applicable up to 31 December 2012 and which do not conform to the requirements of 5.2.1.1 regarding the size of the UN number and of the letters "UN" applicable as from 1 January 2013 may continue to be used until the next periodic inspection but no later than 30 June 2018."

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

**1.6.1.28** Amend to read as follows:

"1.6.1.28 (Deleted)".

**1.6.1.30** Amend to read as follows:

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

**1.6.1.31** Amend to read as follows:

"1.6.1.31 (Deleted)".

**1.6.1.32** Amend to read as follows:

"1.6.1.32 (Deleted)".

**1.6.1** Add the following new transitional measures:

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

**1.6.1.39** Notwithstanding the requirements of special provision 188 of Chapter 3.3 applicable as from 1 January 2017, packages containing lithium cells or batteries may continue to be marked until 31 December 2018 in accordance with the requirements of special provision 188 of Chapter 3.3 in force up to 31 December 2016.

**1.6.1.40** Notwithstanding the requirements of RID applicable as from 1 January 2017, articles of UN Nos. 0015, 0016 and 0303 containing smoke-producing substance(s) toxic by inhalation according to the criteria for Class 6.1, manufactured before 31 December 2016 may be carried until 31 December 2018 without a "TOXIC" subsidiary risk label (model No. 6.1, see 5.2.2.2.2).

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

**1.6.1.42** Notwithstanding the requirements of column (5) of Table A of Chapter 3.2 applicable as from 1 January 2017 to UN Nos. 3090, 3091, 3480 and 3481, the Class 9 label (model No 9, see 5.2.2.2.2) may continue to be used for these UN numbers until 31 December 2018."

**1.6.2.3** Replace "the markings conforming" by:  
"the marks conforming".

**1.6.3.6** Amend to read as follows:

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

**1.6.3.32** At the end, delete:  
"by no later than 31 December 2014".

**1.6.3.40** Amend to read as follows:

"**1.6.3.40** (Deleted)".

**1.6.3** Add the following new transitional provisions **1.6.3.45** and **1.6.3.46** to read as follows:

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

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

**1.6.4.19** Amend to read as follows:

"**1.6.4.19** (Deleted)".

**1.6.4.36** Amend to read as follows:

"**1.6.4.36** (Deleted)".

**1.6.4.37** Delete the second sentence.

**1.6.4.41** Amend to read as follows:

"**1.6.4.41** (Deleted)".

**1.6.4** Add the following new transitional provisions **1.6.4.47** and **1.6.4.48** to read as follows:

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

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

## Chapter 1.7

**1.7.1.5.1** In paragraph (a), replace "5.2.1.9" by:

"5.2.1.10".

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

## Chapter 1.8

**1.8.3.2** In paragraph (c), before "loading or unloading", insert:

"packing, filling," (twice).

**1.8.3.3** In the third, fifth, sixth and ninth indent of the third sub-paragraph, before "loading or unloading", insert:

"packing, filling," (four times).

In the tenth and twelfth indent, before "loading and unloading", insert:

"packing, filling," (twice).

**1.8.3.6** Before "loading or unloading", insert:

"packing, filling,".

**1.8.3.9** After "carriage", insert:

"packing, filling, loading or unloading".

**1.8.3.10** At the end of the second indent, add:

", including, if necessary, the infrastructure and organisation of electronic examinations in accordance with 1.8.3.12.5, if these are to be carried out;".

**1.8.3.11** In paragraph (b), in the third indent, replace "orange plates marking" by:

"orange-coloured plate marking"

In paragraph (b), at the end of the third indent, replace "orange plates" by:

"orange-coloured plates".

In paragraph (b), in the fifth indent, delete:

"wagon load,".

In paragraph (b), in the tenth indent, between the brackets, before "loading and unloading", insert:

"packing, filling,".

In paragraph (b), in the eleventh indent, before "loading and after unloading", insert:

"packing, filling,".

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

**1.8.3.12.2** Amend to read as follows:

**1.8.3.12.2** The competent authority or an examining body designated by the competent authority shall invigilate every examination. Any manipulation and deception shall be ruled out as far as possible. Authentication of the candidate shall be ensured. The use in the written test of documentation other than international or national regulations is not permitted. All examination documents shall be recorded and kept as a print-out or electronically as a file."

**1.8.3.12.4** In paragraph (a), amend the fourth indent to read as follows:

"– danger marking, labelling and placarding;".

**1.8.3.12** Add a new **1.8.3.12.5** to read as follows:

**1.8.3.12.5** Written examinations may be performed, in whole or in part, as electronic examinations, where the answers are recorded and evaluated using electronic data processing (EDP) processes, provided the following conditions are met:

(a) The hardware and software shall be checked and accepted by the competent authority or by an examining body designated by the competent authority;

(b) Proper technical functioning shall be ensured. Arrangements as to whether and how the examination can be continued shall be made for a failure of the devices and applications. No aids shall be available on the input devices (e.g. electronic search function), the equipment provided according to 1.8.3.12.3 shall not allow the candidates to communicate with any other device during the examination;

(c) Final inputs of each candidate shall be logged. The determination of the results shall be transparent."

**1.8.3.18** In the eighth entry ("Valid until ..."), before "loading or unloading", insert:

"packing, filling,".

Delete the last 4 lines of the model certificate.

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

**1.8.8.4.1** [The amendment to paragraph (e) in the French version does not apply to the English text.]

**1.8.8.4.3** In paragraph (d), replace "for the marking" by:

"for marking".

## Chapter 1.9

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

## PART 2

### Chapter 2.1

**2.1.1.1** For "Class 4.1", after "self-reactive substances" insert:

", polymerizing substances".

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

**2.1.2.2** At the end, before the Note, insert a new sentence to read as follows:

"The substances listed by name in column (2) of Table A of Chapter 3.2 shall be carried according to their classification in Table A or under the conditions specified in 2.1.2.8."

**2.1.2** Add a new **2.1.2.8** to read as follows:

**2.1.2.8** A consignor who has identified, on the basis of test data, that a substance listed by name in column (2) of Table A of Chapter 3.2 meets classification criteria for a class that is not identified in column (3a) or (5) of Table A of Chapter 3.2, may, with the approval of the competent authority, consign the substance:

- Under the most appropriate collective entry listed in sub-sections 2.2.x.3 reflecting all hazards; or
- Under the same UN number and name but with additional hazard communication information as appropriate to reflect the additional subsidiary risk(s) (documentation, label, placard) provided that the class remains unchanged and that any other carriage conditions (e.g. limited quantity, packaging and tank provisions) that would normally apply to substances possessing such a combination of hazards are the same as those applicable to the substance listed.

**NOTE 1:** The competent authority granting the approval may be the competent authority of any RID Contracting State who may also recognize an approval granted by the competent authority of a country which is not an RID Contracting State provided that this approval has been granted in accordance with the procedures applicable according to RID, ADR, ADN, the IMDG Code or the ICAO Technical Instructions.

**2:** When a competent authority grants such approvals, it should inform the United Nations Sub-Committee of Experts on the Transport of Dangerous Goods accordingly and submit a relevant proposal of amendment to the Dangerous Goods List of the UN Model Regulations. Should the proposed amendment be rejected, the competent authority should withdraw its approval.

**3:** For carriage in accordance with 2.1.2.8, see also 5.4.1.1.20."

**2.1.3.4.2** Amend the entries for UN Nos. 3151 and 3152 to read as follows:

"UN 3151 POLYHALOGENATED BIPHENYLS, LIQUID or  
UN 3151 HALOGENATED MONOMETHYLDIPHENYLMETHANES, LIQUID or  
UN 3151 POLYHALOGENATED TERPHENYLS, LIQUID  
UN 3152 POLYHALOGENATED BIPHENYLS, SOLID or  
UN 3152 HALOGENATED MONOMETHYLDIPHENYLMETHANES, SOLID or  
UN 3152 POLYHALOGENATED TERPHENYLS, SOLID".

**2.1.3.5.5** In footnote 1, delete:

"(replaced by the Directive 2006/12/EC of the European Parliament and of the Council (Official Journal of the European Union No. L 114 of 27 April 2006, page 9))".

At the end of footnote 1, insert:

"; and Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives (Official Journal of the European Union No. L 312 of 22 November 2008, pages 3-30)".

**2.1.4.2** [The amendment to paragraph (e) in the French version does not apply to the English text.]

## Chapter 2.2

### Section 2.2.1

**2.2.1.1.5** [The amendment to Division 1.4 in the French version does not apply to the English text.]

In the definition of Division 1.6, in the second sentence, replace "contain only extremely insensitive substance" by:

"predominantly contain extremely insensitive substances".

**2.2.1.1.6** Amend the definition of Compatibility Group "N" to read as follows:

"N Articles predominantly containing extremely insensitive substances".



**2.2.1.1.7.1** Amend the second sentence to read as follows:

"However:

- (a) waterfalls giving a positive result when tested in the HSL Flash composition test in Appendix 7 of the Manual of Tests and Criteria shall be classified as 1.1G regardless of the results of Test Series 6;
- (b) since the range of such articles is very extensive and the availability of test facilities may be limited, assignment to divisions may also be made in accordance with the procedure in 2.2.1.1.7.2."

**2.2.1.1.7.5** In the Table, for the entry "Fountain" in the column "Includes: / Synonym", delete:

"showers".

For the entry "Fountain", in the third column, at the end, add the following Note:

**"NOTE:** Fountains intended to produce a vertical cascade or curtain of sparks are considered to be waterfalls (see row below)."

After the row for "Fountain", insert a new row to read as follows:

Type	Includes: / Synonym:	Definition	Specification	Classification
Waterfall	cascades, showers	pyrotechnic fountain intended to produce a vertical cascade or curtain of sparks	containing a pyrotechnic substance which gives a positive result when tested in the HSL Flash composition test in Appendix 7 of the Manual of Tests and Criteria regardless of the results of Test Series 6 (see 2.2.1.1.7.1 (a))	1.1G
			containing a pyrotechnic substance which gives a negative result when tested in the HSL Flash composition test in Appendix 7 of the Manual of Tests and Criteria	1.3G

**2.2.1.1** Add a new paragraph **2.2.1.1.9** to read as follows:

**"2.2.1.1.9 Classification documentation**

**2.2.1.1.9.1** A competent authority assigning an article or substance to Class 1 shall confirm that classification with the applicant in writing.

**2.2.1.1.9.2** A competent authority classification document may be in any form and may consist of more than one page, provided pages are numbered consecutively. The document shall have a unique reference.

**2.2.1.1.9.3** The information provided shall be easy to identify, legible and durable.

**2.2.1.1.9.4** Examples of the information that may be provided in the classification documents are as follows:

- (a) The name of the competent authority and the provisions in national legislation under which it is granted its authority;
- (b) The modal or national regulations for which the classification document is applicable;
- (c) Confirmation that the classification has been approved, made or agreed in accordance with the UN Model Regulations or the relevant modal regulations;
- (d) The name and address of the person in law to which the classification has been assigned and any company registration which uniquely identifies a company or other body corporate under national legislation;
- (e) The name under which the explosives will be placed onto the market or otherwise supplied for carriage;
- (f) The proper shipping name, UN number, class, division and corresponding compatibility group of the explosives;
- (g) Where appropriate, the maximum net explosive mass of the package or article;
- (h) The name, signature, stamp, seal or other identification of the person authorised by the competent authority to issue the classification document is clearly visible;
- (i) Where safety in carriage or the division is assessed as being dependent upon the packaging, the packaging mark or a description of the permitted inner packagings, intermediate packagings, outer packagings;
- (j) The classification document states the part number, stock number or other identifying reference under which the explosives will be placed onto the market or otherwise supplied for carriage;
- (k) The name and address of the person in law who manufactured the explosives and any company registration which uniquely identifies a company or other body corporate under national legislation;
- (l) Any additional information regarding the applicable packing instruction and special packing provisions where appropriate;
- (m) The basis for assigning the classification, i.e. whether on the basis of test results, default for fireworks, analogy with classified explosive, by definition from Table A of Chapter 3.2 etc.;
- (n) Any special conditions or limitations that the competent authority has identified as relevant to the safety for carriage of the explosives, the communication of the hazard and international carriage;
- (o) The expiry date of the classification document is given where the competent authority considers one to be appropriate."

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

**2.2.1.4** [The amendment to the definition of "CARTRIDGES, SMALL ARMS, BLANK: UN Nos. 0013, 0327, 0338" in the French version does not apply to the English text.]

[The amendments to the definition of "CORD, DETONATING, flexible: UN Nos. 0065, 0289" in the German version do not apply to the English text.]

[The amendment to the definition of "CORD (FUSE) DETONATING, metal clad: UN Nos 0102, 0290" in the French version does not apply to the English text.]

In the definition of "ROCKET MOTORS", after "0281", insert:

", 0510".

[The amendment to the definition of "TORPEDOES, LIQUID FUELLED with or without bursting charge: UN No. 0449" in the French version does not apply to the English text.]

## Section 2.2.2

**2.2.2.1.7** [The amendments to paragraphs (c) and (d) in the French version does not apply to the English text.]

**2.2.2.2.1** Amend to read as follows:

**"2.2.2.2.1** Chemically unstable gases of Class 2 shall not be accepted for carriage unless the necessary precautions have been taken to prevent the possibility of a dangerous decomposition or polymerization under normal conditions of carriage or unless carried in accordance with special packing provision (r) of packing instruction P 200 (10) of 4.1.4.1, as applicable. For the precautions necessary to prevent polymerization, see special provision 386 of Chapter 3.3. To this end particular care shall be taken to ensure that receptacles and tanks do not contain any substances liable to promote these reactions."

## Section 2.2.3

**2.2.3.1.5** Amend to read as follows:

**"2.2.3.1.5** *Viscous liquids*".

Existing **2.2.3.1.5** becomes **2.2.3.1.5.1**.

**2.2.3.1.5.1** (former 2.2.3.1.5) Amend the beginning to read as follows:

"Except as provided for in 2.2.3.1.5.2, viscous liquids ...".

**2.2.3.1.5** Insert a new 2.2.3.1.5.2 to read as follows:

**"2.2.3.1.5.2** Viscous liquids which are also environmentally hazardous, but meet all other criteria in 2.2.3.1.5.1, are not subject to any other provisions of RID when they are carried in single or combination packagings containing a net quantity per single or inner packaging of 5 litres or less, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8."

**2.2.3.2.2** Amend to read as follows:

**2.2.3.2.2** Chemically unstable substances of Class 3 shall not be accepted for carriage unless the necessary precautions have been taken to prevent the possibility of a dangerous decomposition or polymerization under normal conditions of carriage. For the precautions necessary to prevent polymerization, see special provision 386 of Chapter 3.3. To this end particular care shall be taken to ensure that receptacles and tanks do not contain any substances liable to promote these reactions."

**2.2.3.3** For "F3 articles", at the end of the proper shipping name for UN 3269, add:  
", liquid base material".

## **Section 2.2.41**

**2.2.41** In the heading, after "self-reactive substances", insert:  
", polymerizing substances".

**2.2.41.1.1** In the first paragraph, replace "and self-reactive liquids or solids" by:  
", self-reactive liquids or solids and polymerizing substances".

At the end of the second paragraph, replace "." by:

",".

After the last indent, add:

"— polymerizing substances (see 2.2.41.1.20)."

**2.2.41.1.2** For "F Flammable solids, without subsidiary risk", add:  
"F4 Articles".

At the end, delete the full stop and add the following text:

"PM Polymerizing substances

PM1 Not requiring temperature control

PM2 Requiring temperature control (not accepted for carriage by rail)."

**2.2.41.1.9** In the third sub-paragraph of Note 2 in 2.2.41.1.9, replace "sub-section 20.4.3 (g)" by:  
"section 20.4.3 (g)".

**2.2.41.1** Insert the following new sub-sections **2.2.41.1.20** and **2.2.41.1.21**:

***Polymerizing substances***

*Definitions and properties*

**2.2.41.1.20** *Polymerizing substances* are substances which, without stabilization, are liable to undergo a strongly exothermic reaction resulting in the formation of larger molecules or resulting in the formation of polymers under conditions normally encountered in

carriage. Such substances are considered to be polymerizing substances of Class 4.1 when:

- (a) Their self-accelerating polymerization temperature (SAPT) is 75 °C or less under the conditions (with or without chemical stabilization as offered for carriage) and in the packaging, IBC or tank in which the substance or mixture is to be carried;
- (b) They exhibit a heat of reaction of more than 300 J/g; and
- (c) They do not meet any other criteria for inclusion in classes 1 to 8.

A mixture meeting the criteria of a polymerizing substance shall be classified as a polymerizing substance of Class 4.1.

**Temperature control requirements**

**2.2.41.1.21** (Reserved)".

**2.2.41.2.3** At the end of the last indent, replace "." by:

",".

After the last indent, add:

"– Polymerizing substances requiring temperature control:

- UN 3533 POLYMERIZING SUBSTANCE, SOLID, TEMPERATURE CONTROLLED, N.O.S.;
- UN 3534 POLYMERIZING SUBSTANCE, LIQUID, TEMPERATURE CONTROLLED, N.O.S."

**2.2.41.3** Under "Flammable solids" / "without subsidiary risk", insert the following new arm:

"		<b>Articles F4</b>	3527 POLYESTER RESIN KIT, solid base material
"			

At the end, add the following arm:

<b>Polymerizing substances PM</b>	<b>not requiring temperature control</b>	<b>PM1</b>	3531 POLYMERIZING SUBSTANCE, SOLID, STABILIZED, N.O.S. 3532 POLYMERIZING SUBSTANCE, LIQUID, STABILIZED, N.O.S.
	<b>requiring temperature control</b>	<b>PM2</b>	3533 POLYMERIZING SUBSTANCE, SOLID, TEMPERATURE CONTROLLED, N.O.S. (not accepted for carriage by rail, see 2.2.41.2.3) 3534 POLYMERIZING SUBSTANCE, LIQUID, TEMPERATURE CONTROLLED, N.O.S. (not accepted for carriage by rail, see 2.2.41.2.3)

**Section 2.2.43**

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

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

**Section 2.2.51**

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

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

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

**Section 2.2.52**

**2.2.52.1.6** In the third sentence, replace "in one packaging" by:  
"in one package".

**2.2.52.4** In the Table, amend the entries listed below as indicated:

<b>Organic peroxide</b>	<b>Column</b>	<b>Amendment</b>
tert-BUTYL CUMYL PEROXIDE (first row)	Number (Generic entry)	Replace "3107" by: "3109".
tert-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE (first row)	Concentration (%)	Replace "> 32 – 100" by: "> 37 – 100".
tert-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE (third row)	Concentration (%)	Replace "≤ 32" by: "≤ 37".
tert-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE (third row)	Diluent type B (%)	Replace "≥ 68" by: "≥ 63".
DIBENZOYL PEROXIDE (first row)	Concentration (%)	Replace "> 51 – 100" by: "> 52 – 100".
DICETYL PEROXYDICARBONATE (first row)	Number (Generic entry)	Replace "3116" by: "3120".

**Section 2.2.61**

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

**2.2.61.1.14** Amend to read as follows:

**"2.2.61.1.14** Substances, solutions and mixtures, with the exception of substances and preparations used as pesticides, which are not classified as acute toxic category 1, 2 or 3 according to Regulation (EC) No 1272/2008<sup>4</sup>, may be considered as substances not belonging to Class 6.1.

<sup>4</sup> Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances

and mixtures, amending and repealing Directive 67/548/EEC and 1999/45/EC; and amending Regulation (EC) No 1907/2006, published in the Official Journal of the European Union, L 353, 31 December 2008, p 1-1355."

Existing footnotes 4 and 5 are deleted.

Footnote 6 becomes footnote 5.

**2.2.61.2.1** Amend to read as follows:

**"2.2.61.2.1** Chemically unstable substances of Class 6.1 shall not be accepted for carriage unless the necessary precautions have been taken to prevent the possibility of a dangerous decomposition or polymerization under normal conditions of carriage. For the precautions necessary to prevent polymerization, see special provision 386 of Chapter 3.3. To this end particular care shall be taken to ensure that receptacles and tanks do not contain any substances liable to promote these reactions."

## **Section 2.2.62**

**2.2.62.1.1** Amend Note 1 to read as follows:

**"NOTE 1:** Genetically modified microorganisms and organisms, biological products, diagnostic specimens and intentionally infected live animals shall be assigned to this Class if they meet the conditions for this Class.

The carriage of unintentionally or naturally infected live animals is subject only to the relevant rules and regulations of the respective countries of origin, transit and destination."

**2.2.62.1.12.1** At the end, delete:

"and in accordance with the regulations that apply to the carriage of animals<sup>7</sup>".

Footnotes 8 to 11 become footnotes 6 to 9.

Add a new note at the end to read as follows:

**"NOTE:** The approval of the competent authorities shall be issued on the basis of the relevant rules for the carriage of live animals, taking into consideration dangerous goods aspects. The authorities that are competent to lay down these conditions and rules for approval shall be regulated at national level.

If there is no approval by a competent authority of an RID Contracting State, the competent authority of an RID Contracting State may recognize an approval issued by the competent authority of a country that is not an RID Contracting State.

Rules for the carriage of livestock are, for example, contained in Council Regulation (EC) No 1/2005 of 22 December 2004 on the protection of animals during transport (Official Journal of the European Union No L 3 of 5 January 2005) as amended."

## **Section 2.2.7**

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

**2.2.7.2.4.1.3** In paragraphs (b), (b) (ii) and (b) (iii), replace "marking "RADIOACTIVE"" by:  
"mark "RADIOACTIVE"" (four times).

**2.2.7.2.4.1.4** In paragraph (b), replace "marking "RADIOACTIVE"" by:  
"mark "RADIOACTIVE"".

## **Section 2.2.8**

**2.2.8.1.9** Amend to read as follows:

**"2.2.8.1.9** Substances, solutions and mixtures, which are not classified as corrosive to skin or metal of category 1 according to Regulation (EC) No 1272/2008<sup>10</sup> may be considered as substances not belonging to Class 8."

The note remains unchanged.

<sup>10</sup> Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directive 67/548/EEC and 1999/45/EC; and amending Regulation (EC) No 1907/2006, published in the Official Journal of the European Union, L 353, 31 December 2008, p 1-1355.

Existing footnotes 12 and 13 are deleted.

Footnotes 14 to 23 become footnotes 11 to 20.

**2.2.8.2.1** Amend to read as follows:

**"2.2.8.2.1** Chemically unstable substances of Class 8 shall not be accepted for carriage unless the necessary precautions have been taken to prevent the possibility of a dangerous decomposition or polymerization under normal conditions of carriage. For the precautions necessary to prevent polymerization, see special provision 386 of Chapter 3.3. To this end particular care shall be taken to ensure that receptacles and tanks do not contain any substances liable to promote these reactions."

## **Section 2.2.9**

**2.2.9.1.2** In the M2 entry, replace "apparatus" by:  
"articles".

**2.2.9.1.5** In the title and in the text, replace "apparatus" by:  
"articles" (4 times).

**2.2.9.1.7** Insert the following new first paragraph:

"Lithium batteries shall meet the following requirements, except when otherwise provided for in RID (e.g. for prototype batteries and small production runs under special provision 310 or damaged batteries under special provision 376)."



Delete the last Note.

**2.2.9.1.10.2.5** In the second paragraph, in the first sentence, amend the end to read as follows:

"... OECD Test Guidelines 107, 117 or 123."

**2.2.9.1.10.2.6** In paragraph (c), delete:

"or mixture".

**2.2.9.1.10.5** Amend 16 (former footnote 19) to read as follows:

"<sup>16</sup> Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directive 67/548/EEC and 1999/45/EC; and amending Regulation (EC) No 1907/2006, published in the Official Journal of the European Union, L 353, 31 December 2008, p 1-1355."

At the end of paragraph (a), delete:

"or, if still relevant according to the said Regulation, risk phrase(s) R50, R50/53 or R51/53 according to the Directives 67/548/EEC<sup>20</sup> or 1999/45/EC<sup>21</sup>".

Delete footnotes 20 and 21.

Footnotes 22 to 24 become footnotes 17 to 19.

Amend paragraph (b) to read as follows:

"(b) May be regarded as not being an environmentally hazardous substance (aquatic environment) if it does not have to be assigned such a category according to the said Regulation."

**2.2.9.1.11** For Note 2, amend the text of footnote 17 (former 22) to read as follows:

"<sup>17</sup> See Part C of Directive 2001/18/EC of the European Parliament and of the Council on the deliberate release into the environment of genetically modified organisms and repealing Council Directive 90/220/EEC (Official Journal of the European Communities, No. L 106, of 17 April 2001, pp 8-14) and Regulation (EC) No. 1829/2003 of the European Parliament and of the Council on genetically modified food and feed (Official Journal of the European Union, No. L 268, of 18 October 2003, pp 1-23), which set out the authorization procedures for the European Union."

Insert a new Note 3 to read as follows and renumber existing Note 3 as Note 4:

**3:** Genetically modified live animals which, in accordance with the current state of scientific knowledge, have no known pathogenic effect on humans, animals and plants and are carried in receptacles that are suitable for safely preventing both the escape of the animals and unauthorized access to them, are not subject to the provisions of RID. The provisions specified by the International Air Transport Association (IATA) for air transport "Live Animals Regulations, LAR" can be drawn on as guidelines for suitable receptacles for the transport of live animals."

**2.2.9.1.14** In the list before the Note, after "Electric double layer capacitors (with an energy storage capacity greater than 0.3 Wh)" add a new line to read:

"Vehicles, engines and machinery, internal combustion".

In the Note, delete the entries for UN Nos. 3166 and 3171.

**2.2.9.3** For "M2", replace "apparatus" by:

"articles".

For "M2 Substances and articles which, in the event of fire, may form dioxins", amend the entries for UN Nos. 3151 and 3152 to read as follows:

"3151 POLYHALOGENATED BIPHENYLS, LIQUID or  
3151 HALOGENATED MONOMETHYLDIPHENYLMETHANES, LIQUID or  
3151 POLYHALOGENATED TERPHENYLS, LIQUID  
3152 POLYHALOGENATED BIPHENYLS, SOLID or  
3152 HALOGENATED MONOMETHYLDIPHENYLMETHANES, SOLID or  
3152 POLYHALOGENATED TERPHENYLS, SOLID".

For classification code M11, insert the following new entries:

"3166 VEHICLE, FLAMMABLE GAS POWERED or  
3166 VEHICLE, FLAMMABLE LIQUID POWERED or  
3166 VEHICLE, FUEL CELL, FLAMMABLE GAS POWERED or  
3166 VEHICLE, FUEL CELL, FLAMMABLE LIQUID POWERED  
3171 BATTERY POWERED VEHICLE or  
3171 BATTERY POWERED EQUIPMENT".

## Chapter 2.3

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

**2.3.1.4** In explanation (3) to figures 1 to 3, replace "iron plate" by:

"lead plate".

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

## PART 3

### Chapter 3.1

**3.1.2.2** At the end of the first sentence, replace "package marking" by:

"package marks".

**3.1.2.3** At the end of the second sentence, replace "package marking" by:

"package marks".

**3.1.2.6** In the introductory sentence, before paragraphs (a) and (b), at the end, before "then:" insert

"or the evolution of excessive heat, or when chemical stabilization is used in combination with temperature control,".

Amend paragraph (a) to read as follows:

"(a) For liquids and solids: liquids and solids requiring temperature control<sup>2</sup> shall not be accepted for carriage by rail;

<sup>2</sup> This includes all substances (including substances stabilized by chemical inhibitors) whose self-accelerating decomposition temperature (SADT) or self-accelerating polymerization temperature (SAPT) in the containment used for carriage is not more than 50 °C."

## Chapter 3.2

**3.2.1** In the explanatory note for column (5), in the first indent, replace "a wagon load" by:

"a full load".

In the explanatory note for column (17) amend the third sentence after the heading to read as follows:

"If no special provision, identified by the code "VC" or a reference to a specific paragraph, explicitly authorizing this mode of carriage is indicated in this column, and no special provision, identified by the code "BK" or a reference to a specific paragraph, explicitly authorizing this mode of carriage is indicated in column (10), carriage in bulk is not permitted."

In the explanatory note for Column (18), amend the title to read:

"Special provisions for carriage – Loading, unloading and handling".

In the explanatory note for Column (20), replace "orange-coloured marking" by:

"orange-coloured plates".

## Table A

UN No.	Column	Amendment
1003	(18)	Delete: "CW30".
1005	(6)	Add: "379".
1006	(6)	Insert: "378".
1010	(6)	Insert: "386".
1013	(6)	Insert: "378".
1038	(18)	Delete: "CW30".
1046	(6)	Insert: "378".

UN No.	Column	Amendment
1051	(6)	Insert: "386".
1056	(6)	Insert: "378".
1060	(6)	Insert: "386".
1065	(6)	Insert: "378".
1066	(6)	Insert: "378".
1073	(18)	Delete: "CW30".
1081	(6)	Insert: "386".
1082	(6)	Insert: "386".
1085	(6)	Insert: "386".
1086	(6)	Insert: "386".
1087	(6)	Insert: "386".
1092	(6)	Insert: "386".
	(11)	Delete: "TP35".
1093	(6)	Insert: "386".
1098	(11)	Delete: "TP35".
1133, first entry of PG III	(6)	Delete: "640E".
1135	(11)	Delete: "TP37".
1139, first entry of PG III	(6)	Delete: "640E".
1143	(6)	Insert: "386".
	(11)	Delete: "TP35".
1163	(11)	Delete: "TP35".
1167	(6)	Insert: "386".

UN No.	Column	Amendment
1169, first entry of PG III	(6)	Delete: "640E".
1182	(11)	Delete: "TP37".
1185	(6)	Insert: "386".
1197, first entry of PG III	(6)	Delete: "640E".
1202 (all en- tries)	(6)	Delete: "363".
1202 (sec- ond entry)	(2)	Replace "EN 590:2009 + A1:2010" by: "EN 590:2013 + AC:2014" (twice).
1203	(6)	Delete: "363".
1210, first entry of PG III	(6)	Delete: "640E".
1218	(6)	Insert: "386".
1223	(6)	Delete: "363".
1238	(11)	Delete: "TP35".
1239	(11)	Delete: "TP35".
1244	(11)	Delete: "TP35".
1246	(6)	Insert: "386".
1247	(6)	Insert: "386".
1251	(6)	Insert: "386".
	(11)	Delete: "TP37".
1263, first entry of PG III	(6)	Delete: "640E".

UN No.	Column	Amendment
1266, first entry of PG III	(6)	Delete: "640E".
1268 (all en- tries)	(6)	Delete: "363".
1286, first entry of PG III	(6)	Delete: "640E".
1287, first entry of PG III	(6)	Delete: "640E".
1301	(6)	Insert: "386".
1302	(6)	Insert: "386".
1303	(6)	Insert: "386".
1304	(6)	Insert: "386".
1306, first entry of PG III	(6)	Delete: "640E".
1334	(10)	Add: "BK3".
1350	(10)	Add: "BK3".
1415	(10)	Insert: "T9".
	(11)	Insert: "TP7 TP33".
1454	(10)	Add: "BK3".
1474	(10)	Add: "BK3".
1486	(10)	Add: "BK3".
1498	(10)	Add: "BK3".
1499	(10)	Add: "BK3".
1541	(11)	Delete: "TP37".
1545	(6)	Insert: "386".

UN No.	Column	Amendment
1580	(11)	Delete: "TP37".
1589	(6)	Insert: "386".
1595	(11)	Delete: "TP35".
1605	(11)	Delete: "TP37".
1614	(6)	Insert: "386".
1670	(11)	Delete: "TP37".
1695	(11)	Delete: "TP35".
1724	(6)	Insert: "386".
1752	(11)	Delete: "TP35".
1809	(11)	Delete: "TP35".
1810	(11)	Delete: "TP37".
1829	(6)	Insert: "386".
1838	(11)	Delete: "TP37".
1845	(5) – (20)	Replace "NOT SUBJECT TO RID – when used as a coolant, see 5.5.3" by: "NOT SUBJECT TO RID except for 5.5.3".
1860	(6)	Insert: "386".
1863 (all entries)	(6)	Delete: "363".
1866, first entry of PG III	(6)	Delete: "640E".
1892	(11)	Delete: "TP37".
1913	(18)	Delete: "CW30".
1917	(6)	Insert: "386".
1919	(6)	Insert: "386".
1921	(6)	Insert: "386".
1942	(10)	Add: "BK3".
1950 (all entries)	(8)	Replace "LP02" by: "LP200".

UN No.	Column	Amendment
1951	(18)	Delete: "CW30".
1956	(6)	Insert: "378".
1961	(18)	Delete: "CW30".
1963	(18)	Delete: "CW30".
1966	(11)	Delete: "TP23".
	(18)	Delete: "CW30".
1970	(18)	Delete: "CW30".
1972	(18)	Delete: "CW30".
1977	(18)	Delete: "CW30".
1991	(6)	Insert: "386".
1993, first entry of PG III	(6)	Delete: "640E".
1999, first entry of PG III	(6)	Delete: "640E".
2000	(6)	Insert: "383".
2036	(6)	Insert: "378".
2055	(6)	Insert: "386".
2067	(10)	Add: "BK3".
2187	(18)	Delete: "CW30".
2200	(6)	Insert: "386".
2201	(18)	Delete: "CW30".
2211	(6)	Replace "207" by: "382".
	(18)	Insert: "CW 36".
2213	(10)	Add: "BK3".
2218	(6)	Insert: "386".
2227	(6)	Insert: "386".



UN No.	Column	Amendment
2232	(11)	Delete: "TP37".
2251	(6)	Insert: "386".
2277	(6)	Insert: "386".
2283	(6)	Insert: "386".
2334	(11)	Delete: "TP35".
2337	(11)	Delete: "TP35".
2348	(6)	Insert: "386".
2352	(6)	Insert: "386".
2382	(11)	Delete: "TP37".
2383	(6)	Insert: "386".
2396	(6)	Insert: "386".
2452	(6)	Insert: "386".
2474	(11)	Delete: "TP37".
2477	(11)	Delete: "TP37".
2481	(11)	Delete: "TP37".
2482	(11)	Delete: "TP37".
2483	(11)	Delete: "TP37".
2484	(11)	Delete: "TP37".
2485	(11)	Delete: "TP37".
2486	(11)	Delete: "TP37".
2487	(11)	Delete: "TP37".
2488	(11)	Delete: "TP37".
2521	(6)	Insert: "386".
	(11)	Delete: "TP37".
2527	(6)	Insert: "386".
2531	(6)	Insert: "386".
2591	(18)	Delete: "CW30".

UN No.	Column	Amendment
2605	(11)	Delete: "TP37".
2606	(11)	Delete: "TP37".
2607	(6)	Insert: "386".
2618	(6)	Insert: "386".
2644	(11)	Delete: "TP37".
2646	(11)	Delete: "TP35".
2668	(11)	Delete: "TP37".
2813, PG I, II and III	(9a)	Delete: "PP83".
2815	(3b)	Replace "C7" by: "CT1".
	(5)	Replace "8" by: "8+6.1".
	(20)	Replace "80" by: "86".
2838	(6)	Insert: "386".
2977	(5)	Before "+8", insert: "+6.1".
	(20)	Replace "78" by: "768".
2978	(5)	Before "+8", insert: "+6.1".
	(20)	Replace "78" by: "768".
3022	(6)	Insert: "386".
3023	(11)	Delete: "TP35".
3073	(6)	Insert: "386".
3077	(10)	Add: "BK3".
3079	(6)	Insert: "386".
	(11)	Delete: "TP37".
3090	(5)	Replace "9" by: "9A".
	(8)	After "P909", insert: "P910".
3091	(5)	Replace "9" by: "9A".
	(6)	After "230", insert: "310".

UN No.	Column	Amendment
	(8)	After "P909", insert: "P910".
3136	(18)	Delete: "CW30".
3151	(2)	Amend to read as follows: "POLYHALOGENATED BIPHENYLS, LIQUID or HALO- GENATED MONOMETHYLDIPHENYLMETHANES, LIQUID or POLYHALOGENATED TERPHENYLS, LIQUID".
3152	(2)	Amend to read as follows: "POLYHALOGENATED BIPHENYLS, SOLID or HALO- GENATED MONOMETHYLDIPHENYLMETHANES, SOLID or POLYHALOGENATED TERPHENYLS, SOLID".
3158	(18)	Delete: "CW30".
3246	(11)	Delete: "TP37".
3257	(6)	Add: "668".
3269 (all en- tries)	(2)	After "POLYESTER RESIN KIT", insert: ", liquid base material".
3311	(18)	Delete: "CW30".
3312	(18)	Delete: "CW30".
3314	(18)	Insert: "CW 36".
3377	(10)	Add: "BK3".
3378, PG III	(10)	Add: "BK3".
3475	(6)	Delete: "363".
3480	(5)	Replace "9" by: "9A".
	(8)	After "P909", insert: "P910".
3481	(5)	Replace "9" by: "9A".
	(6)	After "230", insert: "310".
	(8)	After "P909", insert: "P910".
3507	(3a)	Replace "8" by: "6.1".
	(5)	Before "8", insert: "6.1+".
	(8)	Replace "P805" by: "P603".
	(20)	Replace "87" by: "687".
3516	(6)	Add: "379".

Amend the entries for UN Nos. 3166 and 3171 to read as follows:

(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			(19)	(20)	
									(8)	(9a)	(9b)	(10)	(11)	(12)	(13)		(15)	(16)	(17)			(18)
3166	VEHICLE, FLAMMABLE GAS POWERED or VEHICLE, FLAMMABLE LIQUID POWERED or VEHICLE, FUEL CELL, FLAMMABLE GAS POWERED or VEHICLE, FUEL CELL, FLAMMABLE LIQUID POWERED	9	M11			312 385 666 667 669																
3171	BATTERY POWERED VEHICLE or BATTERY POWERED EQUIPMENT	9	M11			240 666 667 669																

Insert 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)
0015	AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge, containing toxic by inhalation substances	1	1.2 G		1+6.1		0	E0	P130 LP101	PP67 L1	MP23					1	W2		CW1 CW28		1.2G
0016	AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge, containing toxic by inhalation substances	1	1.3 G		1+6.1		0	E0	P130 LP101	PP67 L1	MP23					1	W2		CW1 CW28		1.3G
0303	AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge, containing toxic by inhalation substances	1	1.4 G		1.4+6.1		0	E0	P130 LP101	PP67 L1	MP23					2	W2		CW1 CW28		1.4G
0510	ROCKET MOTORS	1	1.4C		1.4		0	E0	P130 LP101	PP67 L1	MP22					2	W2		CW1		1.4C
3527	POLYESTER RESIN KIT, solid base material	4.1	F4	II	4.1	236 340	5 kg	E0	P412							2				CE10	40
3527	POLYESTER RESIN KIT, solid base material	4.1	F4	III	4.1	236 340	5 kg	E0	P412							3				CE11	40
3528	ENGINE, INTERNAL COMBUSTION, FLAMMABLE LIQUID POWERED or ENGINE, FUEL CELL, FLAMMABLE LIQUID POWERED or MACHINERY, INTERNAL COMBUSTION, FLAMMABLE LIQUID POWERED or MACHINERY, FUEL CELL, FLAMMABLE LIQUID POWERED	3			3	363 667 669	0	E0	P005												

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)
3529	ENGINE, INTERNAL COMBUSTION, FLAMMABLE GAS POWERED or ENGINE, FUEL CELL, FLAMMABLE GAS POWERED or MACHINERY, INTERNAL COMBUSTION, FLAMMABLE GAS POWERED or MACHINERY, FUEL CELL, FLAMMABLE GAS POWERED	2			2.1	363 667 669	0	E0	P005												
3530	ENGINE, INTERNAL COMBUSTION or MACHINERY, INTERNAL COMBUSTION	9			9	363 667 669	0	E0	P005												
3531	POLYMERIZING SUBSTANCE, SOLID, STABILIZED, N.O.S.	4.1	PM1	III	4.1	274 386	0	E0	P002 IBC07	PP92 B18		T7	TP4 TP6 TP33	SGAN(+)	TU30 TE11	2	W7		CW22	CE10	40
3532	POLYMERIZING SUBSTANCE, LIQUID, STABILIZED, N.O.S.	4.1	PM1	III	4.1	274 386	0	E0	P001 IBC03	PP93 B19		T7	TP4 TP6	L4BN(+)	TU30 TE11	2	W7		CW22	CE6	40
3533	POLYMERIZING SUBSTANCE, SOLID, TEMPERATURE CONTROLLED, N.O.S.	4.1	PM2	CARRIAGE PROHIBITED																	
3534	POLYMERIZING SUBSTANCE, LIQUID, TEMPERATURE CONTROLLED, N.O.S.	4.1	PM2	CARRIAGE PROHIBITED																	

### 3.2.2 Amend footnote 1 to read as follows:

"<sup>1</sup> The NHM codes can be consulted on the UIC website under [www.uic.org/nhm](http://www.uic.org/nhm)."

**Table B** Insert the following new entries:

Name and description	UN No.	Note	NHM Code
Calomel: see	2025		285200
ENGINE, FUEL CELL, FLAMMABLE GAS POWERED	3529		???????
ENGINE, FUEL CELL, FLAMMABLE LIQUID POWERED	3528		???????
ENGINE, INTERNAL COMBUSTION	3530		???????
ENGINE, INTERNAL COMBUSTION, FLAMMABLE GAS POWERED	3529		???????
ENGINE, INTERNAL COMBUSTION, FLAMMABLE LIQUID POWERED	3528		???????
HALOGENATED MONOMETHYLDIPHENYL-METHANES, LIQUID	3151		???????
HALOGENATED MONOMETHYLDIPHENYL-METHANES, SOLID	3152		???????
MACHINERY, FUEL CELL, FLAMMABLE GAS POWERED	3529		???????
MACHINERY, FUEL CELL, FLAMMABLE LIQUID POWERED	3528		???????
MACHINERY, INTERNAL COMBUSTION	3530		???????
MACHINERY, INTERNAL COMBUSTION, FLAMMABLE GAS POWERED	3529		???????
MACHINERY, INTERNAL COMBUSTION, FLAMMABLE LIQUID POWERED	3528		???????
POLYESTER RESIN KIT, solid base material	3527		???????
POLYMERIZING SUBSTANCE, LIQUID, STABILIZED, N.O.S.	3532		???????
POLYMERIZING SUBSTANCE, LIQUID, TEMPERATURE CONTROLLED, N.O.S.	3534	Prohibited	
POLYMERIZING SUBSTANCE, SOLID, STABILIZED, N.O.S.	3531		???????
POLYMERIZING SUBSTANCE, SOLID, TEMPERATURE CONTROLLED, N.O.S.	3533	Prohibited	
ROCKET MOTORS	0510		???????
Table tennis balls, see	2000		
VEHICLE, FLAMMABLE LIQUID POWERED	3166		8407++
VEHICLE, FUEL CELL, FLAMMABLE GAS POWERED	3166		8407++
VEHICLE, FUEL CELL, FLAMMABLE LIQUID POWERED	3166		8407++

Amend the following entries:

Name and description	UN No.	Amendment
Battery-powered equipment	3171	Show the name in column (1) in capital letters.
		In column (3), delete: "Exempt".
Battery-powered vehicle	3171	Show the name in column (1) in capital letters.
		In column (3), delete: "Exempt".
Engine, internal combustion, flammable gas powered or engine, internal combustion, flammable liquid powered or vehicle, flammable gas powered or vehicle, flammable liquid powered or engine, fuel cell, flammable gas powered or engine, fuel cell, flammable liquid powered or vehicle, fuel cell, flammable gas powered or vehicle, fuel cell, flammable liquid powered	3166	Amend the name in column (1) to read as follows: "VEHICLE, FLAMMABLE GAS POWERED".
POLYESTER RESIN KIT	3269	In column (1), add: ", liquid base material".

[The amendment to UN No. 2025 in the French version does not apply to the English text.]

[The amendment to UN No. 3082 in the French version does not apply to the English text.]

### Chapter 3.3

**3.3.1** [The amendment to the first sentence in the French and German version does not apply to the English text.]

Add the following second sentence:

"Where a special provision includes a requirement for package marking, the provisions of 5.2.1.2 (a) and (b) shall be met. If the required mark is in the form of specific wording indicated in quotation marks, such as "DAMAGED LITHIUM BATTERIES", the size of the mark shall be at least 12 mm, unless otherwise indicated in the special provision or elsewhere in RID."

**SP 61** [The amendment to the German version does not apply to the English text.]

**SP 172** In paragraph (b), replace "wagons or large containers" by:

"cargo transport units".

**SP 188** Amend paragraph (f) to read as follows:

"(f) Each package shall be marked with the appropriate lithium battery mark, as illustrated in 5.2.1.9.

This requirement does not apply to:



- (i) packages containing only button cell batteries installed in equipment (including circuit boards); and
- (ii) packages containing no more than four cells or two batteries installed in equipment, where there are not more than two packages in the consignment."

Delete paragraph (g).

Re-number (h) and (i) as (g) and (h) respectively.

Add the following paragraph at the end:

"A single cell battery as defined in Part III, sub-section 38.3.2.3 of the Manual of Tests and Criteria is considered a "cell" and shall be carried according to the requirements for "cells" for the purpose of this special provision."

**SP 207** Delete "Polymeric beads and".

**SP 216** Replace ", wagon or container" by:

"or cargo transport unit".

**SP 217** Replace ", wagon or container" by:

"or cargo transport unit".

**SP 218** Replace ", wagon or container" by:

"or cargo transport unit".

**SP 225** In the last Note, replace "applicable to the relevant gas" by:

"applicable to the relevant dangerous goods".

**SP 236** Amend to read as follows:

**"236** Polyester resin kits consist of two components: a base material (either Class 3 or Class 4.1, packing group II or III) and an activator (organic peroxide). The organic peroxide shall be type D, E, or F, not requiring temperature control. The packing group shall be II or III, according to the criteria of either Class 3 or Class 4.1, as appropriate, applied to the base material. The quantity limit shown in column (7a) of Table A of Chapter 3.2 applies to the base material."

**SP 240** Amend to read as follows:

**"240** This entry only applies to vehicles powered by wet batteries, sodium batteries, lithium metal batteries or lithium ion batteries and equipment powered by wet batteries or sodium batteries carried with these batteries installed. Lithium batteries shall meet the requirements of 2.2.9.1.7, except as otherwise provided for in special provision 667.

For the purpose of this special provision, vehicles are self-propelled apparatus designed to carry one or more persons or goods. Examples of such vehicles are electrically-powered cars, motorcycles, scooters, three- and four-wheeled vehicles or motorcycles, trucks, locomotives, bicycles (pedal cycles with an electric motor) and

other vehicles of this type (e.g. self-balancing vehicles or vehicles not equipped with at least one seating position), wheel chairs, lawn tractors, self-propelled farming and construction equipment, boats and aircraft. This includes vehicles carried in a packaging. In this case some parts of the vehicle may be detached from its frame to fit into the packaging.

Examples of equipment are lawnmowers, cleaning machines or model boats and model aircraft. Equipment powered by lithium metal batteries or lithium ion batteries shall be assigned to the entries UN 3091 LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT or UN 3091 LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT or UN 3481 LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT or UN 3481 LITHIUM ION BATTERIES PACKED WITH EQUIPMENT, as appropriate.

Hybrid electric vehicles powered by both an internal combustion engine and wet batteries, sodium batteries, lithium metal batteries or lithium ion batteries, carried with the battery(ies) installed shall be assigned to the entries UN 3166 VEHICLE, FLAMMABLE GAS POWERED or UN 3166 VEHICLE, FLAMMABLE LIQUID POWERED, as appropriate. Vehicles which contain a fuel cell shall be assigned to the entries UN 3166 VEHICLE, FUEL CELL, FLAMMABLE GAS POWERED or UN 3166 VEHICLE, FUEL CELL, FLAMMABLE LIQUID POWERED, as appropriate.

Vehicles may contain other dangerous goods than batteries (e.g. fire extinguishers, compressed gas accumulators or safety devices) required for their functioning or safe operation without being subject to any additional requirements for these other dangerous goods, unless otherwise specified in RID."

**SP 295** [The amendment in the French and German version does not apply to the English text.]

**SP 310** Amend to read as follows:

**"310** The testing requirements in the Manual of Tests and Criteria, Part III sub-section 38.3 do not apply to production runs, consisting of not more than 100 cells and batteries, or to pre-production prototypes of cells and batteries when these prototypes are carried for testing when packaged in accordance with packing instruction P 910 of 4.1.4.1.

The transport document shall include the following statement:

"CARRIAGE IN ACCORDANCE WITH SPECIAL PROVISION 310".

Damaged or defective cells, batteries, or cells and batteries contained in equipment shall be carried in accordance with special provision 376 and packaged in accordance with packing instructions P 908 of 4.1.4.1 or LP 904 of 4.1.4.3, as applicable.

Cells, batteries or cells and batteries contained in equipment carried for disposal or recycling may be packaged in accordance with special provision 377 and packing instruction P 909 of 4.1.4.1."

**SP 312** Amend to read as follows:

**"312** Vehicles powered by a fuel cell engine shall be assigned to UN 3166 VEHICLE, FUEL CELL, FLAMMABLE GAS POWERED or UN 3166 VEHICLE, FUEL CELL, FLAMMABLE LIQUID POWERED, as appropriate. These entries include hybrid electric vehicles powered by both a fuel cell and an internal combustion engine with wet batteries, sodium batteries, lithium metal batteries or lithium ion batteries, carried with the battery(ies) installed.

Other vehicles which contain an internal combustion engine shall be assigned to the entries UN 3166 VEHICLE, FLAMMABLE GAS POWERED or UN 3166 VEHICLE, FLAMMABLE LIQUID POWERED, as appropriate. These entries include hybrid electric vehicles powered by both an internal combustion engine and wet batteries, sodium batteries, lithium metal batteries or lithium ion batteries, carried with the battery(ies) installed.

Lithium batteries shall meet the requirements of 2.2.9.1.7, except as otherwise provided for in special provision 667."

**SP 317** Amend to read as follows:

**"317** "Fissile-excepted" applies only to those fissile material and packages containing fissile material which are excepted in accordance with 2.2.7.2.3.5."

**SP 327** In the second sentence, after "protected against", insert:

"movement and".

In the third sentence, replace "LP 02" by:

"LP 200".

**SP 335** Replace "wagon or container" by:

"cargo transport unit" (3 times).

**SP 339** [The amendment in the French version does not apply to the English text.]

**SP 342** [The amendment to paragraph (b) in the French version does not apply to the English text.]

**SP 356** In the first sentence, delete:

"installed in wagons, vehicles, vessels or aircraft or in completed components or".

**SP 363** Amend to read as follows:

**363** (a) This entry applies to engines or machinery, powered by fuels classified as dangerous goods via internal combustion systems or fuel cells (e.g. combustion engines, generators, compressors, turbines, heating units, etc.), in quantities above those specified in column (7a) of Table A of Chapter 3.2, except vehicle equipment assigned to UN No. 3166 referred to in SP 666.

**NOTE:** This entry does not apply to equipment referred to in 1.1.3.2 (a), (d) and (e), 1.1.3.3 and 1.1.3.7.

- (b) Engines or machinery which are empty of liquid or gaseous fuels and which do not contain other dangerous goods, are not subject to RID.

**NOTE 1:** An engine or machinery is considered to be empty of liquid fuel when the liquid fuel tank has been drained and the engine or machinery cannot be operated due to a lack of fuel. Engine or machinery components such as fuel lines, fuel filters and injectors do not need to be cleaned, drained or purged to be considered empty of liquid fuels. In addition, the liquid fuel tank does not need to be cleaned or purged.

**2:** An engine or machinery is considered to be empty of gaseous fuels when the gaseous fuel tanks are empty of liquid (for liquefied gases), the pressure in the tanks does not exceed 2 bar and the fuel shut-off or isolation valve is closed and secured.

- (c) Engines and machinery containing fuels meeting the classification criteria of Class 3, shall be assigned to the entries UN 3528 ENGINE, INTERNAL COMBUSTION, FLAMMABLE LIQUID POWERED or UN 3528 ENGINE, FUEL CELL, FLAMMABLE LIQUID POWERED or UN 3528 MACHINERY, INTERNAL COMBUSTION, FLAMMABLE LIQUID POWERED or UN 3528 MACHINERY, FUEL CELL, FLAMMABLE LIQUID POWERED, as appropriate.

- (d) Engines and machinery containing fuels meeting the classification criteria of flammable gases of Class 2, shall be assigned to the entries UN 3529 ENGINE, INTERNAL COMBUSTION, FLAMMABLE GAS POWERED or UN 3529 ENGINE, FUEL CELL, FLAMMABLE GAS POWERED or UN 3529 MACHINERY, INTERNAL COMBUSTION, FLAMMABLE GAS POWERED or UN 3529 MACHINERY, FUEL CELL, FLAMMABLE GAS POWERED, as appropriate.

Engines and machinery powered by both a flammable gas and a flammable liquid shall be assigned to the appropriate UN No. 3529 entry.

- (e) Engines and machinery containing liquid fuels meeting the classification criteria of 2.2.9.1.10 for environmentally hazardous substances and not meeting the classification criteria of any other class shall be assigned to the entries UN 3530 ENGINE, INTERNAL COMBUSTION or UN 3530 MACHINERY, INTERNAL COMBUSTION, as appropriate.

- (f) Engines or machinery may contain other dangerous goods than fuels (e.g. batteries, fire extinguishers, compressed gas accumulators or safety devices) required for their functioning or safe operation without being subject to any additional requirements for these other dangerous goods, unless otherwise specified in RID. However, lithium batteries shall meet the requirements of 2.2.9.1.7, except as provided for in special provision 667.

- (g) The engines or machinery are not subject to any other requirements of RID if the following requirements are met:

(i) The engine or machinery, including the means of containment containing dangerous goods, shall be in compliance with the construction requirements specified by the competent authority of the country of manufacture<sup>2</sup>;

(ii) Any valves or openings (e.g. venting devices) shall be closed during carriage;

(iii) The engines or machinery shall be oriented to prevent inadvertent leakage of dangerous goods and secured by means capable of restraining the engines or machinery to prevent any movement during carriage which would change the orientation or cause them to be damaged;

(iv) for UN No. 3528 and UN No. 3530:

Where the engine or machinery contains more than 60 l of liquid fuel and has a capacity of more than 450 l but not more than 3 000 l, it shall be labelled on two opposite sides in accordance with 5.2.2.

Where the engine or machinery contains more than 60 l of liquid fuel and has a capacity of more than 3 000 l, it shall be placarded on two opposite sides. Placards shall correspond to the labels required in Column (5) of Table A of Chapter 3.2 and shall conform to the specifications given in 5.3.1.7. Placards shall be displayed on a background of contrasting colour, or shall have either a dotted or solid outer boundary line.

(v) for UN No. 3529:

Where the fuel tank of the engine or machinery has a water capacity of more than 450 l but not more than 1 000 l, it shall be labelled on two opposite sides in accordance with 5.2.2.

Where the fuel tank of the engine or machinery has a water capacity of more than 1 000 l, it shall be placarded on two opposite sides. Placards shall correspond to the labels required in Column (5) of Table A of Chapter 3.2 and shall conform to the specifications given in 5.3.1.7. Placards shall be displayed on a background of contrasting colour, or shall have either a dotted or solid outer boundary line.

(vi) A transport document in accordance with 5.4.1 is required only when the engine or machinery contains more than 1 000 l of liquid fuels, for UN 3528 and UN 3530, or the fuel tank has a water capacity of more than 1 000 l, for UN 3529.

This transport document shall contain the following additional statement:

"TRANSPORT IN ACCORDANCE WITH SPECIAL PROVISION 363".

<sup>2</sup> For example, compliance with the relevant provisions of Directive 2006/42/EC of the European Parliament and of the Council of 17 May 2006 on machinery, and amending Directive 95/16/EC (Official Journal of the European Union No. L 157 of 9 June 2006, p. 24 – 86)."

Renumber footnotes 3 and 4 as 4 and 5.

**SP 369** Amend the first paragraph to read as follows:

"In accordance with 2.1.3.5.3 (a), this radioactive material in an excepted package possessing toxic and corrosive properties is classified in Class 6.1 with radioactivity and corrosivity subsidiary risks."

Amend the third paragraph to read as follows:

"In addition to the provisions applicable to the carriage of Class 6.1 substances with a corrosivity subsidiary risk, the provisions of 5.1.3.2, 5.1.5.2.2, 5.1.5.4.1 (b), 7.5.11 CW33 (3.1), (5.1) to (5.4) and (6) shall apply."

**SP 370** In the second indent, replace "that is not too sensitive for acceptance into Class 1" by:

"that gives a positive result".

**SP 372** [The amendment in the German version does not apply to the English text.]

**SP 373** [The first amendment to paragraph (a) in the German version does not apply to the English text.]

In paragraph (a), in the Note after subparagraph (iii), replace "ISO 9001:2008" by:

"ISO 9001".

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

In paragraphs (b) (i) and (c) (ii), after "absorbent", insert:

"or adsorbent". Insert "or adsorb" after "absorb".

In paragraphs (b) (i) and (c) (ii), after "absorb", insert:

"or adsorb".

In the penultimate paragraph, replace "CARRIAGE IN ACCORDANCE" by:

"TRANSPORT IN ACCORDANCE".

**SP 376** Amend the end of the last sentence to read as follows:

"... shall not be carried except under conditions approved by the competent authority of any RID Contracting State who may also recognize an approval granted by the competent authority of a country which is not an RID Contracting State provided that this approval has been granted in accordance with the procedures applicable according to RID, ADR, ADN, the IMDG Code or the ICAO Technical Instructions."

**SP 377** In the last sub-paragraph, before "P 908, insert:

"packing instruction".

Delete:

**378 –  
499** (Reserved)".

**SP 528** Replace "articles of Class 4.1" by:

"substances of Class 4.1".

**SP 529** [The amendment in the French version does not apply to the English text.]

**SP 531** At the end, after "Class 4.1", insert:

"(UN Nos. 2555, 2556 or 2557)".

**SP 581** Amend to read as follows:

**"581** This entry covers mixtures of propadiene with 1 to 4% methylacetylene as well as the following mixtures:

Mixture	Content, % by volume			
	Methylacetylene and propadiene, not more than	Propane and propylene, not more than	C <sub>4</sub> -saturated hydrocarbons, not less than	Permitted technical name for purposes of 5.4.1.1
P 1	63	24	14	"Mixture P 1"
P 2	48	50	5	"Mixture P 2"

**SP 592** [The amendment in the French version does not apply to the English text.]

**SP 625** "mit der Kennzeichnung" ändern in:

"mit dem Kennzeichen".

**SP 633** Replace "marking" by:

"mark" (twice).

**SP 635** [The amendment in the German version does not apply to the English text.]

**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 cells with an aggregate lithium content of not more than 2 g, not contained in equipment, collected and handed over for carriage for sorting, disposal or recycling; as well as
- lithium cells and batteries contained in equipment from private households collected and handed over for carriage for depollution, dismantling, recycling or disposal.

**NOTE:** "Equipment from private households" means equipment which comes from private households and equipment which comes from commercial, industrial, institutional and other sources which, because of its nature and quantity, is similar to that from private households. Equipment likely to be used by both private households and users other than private households shall in any event be considered to be equipment from private households.

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.

If equipment containing lithium cells or batteries is carried unpackaged or on pallets in accordance with packing instruction P 909 (3) of 4.1.4.1, this mark may alternatively be affixed to the external surface of the wagons or containers."

**SP 650** [The amendment in the German version does not apply to the English text.]

**SP 653** In the last indent, replace "marking" by:

"mark".

**SP 655** In the first sentence, replace "Directive 97/23/EC<sup>4</sup>" by:

"Directive 97/23/EC<sup>4</sup> or Directive 2014/68/EU<sup>5</sup>".

At the end of the second sentence, add:

"or Directive 2014/68/EU".

Add a new footnote 5 to read as follows:

<sup>5</sup> Directive 2014/68/EU of the European Parliament and of the Council of 15 May 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of pressure equipment (PED) (Official Journal of the European Union No. L 189 of 27 June 2014, p. 164 – 259)."

Renumber footnotes 5 to 9 as 6 to 10.

**SP 658** In paragraph (b), after "wagon" Insert "or large container".

**SP 660** In paragraph (f), in the last sentence, replace "markings" by:

"marks".

Amend footnote 6 (current footnote 5) to read as follows:

<sup>6</sup> ECE Regulation No. 67 (Uniform provisions concerning the approval of:  
I. Approval of specific equipment of vehicles of category M and N using liquefied petroleum gases in their propulsion system;



- II. Approval of vehicles of category M and N fitted with specific equipment for the use of liquefied petroleum gases in their propulsion system with regard to the installation of such equipment).

**SP 663** Under "Scope", in the last indent, after "polyhalogenated biphenyls", insert:

", halogenated monomethyldiphenylmethanes".

Add the following new special provisions:

**378** Radiation detectors containing this gas in non-refillable pressure receptacles not meeting the requirements of Chapter 6.2 and packing instruction P 200 of 4.1.4.1 may be carried under this entry provided:

- (a) The working pressure in each receptacle does not exceed 50 bar;
- (b) The receptacle capacity does not exceed 12 litres;
- (c) Each receptacle has a minimum burst pressure of at least 3 times the working pressure when a relief device is fitted and at least 4 times the working pressure when no relief device is fitted;
- (d) Each receptacle is manufactured from material which will not fragment upon rupture;
- (e) Each detector is manufactured under a registered quality assurance programme;

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

- (f) Detectors are carried in strong outer packagings. The complete package shall be capable of withstanding a 1.2 metre drop test without breakage of the detector or rupture of the outer packaging. Equipment that includes a detector shall be packed in a strong outer packaging unless the detector is afforded equivalent protection by the equipment in which it is contained; and
- (g) The transport document includes the following statement:

"TRANSPORT IN ACCORDANCE WITH SPECIAL PROVISION 378".

Radiation detectors, including detectors in radiation detection systems, are not subject to any other requirements of RID if the detectors meet the requirements in (a) to (f) above and the capacity of detector receptacles does not exceed 50 ml."

**379** Anhydrous ammonia adsorbed or absorbed on a solid contained in ammonia dispensing systems or receptacles intended to form part of such systems are not subject to the other provisions of RID if the following conditions are observed:

- (a) The adsorption or absorption presents the following properties:
  - (i) The pressure at a temperature of 20 °C in the receptacle is less than 0.6 bar;
  - (ii) The pressure at a temperature of 35 °C in the receptacle is less than 1 bar;

- (iii) The pressure at a temperature of 85 °C in the receptacle is less than 12 bar.
- (b) The adsorbent or absorbent material shall not have dangerous properties listed in classes 1 to 8;
- (c) The maximum contents of a receptacle shall be 10 kg of ammonia; and
- (d) Receptacles containing adsorbed or absorbed ammonia shall meet the following conditions:
  - (i) Receptacles shall be made of a material compatible with ammonia as specified in ISO 11114-1:2012;
  - (ii) Receptacles and their means of closure shall be hermetically sealed and able to contain the generated ammonia;
  - (iii) Each receptacle shall be able to withstand the pressure generated at 85 °C with a volumetric expansion no greater than 0.1%;
  - (iv) Each receptacle shall be fitted with a device that allows for gas evacuation once pressure exceeds 15 bar without violent rupture, explosion or projection; and
  - (v) Each receptacle shall be able to withstand a pressure of 20 bar without leakage when the pressure relief device is deactivated.

When carried in an ammonia dispenser, the receptacles shall be connected to the dispenser in such a way that the assembly is guaranteed to have the same strength as a single receptacle.

The properties of mechanical strength mentioned in this special provision shall be tested using a prototype of a receptacle and/or dispenser filled to nominal capacity, by increasing the temperature until the specified pressures are reached.

The test results shall be documented, shall be traceable and shall be communicated to the relevant authorities upon request.

**380** (Reserved)

**381** (Reserved)

**382** Polymeric beads may be made from polystyrene, poly (methyl methacrylate) or other polymeric material. When it can be demonstrated that no flammable vapour, resulting in a flammable atmosphere, is evolved according to test U1 (Test method for substances liable to evolve flammable vapours) of Part III, sub-section 38.4.4 of the Manual of Tests and Criteria, polymeric beads, expandable need not be classified under this UN number. This test should only be performed when declassification of a substance is considered.

**383** Table tennis balls manufactured from celluloid are not subject to RID where the net mass of each table tennis ball does not exceed 3.0 g and the total net mass of table tennis balls does not exceed 500 g per package.

**384** (Reserved)

**385** This entry applies to vehicles powered by flammable liquid or gas internal combustion engines or fuel cells.

Hybrid electric vehicles powered by both, an internal combustion engine and wet batteries, sodium batteries, lithium metal batteries or lithium ion batteries, carried with the batteries installed shall be assigned to this entry. Vehicles powered by wet batteries, sodium batteries, lithium metal batteries or lithium ion batteries, carried with the batteries installed, shall be assigned to the entry UN 3171 BATTERYPOWERED VEHICLE (see special provision 240).

For the purpose of this special provision, vehicles are self-propelled apparatus designed to carry one or more persons or goods. Examples of such vehicles are cars, motorcycles, trucks, locomotives, scooters, three- and four-wheeled vehicles or motorcycles, lawn tractors, self-propelled farming and construction equipment, boats and aircraft.

Dangerous goods such as batteries, air bags, fire extinguishers, compressed gas accumulators, safety devices and other integral components of the vehicle that are necessary for the operation of the vehicle or for the safety of its operator or passengers, shall be securely installed in the vehicle and are not otherwise subject to RID. However, lithium batteries shall meet the requirements of 2.2.9.1.7, except as otherwise provided for in special provision 667.

**386** Substances stabilized by temperature control are not accepted for carriage by rail (see 2.2.41.2.3). When chemical stabilization is employed, the person offering the packaging, IBC or tank for carriage shall ensure that the level of stabilization is sufficient to prevent the substance in the packaging, IBC or tank from dangerous polymerization at a bulk mean temperature of 50 °C, or, in the case of a portable tank, 45 °C. Where chemical stabilization becomes ineffective at lower temperatures within the anticipated duration of carriage, carriage by rail is not permitted. In making this determination factors to be taken into consideration include, but are not limited to, the capacity and geometry of the packaging, IBC or tank and the effect of any insulation present, the temperature of the substance when offered for carriage, the duration of the journey and the ambient temperature conditions typically encountered in the journey (considering also the season of year), the effectiveness and other properties of the stabilizer employed, applicable operational controls imposed by regulation (e.g. requirements to protect from sources of heat, including other cargo carried at a temperature above ambient) and any other relevant factors.

**387 –  
499** (Reserved)".

**"666** Vehicles assigned to UN No. 3166 or UN No. 3171 and battery powered equipment assigned to UN 3171 in conformity with special provisions 240, 312 and 385, as well as any dangerous goods they contain that are necessary for their operation or the operation of their equipment, when carried as a load, are not subject to any other provisions of RID, provided the following conditions are met:

- (a) For liquid fuels, any valves between the engine or equipment and the fuel tank shall be closed during carriage unless it is essential for the equipment to remain operational. Where appropriate, the vehicles shall be loaded upright and secured against falling;
- (b) For gaseous fuels, the valve between the gas tank and engine shall be closed and the electric contact open unless it is essential for the equipment to remain operational;

(c) Metal hydride storage systems shall be approved by the competent authority of the country of manufacture. If the country of manufacture is not an RID Contracting State the approval shall be recognized by the competent authority of an RID Contracting State;

(d) The provisions of (a) and (b) do not apply to vehicles which are empty of liquid or gaseous fuels.

**NOTE 1:** A vehicle is considered to be empty of liquid fuel when the liquid fuel tank has been drained and the vehicle cannot be operated due to a lack of fuel. Vehicle components such as fuel lines, fuel filters and injectors do not need to be cleaned, drained or purged to be considered empty of liquid fuels. In addition, the liquid fuel tank does not need to be cleaned or purged.

**2:** A vehicle is considered to be empty of gaseous fuels when the gaseous fuel tanks are empty of liquid (for liquefied gases), the pressure in the tanks does not exceed 2 bar and the fuel shut-off or isolation valve is closed and secured.

**667** (a) The requirements of 2.2.9.1.7 (a) do not apply when pre-production prototype lithium cells or batteries or lithium cells or batteries of a small production run, consisting of not more than 100 cells or batteries, are installed in the vehicle, engine or machinery;

(b) The requirements of 2.2.9.1.7 do not apply to lithium cells or batteries installed in damaged or defective vehicles, engines or machinery. In such cases the following conditions shall be met:

(i) If the damage or defect has no significant impact on the safety of the cell or battery, damaged and defective vehicles, engines or machinery, may be carried under the conditions defined in special provisions 363 or 666, as appropriate;

(ii) If the damage or defect has a significant impact on the safety of the cell or battery, the lithium cell or battery shall be removed and carried according to special provision 376.

However, if it is not possible to safely remove the cell or battery or it is not possible to verify the status of the cell or battery, the vehicle, engine or machinery may be towed or carried as specified in (i).

**668** Elevated temperature substances for the purpose of applying road markings are not subject to the requirements of RID, provided that the following conditions are met:

(a) They do not fulfil the criteria of any class other than Class 9;

(b) The temperature of the outer surface of the boiler does not exceed 70 °C;

(c) The boiler is closed in such a way that any loss of product is prevented during carriage;

(d) The maximum capacity of the boiler is limited to 3 000 l.

- 669** A trailer fitted with equipment, powered by a liquid or gaseous fuel or an electric energy storage and production system, that is intended for use during carriage operated by this trailer as a part of a transport unit, shall be assigned to UN numbers 3166 or 3171 and be subject to the same conditions as specified for these UN numbers, when carried as a load on a wagon, provided that the total capacity of the tanks containing liquid fuel does not exceed 500 litres."

### **Chapter 3.4**

- 3.4.1** In paragraph (e), replace "5.2.1.9" by:

"5.2.1.10".

- 3.4.7** Replace "Marking for" by:

"Marking of".

- 3.4.7.1** Replace "marking" by:

"mark" (4 times).

- 3.4.7.2** At the end of the first sentence, replace "marking" by:

"mark".

- 3.4.8** Replace "Marking for" by:

"Marking of".

- 3.4.8.1** Replace "marking" by:

"mark" (4 times).

- 3.4.8.2** At the end of the first sentence, replace "marking" by:

"mark".

- 3.4.9** Replace "marking" by:

"mark" (twice).

Replace "markings" by:

"marks".

- 3.4.10** Replace "marking" by:

"mark".

**3.4.11** Amend to read as follows:

**"3.4.11 Use of overpacks**

For an overpack containing dangerous goods packed in limited quantities, the following applies:

Unless the marks representative of all dangerous goods in an overpack are visible, the overpack shall be:

- marked with the word "OVERPACK". The lettering of the "OVERPACK" mark shall be at least 12 mm high. The mark shall be in an official language of the country of origin and also, if that language is not English, French or German, in English, French or German, unless agreements, if any, concluded between the countries concerned in the transport operation provide otherwise; and
- marked with the marks required by this Chapter.

Except for air transport, the other provisions of 5.1.2.1 apply only if other dangerous goods which are not packed in limited quantities are contained in the overpack and only in relation to these other dangerous goods."

**3.4.13** In paragraph (a), amend the end of the second sentence to read as follows:

"... and the marks in accordance with 3.4.15."

In paragraph (b), amend the end of the first paragraph to read as follows:

"... and the marks in accordance with 3.4.15."

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

"If the marks affixed to the large containers are not visible from outside the carrying wagon, the same marks shall also be affixed to both sides of the wagon."

**3.4.14** Replace "Markings" by:

"The marks".

**3.4.15** Amend to read as follows:

**"3.4.15** The marks specified in 3.4.13 shall be the same as the one required in 3.4.7, except that their minimum dimensions shall be 250 mm × 250 mm. These marks shall be removed or covered if no dangerous goods in limited quantities are carried."

**Chapter 3.5**

**3.5.2** After the first sentence, amend the remainder of paragraph (b) to read as follows:

"For liquid dangerous goods, the intermediate or outer packaging shall contain sufficient absorbent material to absorb the entire contents of the inner packagings. When placed in the intermediate packaging, the absorbent material may be the cushioning material. Dangerous goods shall not react dangerously with cushioning, absorbent material and packaging material or reduce the integrity or function of the materials. Regardless of its orientation, the package shall completely contain the contents in case of breakage or leakage;"

In paragraph (e), replace "markings" by:

"marks".

**3.5.4.2** In the paragraph after the figure, replace "marking" by:

"mark".

**3.5.4.3** Amend to read as follows:

**3.5.4.3 Use of overpacks**

For an overpack containing dangerous goods packed in excepted quantities, the following applies:

Unless the marks representative of all dangerous goods in an overpack are visible, the overpack shall be:

- marked with the word "OVERPACK". The lettering of the "OVERPACK" mark shall be at least 12 mm high. The mark shall be in an official language of the country of origin and also, if that language is not English, French or German, in English, French or German, unless agreements, if any, concluded between the countries concerned in the transport operation provide otherwise; and
- marked with the marks required by this Chapter.

The other provisions of 5.1.2.1 apply only if other dangerous goods which are not packed in excepted quantities are contained in the overpack and only in relation to these other dangerous goods."

**PART 4**

**Chapter 4.1**

**4.1.1** In the NOTE, replace "LP 02" by:

"LP 200".

**4.1.1.1** In the first sentence, replace "between transport units" by:

"between cargo transport units" (twice).

**4.1.1.5** Replace "5.2.1.9" by:

"5.2.1.10".

In the second sentence, replace "markings" by:

"marks".

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

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

"Every packaging as specified in Chapter 6.1 intended to contain liquids shall successfully undergo a suitable leakproofness test. This test is part of a quality assurance programme as stipulated in 6.1.1.4 which shows the capability of meeting the appropriate test level indicated in 6.1.5.4.3:".

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

**4.1.1.19.1** Amend the second sentence to read as follows:

"This does not prevent the use of a larger size packaging, an IBC of type 11A or a large packaging of appropriate type and performance level and under the conditions of 4.1.1.19.2 and 4.1.1.19.3."

**4.1.1.20.1** In the Note, replace "markings" by:

"marks".

**4.1.1.20.2** Add a second sentence to read as follows:

"The maximum size of the placed pressure receptacle is limited to a water capacity of 1 000 litres."

Add a penultimate sentence to read as follows:

"In this case the total sum of water capacities of the placed pressure receptacles shall not exceed 1 000 litres."

**4.1.1.21.3** [The amendment to paragraph (f) in the French version does not apply to the English text.]

**4.1.1.21.6** In the entries for "UN 1202 Diesel fuel" and "UN 1202 Heating oil, light", in column (2b) of the Table, replace "EN 590:2009 + A1:2010" by:

"EN 590:2013 + AC:2014".

In the Table, for UN No. 2815, amend the classification code in column (3b) to read:

"CT1".

**4.1.2.4** At the end of the introductory sentence, before the subparagraphs, replace "marking" by:

"mark".

**4.1.3.4** Under "Boxes", after "4B,", insert:

"4N,".

**4.1.3.8.1** In paragraph (a), replace "between transport units" by:

"between cargo transport units" (twice).

In paragraph (e), replace "wagon or container" by:

"cargo transport unit".



**4.1.4.1**

**P 001** Add a new special packing provision "**PP 93**" to read:

"**PP 93** For UN Nos. 3532 and 3534, packagings shall be designed and constructed to permit the release of gas or vapour to prevent a build-up of pressure that could rupture the packagings in the event of loss of stabilization."

**P 002** In special packing provision **PP 7**, in the first sentence, delete:

"as a wagon load or".

Add a new special packing provision "**PP 92**" to read:

"**PP 92** For UN Nos. 3531 and 3533, packagings shall be designed and constructed to permit the release of gas or vapour to prevent a build-up of pressure that could rupture the packagings in the event of loss of stabilization."

**P 003** In special packing provision specific to RID and ADR **RR 6**, in the first sentence, delete:

"wagon load or".

Insert a new packing instruction to read:

<b>P 005</b>	<b>PACKING INSTRUCTION</b>	<b>P 005</b>
This instruction applies to UN Nos. 3528, 3529 and 3530.		
If the engine or machinery is constructed and designed so that the means of containment containing the dangerous goods affords adequate protection, an outer packaging is not required.		
Dangerous goods in engines or machinery shall otherwise be packed in outer packagings constructed of suitable material, and of adequate strength and design in relation to the packaging capacity and its intended use, and meeting the applicable requirements of 4.1.1.1, or they shall be fixed in such a way that they will not become loose during normal conditions of carriage, e.g. in cradles or crates or other handling devices.		
In addition, the manner in which means of containment are contained within the engine or machinery, shall be such that under normal conditions of carriage, damage to the means of containment containing the dangerous goods is prevented; and in the event of damage to the means of containment containing liquid dangerous goods, no leakage of the dangerous goods from the engine or machinery is possible (a leakproof liner may be used to satisfy this requirement).		
Means of containment containing dangerous goods shall be so installed, secured or cushioned as to prevent their breakage or leakage and so as to control their movement within the engine or machinery during normal conditions of carriage. Cushioning material shall not react dangerously with the content of the means of containment. Any leakage of the contents shall not substantially impair the protective properties of the cushioning material.		
<b>Additional requirement</b>		
Other dangerous goods (e.g. batteries, fire extinguishers, compressed gas accumulators or safety devices) required for the functioning or safe operation of the engine or machinery shall be securely mounted in the engine or machine.		

**P 112c** In special packing provision **PP 48**, add a new last sentence to read as follows:

"Packagings of other material with a small amount of metal, for example metal closures or other metal fittings such as those mentioned in 6.1.4, are not considered metal packagings."

**P 114b** In special packing provision **PP 48**, add a new last sentence to read as follows:

"Packagings of other material with a small amount of metal, for example metal closures or other metal fittings such as those mentioned in 6.1.4, are not considered metal packagings."

**P 130** In special packing provision **PP 67**, replace "and 0502" by:

", 0502 and 0510".

**P 137** In special packing provision **PP 70**, replace "the package marked THIS SIDE UP" by:

"the package shall be marked in accordance with 5.2.1.10.1".

**P 144** In column "Outer packagings", under "Boxes", after "natural wood, ordinary with metal liner", insert:

"(4C1)".

**P 200** In paragraph (3) (d), amend the Note to read as follows:

**NOTE:** For pressure receptacles which make use of composite materials, the maximum test period shall be 5 years. The test period may be extended to that specified in Tables 1 and 2 (i.e. up to 10 years), if approved by the competent authority or body designated by this authority which issued the type approval."

Amend paragraph (3) (f) to read as follows:

"(f) The maximum working pressure of the pressure receptacles for compressed gases (where no value is given, the working pressure shall not exceed two thirds of the test pressure) or the maximum filling ratio(s) dependent on the test pressure(s) for liquefied and dissolved gases;"

In paragraph (5), insert a new subparagraph (e) to read as follows:

"(e) For liquefied gases charged with compressed gases, both components – the liquefied gas and the compressed gas – have to be taken into consideration in the calculation of the internal pressure in the pressure receptacle.

The maximum mass of contents per litre of water capacity shall not exceed 0.95 times the density of the liquid phase at 50 °C; in addition, the liquid phase shall not completely fill the pressure receptacle at any temperature up to 60 °C.

When filled, the internal pressure at 65 °C shall not exceed the test pressure of the pressure receptacles. The vapour pressures and volumetric expansions of all substances in the pressure receptacles shall be considered. When experimental data is not available, the following steps shall be carried out:

- (i) Calculation of the vapour pressure of the liquefied gas and of the partial pressure of the compressed gas at 15 °C (filling temperature);
- (ii) Calculation of the volumetric expansion of the liquid phase resulting from the heating from 15 °C to 65 °C and calculation of the remaining volume for the gaseous phase;
- (iii) Calculation of the partial pressure of the compressed gas at 65 °C considering the volumetric expansion of the liquid phase;

**NOTE:** The compressibility factor of the compressed gas at 15 °C and 65 °C shall be considered.

- (iv) Calculation of the vapour pressure of the liquefied gas at 65 °C;
- (v) The total pressure is the sum of the vapour pressure of the liquefied gas and the partial pressure of the compressed gas at 65 °C;
- (vi) Consideration of the solubility of the compressed gas at 65 °C in the liquid phase;

The test pressure of the pressure receptacle shall not be less than the calculated total pressure minus 100 kPa (1 bar).

If the solubility of the compressed gas in the liquid phase is not known for the calculation, the test pressure can be calculated without taking the gas solubility (sub-paragraph (vi)) into account."

Amend paragraph (7) (a) as follows:

- Amend the first indent to read as follows:

"– of the conformity of receptacles and accessories with RID;"

- Amend the last indent to read as follows:

"– of marks and identification."

In paragraph (9), amend the last subparagraph to read as follows:

"For pressure receptacles which make use of composite materials, the maximum test period shall be 5 years. The test period may be extended to that specified in Tables 1 and 2 (i.e. up to 10 years), if approved by the competent authority or body designated by this authority which issued the type approval."

Amend special provision "p" in paragraph (10) as follows:

- In the two first sub-paragraphs, replace "or ISO 3807-2:2000" by:

", ISO 3807-2:2000 or ISO 3807:2013".

- In the last sub-paragraph, replace "conforming to ISO 3807-2:2000" by:

"fitted with a fusible plug".

In paragraph (10), for special provision "u", replace "ISO 7866:2012" by:

"ISO 7866:2012 + Cor 1:2014".

In paragraph (11), in the Table, after the row for "EN 13365:2002 + A1:2005", insert the following standards:

(7) (a)	ISO 10691:2004	Gas cylinders – Refillable welded steel cylinders for liquefied petroleum gas (LPG) – Procedures for checking before, during and after filling
(7) (a)	ISO 11755:2005	Gas cylinders – Cylinder bundles for compressed and liquefied gases (excluding acetylene) – Inspection at time of filling
(7) (a)	ISO 24431:2006	Gas cylinders – Cylinders for compressed and liquefied gases (excluding acetylene) – Inspection at time of filling
(7) (a) and (10) p	ISO 11372:2011	Gas cylinders – Acetylene cylinders – Filling conditions and filling inspection <b>NOTE:</b> The EN version of this ISO standard fulfils the requirements and may also be used.
(7) (a) and (10) p	ISO 13088:2011	Gas cylinders – Acetylene cylinder bundles – Filling conditions and filling inspection <b>NOTE:</b> The EN version of this ISO standard fulfils the requirements and may also be used.

In paragraph (11), delete the last two rows of the Table.

In paragraph (12), at the end of subparagraph 1.1, add:

"(for the definitions of Xb and IS bodies, see 6.2.3.6.1)."

Amend paragraph (12), subparagraph 4 as follows:

- [The amendment to the first sentence in the French version does not apply to the English text.]
- In the second sentence, replace "marking" by:  
"mark".
- In the Note, replace "marking" by:  
"mark".

In paragraph (13), at the end of subparagraph 1.1, add:

"(for the definitions of Xb and IS bodies, see 6.2.3.6.1)."

Amend paragraph (13), subparagraph 4 as follows:

- [The amendment to the first sentence in the French version does not apply to the English text.]
- In the second sentence, replace "marking" by:  
"mark".

In Table 2, column "Special packing provisions", for UN No. 1058, add:

", z".

**P 205** [The amendment to paragraph (4) in the French and German version does not apply to the English text.]

In paragraph (6), replace "markings" by:

"mark".

**P 206** At the end of paragraph (3) add the following sub-paragraph:

"For liquids charged with a compressed gas both components – the liquid and the compressed gas – have to be taken into consideration in the calculation of the internal pressure in the pressure receptacle. When experimental data is not available, the following steps shall be carried out:

- (a) Calculation of the vapour pressure of the liquid and of the partial pressure of the compressed gas at 15 °C (filling temperature);
- (b) Calculation of the volumetric expansion of the liquid phase resulting from the heating from 15 °C to 65 °C and calculation of the remaining volume for the gaseous phase;
- (c) Calculation of the partial pressure of the compressed gas at 65 °C considering the volumetric expansion of the liquid phase;

**NOTE:** The compressibility factor of the compressed gas at 15 °C and 65 °C shall be considered.

- (d) Calculation of the vapour pressure of the liquid at 65 °C;
- (e) The total pressure is the sum of the vapour pressure of the liquid and the partial pressure of the compressed gas at 65 °C;
- (f) Consideration of the solubility of the compressed gas at 65 °C in the liquid phase.

The test pressure of the cylinders or pressure drums shall not be less than the calculated total pressure minus 100 kPa (1 bar).

If the solubility of the compressed gas in the liquid phase is not known for the calculation, the test pressure can be calculated without taking the gas solubility (sub-paragraph (f)) into account."

**P 207** In the last sentence before the special packing provision, after "to prevent", insert:

"excessive".

In special packing provision specific to RID and ADR **RR 6**, in the first sentence, delete:

"wagon load or".

**P 400** [The amendment in the French version does not apply to the English text.]

**P 403** In column "Single packagings", under "Composite packagings", replace "6HG2 oder 6HH2" by:

"6HG2 or 6HH2".

Amend special packing provision **PP 83** to read as follows:

**"PP 83 (Deleted)".**

**P 405** In (1) (b), replace "(3A1 oder 3B1)" by:

"(3A1 or 3B1)".

**P 406** In special packing provision **PP 48**, add a new last sentence to read as follows:

"Packagings of other material with a small amount of metal, for example metal closures or other metal fittings such as those mentioned in 6.1.4, are not considered metal packagings."

**P 410** Amend special packing provision **PP 83** to read as follows:

**"PP 83 (Deleted)".**

Insert a new packing instruction to read:

<b>P 412</b>	<b>PACKING INSTRUCTION</b>	<b>P 412</b>
This instruction applies to UN No. 3527.		
The following combination packagings are authorized, provided that the general provisions of 4.1.1 and 4.1.3 are met:		
(1) Outer packagings:		
Drums (1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G);		
Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2);		
Jerricans (3A1, 3A2, 3B1, 3B2, 3H1, 3H2).		
(2) Inner packagings:		
(a) The activator (organic peroxide) shall have a maximum quantity of 125 ml per inner packaging if liquid, and 500 g per inner packaging if solid.		
(b) The base material and the activator shall each be separately packed in inner packagings.		
The components may be placed in the same outer packaging provided that they will not interact dangerously in the event of a leakage.		
Packagings shall conform to the packing group II or III performance level according to the criteria for Class 4.1 applied to the base material.		

**P 502** Amend special packing provision **PP 28** to read as follows:

**"PP 28** For UN No. 1873, parts of packagings which are in direct contact with perchloric acid shall be constructed of glass or plastics."

**P 620** [The amendment to the introductory sentence of additional requirement 2 in the French version does not apply to the English text.]

In additional requirement (2) (c), in the third sentence, replace "Provisions for the consignment" by:

"Provisions for the carriage".

**P 650** In paragraph (1), replace "wagons or containers" by:

"cargo transport units" (twice).

In paragraph (10), replace "markings" by:

"marks".

In paragraph (14), replace "wagon or container" by:

"cargo transport unit" (twice).

[The other amendments to paragraph (14) in the French and German version do not apply to the English text.]

**P 801a** [The amendment in the German version does not apply to the English text.]

**P 805** Renumber as **P 603** and reorder accordingly.

**P 902** Under "Unpackaged articles", replace ", wagons or containers" by:

"or cargo transport units".

**P 903** [The amendment in the French version does not apply to the English text.]

**P 906** Amend paragraph (1) to read as follows:

"For liquids and solids containing or contaminated with PCBs, polyhalogenated biphenyls, polyhalogenated terphenyls or halogenated monomethyldiphenylmethanes:

Packagings in accordance with packing instructions P 001 or P 002, as appropriate."

In the introductory sentence to paragraph (2) and in paragraph (2) (b), replace "devices" by:

"articles" (three times).

In paragraph (2) (b), amend the end of the first sentence to read as follows:

"... PCBs, polyhalogenated biphenyls, polyhalogenated terphenyls or halogenated monomethyldiphenylmethanes present in them."

In the sentence after paragraph (2), before "P001 and P002", insert:

"packing instructions".

**P 909** Amend the beginning of the last sentence to read:

"Equipment may also be ...".

Insert a new packing instruction to read:

"

P 910	PACKING INSTRUCTION	P 910
<p>This instruction applies to UN Nos. 3090, 3091, 3480 and 3481 production runs consisting of not more than 100 cells and batteries and to pre-production prototypes of cells and batteries when these prototypes are carried for testing.</p>		
<p>The following packagings are authorized provided that the general provisions of 4.1.1 and 4.1.3 are met:</p>		
<p>(1) For cells and batteries, including when packed with equipment:</p>		
<p>Drums (1A2, 1B2, 1N2, 1H2, 1D, 1G);</p>		
<p>Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2);</p>		
<p>Jerricans (3A2, 3B2, 3H2).</p>		
<p>Packagings shall conform to the packing group II performance level and shall meet the following requirements:</p>		
<p>(a) Batteries and cells, including equipment, of different sizes, shapes or masses shall be packaged in an outer packaging of a tested design type listed above provided the total gross mass of the package does not exceed the gross mass for which the design type has been tested;</p>		
<p>(b) Each cell or battery shall be individually packed in an inner packaging and placed inside an outer packaging;</p>		
<p>(c) Each inner packaging shall be completely surrounded by sufficient non-combustible and non-conductive thermal insulation material to protect against a dangerous evolution of heat;</p>		
<p>(d) Appropriate measures shall be taken to minimize the effects of vibration and shocks and prevent movement of the cells or batteries within the package that may lead to damage and a dangerous condition during carriage. Cushioning material that is non-combustible and non-conductive may be used to meet this requirement;</p>		
<p>(e) Non-combustibility shall be assessed according to a standard recognized in the country where the packaging is designed or manufactured;</p>		
<p>(f) 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>(2) For cells and batteries contained in equipment:</p>		
<p>Drums (1A2, 1B2, 1N2, 1H2, 1D, 1G);</p>		
<p>Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2);</p>		
<p>Jerricans (3A2, 3B2, 3H2).</p>		
<p>Packagings shall conform to the packing group II performance level and shall meet the following requirements:</p>		
<p>(a) Equipment of different sizes, shapes or masses shall be packaged in an outer packaging of a tested design type listed above provided the total gross mass of the package does not exceed the gross mass for which the design type has been tested;</p>		
<p>(b) The equipment shall be constructed or packaged in such a manner as to prevent accidental operation during carriage;</p>		
<p>(c) Appropriate measures shall be taken to minimize the effects of vibration and shocks and prevent movement of the equipment within the package that may lead to damage and a dangerous condition during carriage. When cushioning material is used to meet this re-</p>		



quirement it shall be non-combustible and non-conductive; and

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

(3) The equipment or the batteries may be carried unpackaged under conditions specified by the competent authority of any RID Contracting State, which may also recognize an approval granted by the competent authority of a country which is not an RID Contracting State, provided that this approval has been granted in accordance with the procedures applicable according to RID, ADR, ADN, the IMDG Code or the ICAO Technical Instructions. Additional conditions that may be considered in the approval process include, but are not limited to:

(a) The equipment or the battery shall be strong enough to withstand the shocks and loadings normally encountered during carriage, including trans-shipment between cargo transport units and between cargo transport units and warehouses as well as any removal from a pallet for subsequent manual or mechanical handling; and

(b) The equipment or the battery shall be fixed in cradles or crates or other handling devices in such a way that it will not become loose during normal conditions of carriage.

#### **Additional requirements**

The cells and batteries shall be protected against short circuit;

Protection against short circuits includes, but is not limited to,

- individual protection of the battery terminals,
- inner packaging to prevent contact between cells and batteries,
- batteries with recessed terminals designed to protect against short circuits, or
- the use of a non-conductive and non-combustible cushioning material to fill empty space between the cells or batteries in the packaging.

#### **4.1.4.2**

**IBC 02** [The amendment in the French version does not apply to the English text.]

**IBC 03** Add a new special packing provision **B 19** to read:

**"B 19** For UN Nos. 3532 and 3534, IBCs shall be designed and constructed to permit the release of gas or vapour to prevent a build-up of pressure that could rupture the IBCs in the event of loss of stabilization."

**IBC 07** Add a new special packing provision **B 18** to read:

#### **"Special packing provision**

**B 18** For UN Nos. 3531 and 3533, IBCs shall be designed and constructed to permit the release of gas or vapour to prevent a build-up of pressure that could rupture the IBCs in the event of loss of stabilization."

**IBC 520** In the Table, add the following new entry:

<b>UN No.</b>	<b>Organic peroxide</b>	<b>Type of IBC</b>	<b>Maximum quantity (litres)</b>
<b>3109</b>	tert-BUTYL CUMYL PEROXIDE	31HA1	1000

[The amendment to additional requirement 1 in the French version does not apply to the English text.]

**4.1.4.3**

**LP 02** Amend special packing instruction L 2 to read as follows:

"L 2 (Deleted)".

**LP 101** In special packing provision L 1, replace "and 0502" by:

", 0502 and 0510".

Insert the following new packing instruction:

LP 200	PACKING INSTRUCTION	LP 200
This instruction applies to UN No. 1950.		
The following large packagings are authorized for aerosols, provided that the general provisions of 4.1.1 and 4.1.3 are met:		
Rigid large packagings conforming to the packing group II performance level, made of:		
<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>		
<b>Special packing provision</b>		
<b>L 2</b>	The large packagings shall be designed and constructed to prevent dangerous movement of the aerosols and inadvertent discharge during normal conditions of carriage. For waste aerosols carried in accordance with special provision 327, the large packagings shall have a means of retaining any free liquid that might escape during carriage, e.g. absorbent material. The large packagings shall be adequately ventilated to prevent the creation of a flammable atmosphere and the build-up of pressure.	

**LP 902** Under "Unpackaged articles", replace ", wagons or containers" by:

"or cargo transport units".

**4.1.5.17** Amend the text in brackets to read as follows:

"(1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 4A, 4B, 4N and metal receptacles)".

**4.1.6.12** In paragraph (c), replace "markings" by:

"marks".

**4.1.6.13** In paragraph (d), replace "markings" by:

"marks".

**4.1.6.15** In the Table, for "4.1.6.2", replace "ISO 11114-2:2000" by:

"ISO 11114-2:2013".

[The amendment to the title of standard ISO 11114-2:2013" in the German version does not apply to the English text.]

In the Table, for "4.1.6.8", after "annex A of ISO 10297:2006", insert:

"or annex A of ISO 10297:2014".

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

**4.1.8.2** Replace "4.1.1.3, 4.1.1.9 to 4.1.1.12" by

"4.1.1.10 to 4.1.1.12".

**4.1.8.4** Replace "marking" by:

"mark".

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

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

**4.1.10.4**

**MP 5** In the first sentence, before "P 620", insert:

"packing instruction".

In the second sentence, before "P 650", insert:

"packing instruction".

**MP 16** Amend to read as follows:

"MP 16 (Reserved)".

## **Chapter 4.2**

**4.2.1.13.14** Replace "marking" by:

"mark".

**4.2.4.5.6** In paragraph (c), replace "markings" by:

"marks".

**4.2.4.6** In paragraph (d), replace "markings" by:

"marks".

**4.2.5.2.6** [The amendment to portable tank instruction T 50 in the French version does not apply to the English text.]

### 4.2.5.3

**TP 7** [The amendment in the French version does not apply to the English text.]

**TP 23** Amend to read as follows:

"**TP 23** (Deleted)".

**TP 24** [The amendment in the French version does not apply to the English text.]

**TP 35** Amend to read as follows:

"**TP 35** (Deleted)".

**TP 36** [The amendment in the French version does not apply to the English text.]

**TP 37** Amend to read as follows:

"**TP 37** (Deleted)".

## Chapter 4.3

**4.3.2.1.7** Amend to read as follows:

"**4.3.2.1.7** The tank record shall be retained by the owner or operator, who shall be able to provide this documentation at the request of the competent authority, and who shall ensure that it is available to the entity in charge of maintenance (ECM).

The tank record, including the relevant information concerning the activities of the ECM,

The tank record

shall be maintained throughout the life of the tank and retained for 15 months after the tank is taken out of service.

Should a change of owner or operator occur during the life of the tank, the tank record shall be transferred without delay to the new owner or operator.

Copies of the tank record or all necessary documents shall be made available to the expert for tests, inspections and checks on tanks in accordance with 6.8.2.4.5 or 6.8.3.4.18, on the occasion of periodic inspections or exceptional checks."

**4.3.2.3** Insert a new 4.3.2.3.7 to read as follows:

"**4.3.2.3.7** Tank-wagons, demountable tanks, battery-wagons, tank-containers, tank swap bodies and MEGCs may not be filled or offered for carriage after the deadline for the test or inspection required by 6.8.2.4.2, 6.8.3.4.6 and 6.8.3.4.10 has expired.

However, tank-wagons, demountable tanks, battery-wagons, tank-containers, tank swap bodies and MEGCs filled prior to the date of expiry of the last periodic inspection may be carried:

(a) for a period not to exceed one month after the expiry of these deadlines;

- (b) unless otherwise approved by the competent authority, for a period not to exceed three months after the expiry of these deadlines in order to allow the return of dangerous goods for proper disposal or recycling. Reference to this exemption shall be mentioned in the transport document."

**4.3.3.4.3** In paragraph (f), replace "marking" by:

"marks".

**4.3.3** Add the following new sub-section:

**4.3.3.5** The actual holding time shall be determined for each journey of a tank carrying a refrigerated liquefied gas on the basis of the following:

- (a) The reference holding time for the refrigerated liquefied gas to be carried (see 6.8.3.4.10) as indicated on the plate referred to in 6.8.3.5.4;
- (b) The actual filling density;
- (c) The actual filling pressure;
- (d) The lowest set pressure of the pressure limiting device(s);
- (e) The deterioration of the insulation<sup>4</sup>.

**NOTE:** ISO 21014:2006 "Cryogenic vessels – Cryogenic insulation performance" details methods of determining the insulation performance of cryogenic vessels and provides a method of calculating the holding time.

The date at which the actual holding time ends shall be entered in the transport document (see 5.4.1.2.2 (d)).

Tanks shall not be offered for carriage:

- (a) In an ullage condition liable to produce an unacceptable hydraulic force due to surge within the shell;
- (b) When leaking;
- (c) When damaged to such an extent that the integrity of the tank or its lifting or securing arrangements may be affected;
- (d) Unless the service equipment has been examined and found to be in good working order;
- (e) Unless the actual holding time for the refrigerated liquefied gas being carried has been determined;
- (f) Unless the duration of carriage, after taking into consideration any delays which might be encountered, does not exceed the actual holding time;
- (g) Unless the pressure is steady and has been lowered to a level such that the actual holding time may be achieved<sup>4</sup>.

<sup>4</sup> Guidance is provided in the European Industrial Gases Association (EIGA) document "Methods to prevent the premature activation of relief devices on tanks" available at [www.eiga.eu](http://www.eiga.eu).

**4.3.4.1.3** Amend paragraph (b) to read as follows:

"(b) Class 4.1

UN No. 2448 SULPHUR, MOLTEN: code LGBV;  
 UN No. 3531 POLYMERIZING SUBSTANCE, SOLID, STABILIZED, N.O.S.:  
 code SGAN;  
 UN No. 3532 POLYMERIZING SUBSTANCE, LIQUID, STABILIZED, N.O.S.:  
 code L4BN."

**4.3.5**

**TU 16** Amend to read as follows:

**"TU 16** When handed over for carriage, uncleaned empty tanks shall be filled with a protective agent fulfilling one of the following measures:

Protective agent	Degree of filling of water	Additional requirements for carriage at low ambient temperatures
Nitrogen <sup>a</sup>	–	
Water and nitrogen <sup>a</sup>	–	
Water	not less than 96 % and not more than 98 %	The water shall contain sufficient anti-freeze agent to prevent it from freezing. The anti-freeze agent shall be free from corrosive action and not liable to react with the substance.

<sup>a</sup> The tank shall be filled with nitrogen in such a way that, even after cooling, the pressure at no time falls below atmospheric pressure. The tank shall be closed in such a way that no leakage of gas occurs.

An additional entry shall be included in the transport document:

"Tank filled with \_\_\_\_\_<sup>5</sup> in accordance with special provision TU 16."

<sup>5</sup> Indicates the name(s) of the protective agent(s). Where the tank is filled with water, its mass shall be indicated in kg; in the case of nitrogen, its pressure shall be given in MPa or bar."

**TU 21** Amend to read as follows:

**"TU 21** The substance shall be protected by a protective agent in the following ways:

Protective agent	A layer of water in the tank	Degree of filling of the substance (including water if any) at a temperature of 60° C shall not exceed	Additional requirements for carriage at low ambient temperatures
Nitrogen <sup>a</sup>	–	96 %	–
Water and nitrogen <sup>a</sup>	–	98 %	The water shall contain sufficient anti-freeze agent to prevent it from

Water	not less than 12 cm	98 %	freezing. The anti-freeze agent shall be free from corrosive action and not liable to react with the substance.
-------	---------------------	------	---

- <sup>a</sup> The remaining space of the tank shall be filled with nitrogen in such a way that, even after cooling, the pressure at no time falls below atmospheric pressure. The tank shall be closed in such a way that no leakage of gas occurs."

## PART 5

### Chapter 5.1

#### 5.1.2.1 Amend paragraph (a) to read as follows:

"(a) Unless marks and labels required in Chapter 5.2, except 5.2.1.3 to 5.2.1.6, 5.2.1.7.2 to 5.2.1.7.8 and 5.2.1.10, representative of all dangerous goods in the overpack are visible, the overpack shall be:

- (i) marked with the word "OVERPACK". The lettering of the "OVERPACK" mark shall be at least 12 mm high. The mark shall be in an official language of the country of origin and also, if that language is not English, French or German, in English, French or German, unless agreements, if any, concluded between the countries concerned in the transport operation provide otherwise; and
- (ii) labelled and marked with the UN number and other marks, as required for packages in Chapter 5.2 except 5.2.1.3 to 5.2.1.6, 5.2.1.7.2 to 5.2.1.7.8 and 5.2.1.10, for each item of dangerous goods contained in the overpack. Each applicable mark or label only needs to be applied once.

Labelling of overpacks containing radioactive material shall be in accordance with 5.2.2.1.11."

In paragraph (b), replace "5.2.1.9" by:

"5.2.1.10".

In paragraph (b), replace "5.2.1.9.1" by:

"5.2.1.10.1".

In paragraph (b), replace "marking" by:

"marks".

#### 5.1.2.3 Replace "5.2.1.9" by:

"5.2.1.10".

Replace "markings" by:

"marks" (twice).

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

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

## Chapter 5.2

**5.2.1** In the Note, replace "markings" by:

"marks".

**5.2.1.1** In the last sentence, replace "marking" by:

"mark".

**5.2.1.2** In the introductory sentence, replace "markings" by:

"marks".

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

In the second sentence, replace "marking" by:

"mark".

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

**5.2.1.5** In the second sentence, replace "marking" by:

"mark".

In the second subparagraph, delete:

"wagon load or".

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

In the last paragraph before the Notes, replace "These marks" by:

"These particulars" and replace "marking" by:

"mark".

**5.2.1.7.1** In the second sentence replace "markings" by:

"marks".

**5.2.1.7.4** In paragraph (c), replace "with the international vehicle registration code (VRI-Code)" by:

"with the distinguishing sign used on vehicles in international road traffic".

Amend footnote 2 to read as follows:

<sup>2</sup> Distinguishing sign of the State of registration used on motor vehicles and trailers in international road traffic, e.g. in accordance with the Geneva Convention on Road Traffic of 1949 or the Vienna Convention on Road Traffic of 1968."



**5.2.1.7.7** Replace "marking" by:

"mark".

**5.2.1.8.2** In the first sentence, replace "markings" by:

"marks".

**5.2.1.8.3** In the paragraph after the figure, replace "marking" by:

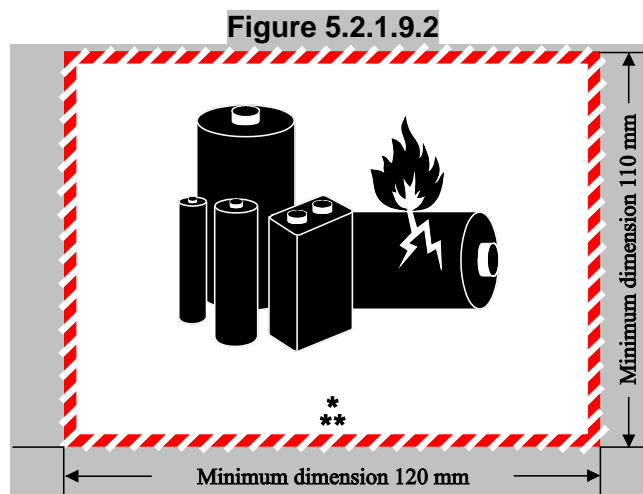
"mark" (twice).

**5.2.1** Add a new **5.2.1.9** to read as follows:

**5.2.1.9 Lithium battery mark**

**5.2.1.9.1** Packages containing lithium cells or batteries prepared in accordance with special provision 188 shall be marked as shown in Figure 5.2.1.9.2.

**5.2.1.9.2** The mark shall indicate the UN number preceded by the letters "UN", i.e. "UN 3090" for lithium metal cells or batteries or "UN 3480" for lithium ion cells or batteries. Where the lithium cells or batteries are contained in, or packed with, equipment, the UN number preceded by the letters "UN", i.e. "UN 3091" or "UN 3481" as appropriate shall be indicated. Where a package contains lithium cells or batteries assigned to different UN numbers, all applicable UN numbers shall be indicated on one or more marks.



Lithium battery mark

\* Place for UN number(s)

\*\* Place for telephone number for additional information

The mark shall be in the form of a rectangle with hatched edging. The dimensions shall be a minimum of 120 mm wide × 110 mm high and the minimum width of the hatching shall be 5 mm. The symbol (group of batteries, one damaged and emitting flame, above the UN number for lithium ion or lithium metal batteries or cells) shall be black on white. The hatching shall be red. If the size of the package so requires, the dimensions/line thickness may be reduced to not less than 105 mm wide × 74 mm high. Where dimensions are not specified, all features shall be in approximate proportion to those shown."

Renumber 5.2.1.9, 5.2.1.9.1, 5.2.1.9.2 and 5.2.1.9.3 as 5.2.1.10, 5.2.1.10.1, 5.2.1.10.2 and 5.2.1.10.3.

5.2.1.10.1 (former 5.2.1.9.1) Replace "5.2.1.9.2" by:

"5.2.1.10.2".

Replace "Figure 5.2.1.9.1.1" by:

"Figure 5.2.1.10.1.1".

Replace "Figure 5.2.1.9.1.2" by:

"Figure 5.2.1.10.1.2".

5.2.2.1.2 Replace "marking" by:

"mark".

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

In paragraph (b), replace "marking" by:

"mark".

5.2.2.1.8 In the sentence after the heading, delete:

"wagon load or".

5.2.2.1.11.1 In the penultimate sentence, replace "markings" by:

"marks".

5.2.2.2.1.1 Figure 5.2.2.2.1.1, in the text for figure note \*\*, after "text/number", insert:

"/symbol".

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

5.2.2.2.1.2 After the first paragraph, add a new Note to read as follows:

**NOTE:** When the diameter of the cylinder is too small to permit the display of the reduced size labels on the non-cylindrical upper part of the cylinder, the reduced sized labels may be displayed on the cylindrical part."

5.2.2.2.1.3 After paragraph (c), add the following new sub-paragraph:

"However for label model No. 9A, the upper half of the label shall only contain the seven vertical stripes of the symbol and the lower half shall contain the group of batteries of the symbol and the class number."

At the beginning of the last paragraph, insert:

"Except for label model No. 9A,".

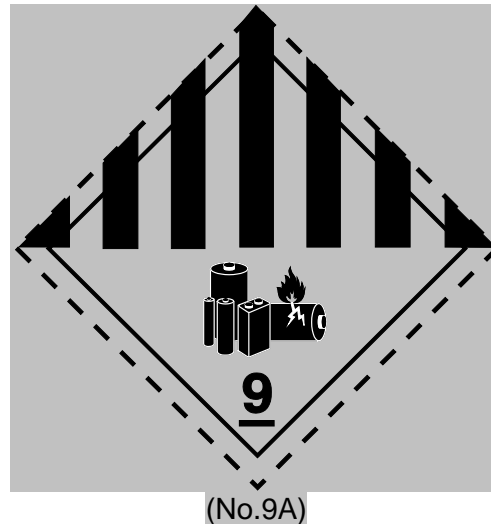
5.2.2.2.2 Amend the title of label no. 4.1 to read as follows:

**"CLASS 4.1 HAZARD**

**Flammable solids, self-reactive substances, polymerizing substances and solid desensitized explosives".**

Under "**Class 9 hazard Miscellaneous dangerous substances and articles**", after the generic No. 9 label, add the following:

"



Symbol (seven vertical black stripes in upper half; battery group, one broken and emitting flame in lower half): black;

Background: white;

Figure "9" underlined in bottom corner".

### Chapter 5.3

5.3.1.1 Insert a new 5.3.1.1.4 to read as follows:

"5.3.1.1.4 For Class 9 the placard shall correspond to the label model No. 9 as in 5.2.2.2.2; label model No. 9A shall not be used for placarding purposes."

Renumber 5.3.1.1.4 to 5.3.1.1.6 as 5.3.1.1.5 to 5.3.1.1.7.

5.3.1.2 At the end, add the following new sentence:

"If all compartments have to bear the same placards, these placards need to be displayed only once along each side and at both ends of the tank-container or portable tank."

5.3.1.4 In the last sentence of the second sub-paragraph, at the beginning, delete:

"However, in such case,".

5.3.1.7.3 Amend the beginning to read:

"For tank-containers and portable tanks ...".

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

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

In the Note, replace "orange-coloured marking" by:

"orange-coloured plate marking".

**5.3.2.1.1** In the last subparagraph, replace "wagon loads" by:

"full loads".

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

**5.3.2.3.2** For hazard identification number "40", at the end insert:

", or polymerizing substance".

After "68 Toxic substance, corrosive", insert a new line to read:

"687 Toxic substance, corrosive, radioactive".

After "70 radioactive material" insert a new line to read:

"768 Radioactive material, toxic, corrosive".

**5.3.3** In the second paragraph, replace "marking" by:

"mark".

In the text after the figure, insert a new fourth sentence to read as follows:

"For tank-containers and portable tanks with a capacity of not more than 3 000 litres and with an available surface area insufficient to affix the prescribed marks, the minimum dimensions of the sides may be reduced to 100 mm."

**5.3.4.1** Replace "5.3.1.1.5" by:

"5.3.1.1.6".

In the first sentence of the second sub-paragraph, replace "marking" by:

"shunting marks".

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

"These may simply consist ...".

**5.3.6.2** After the first sentence, insert the following sentence:

"For tank-containers and portable tanks with a capacity of not more than 3 000 litres and with an available surface area insufficient to affix the prescribed marks, the minimum dimensions may be reduced to 100 mm × 100 mm."

## Chapter 5.4

**5.4.1.1.1** In paragraph (c), insert a new third indent as follows:

– for lithium batteries of UN numbers 3090, 3091, 3480 and 3481: the Class number "9";.

In paragraph (c), amend the beginning of the new fourth indent (former third indent) to read:

"for other substances and articles:".

In paragraph (j), in the second sentence, replace "wagon loads" by:

"full loads".

**5.4.1.1.3** At the end of the fourth indent, replace the full stop by:

"or" and add the following sub-paragraph:

"when a marking in accordance with 5.3.2.1 is prescribed:

– "336, UN 1230 WASTE METHANOL, 3 (6.1), II" or

– "336, UN 1230 WASTE METHANOL, 3 (6.1), PG II".

**5.4.1.1.6.2.1** Amend the last paragraph to read as follows:

"In addition, in such a case:

(a) If the dangerous goods last loaded are goods of Class 2, the information prescribed in 5.4.1.1.1 (c) may be replaced by the number of the class "2";

(b) If the dangerous goods last loaded are goods of classes 3, 4.1, 4.2, 4.3, 5.1, 5.2, 6.1, 8 or 9, the information of the goods last loaded, as described in 5.4.1.1.1 (c) may be replaced by the words "WITH RESIDUES OF [...]" followed by the class(es) and subsidiary risk(s) corresponding to the different residues, in the class numbering order.

Example: Empty packagings, uncleaned, having contained goods of Class 3 carried together with empty packagings, uncleaned, having contained goods of Class 8 with a Class 6.1 subsidiary risk may be referred to in the transport document as:

"EMPTY PACKAGINGS, WITH RESIDUES OF 3, 6.1, 8".

**5.4.1.1.11** Amend to read as follows:

**"5.4.1.1.11 Special provisions for the carriage of IBCs, tanks, battery-wagons, portable tanks and MEGCs after the date of expiry of the last periodic test or inspection**

For carriage in accordance with 4.1.2.2 (b), 4.3.2.3.7 (b), 6.7.2.19.6 (b), 6.7.3.15.6 (b) or 6.7.4.14.6 (b), a statement to this effect shall be included in the transport document, as follows:

"CARRIAGE IN ACCORDANCE WITH 4.1.2.2 (b)",  
"CARRIAGE IN ACCORDANCE WITH 4.3.2.3.7 (b)",

"CARRIAGE IN ACCORDANCE WITH 6.7.2.19.6 (b)",  
"CARRIAGE IN ACCORDANCE WITH 6.7.3.15.6 (b)" or  
"CARRIAGE IN ACCORDANCE WITH 6.7.4.14.6 (b)" as appropriate."

**5.4.1.1** Insert a new 5.4.1.1.20 and 5.4.1.1.21 to read as follows:

**5.4.1.1.20 Special provisions for the carriage of substances classified in accordance with 2.1.2.8**

For carriage in accordance with 2.1.2.8, a statement shall be included in the transport document, as follows:

"CLASSIFIED IN ACCORDANCE WITH 2.1.2.8".

**5.4.1.1.21 Special provisions for the carriage of UN Nos. 3528, 3529 and 3530**

For carriage of UN Nos. 3528, 3529 and 3530, the transport document, when required according to special provision 363 of Chapter 3.3, shall contain the following additional statement:

"TRANSPORT IN ACCORDANCE WITH SPECIAL PROVISION 363".

**5.4.1.2.1** In paragraph (e), replace "(distinguishing sign of the states for motor vehicles in international traffic)" by:

"(distinguishing sign used on vehicles in international road traffic<sup>8</sup>)".

In Note 2, replace "indicated by the distinguishing sign for motor vehicles in international traffic" by:

"indicated by the distinguishing sign used on vehicles in international road traffic".

Amend footnote 8 to read as follows:

<sup>8</sup> Distinguishing sign of the State of registration used on motor vehicles and trailers in international road traffic, e.g. in accordance with the Geneva Convention on Road Traffic of 1949 or the Vienna Convention on Road Traffic of 1968."

**5.4.1.2.2** Amend paragraph (d) to read as follows:

"(d) In the case of tank-wagons and tank-containers carrying refrigerated liquefied gases the consignor shall enter in the transport document the date at which the actual holding time ends, in the following format:

"END OF HOLDING TIME: ..... (DD/MM/YYYY)".

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

**5.4.2** Amend the title to read:

"Container/vehicle packing certificate".

In the first paragraph, replace "large container" by:

"container".

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

In the first paragraph, add a second sentence to read:

"If the carriage of dangerous goods in a vehicle precedes a voyage by sea, a container/vehicle packing certificate conforming to section 5.4.2 of the IMDG Code<sup>11</sup> may be provided with the transport document<sup>12</sup>."

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

In the second sentence of the second paragraph, after "of the container", insert:

"or vehicle".

The Note becomes Note 1.

Add a new Note 2 to read as follows:

**"2:** For the purposes of this section the term "vehicle" includes wagon."

At the end of footnote 11, replace ("IMO/ILO/UNECE Guidelines for Packing of Cargo Transport Units (CTUs)")" by:

("IMO/ILO/UNECE Code of Practice for Packing of Cargo Transport Units (CTU Code)").

**5.4.3.3** Amend to read as follows:

**"5.4.3.3** Before the start of his journey, the driver shall consult the instructions in writing for details on actions to be taken in the event of an accident or incident, taking into account the information on dangerous goods on board provided to him by the carrier."

**5.4.3.4** On page 2 of the instructions in writing, amend the description of the hazards of label 4.1 in column 1 to read as follows:

"Flammable solids, self-reactive substances, polymerizing substances and solid desensitized explosives".

On page 3 of the instructions in writing, in the line for danger label model No. 9, insert the new danger label model No. 9A.

On page 3 of the instructions in writing, in the last line, in column (2), insert at the beginning:

"Risk of burns."

On page 3 of the instructions in writing, in Note 2, replace "above" by:

"in column (3) of the Table".

## Chapter 5.5

**5.5.2.1.1** Delete the Note.

**5.5.2.3.2** In the paragraph after figure 5.5.2.3.2, replace:

"marking" by :

"mark" (twice).

**5.5.3.1.1** Amend to read as follows:

**5.5.3.1.1** This section is not applicable to substances which may be used for cooling or conditioning purposes when carried as a consignment of dangerous goods, except for the carriage of dry ice (UN No. 1845). When they are carried as a consignment, these substances shall be carried under the relevant entry of Table A of Chapter 3.2 in accordance with the associated conditions of carriage.

For UN No. 1845, the conditions of carriage specified in this section, except 5.5.3.3.1, apply for all kinds of carriage, as a coolant, conditioner, or as a consignment. For the carriage of UN No. 1845, no other provisions of RID apply."

**5.5.3.1.5** Amend the end to read as follows:

"... duration of the journey, the types of containment to be used and the gas concentration limits given in the Note to 5.5.3.3.3."

**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. Marking according to 5.5.3.6 is not required in this case.

Ventilation is not required, and marking according to 5.5.3.6 is required, if:

- gas exchange between the load compartment and accessible compartments during carriage is prevented; or
- the load compartment is insulated, refrigerated or mechanically refrigerated equipment, for example as defined in the Agreement on the International Carriage of Perishable Foodstuffs and on the Special Equipment to be Used for such Carriage (ATP) and separated from accessible compartments during carriage .

**NOTE:** In this context "well ventilated" means there is an atmosphere where the carbon dioxide concentration is below 0.5% by volume and the oxygen concentration is above 19.5% by volume."

**5.5.3.4.2** Replace "markings" by:

"marks".

**5.5.3.6.1** Amend to read as follows:

**5.5.3.6.1** Wagons and containers containing dangerous goods used for cooling or conditioning purposes that are not well ventilated shall be marked with a warning mark, as specified in 5.5.3.6.2, affixed at each access point in a location where it will be easily seen by persons opening or entering the wagon or container. This mark shall remain on the wagon or container until the following provisions are met:



- (a) The wagon or container has been well ventilated to remove harmful concentrations of coolant or conditioner; and
- (b) The cooled or conditioned goods have been unloaded.

As long as the wagon or container is marked, the necessary precautions have to be taken before entering it. The necessity of ventilating through the cargo doors or other means (e.g. forced ventilation) has to be evaluated and included in training of the involved persons."

**5.5.3.6.2** In the paragraph following the caption of figure 5.5.3.6.2, replace "marking" by:  
"mark".

## **PART 6**

### **Chapter 6.1**

**6.1.1.1** [The amendment to paragraph (e) in the French version do not apply to the English text.]

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

"Every packaging intended to contain liquids shall successfully undergo a suitable leakproofness test. This test is part of a quality assurance programme as stipulated in 6.1.1.4 which shows the capability of meeting the appropriate test level indicated in 6.1.5.4.3:".

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

**6.1.3** In Note 1, amend the beginning of the first sentence to read as follows:

"The marks indicate that the packaging which bears them correspond to ...".

In Note 1, in the second sentence, replace "mark does" by:

"marks do".

In Note 2, replace "marking is" by:

"marks are" (twice).

In Note 3, in the first sentence, replace "marking does" by:

"marks do".

In Note 3, in the second sentence, replace "marking" by:

"mark".

**6.1.3.1** In the first and second sentence, replace "markings" by:

"marks" (twice).

In the introductory sentence before paragraphs (a) to (g), replace "marking" by:

"marks".

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 an MEGC complies with the relevant requirements in Chapter 6.1, 6.2, 6.3, 6.5, 6.6, 6.7 or 6.11."

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

In paragraph (e), at the end of the second sentence, replace "marking" by:

"marks".

In paragraph (e), in the note \* related to the figure, replace "marking" by:

"mark".

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

In paragraph (f), replace "indicated by the distinguishing sign for motor vehicles in international traffic" by:

"indicated by the distinguishing sign used on vehicles in international road traffic".

Amend footnote 3 to read as follows:

<sup>3</sup> Distinguishing sign of the State of registration used on motor vehicles and trailers in international road traffic, e.g. in accordance with the Geneva Convention on Road Traffic of 1949 or the Vienna Convention on Road Traffic of 1968."

**6.1.3.2** In the first sentence replace "markings" by:

"marks".

**6.1.3.3** [The amendments to the second sentence in the German version do not apply to the English text.]

In the last sentence replace "markings" by:

"marks".

[The second amendment to the last sentence in the German version does not apply to the English text.]

**6.1.3.4** Replace "markings" by:

"marks" (twice).

**6.1.3.5** Replace "markings" by:

"marks".

**6.1.3.6** Replace "marking" by:

"marks" and replace "is valid" by:

"are valid".

**6.1.3.7** At the beginning of the first sentence, replace "Marking" by:

"Marks".

In the first sentence, replace "elements of the marking" by:

"mark".

Amend the beginning of the second paragraph to read as follows:

"Any additional marks...".

In the second paragraph, amend the end to read as follows:

"... still enable the other marks required in 6.1.3.1 to be correctly identified."

**6.1.3.8** In the introductory sentence, amend the end to read as follows:

"... in sequence, durable marks showing:".

In paragraph (h), replace "indicated by the distinguishing sign for motor vehicles in international traffic" by:

"indicated by the distinguishing sign used on vehicles in international road traffic".

Amend footnote 3 to read as follows:

<sup>3</sup> Distinguishing sign of the State of registration used on motor vehicles and trailers in international road traffic, e.g. in accordance with the Geneva Convention on Road Traffic of 1949 or the Vienna Convention on Road Traffic of 1968."

**6.1.3.9** Replace "markings" by:

"marks" (twice).

**6.1.3.10** Replace "mark" (second occurrence) by:

"marks".

**6.1.3.11** In the heading, replace "of markings for" by:

"for marking".

**6.1.3.12** In the heading, replace "of markings for" by:

"for marking".

**6.1.3.13** In the heading, replace "of markings for" by:

"for marking".

In the Note, replace "markings" by:

"marking".

**6.1.3.14** Replace "marking" by:

"marks".

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

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

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

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

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

**6.1.5.1.6** In the Note, replace "assembling" by:

"using".

In the Note, add a new last sentence to read as follows:

"These conditions do not limit the use of inner packagings when applying 6.1.5.1.7."

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

**6.1.5.5.4** In the third sentence, replace "marking" by:

"mark".

## **Chapter 6.2**

**6.2.1.1.9** In the introductory sentence, after "and testing specified by", insert:

"a standard or technical code recognised by".

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

**6.2.1.5.1** In paragraph (g), amend the text before the Note to read as follows:

"(g) A hydraulic pressure test. Pressure receptacles shall meet the acceptance criteria specified in the design and construction technical standard or technical code;".

In paragraph (i), replace "markings" by:

"marks".

**6.2.1.6.1** In paragraph (a), replace "markings" by:

"marks".

**6.2.2** The Note at the end becomes Note 1.

Add a new Note 2 to read as follows:

"2. When EN ISO versions of the following ISO standards are available, they may be used to fulfil the requirements of 6.2.2.1, 6.2.2.2, 6.2.2.3 and 6.2.2.4."

**6.2.2.1.1** After the entry for "ISO 9809-3:2010" insert a new entry to read as follows:

Reference	Title	Applicable for manufacture
ISO 9809-4:2014	Gas cylinders – Refillable seamless steel gas cylinders – Design, construction and testing – Part 4: Stainless steel cylinders with an Rm value of less than 1 100 MPa	Until further notice

In the entry for "ISO 7866:2012", in the first column, after "ISO 7866:2012", insert:

" + Cor 1:2014".

At the end of the Table, replace the last three entries (corresponding to standards "ISO 11119-1:2002", "ISO 11119-2:2002" and "ISO 11119-3:2002") with the following entries:

Reference	Title	Applicable for manufacture
ISO 11119-1:2002	Gas cylinders of composite construction – Specification and test methods – Part 1: Hoop wrapped composite gas cylinders	Until 31 December 2020
ISO 11119-1:2012	Gas cylinders – Refillable composite gas cylinders and tubes – Design, construction and testing – Part 1: Hoop wrapped fibre reinforced composite gas cylinders and tubes up to 450 l	Until further notice
ISO 11119-2:2002	Gas cylinders of composite construction – Specification and test methods – Part 2: Fully wrapped fibre reinforced composite gas cylinders with load-sharing metal liners	Until 31 December 2020
ISO 11119-2:2012 + Amd 1:2014	Gas cylinders – Refillable composite gas cylinders and tubes – Design, construction and testing – Part 2: Fully wrapped fibre reinforced composite gas cylinders and tubes up to 450 l with load-sharing metal liners	Until further notice
ISO 11119-3:2002	Gas cylinders of composite construction – Specification and test methods – Part 3: Fully wrapped fibre reinforced composite gas cylinders with non-load-sharing metallic or non-metallic liners	Until 31 December 2020
ISO 11119-3:2013	Gas cylinders – Refillable composite gas cylinders and tubes – Design, construction and testing – Part 3: Fully wrapped fibre reinforced composite gas cylinders and tubes up to 450 l with non-load-sharing metallic or non-metallic liners	Until further notice

In Note 1, replace "unlimited service life" with:

"a design life of not less than 15 years."

Amend Note 2 to read as follows:

**2:** Composite cylinders with a design life longer than 15 years shall not be filled after 15 years from the date of manufacture, unless the design has successfully passed a service life test programme. The programme shall be part of the initial design type approval and shall specify inspections and tests to demonstrate that cylinders manufactured accordingly remain safe to the end of their design life. The service life test programme and the results shall be approved by the competent authority of the country of approval that is responsible for the initial approval of the cylinder design. The service life of a composite cylinder shall not be extended beyond its initial approved design life."

**6.2.2.1.2** After the entry for standard "ISO 11120:1999", add the following new entries:

Reference	Title	Applicable for manufacture
ISO 11119-1:2012	Gas cylinders – Refillable composite gas cylinders and tubes – Design, construction and testing – Part 1: Hoop wrapped fibre reinforced composite gas cylinders and tubes up to 450 l	Until further notice
ISO 11119-2:2012 + Amd 1:2014	Gas cylinders – Refillable composite gas cylinders and tubes – Design, construction and testing – Part 2: Fully wrapped fibre reinforced composite gas cylinders and tubes up to 450 l with load-sharing metal liners	Until further notice
ISO 11119-3:2013	Gas cylinders – Refillable composite gas cylinders and tubes – Design, construction and testing – Part 3: Fully wrapped fibre reinforced composite gas cylinders and tubes up to 450 l with non-load-sharing metallic or non-metallic liners	Until further notice
ISO 11515:2013	Gas cylinders – Refillable composite reinforced tubes of water capacity between 450 l and 3 000 l – Design, construction and testing	Until further notice

Add the following Notes after the Table:

**NOTE 1:** In the above referenced standards composite tubes shall be designed for a design life of not less than 15 years.

**2:** Composite tubes with a design life longer than 15 years shall not be filled after 15 years from the date of manufacture, unless the design has successfully passed a service life test programme. The programme shall be part of the initial design type approval and shall specify inspections and tests to demonstrate that tubes manufactured accordingly remain safe to the end of their design life. The service life test programme and the results shall be approved by the competent authority of the country of approval that is responsible for the initial approval of the tube design. The service life of a composite tube shall not be extended beyond its initial approved design life."

**6.2.2.1.3** In the second table, for standards "ISO 3807-1:2000" and "ISO 3807-2:2000", amend the text in column "Applicable for manufacture" to read:

"Until 31 December 2020".

After these standards, add the following new row:

Reference	Title	Applicable for manufacture
ISO 3807:2013	Gas cylinders – Acetylene cylinders – Basic requirements and type testing	Until further notice

**6.2.2.2** In the table, replace the entry for "ISO 11114-2:2000" with the following entry:

Reference	Title
ISO 11114-2:2013	Gas cylinders – Compatibility of cylinder and valve materials with gas contents – Part 2: Non-metallic materials

**6.2.2.3** [The first amendment to standard "ISO 10297:1999" in the German version does not apply to the English text.]

For standard "ISO 10297:2006", in the column "Title", delete the Note.

For "ISO 10297:2006", in the column "Applicable for manufacture", replace "Until further notice" with:

"Until 31 December 2020".

After the entry for "ISO 10297:2006", insert a new entry to read as follows:

Reference	Title	Applicable for manufacture
ISO 10297:2014	Gas cylinders – 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

**6.2.2.4** In the Table, for "ISO 10462:2005", replace "Until further notice" by:

"Until 31 December 2018".

In the Table, after "ISO 10462:2005" insert a new row to read as follows:

Reference	Title	Applicable
ISO 10462:2013	Gas cylinders – Acetylene cylinders – Periodic inspection and maintenance	Until further notice

**6.2.2.5.2.1** In the first paragraph, replace "marking" by:

"marks".

**6.2.2.5.5** In the fourth paragraph, replace "certification marking" by:

"certification marks" (twice).

**6.2.2.6.2.1** In the last sentence of the first paragraph, replace "marking" by:

"marks".

**6.2.2.6.5** In the first and second sentence, replace "marking" by:

"marks" (twice).

**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 an 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 (c), replace "indicated by the distinguishing signs for motor vehicles in international traffic" by:

"indicated by the distinguishing sign used on vehicles in international road traffic".

Amend footnote 3 to read as follows:

<sup>3</sup> Distinguishing sign of the State of registration used on motor vehicles and trailers in international road traffic, e.g. in accordance with the Geneva Convention on Road Traffic of 1949 or the Vienna Convention on Road Traffic of 1968."

**6.2.2.7.4** In paragraph (n), replace "indicated by the distinguishing signs for motor vehicles in international traffic" by:

"indicated by the distinguishing sign used on vehicles in international road traffic".

Amend footnote 3 to read as follows:

<sup>3</sup> Distinguishing sign of the State of registration used on motor vehicles and trailers in international road traffic, e.g. in accordance with the Geneva Convention on Road Traffic of 1949 or the Vienna Convention on Road Traffic of 1968."

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

".,"

At the end, add the following new paragraphs and the following Note:

"(q) For composite cylinders and tubes having a limited design life, the letters "FINAL" followed by the design life shown as the year (four digits) followed by the month (two digits) separated by a slash (i.e. "/");

(r) For composite cylinders and tubes having a limited design life greater than 15 years and for composite cylinders and tubes having non-limited design life, the letters "SERVICE" followed by the date 15 years from the date of manufacture (initial inspection) shown as the year (four digits) followed by the month (two digits) separated by a slash (i.e. "/").

**NOTE:** Once the initial design type has passed the service life test programme requirements in accordance with 6.2.2.1.1 Note 2 or 6.2.2.1.2 Note 2, future production no longer requires this initial service life mark. The initial service life mark shall be made unreadable on cylinders and tubes of a design type that has met the service life test programme requirements."



**6.2.2.7.5** Add the following text at the end of the first indent:

"... except for the marks described in 6.2.2.7.4 (q) and (r) which shall be adjacent to the periodic inspection and test marks of 6.2.2.7.7".

Amend the sentence after the indents to read as follows:

"The following is an example of marking a cylinder."

**6.2.2.7.7** In paragraph (a), replace "indicated by the distinguishing signs of motor vehicles in international traffic" by:

"indicated by the distinguishing sign used on vehicles in international road traffic".

Amend footnote 4 to read as follows:

<sup>4</sup> Distinguishing sign of the State of registration used on motor vehicles and trailers in international road traffic, e.g. in accordance with the Geneva Convention on Road Traffic of 1949 or the Vienna Convention on Road Traffic of 1968."

In paragraph (a), in the second sentence, replace "marking" by:

"mark".

**6.2.2.8.3** In the Note, amend the end to read as follows:

"... substitute a label for these permanent marks."

**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 an MEGC complies with the relevant requirements in Chapter 6.1, 6.2, 6.3, 6.5, 6.6, 6.7 or 6.11;"

In paragraphs (c) and (h), replace "indicated by the distinguishing signs of motor vehicles in international traffic" by:

"indicated by the distinguishing sign used on vehicles in international road traffic".

Amend footnote 6 to read as follows:

<sup>6</sup> Distinguishing sign of the State of registration used on motor vehicles and trailers in international road traffic, e.g. in accordance with the Geneva Convention on Road Traffic of 1949 or the Vienna Convention on Road Traffic of 1968."

**6.2.2.9.4** In paragraph (a), replace "indicated by the distinguishing sign of motor vehicles in international traffic" by:

"indicated by the distinguishing sign used on vehicles in international road traffic".

Amend footnote 6 to read as follows:

<sup>6</sup> Distinguishing sign of the State of registration used on motor vehicles and trailers in international road traffic, e.g. in accordance with the Geneva Convention on Road Traffic of 1949 or the Vienna Convention on Road Traffic of 1968."

In paragraph (a), in the second sentence, replace "marking" by:

"mark".

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

**6.2.3.5.1** The Note becomes Note 1.

Add the following Notes 2 and 3:

**2:** For seamless steel cylinders and tubes the check of 6.2.1.6.1 (b) and the hydraulic pressure test of 6.2.1.6.1 (d) may be replaced by a procedure conforming to EN ISO 16148:[2016] "Gas cylinders – Refillable seamless steel gas cylinders and tubes – Acoustic emission examination (AT) and follow-up ultrasonic examination (UT) for periodic inspection and testing".

**3:** The check of 6.2.1.6.1 (b) and the hydraulic pressure test of 6.2.1.6.1 (d) may be replaced by ultrasonic examination carried out in accordance with EN 1802:2002 for seamless aluminium alloy gas cylinders and in accordance with EN 1968:2002 + A1:2005 for seamless steel gas cylinders."

**6.2.3.5.2** In paragraph (a), replace "markings" by:

"marks".

**6.2.3.9.1** Replace "Markings" by:

"Marking".

**6.2.3.9.2** Amend to read as follows:

**6.2.3.9.2** The United Nations packaging symbol specified in 6.2.2.7.2 (a) and the provisions of 6.2.2.7.4 (q) and (r) shall not be applied."

**6.2.3.9.7.3** In paragraph (a), replace "indicated by the distinguishing sign of motor vehicles in international traffic" by:

"indicated by the distinguishing sign used on vehicles in international road traffic".

Amend footnote 7 to read as follows:

<sup>7</sup> Distinguishing sign of the State of registration used on motor vehicles and trailers in international road traffic, e.g. in accordance with the Geneva Convention on Road Traffic of 1949 or the Vienna Convention on Road Traffic of 1968."

In paragraph (a), in the second sentence, replace "marking" by:

"mark".

**6.2.3.10.1** Replace "Markings" by:

"Marking".

**6.2.3.11.4** In the second sentence, replace "marking" by:

"marks".

**6.2.4.1** Insert the following first sentence:

"Type approval certificates shall be issued in accordance with 1.8.7."

Amend the sentence "The requirements of Chapter 6.2 referred to in column (3) shall prevail in all cases." to read as follows:

"The standards shall be applied in accordance with 1.1.5."

Amend the Table, under "for design and construction", as follows:

- For standard "EN 1251-2:2000" in column (2) after the title of the standard, add a note to read as follows:

**"NOTE:** Standard EN 1252-1:1998 referenced in this standard is also applicable to closed cryogenic receptacles for the carriage of UN No. 1972 (METHANE, REFRIGERATED LIQUID or NATURAL GAS, REFRIGERATED LIQUID)."

- For standard "EN 12205:2001", in column (4), replace "Until further notice" by:  
"Between 1 January 2005 and 31 December 2017".
- For standard "EN 12205:2001", in column (5), insert:  
"31 December 2018".
- After standard "EN 12205:2001", insert the following new row:

(1)	(2)	(3)	(4)	(5)
EN ISO 11118:2015	Gas cylinders – Non-refillable metallic gas cylinders – Specification and test methods	6.2.3.1, 6.2.3.3 and 6.2.3.4	Until further notice	

- For standard "EN 14140:2003 + A1:2006", in column (4), replace "Until further notice" by:

"Between 1 January 2009 and 31 December 2018".

- After standard "EN 14140:2003 + A1:2006", insert the following new row:

(1)	(2)	(3)	(4)	(5)
EN 14140:2014 +AC:2015 (except over-moulded cylinders)	LPG Equipment and accessories – Transportable refillable welded steel cylinders for LPG – Alternative design and construction	6.2.3.1 and 6.2.3.4	Until further notice	

Amend the Table, under "for closures", as follows:

- For standard "EN 13340:2001", in column (4), replace "Until further notice" by:  
"Between 1 January 2011 and 31 December 2017".
- For standard "EN 13340:2001", in column (5), insert:  
"31 December 2018".

- At the end, add the following standards:

(1)	(2)	(3)	(4)	(5)
EN 13175:2014	LPG Equipment and accessories – Specification and testing for Liquefied Petroleum Gas (LPG) pressure vessel valves and fittings	6.2.3.1 and 6.2.3.3	Until further notice	
EN ISO 17871:2015	Gas cylinders – Quick-release cylinder valves – Specification and type testing (ISO 17871:2015)	6.2.3.1, 6.2.3.3 and 6.2.3.4	Until further notice	
EN 13953:2015	LPG equipment and accessories – Pressure relief valves for transportable refillable cylinders for Liquefied Petroleum Gas (LPG) <b>NOTE:</b> The final sentence of the scope shall not apply.	6.2.3.1, 6.2.3.3 and 6.2.3.4	Until further notice	

**6.2.4.2** At the end of the first sub-paragraph, delete:

"which shall prevail in all cases".

At the end of the first sub-paragraph, add the following sentence:

"The standards shall be applied in accordance with 1.1.5."

Amend the Table as follows:

- Delete the whole row for standard "EN 12863:2002 + A1:2005".
- For standard "EN ISO 10462:2013", in column (3), replace "Mandatorily from 1 January 2017" by:  
"Until further notice".
- For standard "EN ISO 11623:2002 (except clause 4)", in column (3), replace "Until further notice" by:  
"Until 31 December 2018".
- After standard "EN ISO 11623:2002 (except clause 4)", insert the following new row:

(1)	(2)	(3)
EN ISO 11623:2015	Gas cylinders – Composite construction – Periodic inspection and testing	Mandatorily from 1 January 2019

- For standard "EN 14912:2005", in the last column, replace "Until further notice" by:

"Until 31 December 2018".

- After standard "EN 14912:2005", insert the following new row:

(1)	(2)	(3)
EN 14912:2015	LPG equipment and accessories – Inspection and maintenance of LPG cylinder valves at time of periodic inspection of cylinders	Mandatorily from 1 January 2019

- For standard "EN 1440:2008 + A1:2012 (except Annexes G and H)", in column (3), replace "Until further notice" by:

"Until 31 December 2018".

- After standard "EN 1440:2008 + A1:2012 (except Annexes G and H)", insert the following new rows:

(1)	(2)	(3)
EN 1440:2016 (except Annex C)	LPG equipment and accessories – Transportable refillable traditional welded and brazed steel Liquefied Petroleum Gas (LPG) cylinders – Periodic inspection	Mandatorily from 1 January 2019
EN 16728:2016 (except clause 3.5, Annex F and Annex G)	LPG equipment and accessories – Transportable refillable LPG cylinders other than traditional welded and brazed steel cylinders – Periodic inspection	Mandatorily from 1 January 2019

"

- 6.2.6.1.5** In the last sentence, before "P 200", insert:

"packing instruction".

At the end, add the following new sentence:

"In addition, the product of test pressure and water capacity shall not exceed 30 bar·litres for liquefied gases or 54 bar·litres for compressed gases and the test pressure shall not exceed 250 bar for liquefied gases or 450 bar for compressed gases."

- 6.2.6.4** At the end of the second indent, replace ";" by:

". "

Add the following new indent:

– for UN No. 2037 small receptacles containing gas (gas cartridges) containing non-toxic, non-flammable compressed or liquefied gases: EN 16509:2014 Transportable gas cylinders – Non-refillable, small transportable, steel cylinders of capacities up to and including 120 ml containing compressed or liquefied gases (compact cylinders) – Design, construction, filling and testing (excluding clause 9)."

## Chapter 6.3

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

- 6.3.4** In Note 1, amend the beginning to read as follows:

"The marks indicate that the packaging which bears them correspond to ...".

In Note 2, replace "marking is" by:

"marks are".

In Note 3, replace "marking does" by:

"marks do".

**6.3.4.1** Replace "markings" by:

"marks" (twice).

**6.3.4.2** [The amendment to the introductory sentence before paragraphs (a) to (g) 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 an MEGC complies with the relevant requirements in Chapter 6.1, 6.2, 6.3, 6.5, 6.6, 6.7 or 6.11;"

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

In paragraph (e), replace "indicated by the distinguishing sign for motor vehicles in international traffic" by:

"indicated by the distinguishing sign used on vehicles in international road traffic".

Amend footnote 2 to read as follows:

<sup>2</sup> Distinguishing sign of the State of registration used on motor vehicles and trailers in international road traffic, e.g. in accordance with the Geneva Convention on Road Traffic of 1949 or the Vienna Convention on Road Traffic of 1968."

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

In paragraph (g), replace "marking" by:

"mark".

**6.3.4.3** At the beginning of the first paragraph, replace "Marking" by:

"Marks".

In the first paragraph, replace "element of the marking" by:

"mark".

Amend the beginning of the second paragraph to read as follows:

"Any additional marks shall..."

In the second paragraph, amend the end to read as follows:

"... still enable the marks required in 6.3.4.1 to be correctly identified."

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

**6.3.5.1.6** In paragraph (g), replace "markings" by:

"marks".

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

## **Chapter 6.4**

**6.4.5.4.4** [The amendment to paragraph (c) in the French and German version does not apply to the English text.]

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

**6.4.22.8** In the first sentence, after "package", insert:

"design".

Amend the end of paragraph (a) to read as follows:

"... and that this certificate is validated by a competent authority of an RID Contracting State;"

Amend the end of paragraph (b) to read as follows:

"... is approved by the competent authority of an RID Contracting State."

**6.4.23.11** In paragraph (a), replace "the international vehicle registration identification code" by:

"the distinguishing sign used on vehicles in international road traffic".

Amend footnote 1 to read as follows:

<sup>1</sup> Distinguishing sign of the State of registration used on motor vehicles and trailers in international road traffic, e.g. in accordance with the Geneva Convention on Road Traffic of 1949 or the Vienna Convention on Road Traffic of 1968."

**6.4.23.12** In paragraph (a), in the first sentence, replace "identification marking" by:

"identification marks".

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

## **Chapter 6.5**

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

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

**6.5.2.1.1** In the first sentence, replace "markings" by:

"marks".

[The amendment to the second sentence in the German and French 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 an 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 (a), in the third sentence, replace "marking is stamped" by:

"marks are stamped".

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

In paragraph (e), replace "indicated by the distinguishing sign for motor vehicles in international traffic" by:

"indicated by the distinguishing sign used on vehicles in international road traffic".

Amend footnote 2 to read as follows:

<sup>2</sup> Distinguishing sign of the State of registration used on motor vehicles and trailers in international road traffic, e.g. in accordance with the Geneva Convention on Road Traffic of 1949 or the Vienna Convention on Road Traffic of 1968."

Amend the text after sub-paragraph (a) to (h) to read:

"The primary marks required above shall be applied in the sequence of the subparagraphs above. The marks required by 6.5.2.2 and any further mark authorized by a competent authority shall still enable the primary marks to be correctly identified.

Each mark applied in accordance with (a) to (h) and with 6.5.2.2 shall be clearly separated, e.g. by a slash or space, so as to be easily identifiable."

**6.5.2.1.2** In the heading, replace "markings" by:

"marking".

**6.5.2.2.1** In the first sentence, replace "markings" by:

"marks".

In the table, in the heading of the first column, replace "marking" by:

"marks".

In table note b, replace "marking" by:

"mark".

**6.5.2.2.3** Replace "markings" by:

"marks".



**6.5.2.2.4** In the first paragraph, amend the beginning of the first sentence to read as follows:

"Inner receptacles that are of composite IBC design type shall be identified by the application of the marks ...".

In the first paragraph, third sentence, replace "marking" by:

"marks".

[The amendment to the first paragraph, fourth sentence in the French and German version does not apply to the English text.]

In the second paragraph, first sentence, replace "marking" by:

"marks".

In the second paragraph, second sentence, replace "marking" by:

"mark".

Renumber the existing Note as Note 1. Add a new Note 2 to read as follows:

**2:** The date of manufacture of the inner receptacle may be different from the marked date of manufacture (see 6.5.2.1), repair (see 6.5.4.5.3) or remanufacture (see 6.5.2.4) of the composite IBC."

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

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

Replace "marking indicates" by:

"marks indicate".

**6.5.2.4** Replace "marking" by:

"marks".

Replace "markings" by:

"marks".

**6.5.4.4.1** In paragraph (a) (i), replace "marking" by:

"marks".

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

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

"Every metal, rigid plastics and composite IBC for liquids, or for solids which are filled or discharged under pressure, shall undergo a suitable leakproofness test. This test is part of a quality assurance programme as stipulated in 6.5.4.1 which shows the capability of meeting the appropriate test level indicated in 6.5.6.7.3:"

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

**6.5.4.5.3** Replace "marking" by:

"marks".

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

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

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

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

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

## **Chapter 6.6**

**6.6.3.1** In the first sentence, replace "markings" by:

"marks".

[The amendment to the second sentence in the French and 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 an 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 (a), in the third sentence, replace "marking is" by:

"marks are".

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

In paragraph (e), replace "indicated by the distinguishing sign for motor vehicles in international traffic" by:

"indicated by the distinguishing sign used on vehicles in international road traffic".

Amend footnote 2 to read as follows:

<sup>2</sup> Distinguishing sign of the State of registration used on motor vehicles and trailers in international road traffic, e.g. in accordance with the Geneva Convention on Road Traffic of 1949 or the Vienna Convention on Road Traffic of 1968."

In the first sentence after paragraphs (a) to (h), replace "marking" by:

"mark".

In the second sentence after the paragraphs (a) to (h), replace "element of the marking" by:

"mark".

**6.6.3.2** In the heading, replace "the marking" by:

"marking".

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

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

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

## **Chapter 6.7**

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

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

**6.7.2.4.1** [The amendment to paragraph (b) in the French and German version does not apply to the English text.]

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

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

**6.7.2.18.1** In the fifth sentence, replace "i.e. the distinguishing sign for use in international traffic as prescribed by the Convention on Road Traffic, Vienna 1968" by:

"indicated by the distinguishing sign used on vehicles in international road traffic<sup>2</sup>".

Footnote 2 reads as follows:

<sup>2</sup> Distinguishing sign of the State of registration used on motor vehicles and trailers in international road traffic, e.g. in accordance with the Geneva Convention on Road Traffic of 1949 or the Vienna Convention on Road Traffic of 1968." In Chapter 6.7, renumber subsequent footnotes accordingly."

Current footnotes 2 to 6 become footnotes 3 to 7.

**6.7.2.19.8** At the end of paragraph (a), replace ";" by:  
"."

At the end of paragraph (a), add a new last sentence to read as follows:

"The wall thickness shall be verified by appropriate measurement if this inspection indicates a reduction of wall thickness;"

In paragraph (g), replace "markings" by:

"marks".

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

**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 an MEGC complies with the relevant requirements in Chapter 6.1, 6.2, 6.3, 6.5, 6.6, 6.7 or 6.11;"

Amend the title of the figure to read:

"Example of a plate for marking".

[The other amendments to the introductory sentence before the paragraphs, to paragraph (c) (vi) and to the figure in the French version do not apply to the English text.]

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

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

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

**6.7.3.4.1** [The amendment to paragraph (b) in the French and German version does not apply to the English text.]

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

**6.7.3.14.1** In the fifth sentence, replace "i.e. the distinguishing sign for use in international traffic, as prescribed by the Convention on Road Traffic, Vienna 1968" by:

"indicated by the distinguishing sign used on vehicles in international road traffic<sup>8</sup>".

Footnote 8 reads as follows:

<sup>8</sup> Distinguishing sign of the State of registration used on motor vehicles and trailers in international road traffic, e.g. in accordance with the Geneva Convention on Road Traffic of 1949 or the Vienna Convention on Road Traffic of 1968."

Current footnotes 7 to 11 become footnotes 9 to 13.

**6.7.3.15.8** At the end of paragraph (a), replace ";" by:  
". "

At the end of paragraph (a), add a new last sentence to read as follows:

"The wall thickness shall be verified by appropriate measurement if this inspection indicates a reduction of wall thickness;"

In paragraph (f), replace "markings" by:

"marks".

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

**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 an MEGC complies with the relevant requirements in Chapter 6.1, 6.2, 6.3, 6.5, 6.6, 6.7 or 6.11;"

Amend the title of the figure to read:

"Example of a plate for marking".

[The other amendments to the introductory sentence before the paragraphs, to paragraph (c) (vi) and to the figure in the French version do not apply to the English text.]

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

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

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

**6.7.4.4.1** [The amendment to paragraph (b) in the French and German version does not apply to the English text.]

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

**6.7.4.13.1** In the fifth sentence, replace "i.e. the distinguishing sign for use in international traffic as presented by the Convention on Road Traffic, Vienna 1968" by:

"indicated by the distinguishing sign for use in international road traffic<sup>14</sup>".

Footnote 14 reads as follows:

<sup>14</sup> Distinguishing sign of the State of registration used on motor vehicles and trailers in international road traffic, e.g. in accordance with the Geneva Convention on Road Traffic of 1949 or the Vienna Convention on Road Traffic of 1968."

Current footnotes 12 to 14 become footnotes 15 to 17.

**6.7.4.14.9** In paragraph (e), replace "markings" by:

"marks".

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

**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 an MEGC complies with the relevant requirements in Chapter 6.1, 6.2, 6.3, 6.5, 6.6, 6.7 or 6.11;"

Amend the title of the figure to read:

"Example of a plate for marking".

[The other amendments to the introductory sentence before the paragraphs, to paragraph (c) (vi) and to the figure in the French version do not apply to the English text.]

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

**6.7.5.2.4** In paragraph (a), replace "ISO 11114-2:2000" by:

"ISO 11114-2:2013".

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

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

**6.7.5.11.1** In the fifth sentence, replace "i.e. the distinguishing sign for use in international traffic, as prescribed by the Convention on Road Traffic, Vienna 1968" by:

"indicated by the distinguishing sign used on vehicles in international road traffic<sup>18</sup>".

Footnote 18 reads as follows:

<sup>18</sup> Distinguishing sign of the State of registration used on motor vehicles and trailers in international road traffic, e.g. in accordance with the Geneva Convention on Road Traffic of 1949 or the Vienna Convention on Road Traffic of 1968."

Current footnotes 15 and 16 become footnotes 19 and 20.

**6.7.5.12.6** In paragraph (e), replace "markings" by:

"marks".

**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 an MEGC complies with the relevant requirements in Chapter 6.1, 6.2, 6.3, 6.5, 6.6, 6.7 or 6.11;"

Amend the title of the figure to read:

"Example of a plate for marking".

## **Chapter 6.8**

**6.8.2.1.23** Amend to read as follows:

**"6.8.2.1.23** The ability of the manufacturer to perform welding operations shall be verified and confirmed by either the competent authority or by the body designated by this authority, which issues the type approval. A weld quality assurance system shall be operated by the manufacturer. Welding shall be performed by qualified welders using a qualified welding process whose effectiveness (including any heat treatments required) has been demonstrated by tests. Non-destructive tests shall be carried out by radiography or by ultrasound and shall confirm that the quality of the welding is appropriate to the stresses.

The following checks shall be carried out for welds made by each welding process used by the manufacturer in accordance with the value of the coefficient  $\lambda$  used in determining the thickness of the shell in 6.8.2.1.17:

$\lambda = 0.8$ : All weld beads shall so far as possible be inspected visually on both faces and shall be subjected to non-destructive checks. The non-destructive checks shall include all weld "Tee" junctions and all inserts used to avoid welds crossing. The total length of welds to be examined shall not be less than:

- 10% of the length of all the longitudinal welds,
- 10% of the length of all the circumferential welds,
- 10% of the length of all the circumferential welds in the tank ends, and
- 10% of the length of all the radial welds in the tank ends.

$\lambda = 0.9$ : All weld beads shall so far as possible be inspected visually on both faces and shall be subjected to non-destructive checks. The non-destructive checks shall include all connections, inserts used to avoid welds crossing, and welds for the assembly of large-diameter items of equipment. The total length of welds to be examined shall not be less than:

100% of the length of all the longitudinal welds,  
25% of the length of all the circumferential welds,  
25% of the length of all the circumferential welds in the tank ends, and  
25% of the length of all the radial welds in the tank ends.

$\lambda = 1$ : All weld beads throughout their length shall be subjected to non-destructive checks and shall so far as possible be inspected visually on both faces. A weld test-piece shall be taken.

In the cases of either  $\lambda = 0.8$  or  $\lambda = 0.9$ , when the presence of an unacceptable defect is detected in a portion of a weld, the non-destructive checks shall be extended to a portion of equal length on both sides of the portion that contains the defect. If the non-destructive checks detect an additional defect that is unacceptable, non-destructive checks shall be extended to all remaining welds of the same type of welding process.

Where either the competent authority or a body designated by this authority has doubts regarding the quality of welds, including the welds made to repair any defects revealed by the non-destructive checks, it may require additional checks."

**6.8.2.1.29** In footnote 6, amend "standard EN 15273-2:2009" to read as follows:

"standard EN 15273-2:2013".

**6.8.2.3.1** In the second indent on the right hand column, replace "distinguishing sign" by:

"distinguishing sign used on vehicles in international road traffic".

Amend footnote 9 to read as follows:

<sup>9</sup> Distinguishing sign of the State of registration used on motor vehicles and trailers in international road traffic, e.g. in accordance with the Geneva Convention on Road Traffic of 1949 or the Vienna Convention on Road Traffic of 1968."

**6.8.2.4.3** Amend the penultimate paragraph of 6.8.2.4.3 to read as follows:

"For tanks equipped with breather devices and a safety device to prevent the contents spilling out if the tank overturns, the leakproofness test shall be carried out at a pressure at least equal to the static pressure of the densest substance to be carried, the static pressure of water or 20 kPa (0.2 bar), whichever is the highest."

**6.8.2.5.2** In the first indent of the left-hand column, replace "marking":

by "mark".

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

**6.8.2.6.1** Insert the following first sentence:

"Type approval certificates shall be issued in accordance with 1.8.7 or 6.8.2.3."

Amend the sentence "The requirements of Chapter 6.8 referred to in column (3) shall prevail in all cases." to read as follows:

"The standards shall be applied in accordance with 1.1.5."

Amend the table to read as follows:

Reference	Title of document	Applicable sub-sections and paragraph	Applicable to new type approvals or to renewals	Latest date for withdrawal of existing type approvals
(1)	(2)	(3)	(4)	(5)
<b>For design and construction of tanks</b>				
EN 14025:2003 + AC:2005	Tanks for the transport of dangerous goods – Metallic pressure tanks – Design and construction	6.8.2.1	Between 1 January 2005 and 30 June 2009	
EN 14025:2008	Tanks for the transport of dangerous goods – Metallic pressure tanks – Design and construction	6.8.2.1 and 6.8.3.1	Between 1 July 2009 and 31 December 2016	
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	Between 1 January 2015 and 31 December 2018	
EN 14025:2013 +A1:[2016] (except Annex B)	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	
EN 13094:2004	Tanks for the transport of dangerous goods – Metallic tanks with a working pressure not exceeding 0.5 bar – Design and construction	6.8.2.1	Between 1 January 2005 and 31 December 2009	
EN 13094:2008 + AC:2008	Tanks for the transport of dangerous goods – Metallic tanks with a working pressure not exceeding 0.5 bar – Design and construction	6.8.2.1	Between 1 January 2010 and 31 December 2018	
EN 13094:2015	Tanks for the transport of dangerous goods – Metallic tanks with a working pressure not exceeding 0.5 bar – Design and construction	6.8.2.1	Until further notice	
<b>For equipment</b>				
EN 14432:2006	Tanks for the transport of dangerous goods – Tank equipment for the transport of liquid chemicals – Product discharge and air inlet valves	6.8.2.2.1	Between 1 January 2009 and 31 December 2018	
EN 14432:2014	Tanks for the transport of dangerous goods – Tank equipment for the transport of liquid chemicals and liquefied gases – Product discharge and air inlet valves <b>NOTE:</b> This standard may also be used for tanks with a maximum working pressure not exceeding 0.5 bar.	6.8.2.2.1, 6.8.2.2.2 and 6.8.2.3.1	Until further notice	
EN 14433:2006	Tanks for the transport of dangerous goods – Tank equipment for the transport of liquid chemicals – Foot valves	6.8.2.2.1	Between 1 January 2009 and 31 December 2018	



Reference	Title of document	Applicable sub-sections and paragraph	Applicable to new type approvals or to renewals	Latest date for withdrawal of existing type approvals
(1)	(2)	(3)	(4)	(5)
EN 14433:2014	Tanks for the transport of dangerous goods – Tank equipment for the transport of liquid chemicals and liquefied gases – Foot valves <b>NOTE:</b> This standard may also be used for tanks with a maximum working pressure not exceeding 0.5 bar.	6.8.2.2.1, 6.8.2.2.2 and 6.8.2.3.1	Until further notice	

"

**6.8.2.6.2** At the end of the first sub-paragraph, delete:

"which shall prevail in all cases".

At the end of the first sub-paragraph, add the following sentence:

"The standards shall be applied in accordance with 1.1.5."

**6.8.3.1.4** In Note 3, replace "battery-vehicles" by:

"battery-wagons".

**6.8.3.1.5** Amend the first sentence to read:

"Elements and their fastenings of battery wagons | and the frame of MEGCs shall be capable of absorbing under the maximum permissible load the forces defined in 6.8.2.1.2."

**6.8.3.2.15** At the end, add the following sentence:

"For type testing of the effectiveness of the insulation system, see 6.8.3.4.11."

**6.8.3.4** Insert the following paragraphs 6.8.3.4.10 and 6.8.3.4.11:

**"Holding times for tanks carrying refrigerated liquefied gases**

**6.8.3.4.10** The reference holding time for tanks carrying refrigerated liquefied gases shall be determined on the basis of the following:

- (a) The effectiveness of the insulation system, determined in accordance with 6.8.3.4.11;
- (b) The lowest set pressure of the pressure limiting device(s);
- (c) The initial filling conditions;
- (d) An assumed ambient temperature of 30 °C;
- (e) The physical properties of the individual refrigerated liquefied gas intended to be carried.

**6.8.3.4.11** The effectiveness of the insulation system (heat influx in Watts) shall be determined by type testing the tanks. This test shall consist of either:

- (a) A constant pressure test (for example at atmospheric pressure) during which the loss of refrigerated liquefied gas is measured over a period of time; or
- (b) A closed system test during which the rise in pressure in the shell is measured over a period of time.

When performing the constant pressure test, variations in atmospheric pressure shall be taken into account. When performing either test corrections shall be made for any variation of the ambient temperature from the assumed ambient temperature reference value of 30 °C.

**NOTE:** ISO 21014:2006 "Cryogenic vessels – Cryogenic insulation performance" details methods of determining the insulation performance of cryogenic vessels and provides a method of calculating the holding time.

Renumber the existing paragraphs **6.8.3.4.10** to **6.8.3.4.16** as **6.8.3.4.12** to **6.8.3.4.18**.

**6.8.3.4.12** (former 6.8.3.4.10) Replace "6.8.3.4.14" by:

"6.8.3.4.16".

**6.8.3.4.16** (former 6.8.3.4.14) Replace "6.8.3.4.15" by:

"6.8.3.4.17".

**6.8.3.4.17** (former 6.8.3.4.15) In paragraph (e), replace "markings" by:

"marks".

**6.8.3.4.18** (former 6.8.3.4.16) Replace "6.8.3.4.10 to 6.8.3.4.15" by:

"6.8.3.4.12 to 6.8.3.4.17".

**6.8.3.5.4** Amend to read as follows:

**"6.8.3.5.4** On tanks intended for the carriage of refrigerated liquefied gases:

- the maximum working pressure allowed<sup>19</sup>;
- reference holding time (in days or hours) for each gas<sup>19</sup>;
- the associated initial pressures (in bar gauge or kPa gauge)<sup>19</sup>."

**6.8.3.5.10** In the last but one indent, replace "6.8.3.4.10 to 6.8.3.4.13" by:

"6.8.3.4.12 and 6.8.3.4.15".

**6.8.3.5.11** In the first indent of the left-hand column, replace "marking" by:

"mark".

In the last indent of the left-hand column, replace "6.8.3.4.13" by:

"6.8.3.4.15".

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

**6.8.3.6** Amend to read as follows:

**"6.8.3.6** **"NOTE:** Persons or bodies identified in standards as having responsibilities in accordance with RID shall meet the requirements of RID.

Type approval certificates shall be issued in accordance with 1.8.7. The standard referenced in the table below shall be applied for the issue of type approvals as indicated in column (4) to meet the requirements of Chapter 6.8 referred to in column (3). The standards shall be applied in accordance with 1.1.5. Column (5) gives the latest date when existing type approvals shall be withdrawn according to 1.8.7.2.4; if no date is shown the type approval remains valid until it expires.

Since 1 January 2009 the use of the referenced standards has been mandatory. Exceptions are dealt with in 6.8.3.7.

If more than one standard is referenced for the application of the same requirements, only one of them shall be applied, but in full unless otherwise specified in the table below.

The scope of application of each standard is defined in the scope clause of the standard unless otherwise specified in the Table below.

Reference	Title of document	Applicable subsections and paragraph	Applicable for new type approvals or for renewals	Latest date for withdrawal of existing type approvals
(1)	(2)	(3)	(4)	(5)
EN 13807:2003	Transportable gas cylinders – Battery vehicles – Design, manufacture, identification and testing  <b>NOTE:</b> Where appropriate this standard may be applied to MEGCs which consist of pressure receptacles.	6.8.3.1.4, 6.8.3.1.5, 6.8.3.2.18 to 6.8.3.2.26, 6.8.3.4.12 to 6.8.3.4.14 and 6.8.3.5.10 to 6.8.3.5.13	Until further notice	

**6.8.4** [The amendment to the Note in paragraph (e) in the German version does not apply to the English text.]

**TE 12** [The amendment in the German version does not apply to the English text.]

**TE 22** In the fourth subparagraph, replace "standard EN 15551:2009 (Railway applications – Freight wagons – Buffers)" by:  
"standard EN 15551:2009 + A1:2010 (Railway applications – Railway rolling stock – Buffers)".

**TE 25** In paragraph (a), in the ninth indent, replace "EN 15551:2011 Railway applications – Railway rolling stock – Buffers" by:  
"EN 15551:2009 + A1:2010 (Railway applications – Railway rolling stock – Buffers)".

**TT 8** In the third paragraph, replace "marking" by:  
"mark".

## **Chapter 6.11**

**6.11.2.3** In the Table add the following new row:

flexible bulk container	BK 3
-------------------------	------

**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 marks 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 an 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.

The marks shall be applied in the sequence shown in (a) to (h); each mark, 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** At the beginning, after "portable tanks", insert:

", MEGCs,".

At the end, after "portable tank", insert:

", MEGC".

## Chapter 7.2

### 7.2.4

**W 2** [The amendment in the French version does not apply to the English text.]

## Chapter 7.3

**7.3.1.1** In paragraph (b), replace "with the code(s)" by:

"by the code".

**7.3.2.1** In the second 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** Add the following new sub-section:

#### **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 1.1. The maximum gross mass of the flexible bulk containers shall not exceed 14 tonnes."

#### **7.3.3.2.3**

**AP 4** Replace "loading and unloading" by:

"filling and discharging".

**AP 5** [The amendment in the German version does not apply to the English text.]

**7.3.3.2.4****AP 7** Delete:

"wagon load or".

**7.3.3.2.5****AP 7** Delete:

"wagon load or".

**7.3.3.2.6****AP 7** Delete:

"wagon load or".

**Chapter 7.5****7.5** Delete the Note after the heading.**7.5.1.2** In the second indent, replace "large container(s)" by:

"container(s)".

In the second indent, after "bulk container(s)", add:

"MEGC(s)".

In the text after the second indent, replace "large container" by:

"container".

In the text after the second indent, after "bulk container", add:

"an MEGC".

**7.5.1.4** Delete:

"wagon load or".

**7.5.1.5** Replace "markings" by:

"marks".

**7.5.2.1** Current Note becomes Note 1.

Add a new Note 2 to read as follows:

**2:** For packages containing substances or articles only of Class 1 and bearing a label conforming to models Nos. 1, 1.4, 1.5 or 1.6, irrespective of any other danger labels required for these packages, mixed loading shall be permitted in accordance with 7.5.2.2. The Table in 7.5.2.1 shall only apply when such packages are loaded together with packages containing substances or articles of other classes."

In table note d, after "(UN Nos. 1942 and 2067)", insert:

"ammonium nitrate emulsion or suspension or gel (UN No. 3375)".

**7.5.3** Amend to read as follows:

**7.5.3 Protective distance**

Every wagon, large container, portable tank or road vehicle containing substances or articles of Class 1 and bearing a placard conforming to models Nos. 1, 1.5 or 1.6, shall be separated on the same train from wagons, large containers, portable tanks, tank-containers, MEGCs or road vehicles bearing a placard conforming to models Nos. 2.1, 3, 4.1, 4.2, 4.3, 5.1 or 5.2 or road vehicles for which the transport document indicates that they are containing packages bearing a label conforming to models Nos. 2.1, 3, 4.1, 4.2, 4.3, 5.1 or 5.2 by a protective distance.

The requirement for this protective distance is met if the space between the buffer head of a wagon or the end wall of a large container, portable tank or road vehicle and the buffer head of another wagon or the end wall of another large container, portable tank, tank-container, MEGC or road vehicle is:

(a) at least 18 m, or

(b) occupied by two 2-axle wagons or a wagon with 4 or more axles."

**7.5.7** Add the following new sub-sections:

**7.5.7.4** The provisions of 7.5.7.1 also apply to the loading, stowage and removal of containers, tank-containers, portable tanks and MEGCs on to and from wagons.

**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 Code of Practice for Packing of Cargo Transport Units (CTU Code).

**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 4** Delete:

"or as a wagon load".

**CW 16** Delete:

"as a wagon load or".

**CW 17** Delete:

"as a wagon load or".

**CW 30** Amend to read as follows:

**"CW 30** (Deleted)".

**CW 31** Delete:

"as wagon loads or".

**CW 33** [The amendment to Table A in the German version does not apply to the English text.]

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

**CW 36** [The first amendment in the German version does not apply to the English text.]

At the end, add the following sentence:

"For UN Nos. 2211 and 3314 this mark is not required when the wagon or container is already marked according to special provision 965 of the IMDG Code<sup>1</sup>."

<sup>1</sup> Warning mark including the words "CAUTION – MAY CONTAIN FLAMMABLE VAPOUR" with lettering not less than 25 mm high, affixed at each access point in a location where it will be easily seen by persons prior to opening or entering the vehicle or container."

**CW 37** Replace the first two sentences by:

"Before loading, these by-products shall be cooled to ambient temperature, unless they have been calcined to remove moisture. Wagons and containers containing bulk loads shall be adequately ventilated and protected against ingress of water throughout the journey."

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

---