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Texts adopted by the Joint Meeting: amendments to ADR for entry into force on 1 January 2015

Note by the secretariat

Revision

The secretariat reproduces hereafter the proposals of amendments and corrections to ADR for entry into force on 1 January 2015 as adopted by the Joint Meeting at its March 2014 session (ECE/TRANS/WP.15/AC.1/134).

I. Draft corrections to document ECE/TRANS/WP.15/222

Chapter 1.1

1.1.3.6.3 In the second indent, after "compressed gases", insert ", adsorbed gases".

Chapter 1.6

1.6.2.13 Amend to read as follows:

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

Chapter 1.8

1.8.6.8 The amendment does not apply to the English text.

Chapter 3.2, Table A

In the amendment to UN No. 1408, replace "AP4 AP5" by "AP3 AP4 AP5".

In the amendments to UN No. 3170 (packing group II) and UN No. 3170 (packing group III), replace "AP4 AP5" by "AP2".

Chapter 3.3

3.3.1 Replace the amendment to special provision 594 by the following amendment:

SP 594 Amend to read as follows:

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

(a) UN No. 1044 fire extinguishers provided with protection against inadvertent discharge, when:

- they are packaged in a strong outer packaging; or
- they are large fire extinguishers which meet the requirements of special packing provision PP91 of packing instruction P003 in 4.1.4.1;

(b) UN No. 3164 articles, pressurized pneumatic or hydraulic, designed to withstand stresses greater than the internal gas pressure by virtue of transmission of force, intrinsic strength or construction, when they are packaged in a strong outer packaging.

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

SP 663 Insert a new fourth indent to read as follows:

"– Radioactive material; nor".

SP 664 In the second indent after "Additive devices:", replace "emptying device" by "discharge device".

Chapter 4.1

4.1.4.1

P 200 In paragraph (13), sub-paragraph 1.3, insert the following new fourth indent:

"– EN ISO 7866; or".

Chapter 5.5

5.5.3.1.5 Delete the last sentence.

Chapter 6.2

6.2.2.10, 6.2.2.11, 6.2.3.6.1, 6.2.4.1 and 6.2.4.2 The amendment does not apply to the English text.

6.2.3 Replace the amendment to 6.2.3.9.7 by the following amendment:

6.2.3.9.7 Amend to read as follows:

"6.2.3.9.7 Marking of bundles of cylinders

6.2.3.9.7.1 Individual cylinders in a bundle of cylinders shall be marked in accordance with 6.2.3.9.1 to 6.2.3.9.6.

6.2.3.9.7.2 Marking of bundles of cylinders shall be in accordance with 6.2.2.10.2 and 6.2.2.10.3, except that the United Nations packaging symbol specified in 6.2.2.7.2 (a) shall not be applied.

6.2.3.9.7.3 In addition to the preceding marks, each bundle of cylinders that meets the periodic inspection and test requirements of 6.2.4.2 shall be marked indicating:

- (a) The character(s) identifying the country authorizing the body performing the periodic inspection and test, as indicated by the distinguishing sign of motor vehicles in international traffic³. This marking is not required if this body is approved by the competent authority of the country approving manufacture;
- (b) The registered mark of the body authorised by the competent authority for performing periodic inspection and test;
- (c) The date of the periodic inspection and test, the year (two digits) followed by the month (two digits) separated by a slash (i.e. "/"). Four digits may be used to indicate the year.

The above marks shall appear consecutively in the sequence given either on the plate specified in 6.2.2.10.2 or on a separate plate permanently attached to the frame of the bundle of cylinders.

³ Distinguishing signs for motor vehicles in international traffic prescribed in the Vienna Convention on Road Traffic (1968)."

6.2.4.1 Under the title of the new standard "EN ISO 3807:2013", add the following Note:

"NOTE: *Fusible plugs shall not be fitted.*"

Before the amendment concerning the insertion of standard "EN ISO 11120:1999 + A1:2013", insert the following amendments:

- For standard "EN ISO 11120:1999", in column (4), replace "Until further notice" by "Between 1 July 2001 and 30 June 2015".
- For standard "EN ISO 11120:1999", in column (5), add the following new text: "31 December 2015 for tubes marked with the letter "H" in accordance with 6.2.2.7.4 (p)".

Chapter 6.8

6.8.2.2.3 The amendment does not apply to the English text.

6.8.2.6.1, 6.8.2.6.2, 6.8.3.6, 6.8.4 TA4 and TT9 The amendment does not apply to the English text.

Chapter 7.3

7.3.3.2.1 and 7.3.3.2.7 Amend additional provision AP2 to read as follows:

"AP2 Vehicles and containers shall have adequate ventilation."

7.3.3.2.3 Before the additional provision AP3, insert:

"AP2 Vehicles and containers shall have adequate ventilation."

II. Draft new amendments

Chapter 1.1

1.1.3.3 Add a new paragraph (c) to read as follows:

"(c) fuel contained in the tanks of non-road mobile machinery as defined in Article 2 of Directive 97/68/EC¹ which is carried as a load, when it is destined for its propulsion or the operation of any of its equipment. The fuel may be carried in fixed fuel tanks connected directly to the vehicle engine and/or equipment and which meet the legal requirements. Where appropriate, this machinery shall be loaded upright and secured against falling.

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

Renumber footnote of 1.1.4.3 as footnote 2.

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

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

Chapter 1.2

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

"*Flexible bulk container*" means a flexible container with a capacity not exceeding 15 m³ and includes liners and attached handling devices and service equipment;"

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

1.2.1 Insert in alphabetical order:

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

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

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

1.2.1 In the definition of "*Service equipment*", in paragraphs (a) and (b), replace "emptying" by "discharge".

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

Chapter 1.6

1.6.2 Add the following new transitional measure:

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

1.6.4.31 Delete the transitional measure and insert:

"1.6.4.31 (Deleted)".

Chapter 1.8

1.8.6.4.1 After the first sentence, insert: "In the case of separate accreditation, this entity shall be duly accredited according to standard EN ISO/IEC 17025:2005 and shall be recognised by the inspection body as an independent and impartial testing laboratory in order to perform testing tasks in accordance with its accreditation, or it shall be accredited according to standard EN ISO/IEC 17020:2012 (except clause 8.1.3)."

Chapter 2.2

2.2.3.1.4 Amend to read as follows:

"2.2.3.1.4 Viscous flammable liquids such as paints, enamels, lacquers, varnishes, adhesives and polishes having a flash-point of less than 23 °C may be assigned to packing group III in conformity with the procedures prescribed in the Manual of Tests and Criteria, Part III, sub-section 32.3, provided that:

(a) the viscosity² and flash-point are in accordance with the following table:

| <i>Kinematic viscosity (extrapolated) ν (at near-zero shear rate) mm²/s at 23°C</i> | <i>Flow-time t in seconds</i> | <i>Jet diameter (mm)</i> | <i>Flash-point, closed-cup (°C)</i> |
|---|--|------------------------------|---|
| 20 < ν ≤ 80 | 20 < t ≤ 60 | 4 | above 17 |
| 80 < ν ≤ 135 | 60 < t ≤ 100 | 4 | above 10 |
| 135 < ν ≤ 220 | 20 < t ≤ 32 | 6 | above 5 |
| 220 < ν ≤ 300 | 32 < t ≤ 44 | 6 | above -1 |
| 300 < ν ≤ 700 | 44 < t ≤ 100 | 6 | above -5 |
| 700 < ν | 100 < t | 6 | no limit |

(b) Less than 3% of the clear solvent layer separates in the solvent separation test;

(c) The mixture or any separated solvent does not meet the criteria for Class 6.1 or Class 8;

(d) The substances are packed in receptacles of not more than 450 litre capacity.

NOTE: *These provisions also apply to mixtures containing no more than 20% nitrocellulose with a nitrogen content not exceeding 12.6% by dry mass. Mixtures containing more than 20% but not more than 55% nitrocellulose with a nitrogen content not exceeding 12.6% by dry mass are substances assigned to UN No. 2059.*

Mixtures having a flash-point below 23 °C and containing:

- *more than 55% nitrocellulose, whatever their nitrogen content; or*
 - *not more than 55% nitrocellulose with a nitrogen content above 12.6% by dry mass,*
- are substances of Class 1 (UN Nos. 0340 or 0342) or of Class 4.1 (UN Nos. 2555, 2556 or 2557)."*

Footnote 2 unchanged.

Chapter 3.2, Table A

For UN Nos. 1011, 1075, 1965, 1969 and 1978, in column (13), insert "TT11".

For UN 1131, in column (13), insert "TU2".

For the entries of UN Nos. 1133, 1139, 1169, 1197, 1210, 1263, 1266, 1286, 1287, 1306, 1866, 1993 and 1999 to which special provision "640F", "640G" or "640H" is assigned in column (6), delete the tank provisions in columns (10), (11), and (12) and the packing instruction "LP01" in column (8).

For the entries of UN Nos. 1133, 1139, 1169, 1197, 1210, 1263, 1266, 1286, 1287, 1306, 1866, 1993 and 1999 to which special provision "640H" is assigned in column (6), insert "BB4" in column (9a) against "IBC02" in column (8).

For UN 3170, PG II and III, in column (18), insert "CW37/CV37".

Chapter 3.3

SP 363 In the first sentence, delete "paragraphs (a) or (b) of".

Chapter 4.1

4.1.1.19 At the end, add "and large salvage packagings".

4.1.1.19.1 At the end of the first sentence, add "and in large salvage packagings mentioned in 6.6.5.1.9".

4.1.1.19.1 In the second sentence, after "packaging", insert ", including intermediate bulk container (IBC) and large packaging,".

4.1.1.19.2 In the first and second sentence, after "salvage packaging", insert "or large salvage packaging".

4.1.4.2

IBC02 Add the following new special packing provision specific to RID and ADR:

"BB4 For UN Nos. 1133, 1139, 1169, 1197, 1210, 1263, 1266, 1286, 1287, 1306, 1866, 1993 and 1999, assigned to packing group III in accordance with 2.2.3.1.4, IBCs with a capacity greater than 450 litres are not permitted.".

Chapter 4.5

4.5.2.1 Replace "4.5.2.2 to 4.5.2.4" by "4.5.2.2 to 4.5.2.6".

4.5.2 Insert the new sub-sections 4.5.2.5 and 4.5.2.6 to read as follows:

"4.5.2.5 (*Reserved*)

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

Chapter 5.3

5.3.1.2 The amendment in the French version does not apply to the English text.

5.3.1.4.1 The amendment in the French version does not apply to the English text.

Chapter 6.2

6.2.3.1 Add the following new paragraph:

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

6.2.4.1 Amend the Table, under "for design and construction", as follows:

– For standard "EN 1975:1999 + A1:2003", in column (4), replace "Until further notice" by "Between 1 January 2009 and 31 December 2016".

– After standard "EN 1975:1999 + A1:2003", insert the following new row:

| | | | | |
|------------------------------------|--|---------------------------|----------------------------|--|
| EN ISO 7866:2012 [+ AC:2014] | Gas cylinders – Refillable seamless aluminium alloy gas cylinders – Design, construction and testing (ISO 7866:2012) | 6.2.3.1 and 6.2.3.4 | Until further notice | |
|------------------------------------|--|---------------------------|----------------------------|--|

Amend the Table, under "for closures", as follows:

– For standard "EN ISO 10297:2006", in column (4), replace "Until further notice" by "Between 1 January 2009 and 31 December [2016] [2018]".

– After standard "EN ISO 10297:2006", insert the following new row:

| | | | | |
|------------------------|---|---------------------------|----------------------------|--|
| EN ISO 10297:[2014] | Gas cylinders – Cylinder valves – Specification and type testing (ISO/DIS 10297:2012) | 6.2.3.1 and 6.2.3.3 | Until further notice | |
|------------------------|---|---------------------------|----------------------------|--|

– Add the following new rows:

| | | | | |
|------------------------|--|---------------------------|----------------------------|--|
| EN ISO 14246:[2014] | Gas cylinders – Cylinder valves – Manufacturing tests and examinations (ISO 14246:2014) | 6.2.3.1 and 6.2.3.4 | Until further notice | |
| EN 13648-1:2008 | Cryogenic vessels – Safety devices for protection against excessive pressure – Part 1: Safety valves for cryogenic service | 6.2.3.1 and 6.2.3.4 | Until further notice | |
| EN 1626:2008 | Cryogenic vessels – Valves for cryogenic service | 6.2.3.1 and 6.2.3.4 | Until further notice | |

6.2.4.2 Amend the Table as follows:

– For standard "EN 12863:2002 + A1:2005", in the last column, replace "Until further notice" by "Until 31 December 2016".

– After standard "EN 12863:2002 + A1:2005", insert the following new row:

| | | | | |
|-------------------|--|------------------------------------|--|--|
| EN ISO 10462:2013 | Gas cylinders – Acetylene cylinders – Periodic inspection and maintenance (ISO 10462:2013) | Mandatorily from 1 January 2017 | | |
|-------------------|--|------------------------------------|--|--|

– Delete the entry for standard "EN 14189:2003".

– For standard "EN ISO 22434:2012", in column "Reference", replace "EN ISO 22434:2012" by "EN ISO 22434:2011".

- For standard "EN ISO 22434:2012", in column "Applicable", replace "Mandatorily from 1 January 2015" by "Until further notice".
- For standard "EN 1440:2008 + A1:2012 (except annexes G and H)", in column "Applicable", replace "Mandatorily from 1 January 2015" by "Until further notice".

Chapter 6.8

6.8.2.6.1 Amend the Table under "for all tanks" as follows:

- For standard "EN 14025:2008", in column (4), replace "Until further notice" by "Between 1 July 2009 and 31 December 2016".
- After standard "EN 14025:2008", insert the following new row:

| | | | | |
|---------------|--|---------------------|----------------------|--|
| EN 14025:2013 | Tanks for the transport of dangerous goods – Metallic pressure tanks – Design and construction | 6.8.2.1 and 6.8.3.1 | Until further notice | |
|---------------|--|---------------------|----------------------|--|

Amend the Table under "for tanks for gases of Class 2" as follows:

- After the standard "EN 12493:2008 + A1:2012 (except Annex C)", insert the following new row:

| | | | | |
|--|--|--|----------------------|--|
| EN 12493:2013 [+ A1:2014] (except Annex C) | LPG equipment and accessories – Welded steel tanks for liquefied petroleum gas (LPG) – Road tankers – Design and manufacture | 6.8.2.1, 6.8.2.5, 6.8.3.1, 6.8.3.5, 6.8.5.1 to 6.8.5.3 | Until further notice | |
|--|--|--|----------------------|--|

- For standard "EN 14398-2:2003 (except Table 1)", in column (2), after the title of the standard, add the following Note:

***NOTE:** This standard shall not be used for those gases which are carried at temperatures below -100 °C.*

- For standard "EN 14398-2:2003 (except Table 1)", in column (4), replace "Until further notice" by "Between 1 January 2005 and 31 December 2016".
- After standard "EN 14398-2:2003 (except Table 1)", insert the following new row:

| | | | | |
|---------------------------|--|---|----------------------|--|
| EN 14398-2:2003 + A2:2008 | Cryogenic vessels – Large transportable non-vacuum insulated vessels – Part 2: Design, fabrication, inspection and testing <i>NOTE: This standard shall not be used for those gases which are carried at temperatures below -100 °C.</i> | 6.8.2.1 (with the exception of 6.8.2.1.17, 6.8.2.1.19 and 6.8.2.1.20), 6.8.2.4, 6.8.3.1 and 6.8.3.4 | Until further notice | |
|---------------------------|--|---|----------------------|--|

- At the end, add the following row:

| | | | | |
|--------------|--|---------------------|----------------------|--|
| EN 1626:2008 | Cryogenic vessels – Valves for cryogenic service | 6.8.2.4 and 6.8.3.4 | Until further notice | |
|--------------|--|---------------------|----------------------|--|

6.8.4 (d) Add the following new special provision TT11 (left hand side only):

"TT11 For fixed tanks (tank-vehicles) and demountable tanks used exclusively for the carriage of LPG, with carbon steel shells and service equipment, the hydraulic pressure test,

at the time of the periodic inspection, may be replaced by the non-destructive testing (NDT) techniques listed below, either singularly or in combination as deemed suitable by the competent authority, its delegate or inspection body (see special provision TT9):

- EN ISO 17640:2010 – Non-destructive testing of welds – Ultrasonic testing – Techniques, testing levels and assessment,
- EN ISO 17638:2009 – Non-destructive testing of welds – Magnetic particle testing, with indications acceptance in accordance with EN ISO 23278:2009 – Magnetic particle testing of welds. Acceptance levels,
- EN 1711:2000 – Non-destructive testing of welds – Eddy current examination of welds by complex plane analysis,
- EN 14127:2011 – Non-destructive testing – Ultrasonic thickness measurement,

Personnel involved in NDT shall be qualified, certified and have the appropriate theoretical and practical knowledge of the non-destructive tests they perform, specify, supervise, monitor or evaluate in accordance with:

- EN ISO 9712:2012 – Non-destructive testing – Qualification and certification of NDT personnel.

After direct application of heat such as welding or cutting to the pressure containing elements of the tank a hydraulic test shall be carried out in addition to any prescribed NDT.

NDT shall be performed on the areas of the shell and equipment listed in the table below:

| Area of shell and equipment | NDT |
|--|--|
| Shell longitudinal butt welds | 100% NDT, using one or more of the following techniques: ultrasonic, magnetic particle or eddy current testing |
| Shell circumferential butt welds | |
| Attachments, manway, nozzles and opening welds (internal) direct to the shell | |
| High stress areas of fastening doubling plates (over the end of the saddle horn, plus 400 mm down each side) | |
| Piping and other equipment welds | |
| Shell, areas that cannot be visually inspected from the outside | Ultrasonic thickness survey, from inside, on a 150 mm (maximum) spaced grid |

Irrespective of the original design and construction standard or technical code used for the tank, the defect acceptance levels shall be in accordance with the requirements of the relevant parts of EN 14025:2013 (Tanks for the transport of dangerous goods – metallic pressure tanks – design and construction), EN 12493:2013 (LPG equipment and accessories – welded steel tanks for liquefied petroleum gas (LPG) – road tankers – design and manufacture), EN ISO 23278:2009 (Non-destructive testing of welds – magnetic particle testing of welds – acceptance levels) or the acceptance standard referenced in the applicable NDT standard.

If an unacceptable defect is found in the tank by NDT methods it shall be repaired and retested. It is not permitted to hydraulic test the tank without undertaking the required repairs.

The results of the NDT shall be recorded and retained for the lifetime of the tank."

6.8.4 (e) TM3 Amend the first sentence to read:

"Tanks shall also bear, on the plate prescribed in 6.8.2.5.1, the proper shipping name and the maximum permissible load mass in kg for this substance."

Chapter 6.10

6.10.3.8 (b) Replace "to both the inlet and outlet" by "to all openings".

6.10.3.8 (b) The second amendment does not apply to the English text.

Chapter 6.11

6.11.1 Amend to read as follows:

"6.11.1 (Reserved)".

6.11.4.1 In the Note, after "591", insert ", 592".

Chapter 7.1

7.1.3 After "591 (status at 01.10.2007, 3rd edition)", insert "592 (status at 01.10.2013, 2nd edition)".

7.1.3 At the end, after "591", insert ", 592".

Chapter 7.3

7.3.2.4 Delete "(code BK2)".

Chapter 7.5

7.5.1 Add the following new sub-section:

"7.5.1.6 All means of containment shall be loaded and unloaded in conformity with a handling method for which they have been designed and, where required, tested."

7.5.11 At the end add the following additional provision:

"CV37 Before carriage, aluminium smelting by-products or aluminium remelting by-products shall be cooled to ambient temperature prior to loading. Sheeted vehicles and sheeted containers shall be waterproof. The cargo doors of the closed vehicles and closed containers shall be marked with the following in letters not less than 25 mm high:

"WARNING

CLOSED MEANS OF CONTAINMENT

OPEN WITH CAUTION"

This shall be in a language considered appropriate by the consignor."

III. Flexible bulk containers

Proposal

Chapter 3.2, Table A

For UN Nos. 1334, 1350, 1454, 1474, 1486, 1498, 1499, 1942, 2067, 2213, 3077, 3377 and 3378 PG III, in column (10) add "BK3".

(Reference document: ECE/TRANS/WP.15/AC.1/132, annex II)

Chapter 6.11

[Reference for Chapter 6.11 are ECE/TRANS/WP.15/AC.1/2013/31/Add.1 and ECE/TRANS/WP.15/AC.1/132/Add.2.

6.11.1 Add the following new definition:

“*Flexible bulk container* means a flexible container with a capacity not exceeding 15 m³ and includes liners and attached handling devices and service equipment”.

6.11.2.3 In the table add the following new row:

| | |
|-------------------------|-----|
| Flexible bulk container | BK3 |
|-------------------------|-----|

6.11.4, in the Note After “BK(x)”, add a reference to footnote 1. The footnote reads as follows: “(x) shall be replaced with “1” or “2” as appropriate.”.

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 BK3 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 ADR shall bear markings that are durable, legible and placed in a location so as to be readily visible. Letters, numerals and symbols shall be at least 24 mm high and shall show:

- (a) The United Nations packaging symbol



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

- (b) The code BK3;
- (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 traffic²;
- (f) The name or symbol of the manufacturer and other identification of the flexible bulk container as specified by the competent authority;
- (g) The stacking test load in kg;
- (h) The maximum permissible gross mass in kg.

Marking shall be applied in the sequence shown in (a) to (h); each element of the marking, required in these subparagraphs, shall be clearly separated, e.g. by a slash or space and presented in a way that ensures that all of the parts of the mark are easily identified.

6.11.5.5.2 *Example of marking*



BK3/Z/11 09
RUS/NTT/MK-14-10
56000/14000”.

¹

Distinguishing sign for motor vehicles in international traffic prescribed in the Vienna Convention on Road Traffic (1968).

Consequential amendment:

6.1.3.1 (a) (i), 6.2.2.7.2 (a), 6.2.2.9.2 (a), 6.3.4.2 (a), 6.5.2.1.1 (a), 6.6.3.1 (a), 6.7.2.20.1 (c) (i), 6.7.3.16.1 (c) (i), 6.7.4.15.1 (c) (i), 6.7.5.13.1 (c) (i) Amend the second sentence to read as follows: “This symbol shall not be used for any purpose other than certifying that a packaging, a flexible bulk container, a portable tank or a MEGC complies with the relevant requirements in Chapter 6.1, 6.2, 6.3, 6.5, 6.6, 6.7 or 6.11.”.

(Reference document: ECE/TRANS/WP.15/AC.1/132, annex II)

Chapter 7.3

7.3.2.1 In the second sentence (existing first sentence), replace “codes BK1 and BK2” by “codes BK1, BK2 and BK3”. After the description of the meaning of BK1 and BK2, insert:

“BK3: Carriage in flexible bulk containers is permitted”.

(Reference document: ECE/TRANS/WP.15/AC.1/132, annex II)

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.”.

(Reference document: ECE/TRANS/WP.15/AC.1/132, annex II)

Chapter 7.5

7.5 Add a new sub-section 7.5.7.6 to read as follows:

“7.5.7.6 *Loading of flexible bulk containers*

7.5.7.6.1 Flexible bulk containers shall be carried within a vehicle 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 vehicle or container particular attention shall be paid to the guidance on the handling and stowage of dangerous goods referred to in 7.5.7.1 and to the IMO/ILO/UNECE Guidelines for Packing Cargo Transport Units (CTUs).

7.5.7.6.2 Flexible bulk containers shall be secured by suitable means capable of restraining them in the vehicle 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.”
