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Working Party on the Transport of Dangerous Goods

Joint Meeting of the RID Committee of Experts and the
Working Party on the Transport of Dangerous Goods

Ad hoc Working Group on the Harmonization of RID/ADR/ADN
with the UN Recommendations on the Transport of Dangerous Goods

Geneva, 17-19 May 2011

Harmonization with the United Nations Model Regulations on the Transport of Dangerous Goods

The UNECE secretariat has prepared a draft proposal of amendments to RID/ADR/ADN on the basis of the decisions taken by the UN Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals at its December 2010 session.

The reference document is ST/SG/AC.10/38/Add.1.

Modifications to the above document are shown in track changes. Stricken out text means that the amendment does not seem relevant for RID/ADR/ADN. Text underlined means alternative wording proposed by the secretariat.

¹ Informal document. Not issued as an official United Nations document. Circulated only to delegations participating in the work of the Joint Meeting of the RID Committee of Experts and the Working Party on the Transport of Dangerous Goods.

Chapter 1.1

Insert new ~~sub~~-sections ~~1.1.51.1.1.7~~ and ~~1.1.61.1.1.8~~ to read as follows:

"1.1.51.1.1.7 Application of standards

Where the application of a standard is required and there is any conflict between the standard and the provisions of RID/ADR/ADN~~these Regulations~~, the provisions of RID/ADR/ADN~~the Regulations~~ take precedence."

"1.1.61.1.1.8 ~~Transport~~Carriage of dangerous goods used as a coolant or conditioner

Dangerous goods, that are only asphyxiant (which dilute or replace the oxygen normally in the atmosphere), when used in cargo transport units for cooling or conditioning purposes are only subject to the provisions of section 5.5.3."

Chapter 1.2

1.2.1 At the end of the definition for "Bulk container", add ", flexible bulk containers (FBCs)".

1.2.1 In the definition for "Pressure receptacle", replace "and bundles of cylinders" with ", bundles of cylinders and salvage pressure receptacles".

1.2.1 In the definition of "GHS", replace "third" with "fourth" and "ST/SG/AC.10/30/Rev.3" with "ST/SG/AC.10/30/Rev.4".

1.2.1 In the definition of "Manual of Tests and Criteria", amend the text in the parenthesis to read "(ST/SG/AC.10/11/Rev.5 as amended by document ST/SG/AC.10/11/Rev.5/Amend.1)".

1.2.1 In the definition of "UN Model Regulations", replace "sixteenth" with "seventeenth" and "(ST/SG/AC.10/1/Rev.16)" with "(ST/SG/AC.10/1/Rev.17)".

1.2.1 Add the following new definitions:

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

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

Chapter 1.10~~Chapter 1.4~~

~~1.10.1~~~~1.4.1~~ Add a new paragraph ~~1.4.1.4~~1.10.1.4 to read as follows:

~~1.10.1.4~~~~1.4.1.4~~ The provisions of this Chapter do not apply to:

- (a) UN No. 2908 and UN No. 2909 excepted packages;
- (b) UN No. 2910 and UN No. 2911 excepted packages with an activity level not exceeding the A₂ value; and
- (c) UN No. 2912 LSA-I and UN No. 2913 SCO-I."

Renumber the following sub-sections accordingly.

[1.10.3.1.4.3](#) Amend to read as follows:

~~"1.4.3 — Provisions for high consequence dangerous goods~~

[1.10.3.1.4.3.1](#) Definition of high consequence dangerous goods

~~[1.10.3.1.4.3.1.1](#)~~ High consequence dangerous goods are those which have the potential for misuse in a terrorist event and which may, as a result, produce serious consequences such as mass casualties, mass destruction or, particularly for Class 7, mass socio-economic disruption.

~~[1.10.3.1.2.4.3.1.2](#)~~ ~~An indicative list of high consequence dangerous goods in classes and divisions other than Class 7 is given in Table 1.4.1 below.~~ High consequence dangerous goods in classes other than Class 7 are those listed in Table 1.10.3.1.2 below and carried in quantities greater than those indicated therein. (text of existing 1.10.5 as amended)

[Existing Table ~~1.10.5.1.4.1~~, with the existing NOTE, but without the introductory text and without the entry for Class 7.]

~~[1.10.3.1.3.4.3.1.3](#)~~ For dangerous goods of Class 7, high consequence radioactive material is that with an activity equal to or greater than a transport security threshold of 3 000 A₂ per single package (see also ~~2.2.7.2.2.1.2.7.2.2.1~~) except for the following radionuclides where the transport security threshold is given in Table ~~1.10.3.1.3.4.2~~ below.

Table ~~1.10.3.1.3.4.2~~

Transport security thresholds for specific radionuclides

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

~~1.10.3.1.4~~~~1.4.3.1.4~~ For mixtures of radionuclides, determination of whether or not the transport security threshold has been met or exceeded can be calculated by summing the ratios of activity present for each radionuclide divided by the transport security threshold for that radionuclide. If the sum of the fractions is less than 1, then the radioactivity threshold for the mixture has not been met nor exceeded.

This calculation can be made with the formula:

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

Where:

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

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

~~1.10.3.1.5~~~~1.4.3.1.5~~ When radioactive material possess subsidiary risks of other classes ~~or divisions~~, the criteria of table ~~1.10.3.1.2~~~~1.4.1~~ shall also be taken into account (see also ~~1.7.5~~~~1.5.5.1~~):

~~1.4.3.2~~ — ~~Specific security provisions for high consequence dangerous goods~~

~~1.4.3.2.1~~ — ~~[Existing 1.4.3.1, without the last sentence]~~

~~1.4.3.2.2~~ — ~~Security plans~~

~~1.4.3.2.2.1~~ — Carriers, consignors and others (including infrastructure managers) engaged in the transport of high consequence dangerous goods (see 1.4.3.1) shall adopt, implement and comply with a security plan that addresses at least the elements specified in 1.4.3.2.2.2.

~~1.4.3.2.2.2~~ — ~~[Existing 1.4.3.2.2]~~

~~1.4.3.2.3~~ — ~~[Existing 1.4.3.2.3 with the following modifications: in footnote 1, replace "IAEACIRC" with "INFCIRC". In footnote 2, replace "IAEACIRC" with "INFCIRC" and delete the last sentence].~~

~~1.10.6~~ In footnote 2, delete the last sentence ("See also "Guidance and Considerations for the Implementation of INFCIRC/225/Rev.4, the Physical Protection of Nuclear Material and Nuclear Facilities, IAEA-TECDOC-967/Rev.1".")

Chapter ~~2.12.0~~

See if needed to replace everywhere "solution or mixture" with "mixture or solution" to align editorially with UN Model Regulations.

~~2.1.3.3~~~~2.0.2.5~~ In the first sentence, add "meeting the classification criteria of ~~RID/ADR/ADN~~~~these Regulations~~" after "A ~~solution or mixture~~~~or solution~~".

~~2.1.3.5~~~~2.0.2.9~~ Add "meeting the classification criteria of ~~RID/ADR/ADN~~~~and these Regulations~~" after "~~solutions or mixtures~~~~A mixture or solution~~".

Chapter ~~2.22.1~~

~~2.1.1.1 (b)~~ — ~~At the end, add "(see 2.1.3.6)" after "loud noise".~~

~~2.2.1.1.5~~ ~~2.1.1.4 (f)~~ For Division 1.6, delete "detonating".

~~2.2.1.1.6~~ ~~2.1.2.1.1~~ In ~~the table, in~~ the description for compatibility group N, delete "detonating".

[\[Add a new 2.2.1.1.9 to read as follows:](#)

~~"2.1.3.6~~**2.2.1.1.9** *Exclusion from Class 1*

~~2.1.3.6.1~~**2.2.1.1.9.1** The competent authority may exclude an article or substance from Class 1 by virtue of test results and the Class 1 definition.

~~2.1.3.6.2~~**NOTE 1:** Where a substance provisionally accepted into Class 1 is excluded from Class 1 by performing Test Series 6 on a specific type and size of package, [the competent authority shall take steps to request the United Nations Sub-Committee of Experts on the Transport of Dangerous Goods that](#) this substance, when meeting the classification criteria or definition for another class or division, ~~should~~ be listed in the Dangerous Goods List of Chapter 3.2 [of the UN Model Regulations](#) in that class or division with a special provision restricting it to the type and size of package tested. [Pending approval of this request, the substance may be carried under the appropriate N.O.S. entry with the approval of the competent authorities of the countries concerned.](#)

~~2.1.3.6.3~~**NOTE 2:** Where a substance is assigned to Class 1 but is diluted to be excluded from Class 1 by Test Series 6, [the competent authority shall take steps to request the United Nations Sub-Committee of Experts on the Transport of Dangerous Goods that](#) this diluted substance (hereafter referred to as desensitized explosive) ~~shall~~ be listed in the Dangerous Goods List of Chapter 3.2 [of the UN Model Regulations](#) with an indication of the highest concentration which excluded it from Class 1 (see ~~2.3.1.4 and 2.4.2.4.1~~[2.2.3.1.1 and 2.2.41.1.18](#)) and if applicable, the concentration below which it is no longer deemed subject to these [UN Model Regulations](#). ~~New solid desensitized explosives subject to these Regulations shall be listed in Division 4.1 and new liquid desensitized explosives shall be listed in Class 3.~~ [Pending approval of this request, the desensitized explosive may be carried under UN 3379 DESENSITIZED EXPLOSIVE, LIQUID, N.O.S. or UN 3380 DESENSITIZED EXPLOSIVE, SOLID, N.O.S. as appropriate.](#) When the desensitized explosive meets the criteria or definition for another class or division, the corresponding subsidiary risk(s) shall be assigned to it.

[\[Ref.: 2.1.3.6 of the UN Model Regulations\]](#)

~~2.1.3.6~~ ~~————~~ ~~Add a new 2.1.3.6.4 to read as follows:~~

2.1.3.6.4 An article may be excluded from Class 1 when three unpackaged articles, each individually activated by its own means of initiation or ignition or external means to function in the designed mode, meet the following test criteria:

(a) No external surface shall have a temperature of more than 65° C. A momentary spike in temperature up to 200 °C is acceptable;

(b) No rupture or fragmentation of the external casing or movement of the article or detached parts thereof of more than one metre in any direction;

NOTE: Where the integrity of the article may be affected in the event of an external fire these criteria shall be examined by a fire test, such as described in ISO 12097-3.

(c) No audible report exceeding 135 dB(C) peak at a distance of one metre;

(d) No flash or flame capable of igniting a material such as a sheet of 80 ± 10 g/m² paper in contact with the article; and

(e) No production of smoke, fumes or dust in such quantities that the visibility in a one cubic metre chamber equipped with appropriately sized blow out panels is reduced more than 50% as measured by a calibrated light (lux) meter or radiometer located one metre from a constant light source located at the midpoint on opposite walls .

The general guidance on Optical Density Testing in ISO 5659-1 and the general guidance on the Photometric System described in Section 7.5 in ISO 5659-2 may be used or similar optical density measurement methods designed to accomplish the same purpose may also be employed. A suitable hood cover surrounding the back and sides of the light meter shall be used to minimize effects of scattered or leaking light not emitted directly from the source.

NOTE 1: *If during the tests addressing criteria (a), (b), (c) and (d) no or very little smoke is observed the test described in (e) may be waived.*

NOTE 2: *The competent authority may require testing in packaged form if it is determined that, as packaged for transport, the article may pose a greater risk."*

2.2.1.1.8 Glossary of names

In the definition for "ARTICLES, EXPLOSIVE, EXTREMELY INSENSITIVE (ARTICLES, EEI)", delete "detonating".

Add a new definition for "CARTRIDGES FOR TOOLS, BLANK "? [Refer to UN Sub Committee of Experts on the Transport of Dangerous Goods?]

Insert the following new name:

"AUXILIARY EXPLOSIVE COMPONENT, isolated

An "isolated auxiliary explosive component" is a small device that explosively performs an operation related to the article's functioning, other than its main explosive loads' performance. Functioning of the component does not cause any reaction of the main explosive loads contained within the article."

Chapter 2.2

~~2.2.2.1.5~~~~2.2.2.1 (a) (ii) and 2.2.3 (a) and (d)~~ Under "Flammable gases", rReplace "ISO 10156:1996" with "ISO 10156:2010".

~~2.2.2.1.5~~~~2.2.2.1 (b)~~ Under "Oxidizing gases"~~In the note~~, replace "ISO 10156:1996 or ISO 10156-2:2005" with "ISO 10156:2010".

~~2.2.3 (d)~~ ~~Delete "and ISO 10156 2:2005".~~

Chapter 2.5

~~2.2.5.2.4~~~~2.5.3.2.4~~ In the table, amend the entries listed below as follows:

<i>Organic peroxide</i>		<i>Column</i>	<i>Amendment</i>
DIISOPROPYL PEROXYDICARBONATE	(last row)	Concentration	Replace " ≤ 28 " with " ≤ 32 "
DIISOPROPYL PEROXYDICARBONATE	(last row)	Diluent type A	Replace " ≥ 72 " with " ≥ 68 "
<u>DI-(3,5,5- TRIMETHYLHEXANOYL) PEROXIDE (concentration > 38- 82)</u>	<u>(first row)</u>	<u>Concentration</u>	<u>Replace "> 38-82" with > 52-82"</u>

[\[ST/SG/AC.10/38/Add.1/Corr.1\]](#)

[2.2.52.4](#)~~2.5.3.2.4~~ Insert the following new entries:

Organic peroxide	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
([3R-(3R,5aS,6S,8aS,9R,10R,12S,12aR**)]-DECAHYDRO-10-METHOXY-3,6,9-TRIMETHYL-3,12-EPOXY-12H-PYRANO[4,3-j]-1,2-BENZODIOXEPIN)	≤ 100					OP7				3106
3,6,9-TRIETHYL-3,6,9-TRIMETHYL-1,4,7-TRIPEROXONANE	≤ 17	≥ 18		≥ 65		OP8				3110
DI-(3,5,5-TRIMETHYLHEXANOYL) PEROXIDE	≥ 38- <u>52</u>	≥ 62 <u>≥ 48</u>				OP8	+10	+15		3119

[\[ST/SG/AC.10/38/Add.1/Corr.1, the change in Column \(3\) will be included in a corrigendum to the 17th Revised Edition of the UN Model Regulations\]](#)

~~Chapter 2.6~~

[2.2.62.1.5.32-6.3.2.3.3](#) Add the following new Note at the end:

"NOTE: Medical equipment which has been drained of free liquid and meets the requirements of this paragraph is not subject to [RID/ADR/ADN](#)~~these Regulations~~".

Add a new paragraph [2.2.62.1.5.72-6.3.2.3.7](#) to read as follows:

[2.2.62.1.5.72-6.3.2.3.7](#) Except for:

- Medical waste (UN [No.](#) 3291);
- Medical devices or equipment contaminated with or containing infectious substances in Category A (UN [No.](#) 2814 or UN [No.](#) 2900); and
- Medical devices or equipment contaminated with or containing other dangerous goods that meet the definition of another hazard class,

medical devices or equipment potentially contaminated with or containing infectious substances which are being ~~transported~~[carried](#) for disinfection, cleaning, sterilization, repair, or equipment evaluation are not subject to the provisions of [RID/ADR/ADN](#) ~~these Regulations~~ if packed in packagings designed and constructed in such a way that, under normal conditions of ~~transport~~[carriage](#), they cannot break, be punctured or leak their contents. Packagings shall be designed to meet the construction requirements listed in 6.1.4 or 6.6.5 ([ADN: of ADR](#)).

These packagings shall meet the general packing requirements of [4.1.1](#)~~4.1.1.1~~ and [4.1.2](#) ~~4.1.1.2~~ ([ADN: of ADR](#)) and be capable of retaining the medical devices and equipment when dropped from a height of 1.2 m. ~~For air transport, additional requirements may apply.~~

The packagings shall be marked "USED MEDICAL DEVICE" or "USED MEDICAL EQUIPMENT". When using overpacks, these shall be marked in the same way, except when the inscription remains visible."

~~Chapter 2.8~~

[2.2.8.1.62-8.2.5](#) Add the following table at the end:

"Table ~~2.2.8.1.6~~~~2.8.2.5~~
Table summarizing the criteria in ~~2.2.8.1.6~~~~2.8.2.5~~

<i>Packing Group</i>	<i>Exposure Time</i>	<i>Observation Period</i>	<i>Effect</i>
I	≤ 3 min	≤ 60 min	Full thickness destruction of intact skin
II	> 3 min ≤ 1 h	≤ 14 d	Full thickness destruction of intact skin
III	> 1 h ≤ 4 h	≤ 14 d	Full thickness destruction of intact skin
III	-	-	Corrosion rate on either steel or aluminium surfaces exceeding 6.25 mm a year at a test temperature of 55 °C when tested on both materials

".

Chapter 2.9

~~2.9.2~~ ~~At the end of the subdivision reading "Lithium batteries", add the following new note:~~

~~"NOTE: See 2.9.4."~~

~~2.2.91.10.14~~ ~~Add the following new entry at the end: After the subdivision reading "Lithium batteries", add the following new subdivision:~~

~~"Electric double layer capacitor.s(with an energy storage capacity greater than 0.3 Wh)".~~

~~2.2.9.3~~ ~~For M11, add the following new entry at the end:~~

~~"3499 CAPACITOR, electric double layer (with an energy storage capacity greater than 0.3 Wh)".~~

~~Add a new sub-section 2.9.4 to read as follows:~~

~~2.2.9.1.7~~ ~~Amend to read as follows:~~

~~"2.9.4~~ **Lithium batteries**

~~2.2.9.1.7~~ Cells and batteries, cells and batteries contained in equipment, or cells and batteries packed with equipment, containing lithium in any form shall be assigned to UN Nos. 3090, 3091, 3480 or 3481 as appropriate. They may be ~~transported~~carried under these entries if they meet the following provisions:

(a) Each cell or battery is of the type proved to meet the requirements of each test of the *Manual of Tests and Criteria*, Part III, sub-section 38.3;

(b) Each cell and battery incorporates a safety venting device or is designed to preclude a violent rupture under ~~conditions normally incident to transport~~normal conditions of carriage; (existing text of SP 230)

(c) Each cell and battery is equipped with an effective means of preventing external short circuits;

(d) Each battery containing cells or series of cells connected in parallel is equipped with effective means as necessary to prevent dangerous reverse current flow (e.g., diodes, fuses, etc.);

(e) Cells and batteries shall be manufactured under a quality management programme that includes:

- (i) A description of the organizational structure and responsibilities of personnel with regard to design and product quality;
- (ii) The relevant inspection and test, quality control, quality assurance, and process operation instructions that will be used;
- (iii) Process controls that should include relevant activities to prevent and detect internal short circuit failure during manufacture of cells;
- (iv) Quality records, such as inspection reports, test data, calibration data and certificates. Test data shall be kept and made available to the competent authority upon request;
- (v) Management reviews to ensure the effective operation of the quality management programme;
- (vi) A process for control of documents and their revision;
- (vii) A means for control of cells or batteries that are not conforming to the type tested as mentioned in (a) above;
- (viii) Training programmes and qualification procedures for relevant personnel; and
- (ix) Procedures to ensure that there is no damage to the final product.

NOTE: In house quality management programmes may be accepted. Third party certification is not required, but the procedures listed in (i) to (ix) above shall be properly recorded and traceable. A copy of the quality management programme shall be made available to the competent authority upon request.

Lithium batteries are not subject to the provisions of RID/ADR/ADN if they meet the requirements of special provision 188 of Chapter 3.3. (existing second sentence of 2.2.9.1.7)".

Consequential amendment:

Add a new transitional measure to read as follows:

"1.6.1.23 Lithium cells and batteries manufactured before 1 July ~~2003~~2013 which had been tested and packed in accordance with the requirements applicable until 31 December ~~2002~~2012 but which had not been tested in accordance with the requirements applicable as from 1 January ~~2003~~2013, and appliances containing such lithium cells or batteries, may continue to be carried up to [30 June ~~2013~~?] if all the other applicable requirements are fulfilled."

[Text of existing 1.6.1.10]

Chapter 3.1

3.1.3.2 In the first sentence, add "meeting the classification criteria of RID/ADR/ADN ~~these Regulations~~" after "A solution or mixture ~~or solution~~".

3.1.3.3 Add "meeting the classification criteria of RID/ADR/ADN ~~these Regulations~~" after "A solution or mixture ~~or solution~~".

Chapter 3.2

3.2.1 Table A ~~Dangerous Goods List~~

UN Nos. 0012, 0014 and 0055: Insert "364" in column (6) and replace "0" with "5 kg" in column (7a).

UN No. 0014: In column (2), after "CARTRIDGES, SMALL ARMS, BLANK", insert "or CARTRIDGES FOR TOOLS, BLANK" and amend [Table B](#) ~~the alphabetical index~~ accordingly.

UN No. 0144: Insert "358" ~~and delete "500"~~ in column (6).

UN Nos. 1162, 1196, 1250, 1298, 1305, 1724, 1728, 1747, 1753, 1762, 1763, 1766, 1767, 1769, 1771, 1781, 1784, 1799, 1800, 1801, 1804, 1816, 1818, 2434, 2435, 2437, 2985, 2986, 2987, 3361 and 3362: Amend the code to read "E0" in column (7b).

UN Nos. 1202, 1203, 1223, 1268, 1863 and 3475: Insert "363" in column (6).

UN Nos. 1334, 1350, 1454, 1474, 1486, 1498, 1499, 1942, 2067, 2213, 3077, 3377 and 3378, entries of Packing Group III: Add "BK3" in column (10).

~~UN No. 1707: Insert "274" in column (6).~~ [\[Already in RID/ADR/ADN\]](#)

UN No. 1792: Add ", SOLID" at the end of the name in column (2) and amend [Table B](#) ~~the alphabetical index~~ accordingly.

[In column \(3b\), replace "C1" with "C2".](#)

[In column \(7a\), replace "1 L" with "1 kg"](#)

[In column \(8\), replace "P001 IBC02" with "P002 IBC08".](#)

[In column \(9a\), add "B4"](#)

[In column \(9b\), replace "MP15" with "MP10".](#)

[In column \(12\), tank code to be determined by the tank working group. SGAN?](#)

[In column \(16\), add "V11"/"W11".](#)

~~UN No. 1845: Delete "297" in column (6).~~ [\[Not subject to RID/ADR/ADN\]](#)

UN No. 1950: Replace "P003" with "P207" in column (8) and delete "PP17" in column (9a).

UN Nos. 2208 and 3486: Add "L3" against "LP02" in column (9a).

UN No. 2381: Insert "+6.1" in column (5)~~(4)~~ and "354" in column (6). Replace "T4" with "T7" in column (10) and replace "TP1" with "TP2 ~~TP13~~-TP39" in column (11).

[Amend the classification code in column \(3b\) to read "FT1".](#)

[In column \(12\), replace "LGBF" with "L4BH" and in column \(13\), add "TU15". \(to be checked by the tank working group\)](#)

[In column \(18\), add "CW13 CW28"/"CV13 CV28".](#)

[In column \(20\), amend the code to read "336".](#)

~~UN No. 2571: Delete "274" in column (6).~~ [\[Not in RID/ADR/ADN\]](#)

UN No. 2809: Insert "+6.1" in column (5)~~(4)~~ and "365" ~~and delete "599"~~ in column (6).

[Amend the classification code in column \(3b\) to read "CT1".](#)

[\[See if needed to change the mixed packing provision "MP15" in column \(9b\)?\]](#)

[In column \(18\), add "CW13 CW28"/"CV13 CV28".](#)

[In column \(20\), amend the code to read "86".](#)

~~UN No. 2965 and UN No. 3129, Packing Group I: Insert "TP13" in column (11).~~

UN No. 3064: Insert "359" in column (6).

UN Nos. 3091 and 3481: Insert "360" in column (6).

UN No. 3129, Packing Group II, and UN No. 3148, Packing Group II: Insert "TP7" in column (11).

UN No. 3129, Packing Group III, and UN No. 3148, Packing Group III: Replace "TP1" with "TP2 TP7" in column (11).

UN No. 3148, Packing Group I: Replace "T9" with "T13" in column (10) and insert "TP38" in column (11).

~~UN Nos. 3166 and 3171: Replace "106" with "123" in column (6). [Not subject to RID/ADR/ADN]~~

~~UN Nos. 3334 and 3335: Replace "E0" with "E1" in column (7b). [Not subject to RID/ADR/ADN]~~

UN Nos. 3381 to 3390 and 3488 to 3491: Replace "with an inhalation toxicity" with "with an LC₅₀" in column (2) and amend [Table B and the tables in 2.2.61.3](#)~~appendix A and the alphabetical index~~ accordingly.

UN Nos. 3492 and 3493: Delete these entries and amend [Table B and the tables in 2.2.61.3](#)~~appendix A and the alphabetical index~~ accordingly.

For the following entries, amend the name and description in column (2) as indicated below and amend [Table B](#)~~appendix A~~ and the [list of collective entries in 2.2.61.3](#) ~~alphabetical index~~ accordingly:

<i>UN No.</i>	<i>Name and description</i>
3276	NITRILES, LIQUID, TOXIC, N.O.S.
3278	ORGANOPHOSPHORUS COMPOUND, LIQUID, TOXIC, N.O.S.
3282	ORGANOMETALLIC COMPOUND, LIQUID, TOXIC, N.O.S.
3439	NITRILES, SOLID, TOXIC, N.O.S.
3464	ORGANOPHOSPHORUS COMPOUND, SOLID, TOXIC, N.O.S.
3467	ORGANOMETALLIC COMPOUND, SOLID, TOXIC, N.O.S.

Add the following new entries and amend [Table B](#)~~appendix A~~ and the [list of collective entries 2.2.xy.3](#) ~~alphabetical index~~ accordingly:

For column (15), only the Transport category is given. Tunnel codes will be attributed by WP.15.
Codes for RID in column (19) to be added.

(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	
3496	BATTERIES, NICKEL-METAL HYDRIDE	9	M11											NOT SUBJECT TO RID/ADR/ADN (SP 117)									
3497	KRILL MEAL	4.2	S2	II	4.2	300	0	E2	P410 IBC06	B2	MP14	T3	TP33	[SGAN]/[SGAV]	-	AT	2	V1	-	-	-	40	
3497	KRILL MEAL	4.2	S2	III	4.2	223	0	E1	P002 IBC08 LP02 R001	B3	MP14	T1	TP33	[SGAV]	-	AT	3	V1	[VV4]	-	-	40	
3498	IODINE MONOCHLORIDE, LIQUID (same data as for UN 1792 in RID/ADR 2011)	8	C1	II	8	-	1 L	E2	P001 IBC02	-	MP15	T7	TP2	L4BN	-	AT	2	-	-	-	-	80	
3499	CAPACITOR, electric double layer (with an energy storage capacity greater than 0.3 Wh)	9	M11	-	9	361	0	E0	P003	-	-	-	-	-	-	-	[4]	-	-	-	-	RID: 90	
3500	CHEMICAL UNDER PRESSURE, N.O.S.	2	8A	-	-	274 362	0	E0	P206	-	MP9	T50	TP4 TP40	[?]	[?]	AT	3	-	-	CW9 CW10 CW36 / CV9 CV10 CV36	-	20	
3501	CHEMICAL UNDER PRESSURE, FLAMMABLE, N.O.S.	2	8F	-	2.1	274 362	0	E0	P206	PP89	MP9	T50	TP4 TP40	[?]	[?]	FL	2	-	-	CW9 CW10 CW36 / CV9 CV10 CV36	ADR: S2 S20	23	
3502	CHEMICAL UNDER PRESSURE, TOXIC, N.O.S.	2	8T	-	2.3	274 362	0	E0	P206	PP89	MP9	T50	TP4 TP40	[?]	[?]	AT	1	-	-	CW9 CW10 CW36 / CV9 CV10 CV36	ADR: S14	23	
3503	CHEMICAL UNDER	2	8C	-	2.2	274	0	E0	P206	PP89	MP9	T50	TP4	[?]	[?]	AT	1	-	-	CW9 CW10	ADR: S14	28	

(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(20)		
	PRESSURE, CORROSIVE, N.O.S.				+8	362							TP40								CW36 / CV9 CV10 CV36		
3504	CHEMICAL UNDER PRESSURE, FLAMMABLE, TOXIC, N.O.S.	2	8TF	-	2.3 +2.1	274 362	0	E0	P206	PP89	MP9	T50	TP4 TP40	[?]	[?]	FL	1	-	-		CW9 CW10 CW36 / CV9 CV10 CV36	ADR: S2 S14	263
3505	CHEMICAL UNDER PRESSURE, FLAMMABLE, CORROSIVE, N.O.S.	2	8FC	-	2.1 +8	274 362	0	E0	P206	PP89	MP9	T50	TP4 TP40	[?]	[?]	FL	1	-	-		CW9 CW10 CW36 / CV9 CV10 CV36	ADR: S2 S14	238
3506	MERCURY CONTAINED IN MANUFACTURED ARTICLES	8	C11	III	8 +6.1	366	5 kg	E0	P003	PP90	[MP15]	-	-	-	-	-	3	-	-			RID: 80	

[\[For UN No. 3500: ST/SG/AC.10/38/Add.1/Corr.1\]](#)

[The contents for cells with \[?\] should be determined by the Joint Meeting. The Working Group for Harmonization may provide advice.](#)

Consequential amendments for chemicals under pressure:

2.2.2.1.2 Insert a new subdivision at the end to read as follows:

"8. Chemicals under pressure: liquids, pastes or powders, pressurized with a propellant that meets the definition of a compressed or liquefied gas.".

2.2.2.1.3 At the beginning, replace "(except aerosols)" with "(except aerosols and chemicals under pressure)".

In NOTE 2, At the end, add "For chemicals under pressure (UN Nos. 3500 to 3505), see 2.2.2.1.7."

2.2.2.1.5 At the beginning, replace "(except aerosols)" with "(except aerosols and chemicals under pressure)". / [or add a reference to 2.2.2.1.7].

Add a new 2.2.2.1.7 to read as follows [Ref: 2.2.2.1.6 and text of new SP 362 as amended]:

~~2.2.2.1.6~~ 2.2.2.1.7 ~~Aerosols~~ Chemicals under pressure

~~Aerosols~~ Chemicals under pressure (UN Nos. ~~1950~~ 3500 to 3505) are assigned to one of the following groups according to their hazardous properties, as follows:

A asphyxiant;

~~O~~ ~~oxidizing;~~

F flammable;

T toxic;

C corrosive;

~~CO~~ ~~corrosive, oxidizing;~~

FC flammable, corrosive;

TF toxic, flammable;

~~TC~~ ~~toxic, corrosive;~~

~~TO~~ ~~toxic, oxidizing;~~

~~TFC~~ ~~toxic, flammable, corrosive;~~

~~TOC~~ ~~toxic, oxidizing, corrosive.~~

The classification depends on the ~~nature of the contents of the aerosol dispenser.~~ Hazard characteristics of the components in the different states:

- The propellant;

- The liquid; or

- The solid.

NOTE 1: Gases, which meet the definition of toxic gases or of oxidizing gases according to 2.2.2.1.5 [or of pyrophoric gases according to packing instruction P200 in 4.1.4.1], shall not be used as a propellant in ~~an aerosol dispenser~~ chemicals under pressure.

NOTE 2: ~~Aerosols~~ Chemicals under pressure with contents meeting the criteria for packing group I for toxicity or corrosivity or with contents meeting both the criteria for packing group II or III for toxicity and for packing group II or III for corrosivity shall not be accepted for carriage under these UN numbers ~~(see also 2.2.2.2).~~

NOTE 3: ~~In addition,~~ Chemicals under pressure with components meeting the properties of : Class 1, explosives; Class 3, liquid desensitized explosives; ~~Division~~ Class

4.1, self-reactive substances and solid desensitized explosives; ~~Division-Class 4.2; substances liable to spontaneous combustion; Division-Class 4.3; substances which, in contact with water, emit flammable gases; Division-Class 5.1 oxidizing substances; Division-Class 5.2; organic peroxides; Division-Class 6.2; Infectious substances or Class 7; Radioactive material, shall not be used for transport carriage under this proper shipping name these UN numbers.;~~

NOTE 4: A chemical under pressure in an aerosol dispenser shall be ~~transported~~carried under UN No. 1950.

The following criteria shall apply:

(a) Assignment to group A shall apply when the contents do not meet the criteria for any other group according to sub-paragraphs (b) to (f) below;

~~(b) Assignment to group O shall apply when the aerosol contains an oxidizing gas according to 2.2.2.1.5;~~

(~~e~~b) Assignment to group F shall apply if one of these components, which can be a pure substance or a mixture, needs to be classified as flammable, ~~the chemical under pressure shall be classified as flammable in Division 2.1~~. Flammable components are flammable liquids and liquid mixtures, flammable solids and solid mixtures or flammable gases and gas mixtures meeting the following criteria:

- (i) A flammable liquid is a liquid having a flashpoint of not more than 93 °C;
- (ii) A flammable solid is a solid which meets the criteria in 2.2.41.12.4.2.2 of these Regulations;
- (iii) A flammable gas is a gas which meets the criteria in 2.2.2.1.5 ~~2.2.2.1~~ of these Regulations;

~~the contents include 85% by mass or more flammable components and the chemical heat of combustion is 30 kJ/g or more.~~

~~It shall not apply if the contents contain 1% by mass or less flammable components and the heat of combustion is less than 20 kJ/g.~~

~~Otherwise the aerosol shall be tested for flammability in accordance with the tests described in the Manual of Tests and Criteria, Part III, section 31. Extremely flammable and flammable aerosols shall be assigned to group F;~~

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

(~~e~~c) Assignment to group T shall apply when the contents, other than the propellant ~~of aerosol dispensers to be ejected~~, are classified as Class 6.1, packing groups II or III;

(~~e~~d) Assignment to group C shall apply when the contents, other than the propellant ~~of aerosol dispensers to be ejected~~, meet the criteria for Class 8, packing groups II or III;

(~~f~~c) When the criteria for ~~more than one~~two groups amongst groups O, F, T, and C are met, assignment to groups ~~CO, FC, or TF, TC TO, TFC or TOC~~ shall apply, as relevant."

2.2.2.1.7 ~~Chemicals under pressure (UN Nos. 3500 to 3505) are~~~~This entry applies to~~ liquids, pastes or powders, pressurized with a propellant which meets the definition of a compressed or liquefied gas, ~~gas in 2.2.1.1 and 2.2.1.2 (a) or (b).~~

The following provisions shall apply:

~~(a) The chemical under pressure shall be classified based on the hazard characteristics of the components in the different states:~~

- ~~•The propellant;~~
- ~~•The liquid; or~~
- ~~• The solid.~~

(b) ~~Gases~~Toxic gases (groups T, TF, TC, TO, TFC and TOC) of Division 2.3 and ~~gases with a subsidiary risk of 5.1~~oxidizing gases of Group O shall not be used as a propellant in a chemical under pressure;

(c) Where the liquid or solid components are classified as dangerous goods of ~~Division~~Class 6.1, packing groups II or III, or Class 8, packing groups II or III, the chemical under pressure shall be assigned a subsidiary risk of ~~Division~~Class 6.1 or Class 8 and the appropriate UN number shall be assigned. Components classified in ~~Division~~Class 6.1, packing group I, or Class 8, packing group I, shall not be used for ~~transport~~carriage under this proper shipping name;

2.2.2.3 Add the following new table at the end:

Aerosols and receptacles, small, containing gas		
Classification code	UN No.	Name of the substance or article
<u>8A</u>	<u>3500</u>	<u>CHEMICAL UNDER PRESSURE, N.O.S.</u>
<u>8F</u>	<u>3501</u>	<u>CHEMICAL UNDER PRESSURE, FLAMMABLE, N.O.S.</u>
<u>8T</u>	<u>3502</u>	<u>CHEMICAL UNDER PRESSURE, TOXIC, N.O.S.</u>
<u>8C</u>	<u>3503</u>	<u>CHEMICAL UNDER PRESSURE, CORROSIVE, N.O.S.</u>
<u>8TF</u>	<u>3504</u>	<u>CHEMICAL UNDER PRESSURE, FLAMMABLE, TOXIC, N.O.S.</u>
<u>8FC</u>	<u>3505</u>	<u>CHEMICAL UNDER PRESSURE, FLAMMABLE, CORROSIVE, N.O.S.</u>

1.1.3.6.3 For transport category 1, in column (2), for Class 2, add the following new line at the end:

["chemicals under pressure: groups T, C, TF, FC"]/

["chemicals under pressure: UN Nos. 3502, 3503, 3504 and 3505"].

For transport category 2, in column (2), for Class 2, add the following new line at the end:

["chemicals under pressure: group F"]/

["chemicals under pressure: UN No. 3501"].

For transport category 3, in column (2), for Class 2, add the following new line at the end:

"chemicals under pressure: group A"/

["chemicals under pressure: UN No. 3500"].

5.3.2.3.2 Add the following new lines:

"28 chemical under pressure, corrosive"

"238 chemical under pressure, flammable, corrosive"

[see if it is also needed to amend the definitions for hazard identification numbers 20, 23 and 263].

Consequential amendment for capacitors:

1.1.3.6.3 For transport category 4, in column (2), for Class 9, replace "UN No. 3268" with "UN Nos. 3268 and 3499":

Chapter 3.3

3.3.1

~~SP188 (b) — At the end, delete "which may be transported in accordance with this special provision and without this marking until 31 December 2010".~~

SP188 (b) At the end, add ", except those manufactured before 1 January 2009".

Consequential amendment: Amend SP 656 to read "656 (Deleted)".

SP188 (c) Amend to read as follows:

"(c) Each cell or battery meets the provisions of ~~2.9.42.2.9.1.7~~ (a) and (e);".

SP188 (e) Insert the following new second sentence: "This requirement does not apply to devices which are intentionally active in [transport] (radio frequency identification (RFID) transmitters, watches, sensors, etc.) and which are not capable of generating a dangerous evolution of heat." *(Note: was "transport" in SP656 ADR 2011)*

SP230 Amend to read as follows:

"**230** Lithium cells and batteries may be ~~transported~~carried under this entry if they meet the provisions of ~~2.9.42.2.9.1.7~~".

SP239 In the first sentence, replace, "sodium, sulphur and/or polysulphides" with "sodium, sulphur or sodium compounds (e.g. sodium polysulphides and sodium tetrachloroaluminate)".

~~SP240 — 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 transported with these batteries installed.~~

~~———— 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, motoreycles, scooters, three and four wheeled vehicles or motoreycles, e-bikes, wheel chairs, lawn tractors, boats and aircraft.~~

~~———— 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 consigned under 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, transported with the battery(ies) installed shall be consigned under 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 consigned under the entries UN 3166 VEHICLE, FUEL CELL, FLAMMABLE GAS POWERED or UN 3166 VEHICLE, FUEL CELL, FLAMMABLE LIQUID POWERED, as appropriate."~~

SP272 In the text in parentheses, at the end, add "or UN [No. 0150](#) as appropriate".

SP289 Replace "installed in conveyances or in completed conveyance components" with "installed in vehicles, vessels or aircrafts or in completed components".

SP296 (c) Insert "or liquefied" after "compressed".

SP296 Add the following new paragraph at the end:

"Life-saving appliances packed in strong rigid outer packagings with a total maximum gross mass of 40 kg, containing no dangerous goods other than ~~Division 2.2~~ compressed or liquefied gases [of group A or O](#) with no subsidiary risk in receptacles with a capacity not exceeding 120 ml, installed solely for the purpose of the activation of the appliance, are not subject to [the requirements of RID/ADR/ADN](#) ~~these Regulations~~".

~~**SP297** Amend to read as follows: "297 (Deleted)".~~

SP300 Replace "Fish meal or fish scrap" with "Fish meal, fish scrap and krill meal".

~~**SP301** In the last sentence, at the end, add ", except where special provision 363 applies".~~

~~**SP304** Amend to read as follows:~~

~~**304** This entry may only be used for the transport of non-activated batteries which contain dry potassium hydroxide and which are intended to be activated prior to use by the addition of an appropriate amount of water to the individual cells."~~

~~**SP312** Replace "or lithium batteries" with ", lithium metal batteries or lithium ion batteries" (twice).~~

SP327 In the third sentence, replace "P003" with "P207".

SP328 Add the following new paragraph at the end:

"When lithium metal or lithium ion batteries are contained in the fuel cell system, the consignment shall be consigned under this entry and under the appropriate entries for UN 3091 LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT or UN 3481 LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT."

SP338 Amend paragraph (b) to read as follows:

"(b) Not contain more than 200 ml liquefied flammable gas, the vapour pressure of which shall not exceed 1 000 kPa at 55 °C; and".

SP356 Amend the first sentence to read as follows: "Metal hydride storage systems installed in vehicles, vessels or aircrafts or in completed components or intended to be installed in vehicles, vessels or aircrafts shall be approved by the competent authority [of the country of manufacture](#)¹ before acceptance for [carriage transport](#)".

[Footnote 1 unchanged.](#)

3.3.1 Add the following new special provisions:

~~"123 Subject to these Regulations only when transported by air or by sea."~~

"358 Nitroglycerin solution in alcohol with more than 1% but not more than 5% nitroglycerin may be classified in Class 3 and assigned to UN 3064 provided all the requirements of packing instruction P300 (ADN: of ADR) are complied with."

Consequential amendment: Amend SP 500 to read "500 (Deleted)".

"359 Nitroglycerin solution in alcohol with more than 1% but not more than 5% nitroglycerin shall be classified in Class 1 and assigned to UN 0144 if not all the requirements of packing instruction P300 (ADN: of ADR) are complied with."

"360 Vehicles only powered by lithium metal batteries or lithium ion batteries shall be consigned under the entry UN 3171 BATTERY-POWERED VEHICLE."

"361 This entry applies to electric double layer capacitors with an energy storage capacity greater than 0.3 Wh. Capacitors with an energy storage capacity of 0.3 Wh or less are not subject to ~~RID/ADR/ADN these Regulations~~. Energy storage capacity means the energy held by a capacitor, as calculated using the nominal voltage and capacitance. All capacitors to which this entry applies, including capacitors containing an electrolyte that does not meet the classification criteria of any class ~~or division~~ of dangerous goods, shall meet the following conditions:

(a) Capacitors not installed in equipment shall be ~~transported~~carried in an uncharged state. Capacitors installed in equipment shall be ~~transported~~carried either in an uncharged state or protected against short circuit;

(b) Each capacitor shall be protected against a potential short circuit hazard in ~~transport~~carriage as follows:

- (i) When a capacitor's energy storage capacity is less than or equal to 10Wh or when the energy storage capacity of each capacitor in a module is less than or equal to 10 Wh , the capacitor or module shall be protected against short circuit or be fitted with a metal strap connecting the terminals; and
- (ii) When the energy storage capacity of a capacitor or a capacitor in a module is more than 10 Wh, the capacitor or module shall be fitted with a metal strap connecting the terminals;

(c) Capacitors containing dangerous goods shall be designed to withstand a 95 kPa pressure differential;

(d) Capacitors shall be designed and constructed to safely relieve pressure that may build up in use, through a vent or a weak point in the capacitor casing. Any liquid which is released upon venting shall be contained by packaging or by equipment in which a capacitor is installed; and

(e) Capacitors shall be marked with the energy storage capacity in Wh.

Capacitors containing an electrolyte not meeting the classification criteria of any class ~~or division~~ of dangerous goods, including when installed in equipment, are not subject to other provisions of ~~RID/ADR/ADN these Regulations~~.

Capacitors containing an electrolyte meeting the classification criteria of any class ~~or division~~ of dangerous goods, with an energy storage capacity of 10 Wh or less are not subject to other provisions of ~~RID/ADR/ADN these Regulations~~ when they are capable of

withstanding a 1.2 metre drop test unpackaged on an unyielding surface without loss of contents.

Capacitors containing an electrolyte meeting the classification criteria of any class or ~~division~~ of dangerous goods that are not installed in equipment and with an energy storage capacity of more than 10 Wh are subject to [RID/ADR/ADN](#)~~these Regulations~~.

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

NOTE: Capacitors which by design maintain a terminal voltage (e.g. asymmetrical capacitors) do not belong to this entry."

~~"362 This entry applies to liquids, pastes or powders, pressurized with a propellant which meets the definition of a gas in 2.2.1.1 and 2.2.1.2 (a) or (b).~~

~~—— NOTE: A chemical under pressure in an aerosol dispenser shall be transported under UN 1950.~~

~~—— The following provisions shall apply:~~

~~—— (a) The chemical under pressure shall be classified based on the hazard characteristics of the components in the different states:~~

- ~~•The propellant;~~
- ~~•The liquid; or~~
- ~~•The solid.~~

~~—— If one of these components, which can be a pure substance or a mixture, needs to be classified as flammable, the chemical under pressure shall be classified as flammable in Division 2.1. Flammable components are flammable liquids and liquid mixtures, flammable solids and solid mixtures or flammable gases and gas mixtures meeting the following criteria:~~

- ~~(i) A flammable liquid is a liquid having a flashpoint of not more than 93 °C;~~
- ~~(ii) A flammable solid is a solid which meets the criteria in 2.4.2.2 of these Regulations;~~
- ~~(iii) A flammable gas is a gas which meets the criteria in 2.2.2.1 of these Regulations;~~

~~—— (b) Gases of Division 2.3 and gases with a subsidiary risk of 5.1 shall not be used as a propellant in a chemical under pressure;~~

~~—— (c) Where the liquid or solid components are classified as dangerous goods of Division 6.1, packing groups II or III, or Class 8, packing groups II or III, the chemical under pressure shall be assigned a subsidiary risk of Division 6.1 or Class 8 and the appropriate UN number shall be assigned. Components classified in Division 6.1, packing group I, or Class 8, packing group I, shall not be used for transport under this proper shipping name;~~

~~— (d) — In addition, chemicals under pressure with components meeting the properties of : Class 1, explosives; Class 3, liquid desensitized explosives; Division 4.1, self reactive substances and solid desensitized explosives; Division 4.2, substances liable to spontaneous combustion; Division 4.3, substances which, in contact with water, emit flammable gases; Division 5.1 oxidizing substances; Division 5.2, organic peroxides; Division 6.2, Infectious substances or Class 7, Radioactive material, shall not be used for transport under this proper shipping name; [Transferred in 2.2.2.1.7]~~

~~— (e) —~~ Substances to which PP86 or TP7 are assigned in Column (9a) and Column (11) of ~~Table A the Dangerous Goods List~~ in Chapter 3.2 and therefore require air to be eliminated from the vapour space, shall not be used for ~~transport~~carriage under this UN number but shall be ~~transported~~carried under their respective UN numbers as listed in ~~Table A the Dangerous Goods List~~ of Chapter 3.2. "

"363 This entry also applies to dangerous goods above the quantity specified in Column (7a) of ~~Table A the Dangerous Goods List~~ of Chapter 3.2 in means of containment (other than vehicles ~~or means of containment defined in Part 6 of these Regulations subject to special provision 301~~) integral to equipment or machinery (e.g. generators, compressors, heating units, etc) as part of their original design type. They shall meet the following requirements:

(a) The means of containment shall be in compliance with the construction requirements of the competent authority;

(b) Any valves or openings (e.g. venting devices) in the means of containment containing dangerous goods shall be closed during ~~transport~~carriage;

(c) The machinery or equipment shall be loaded in an orientation to prevent inadvertent leakage of dangerous goods and secured by means capable of restraining the machinery or equipment to prevent any movement during ~~transport~~carriage which would change the orientation or cause it to be damaged;

(d) Where the means of containment has a capacity of not more than 450 litres, the labelling requirements of 5.2.2 shall apply and where the capacity is greater than 450 litres but not more than 1 500 litres the machinery or equipment shall be labelled on all four external sides in accordance with 5.2.2;

(e) Where the means of containment has a capacity greater than 1 500 litres, the machinery or equipment shall be placarded on all four external sides in accordance with ~~5.3.1.1.1.5.3.1.1.2~~; and

(f) The requirement of 5.4.1 shall apply.

No other provisions of ~~RID/ADR/ADN these Regulations~~ shall apply. "

"364 This article may only be ~~transported~~carried under the provisions of Chapter 3.4 if, as presented for ~~transport~~carriage, the package is capable of passing the test in accordance with Test Series 6(d) of Part I of the *Manual of Tests and Criteria* as determined by the competent authority."

"365 For manufactured instruments and articles containing mercury, see UN 3506."

~~"366 For land and sea transport, m~~Manufactured instruments and articles containing not more than 1 kg of mercury are not subject to ~~RID/ADR/ADN these Regulations. _For air transport, articles containing not more than 15 g of mercury are not subject to these Regulations."~~

Consequential amendment: Amend SP 599 to read "599 (Deleted)".

Chapter 3.4

3.4.2 Amend Chapter 3.4 to read as follows:

~~Chapter 3.4~~

~~Dangerous goods packed in limited quantities~~

~~3.4.1—This Chapter provides the provisions applicable to the transport of dangerous goods of certain classes packed in limited quantities. The applicable quantity limit for the inner packaging or article is specified for each substance in Column 7a of the Dangerous Goods List of Chapter 3.2. In addition, the quantity "0" has been indicated in this column for each entry not permitted to be transported in accordance with this Chapter.~~

~~— Limited quantities of dangerous goods packed in such limited quantities, meeting the provisions of this Chapter, are not subject to any other provisions of these Regulations except the relevant provisions of:~~

- ~~(a) — Part 1, Chapters 1.1, 1.2 and 1.3;~~
- ~~(b) — Part 2;~~
- ~~(c) — Part 3, Chapters 3.1, 3.2, 3.3;~~
- ~~(d) — Part 4, paragraphs 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8;~~

~~— *NOTE: For air transport, additional provisions apply; refer to Part 3, Chapter 4 of the ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air.*~~

- ~~(e) — Part 5:

 - ~~(i) — For air transport: chapters 5.1, 5.2 and 5.4;~~
 - ~~(ii) — For sea transport: 5.1.1.2, 5.1.2.3, 5.2.1.7 and chapter 5.4;~~
 - ~~(iii) — For transport by road, rail or inland waterway: 5.1.1.2, 5.1.2.3, 5.2.1.7 and section 5.4.2.~~~~
- ~~(f) — Part 6, construction requirements of 6.1.4, paragraph 6.2.1.2 and section 6.2.4;~~
- ~~(g) — Part 7, section 7.1.1 except first sentence of 7.1.1.7, paragraph 7.1.3.1.4 and sub section 7.1.3.2.~~

3.4.2 Dangerous goods shall be packed only in inner packagings placed in suitable outer packagings. Intermediate packagings may be used. In addition, for articles of Division 1.4, Compatibility Group S, the provisions of section 4.1.5 (ADN: of ADR) shall be fully complied with. The use of inner packagings is not necessary for the ~~transport~~carriage of articles such as aerosols or "receptacles, small, containing gas". The total gross mass of the package shall not exceed 30 kg."

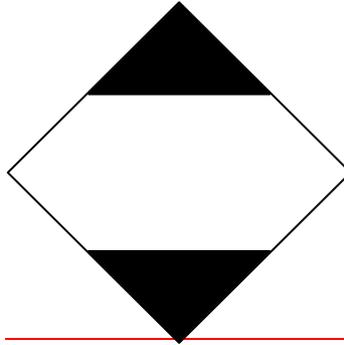
3.4.3 Add the following text at the beginning:

"Except for articles of Division 1.4, Compatibility Group S...", ~~shrink wrapped or stretch wrapped trays meeting the conditions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8 are acceptable as outer packagings for articles or inner packagings containing dangerous goods transported in accordance with this Chapter. Inner packagings that are liable to break or be easily punctured, such as those made of glass, porcelain, stoneware or certain plastics, shall be placed in suitable intermediate packagings meeting the provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8, and be so designed that they meet the construction requirements of 6.1.4. The total gross mass of the package shall not exceed 20 kg.~~

~~3.4.4 Liquid goods of Class 8, packing group II in glass, porcelain or stoneware inner packagings shall be enclosed in a compatible and rigid intermediate packaging.~~

~~3.4.5 and 3.4.6 — (Deleted)~~

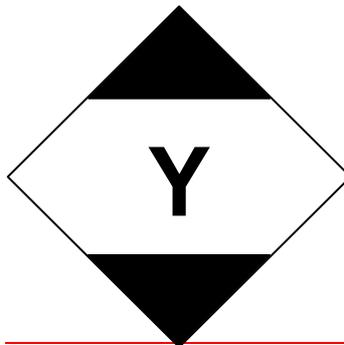
~~3.4.7 Except for air transport, packages containing dangerous goods in limited quantities shall bear the marking shown below:~~



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

~~— The top and bottom portions and the surrounding line shall be black. The centre area shall be white or a suitable contrasting background. The minimum dimensions shall be 100 mm × 100 mm and the minimum width of line forming the diamond shall be 2 mm. If the size of the package so requires, the dimension may be reduced, to be not less than 50 mm × 50 mm provided the marking remains clearly visible.~~

~~3.4.8 Packages containing dangerous goods consigned for air transport in conformity with the provisions of Part 3, Chapter 4 of the ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air shall bear the marking shown below:~~



~~— The marking shall be readily visible, legible and able to withstand open weather exposure without a substantial reduction in effectiveness. The top and bottom portions and the surrounding line shall be black. The centre area shall be white or a suitable contrasting background. The minimum dimensions shall be 100 mm × 100 mm. The minimum width of line forming diamond shall be 2 mm. The symbol "Y" shall be placed in the centre of the mark and shall be clearly visible. If the size of the package so requires, the dimension may be reduced, to be not less than 50 mm × 50 mm provided the marking remains clearly visible.~~

~~3.4.9 Packages containing dangerous goods bearing the marking shown in 3.4.8 shall be deemed to meet the provisions of sections 3.4.1 to 3.4.4 of this Chapter and need not bear the marking shown in 3.4.7.~~

~~3.4.10 (Deleted)~~

~~3.4.11 When packages containing dangerous goods in limited quantities are placed in an overpack, the overpack shall be marked with the word "OVERPACK" and the marking required by this Chapter unless the markings representative of all dangerous goods in the overpack are visible. 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."~~

Chapter 3.5

3.5.1 Insert a new sub-section 3.5.1.4 to read as follows:

"3.5.1.4 Excepted quantities of dangerous goods assigned to codes E1, E2, E4 and E5 ~~are not subject to these Regulations provided that:~~ with

- ~~(a) The a~~ maximum net quantity of material per inner packaging ~~is~~ limited to 1 ml for liquids and gases and 1 g for solids; and
- a maximum net quantity of dangerous goods per outer packaging which does not exceed 100 g for solids or 100 ml for liquids and gases

are only subject to:

~~(ba)~~ The provisions of 3.5.2 ~~are met~~, except that an intermediate packaging is not required if the inner packagings are securely packed in an outer packaging with cushioning material in such a way that, under normal conditions of carriage transport, they cannot break, be punctured, or leak their contents; and for liquid dangerous goods, the outer packaging contains sufficient absorbent material to absorb the entire contents of the inner packagings; and

~~(eb)~~ The provisions of 3.5.3 ~~are complied with; and~~

~~(d) The maximum net quantity of dangerous goods per outer packaging does not exceed 100 g for solids or 100 ml for liquids and gases."~~

~~**Appendix B**~~

~~In the definition for "ARTICLES, EXPLOSIVE, EXTREMELY INSENSITIVE (ARTICLES, EED)", delete "detonating".~~

~~In the definition for "Cartridges, blank", insert "tools," after "starter pistols,".~~

~~Replace the definition for "EXPLOSIVE, EXTREMELY INSENSITIVE DETONATING SUBSTANCE (EIDS)" with the following definition:~~

~~"EXPLOSIVE, EXTREMELY INSENSITIVE SUBSTANCE (EIS)~~

~~A substance which has demonstrated through tests that it is so insensitive that there is very little probability of accidental initiation."~~

~~Insert the following new definition:~~

~~"AUXILIARY EXPLOSIVE COMPONENT, isolated~~

~~An "isolated auxiliary explosive component" is a small device that explosively performs an operation related to the article's functioning, other than its main explosive loads' performance. Functioning of the component does not cause any reaction of the main explosive loads contained within the article."~~

Chapter 4.1

Insert a new 4.1.1.16 to read as follows [and renumber following sub-sections and cross-references accordingly](#):

"4.1.1.16 Where ice is used as a coolant it shall not affect the integrity of the packaging."

~~Renumber existing 4.1.1.16 and 4.1.1.17 accordingly.~~

Insert a new 4.1.1.~~19~~20 to read as follows ([sub-section on chemical compatibility is renumbered 4.1.1.21](#)):

~~"4.1.1.19~~ **4.1.1.20** *Use of salvage pressure receptacles*

~~4.1.1.19.14~~4.1.1.20.1 In the case of damaged, defective, leaking or non-conforming pressure receptacles, salvage pressure receptacles according to 6.2.3 may be used.

NOTE: A salvage pressure receptacle may be used as an overpack in accordance with 5.1.2. When used as an overpack, markings shall be in accordance with 5.1.2.1 instead of 5.2.1.3.

~~4.1.1.19.24~~4.1.1.20.2 Pressure receptacles shall be placed in salvage pressure receptacles of suitable size. More than one pressure receptacle may be placed in the same salvage pressure receptacle only if the contents are known and do not react dangerously with each other (see 4.1.1.6). Measures shall be taken to prevent movement of the pressure receptacles within the salvage pressure receptacle e.g. by partitioning, securing or cushioning.

~~4.1.1.19.34~~4.1.1.20.3 A pressure receptacle may only be placed in a salvage pressure receptacle if:

(a) The salvage pressure receptacle is in accordance with ~~6.2.3.5~~6.2.3.11 and a copy of the approval certificate is available;

(b) Parts of the salvage pressure receptacle which are, or are likely to be in direct contact with the dangerous goods will not be affected or weakened by those dangerous goods and will not cause a dangerous effect (e.g. catalyzing reaction or reacting with the dangerous goods); and

(c) The contents of the contained pressure receptacle(s) is limited in pressure and volume so that if totally discharged into the salvage pressure receptacle, the pressure in the salvage pressure receptacle at 65 °C will not exceed the test pressure of the salvage pressure receptacle (for gases, see packing instruction in P200 (3) [in](#) 4.1.4.1). The reduction of the useable water capacity of the salvage pressure receptacle, e.g. by any contained equipment and cushioning, shall be taken into account.

~~4.1.1.19.44~~4.1.1.20.4 The proper shipping name, the UN Number preceded by the letters "UN" and label(s) as required for packages in Chapter 5.2 applicable to the dangerous goods inside the contained pressure receptacle(s) shall be applied to the salvage pressure receptacle for ~~transport~~carriage.

~~4.1.1.19.54~~4.1.1.20.5 Salvage pressure receptacles shall be cleaned, purged and visually inspected internally and externally after each use. They shall be periodically inspected and tested in accordance with [\[6.2.3.5\]](#)[\[6.2.1.6.1\]](#)~~6.2.1.6~~ at least once every five years."

4.1.4.1

P001 For "Combination packagings", under "Outer packagings", amend the entries for "Drums" to read as follows (the values for Maximum capacity/Net mass remain unchanged):

steel (1A1, 1A2)
aluminium (1B1, 1B2)
other metal (1N1, 1N2)
plastics (1H1, 1H2)
plywood (1D)
fibre (1G)

P001 For "Combination packagings", under "Outer packagings", "Boxes", after "aluminium (4B)", insert the following row:

other metal (4N)	250 kg	400 kg	400 kg
------------------	--------	--------	--------

P001 For "Combination packagings", under "Outer packagings", amend the entries for "Jerricans" to read as follows (the values for Maximum capacity/Net mass remain unchanged):

steel (3A1, 3A2)
aluminium (3B1, 3B2)
plastics (3H1, 3H2)

P002 For "Combination packagings", under "Outer packagings", amend the entries for "Drums" to read as follows (the values for Maximum net mass remain unchanged):

steel (1A1, 1A2)
aluminium (1B1, 1B2)
other metal (1N1, 1N2)
plastics (1H1, 1H2)
plywood (1D)
fibre (1G)

P002 For "Combination packagings", "Outer packagings", "Boxes", after "aluminium (4B)", insert the following row:

other metal (4N)	400 kg	400 kg	400 kg
------------------	--------	--------	--------

P002 For "Combination packagings", under "Outer packagings", amend the entries for "Jerricans" to read as follows (the values for Maximum net mass remain unchanged):

steel (3A1, 3A2)
aluminium (3B1, 3B2)
plastics (3H1, 3H2)

P002 For "Single packagings", "Boxes", after "aluminium (4B)^c", insert the following row:

other metal (4N) ^c	Not allowed	400 kg	400 kg
-------------------------------	-------------	--------	--------

~~**P002** In special packing provision PP85, at the end, add the following sentence: "For transport by sea, bags are not allowed as single packagings."~~

P003 In special packing provision PP17, ~~delete-replace "UN Nos. 1950 and" with "UN No."~~. Delete special packing provision PP87. In special packing provision RR6 specific to RID and ADR, replace "UN 1950 and" with "UN No."

Insert the following new special packing provision PP90:

"PP90 For UN No. 3506, sealed inner liners or bags of strong leak-proof and puncture resistant material impervious to mercury which will prevent escape of the substance from the package irrespective of the position of the package shall be used. ~~For air transport additional requirements may apply.~~"

P004 Amend to read as follows:

P004	PACKING INSTRUCTION	P004
This instruction applies to UN Nos. 3473, 3476, 3477, 3478 and 3479.		
The following packagings are authorized:		
(1)	For fuel cell cartridges, provided that the general provisions of 4.1.1.1, 4.1.1.2, 4.1.1.3, 4.1.1.6 and 4.1.3 are met: Drums (1A2, 1B2, 1N2, 1H2, 1D, 1G); Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2); Jerricans (3A2, 3B2, 3H2). Packagings shall conform to the packing group II performance level.	
(2)	For fuel cell cartridges packed with equipment: strong outer packagings which meet the general provisions of 4.1.1.1, 4.1.1.2, 4.1.1.6 and 4.1.3 . When fuel cell cartridges are packed with equipment, they shall be packed in inner packagings or placed in the outer packaging with cushioning material or divider(s) so that the fuel cell cartridges are protected against damage that may be caused by the movement or placement of the contents within the outer packaging. The equipment shall be secured against movement within the outer packaging. For the purpose of this packing instruction, "equipment" means apparatus requiring the fuel cell cartridges with which it is packed for its operation.	
(3)	For fuel cell cartridges contained in equipment: strong outer packagings which meet the general provisions of 4.1.1.1, 4.1.1.2, 4.1.1.6 and 4.1.3 . Large robust equipment (see 4.1.3.8) containing fuel cell cartridges may be transported <u>carried</u> unpackaged. For fuel cell cartridges contained in equipment, the entire system shall be protected against short circuit and inadvertent operation.	

P010 For "Combination packagings", under "Outer packagings":

- Under "Drums", for "steel", insert "1A1," before "1A2";
- Under "Drums", for "plastics", insert "1H1," before "1H2";

P010 At the end, add the following new row:

Steel pressure receptacles , provided that the general provisions of 4.1.3.6 are met.
--

~~**P110(a)** — For "Inner packagings", insert two new rows to read:~~

~~**"Receptacles**
wood":~~

~~**P110(a)** — For "Intermediate packagings", "Receptacles", insert a new row to read:
"wood":~~

P110(a) — Amend the entries under "Outer packagings", "Drums" to read:

~~steel (1A1, 1A2)~~
~~metal, other than steel or aluminium (1N1, 1N2)~~
~~plastics (1H1, 1H2)~~

P111 For "Inner packagings [and arrangements](#)", insert two new rows to read:

"Receptacles
 wood".

P111 For "Outer packagings [and arrangements](#) ", "Boxes", after "aluminium (4B)", insert a new row to read: "other metal (4N)".

P111 Amend the entries under "Outer packagings [and arrangements](#) ", "Drums" to read:

steel (1A1, 1A2)
 aluminium (1B1, 1B2)
 other metal (1N1, 1N2)
 plywood (1D)
 fibre (1G)
 plastics (1H1, 1H2)

P112(a) For "Inner packagings [and arrangements](#) ", "Receptacles", insert a new line to read: "wood".

P112(a) For "Intermediate packagings [and arrangements](#) ", "Receptacles", insert a new row to read: "wood".

P112(a) For "Outer packagings [and arrangements](#) ", "Boxes", after "aluminium (4B)", insert a new row to read: "other metal (4N)".

P112(a) Amend the entries under "Outer packagings [and arrangements](#) ", "Drums" to read:

steel (1A1, 1A2)
 aluminium (1B1, 1B2)
 other metal (1N1, 1N2)
 plywood (1D)
 fibre (1G)
 plastics (1H1, 1H2)

P112(b) For "Outer packagings [and arrangements](#)", "Boxes", after "aluminium (4B)", insert a new row to read: "other metal (4N)".

~~For "Outer packagings", "Drums", after "aluminium, removable head (1B2)", insert "other metal, removable head (1N2)".~~

[\[ST/SG/AC.10/38/Add.1/Corr.1\]](#)

P112(b) Amend the entries under "Outer packagings [and arrangements](#) ", "Drums" to read:

steel (1A1, 1A2)

aluminium (1B1, 1B2)
other metal (1N1, 1N2)
plywood (1D)
fibre (1G)
plastics (1H1, 1H2)

P112(c) For "Intermediate packagings [and arrangements](#)", "Receptacles", insert a new row to read: "wood".

~~**P112(e)** For "Outer packagings", "Boxes", after "steel (4A)", insert a new row to read: "metal, other than steel or aluminium (4N)".~~

P112(c) Amend the entries under "Outer packagings [and arrangements](#)", "Boxes" to read:

steel (4A)
aluminium (4B)
other metal (4N)
natural wood, ordinary (4C1)
natural wood, sift-proof (4C2)
plywood (4D)
reconstituted wood (4F)
fibreboard (4G)
plastics, solid (4H2)

[\[ST/SG/AC.10/38/Add.1/Corr.1\]](#)

P112(c) Amend the entries under "Outer packagings [and arrangements](#)", "Drums" to read:

steel (1A1, 1A2)
aluminium (1B1, 1B2)
other metal (1N1, 1N2)
plywood (1D)
fibre (1G)
plastics (1H1, 1H2)

~~**P113** For "Outer packagings", "Boxes", after "steel (4A)", insert a new row to read: "metal, other than steel or aluminium (4N)".~~

P113 Amend the entries under "Outer packagings [and arrangements](#)", "Boxes" to read:

steel (4A)
aluminium (4B)
other metal (4N)
natural wood, ordinary (4C1)
natural wood, sift-proof walls (4C2)
plywood (4D)
reconstituted wood (4F)
fibreboard (4G)
plastics, solid (4H2)

[\[ST/SG/AC.10/38/Add.1/Corr.1\]](#)

P113 Amend the entries under "Outer packagings [and arrangements](#)", "Drums" to read:

steel (1A1, 1A2) aluminium (1B1, 1B2) other metal (1N1, 1N2) plywood (1D) fibre (1G) plastics (1H1, 1H2)

P114(a) For "Inner packagings [and arrangements](#)", "Receptacles", insert a new line to read: "wood".

P114(a) For "Intermediate packagings [and arrangements](#)", insert two new lines to read:

"Dividing partitions
wood".

P114(a) For "Outer packagings [and arrangements](#)", "Boxes", after "steel (4A)", insert a new row to read: "metal, other than steel or aluminium (4N)".

P114(a) Amend the entries under "Outer packagings [and arrangements](#)", "Drums" to read:

steel (1A1, 1A2) aluminium (1B1, 1B2) other metal (1N1, 1N2) fibre (1G) plastics (1H1, 1H2)

P114(a) In special packing provisions PP43, replace "1A2 or 1B2" with "1A2, 1B2 or 1N2".

P114(b) For "Inner packagings [and arrangements](#)", "Receptacles", insert a new line to read: "wood".

P114(b) Amend the entries under "Outer packagings [and arrangements](#)", "Drums" to read:

steel (1A1, 1A2) aluminium (1B1, 1B2) other metal (1N1, 1N2) plywood (1D) fibre (1G) plastics (1H1, 1H2)

~~**P114(b)** — In special packing provisions PP52, replace "1A2 or 1B2" with "1A2, 1B2 or 1N2".~~

P114(b) [In special packing provisions PP52, replace "1A2 or 1B2" with "1A1, 1A2, 1B1, 1B2, 1N1 or 1N2".](#)

[\[ST/SG/AC.10/38/Add.1/Corr.1\]](#)

P115 For "Inner packagings [and arrangements](#)", "Receptacles", insert a new line to read: "wood".

P115 For "Intermediate packagings [and arrangements](#)", insert two new rows to read:

"Receptacles
wood".

P115 Amend the entries under "Outer packagings [and arrangements](#)", "Drums" to read:

steel (1A1, 1A2)
aluminium (1B1, 1B2)
other metal (1N1, 1N2)
plywood (1D)
fibre (1G)
plastics (1H1, 1H2)

P115 [Amend special packing provision PP60 to read as follows:](#)

["PP60 For UN No. 0144, aluminium drums \(1B1 and 1B2\) and metal, other than steel or aluminium, drums \(1N1 and 1N2\) shall not be used."](#)

~~**P115** ——— In special packing provisions PP60, after "aluminium drums, removable head (1B2)", insert "and metal, other than steel or aluminium, drums, removable head (1N2)".~~

[\[ST/SG/AC.10/38/Add.1/Corr.1\]](#)

P116 For "Outer packagings [and arrangements](#)", "Boxes", after "aluminium (4B)", insert a new row to read: "other metal (4N)".

P116 Amend the entries under "Outer packagings [and arrangements](#)", "Drums" and "Jerricans" to read:

Drums
steel (1A1, 1A2)
aluminium (1B1, 1B2)
other metal (1N1, 1N2)
fibre (1G)
plastics (1H1, 1H2)
plywood (1D)
Jerricans
steel (3A1, 3A2)
plastics (3H1, 3H2)

P130 For "Outer packagings [and arrangements](#)", "Boxes", after "aluminium (4B)", insert a new row to read: "other metal (4N)".

P130 Amend the entries under "Outer packagings [and arrangements](#)", "Drums" to read:

steel (1A1, 1A2)
aluminium (1B1, 1B2)
other metal (1N1, 1N2)

plywood (1D)
 fibre (1G)
 plastics (1H1, 1H2)

P131 For "Outer packagings [and arrangements](#)", "Boxes", after "aluminium (4B)", insert a new row to read: "other metal (4N)".

P131 Amend the entries under "Outer packagings [and arrangements](#)", "Drums" to read:

steel (1A1, 1A2)
 aluminium (1B1, 1B2)
 other metal (1N1, 1N2)
 plywood (1D)
 fibre (1G)
 plastics (1H1, 1H2)

P132(a) For "Outer packagings [and arrangements](#)", "Boxes", after "aluminium (4B)", insert a new row to read: "other metal (4N)".

P132(b) For "Inner packagings [and arrangements](#)", "Receptacles", insert a new line to read: "wood".

P132(b) For "Outer packagings [and arrangements](#)", "Boxes", after "aluminium (4B)", insert "other metal (4N)".

P133 For "Outer packagings [and arrangements](#)", "Boxes", after "aluminium (4B)", insert a new row to read: "other metal (4N)".

P134 For "Outer packagings [and arrangements](#)", "Boxes", after "aluminium (4B)", insert a new row to read: "other metal (4N)".

P134 Amend the entries under "Outer packagings [and arrangements](#)", "Drums" to read:

steel (1A1, 1A2)
 aluminium (1B1, 1B2)
 other metal (1N1, 1N2)
 plywood (1D)
 fibre (1G)
 plastics (1H1, 1H2)

P135 For "Outer packagings [and arrangements](#)", "Boxes", after "aluminium (4B)", insert "other metal (4N)".

P135 Amend the entries under "Outer packagings", "Drums" to read:

steel (1A1, 1A2)
 aluminium (1B1, 1B2)
 other metal (1N1, 1N2)
 plywood (1D)
 fibre (1G)
 plastics (1H1, 1H2)

P136 For "Outer packagings [and arrangements](#)", "Boxes", after "aluminium (4B)", insert "other metal (4N)".

P136 Amend the entries under "Outer packagings [and arrangements](#)", "Drums" to read:

steel (1A1, 1A2)
aluminium (1B1, 1B2)
other metal (1N1, 1N2)
plywood (1D)
fibre (1G)
plastics (1H1, 1H2)

P137 For "Inner packagings [and arrangements](#)", "Boxes", insert a new row to read: "wood".

P137 For "Outer packagings [and arrangements](#)", "Boxes", after "aluminium (4B)", insert "other metal (4N)".

P137 Amend the entries under "Outer packagings [and arrangements](#)", "Drums" to read:

steel (1A1, 1A2)
aluminium (1B1, 1B2)
other metal (1N1, 1N2)
plywood (1D)
fibre (1G)
plastics (1H1, 1H2)

P138 For "Outer packagings [and arrangements](#)", "Boxes", after "aluminium (4B)", insert a new row to read: "other metal (4N)".

P138 Amend the entries under "Outer packagings [and arrangements](#)", "Drums" to read:

steel (1A1, 1A2)
aluminium (1B1, 1B2)
other metal (1N1, 1N2)
plywood (1D)
fibre (1G)
plastics (1H1, 1H2)

P139 For "Outer packagings [and arrangements](#)", "Boxes", after "aluminium (4B)", insert a new row to read: "other metal (4N)".

P139 Amend the entries under "Outer packagings [and arrangements](#)", "Drums" to read:

steel (1A1, 1A2)
aluminium (1B1, 1B2)
other metal (1N1, 1N2)
plywood (1D)
fibre (1G)
plastics (1H1, 1H2)

P140 For "Inner packagings [and arrangements](#)", insert two new rows to read:

"Receptacles

wood".

P140 For "Outer packagings [and arrangements](#)", "Boxes", after "aluminium (4B)", insert a new row to read: "other metal (4N)".

P140 Amend the entries under "Outer packagings [and arrangements](#)", "Drums" to read:

steel (1A1, 1A2)
aluminium (1B1, 1B2)
other metal (1N1, 1N2)
plywood (1D)
fibre (1G)
plastics (1H1, 1H2)

[P140 In special packing provision PP75, replace "steel or aluminium" with "steel, aluminium or other metal".](#)

[\[ST/SG/AC.10/38/Add.1/Corr.1\]](#)

P141 For "Outer packagings [and arrangements](#)", "Boxes", after "aluminium (4B)", insert a new row to read: "other metal (4N)".

P141 Amend the entries under "Outer packagings [and arrangements](#)", "Drums" to read:

steel (1A1, 1A2)
aluminium (1B1, 1B2)
other metal (1N1, 1N2)
plywood (1D)
fibre (1G)
plastics (1H1, 1H2)

P142 For "Outer packagings [and arrangements](#)", "Boxes", after "aluminium (4B)", insert a new row to read: "other metal (4N)".

P142 Amend the entries under "Outer packagings [and arrangements](#)", "Drums" to read:

steel (1A1, 1A2)
aluminium (1B1, 1B2)
other metal (1N1, 1N2)
plywood (1D)
fibre (1G)
plastics (1H1, 1H2)

P143 For "Inner packagings [and arrangements](#)", "Receptacles", insert a new line to read: "wood".

P143 For "Outer packagings [and arrangements](#)", "Boxes", after "aluminium (4B)", insert "other metal (4N)".

P143 Amend the entries under "Outer packagings [and arrangements](#)", "Drums" to read:

steel (1A1, 1A2)
aluminium (1B1, 1B2)

other metal (1N1, 1N2) plywood (1D) fibre (1G) plastics (1H1, 1H2)

P144 For "Inner packagings [and arrangements](#)", "Receptacles", insert a new line to read: "wood".

P144 For "Outer packagings [and arrangements](#)", "Boxes", after "aluminium (4B)", insert a new row to read "other metal (4N)".

P144 Amend the entries under "Outer packagings [and arrangements](#)", "Drums" to read:

steel (1A1, 1A2) aluminium (1B1, 1B2) other metal (1N1, 1N2) plastics (1H1, 1H2)

P200, Paragraph (104): Amend the first line reading "Keys for the column "Special packing provisions"" to read "Special packing provisions".

P200, Paragraph (104): Amend the first heading reading "Material compatibility (for gases see ISO 11114-1:1997 and ISO 11114-2:2000" to read "Material compatibility".

P200, Paragraph (104): Amend sub-paragraph a to read:

"a: Aluminium alloy pressure receptacles shall not be used."

P200, Paragraph (104): Amend sub-paragraph d to read:

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

P200, Table 2: For UN Nos. 1008, 1076, 1741, 1859, 2189 and 2418, insert "a" in column "Special packing provisions".

P200, Table 3: For UN No. 1052, insert "a" in column "Special packing provisions".

P201 Amend to read as follows:

P201	PACKING INSTRUCTION	P201
This instruction applies to UN Nos. 3167, 3168 and 3169.		
The following packagings are authorized:		
(1)	Compressed gas cylinders and gas receptacles conforming to the construction, testing and filling requirements approved by the competent authority.	
(2)	The following combination packagings provided that the general provisions of 4.1.1 and 4.1.3 are met:	
	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).	
	Inner packagings:	
(a)	For non-toxic gases, hermetically sealed inner packagings of glass or metal with a maximum capacity of 5 litres per package;	
(b)	For toxic gases, hermetically sealed inner packagings of glass or metal with a maximum	

capacity of 1 litre per package.
Packagings shall conform to the packing group III performance level.

P203 Under "Requirements for closed cryogenic receptacles", add a new paragraph (8) to read as follows:

"(8) Periodic inspection

The periodic inspection and test frequencies of pressure relief valves in accordance with 6.2.1.6.3 shall not exceed five years."

P302 Amend to read as follows:

P302	PACKING INSTRUCTION	P302
	This instruction applies to UN No. 3269.	
	The following combination packagings are authorized, provided that the general provisions of 4.1.1 and 4.1.3 are met: 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); Inner packagings: 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. The base material and the activator shall be each 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 3 applied to the base material.	

P400 (2) In the first sentence, insert ", 4N" after "4B" and replace "drums (1A2, 1B2, 1N2, 1D or 1G) or jerricans (3A2 or 3B2)" with "drums (1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1D or 1G) or jerricans (3A1, 3A2, 3B1 or 3B2)".

P400 (3) In the first sentence, replace "4A or 4B" with "4A, 4B or 4N" and replace "Steel, aluminium or metal drums (1A2, 1B2 or 1N2), jerricans (3A2 or 3B2)" with "Steel, aluminium or metal drums (1A1, 1A2, 1B1, 1B2, 1N1 or 1N2), jerricans (3A1, 3A2, 3B1 or 3B2)".

P401 Amend paragraph (2) to read as follows:

"(2) Combination packagings:

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).

Inner packagings:

- Glass, metal or plastics which have threaded closures with a maximum capacity of 1 litre.
- Each inner packaging shall be surrounded by inert cushioning and absorbent material in a quantity sufficient to absorb the entire contents.
- The maximum net mass per outer packaging shall not exceed 30 kg."

P402 Amend paragraph (2) to read as follows:

"(2) Combination packagings:

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).

Inner packagings with a maximum net mass as follows:

Glass 10 kg

Metal or plastics 15 kg

Each inner packaging shall be fitted with threaded closures.

Each inner packaging shall be surrounded by inert cushioning and absorbent material in a quantity sufficient to absorb the entire contents.

The maximum net mass per outer packaging shall not exceed 125 kg."

P403 For "Combination packagings", under "Outer packagings", amend the entries for "Drums" to read as follows (the values for Maximum net mass remain unchanged):

steel (1A1, 1A2)
aluminium (1B1, 1B2)
other metal (1N1, 1N2)
plastics (1H1, 1H2)
plywood (1D)
fibre (1G)

P403 For "Combination packagings", "Outer packagings", "Boxes", after "aluminium (4B)", insert the following row:

other metal (4N)	400 kg
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P403 For "Combination packagings", under "Outer packagings", amend the entries for "Jerricans" to read as follows (the values for Maximum net mass remain unchanged):

steel (3A1, 3A2)
aluminium (3B1, 3B2)
plastics (3H1, 3H2)

P404 (1) Amend the text in parentheses for "Outer packagings" to read "(1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 4A, 4B, 4N, 4C1, 4C2, 4D, 4F or 4H2)".

P405 (1)(a) Insert ", 4N" after "4B".

P406 (1) For "Outer packagings" replace "1H2 or 3H2" with "1H1, 1H2, 3H1 or 3H2".

P406 (2) Insert ", 4N" after "4B".

P407 Amend to read as follows:

P407	PACKING INSTRUCTION	P407
This instruction applies to UN Nos. 1331, 1944, 1945 and 2254.		
The following packagings are authorized, provided that the general provisions of 4.1.1 and 4.1.3 are met:		
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).		
Inner packagings:		
Matches shall be tightly packed in securely closed inner packagings to prevent accidental ignition under normal conditions of carriage transport .		
The maximum gross mass of the package shall not exceed 45 kg except for fibreboard boxes which shall not exceed 30 kg.		
Packagings shall conform to the packing group III performance level.		
Special packing provision:		
PP27 [<i>Unchanged</i>]		

P408 Amend to read as follows:

P408	PACKING INSTRUCTION	P408
This instruction applies to UN No. 3292.		
The following packagings are authorized, provided that the general provisions of 4.1.1 and 4.1.3 are met:		
(1) For cells:		
Drums (1A2, 1B2, 1N2, 1H2, 1D, 1G);		
Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2);		
Jerricans (3A2, 3B2, 3H2).		
There shall be sufficient cushioning material to prevent contact between cells and between cells and the internal surfaces of the outer packaging and to ensure that no dangerous movement of the cells within the outer packaging occurs in carriage transport .		
Packagings shall conform to the packing group II performance level.		
(2) Batteries may be carried transported unpacked or in protective enclosures (e.g. fully enclosed or wooden slatted crates). The terminals shall not support the weight of other batteries or materials packed with the batteries.		
Packagings need not meet the requirements of 4.1.1.3.		
Additional requirement:		
Cells and batteries shall be protected against short circuit and shall be isolated in such a manner as to prevent short circuits.		

P410 For "Combination packagings", under "Outer packagings", amend the entries for "Drums" to read as follows (the values for Maximum net mass remain unchanged):

steel (1A1, 1A2)
aluminium (1B1, 1B2)
other metal (1N1, 1N2)
plastics (1H1, 1H2)

plywood (1D) fibre (1G) ^a

[\[ST/SG/AC.10/38/Add.1/Corr.1\]](#)

P410 For "Combination packagings", "Outer packagings", "Boxes", after "aluminium (4B)", insert the following row:

other metal (4N)	400 kg	400 kg
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P410 For "Combination packagings", under "Outer packagings", amend the entries for "Jerricans" to read as follows (the values for Maximum net mass remain unchanged):

steel (3A1, 3A2) aluminium (3B1, 3B2) plastics (3H1, 3H2)

P410 For "Single packagings", "Boxes", after "aluminium (4B)^c", insert the following row:

other metal (4N) ^c	400 kg	400 kg
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P411 Amend to read as follows:

P411	PACKING INSTRUCTION	P411
This instruction applies to UN No. 3270.		
The following packagings are authorized, provided that the general provisions of 4.1.1 and 4.1.3 are met:		
<ul style="list-style-type: none"> Drums (1A2, 1B2, 1N2, 1H2, 1D, 1G); Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2); Jerricans (3A2, 3B2, 3H2); 		
provided that explosion is not possible by reason of increased internal pressure.		
The maximum net mass shall not exceed 30 kg.		

P500 Amend to read as follows:

P500	PACKING INSTRUCTION	P500
This instruction applies to UN No. 3356.		
The following packagings are authorized, provided that the general provisions of 4.1.1 and 4.1.3 are met:		
<ul style="list-style-type: none"> Drums (1A2, 1B2, 1N2, 1H2, 1D, 1G); Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2); Jerricans (3A2, 3B2, 3H2). 		
Packagings shall conform to the packing group II performance level.		
The generator(s) shall be carried transported in a package which meets the following requirements when one generator in the package is actuated:		
<ul style="list-style-type: none"> (a) Other generators in the package will not be actuated; (b) Packaging material will not ignite; and (c) The outside surface temperature of the completed package shall not exceed 100 °C. 		

P501 In the text for "Combination packagings", (1), insert ", 4N" after "4B" and replace "drums (1A2, 1B2, 1N2, 1H2, 1D) or jerricans (3A2, 3B2, 3H2)" with "drums (1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D) or jerricans (3A1, 3A2, 3B1, 3B2, 3H1, 3H2)".

P502 Amend the entries under "Outer packagings", "Drums" to read:

steel (1A1, 1A2)
aluminium (1B1, 1B2)
other metal (1N1, 1N2)
plywood (1D)
fibre (1G)
plastics (1H1, 1H2)

P502 For "Combination packagings", "Boxes", after "aluminium (4B)", insert the following row:

other metal (4N)	125 kg
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P503 Amend the entries under "Outer packagings", "Drums" to read:

steel (1A1, 1A2)
aluminium (1B1, 1B2)
other metal (1N1, 1N2)
plywood (1D)
fibre (1G)
plastics (1H1, 1H2)

P503 For "Combination packagings", "Boxes", after "aluminium (4B)", insert the following row:

other metal (4N)	125 kg
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P504 In the text for "Combination packagings", (1) and (2), amend the text ~~in parentheses~~ before "outer packagings" to read "~~(...~~1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G, 4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H2)~~)~~".

P504 In the text for "Combination packagings", (4), amend the text before "outer packagings" ~~in parentheses~~ to read "~~(...~~1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 4A, 4B, 4N, 4C1, 4C2, 4D, 4H2)~~)~~".

P520 (1) Insert ", 4N" after "4B" and replace "drums (1A2, 1B2, 1G, 1H2 and 1D), jerricans (3A2, 3B2 and 3H2)" with "drums (1A1, 1A2, 1B1, 1B2, 1G, 1H1, 1H2 and 1D), jerricans (3A1, 3A2, 3B1, 3B2, 3H1 and 3H2)".

P600 Amend the text in parentheses after "Outer packagings:" to read "(1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G, 4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H2)".

P601 (1), last indent Replace "1A2, 1B2, 1N2, 1H2" with "1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2" and insert ", 4N" after "4B".

P601 (2) Replace "1A2, 1B2, 1N2, 1H2" with "1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2" and insert ", 4N" after "4B".

P601 (3) After "Outer packagings:", replace "Steel or plastics drums, removable head (1A2 or 1H2)," with "Steel or plastics drums (1A1, 1A2, 1H1 or 1H2),".

P602 (1), last indent Replace "1A2, 1B2, 1N2, 1H2" with "1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2" and insert ", 4N" after "4B".

P602 (2) Replace "1A2, 1B2, 1N2, 1H2" with "1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2" and insert ", 4N" after "4B".

P620 Amend the first sub-paragraph (b) — before the additional requirements — to read as follows:

"(b) A rigid outer packaging:

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).

The smallest external dimension shall be not less than 100 mm."

P621 Amend to read as follows:

P621	PACKING INSTRUCTION	P621
This instruction applies to UN No. 3291.		
The following packagings are authorized provided that the general provisions of 4.1.1 except 4.1.1.15 and 4.1.3 are met:		
(1) Provided that there is sufficient absorbent material to absorb the entire amount of liquid present and the packaging is capable of retaining liquids:		
Drums (1A2, 1B2, 1N2, 1H2, 1D, 1G);		
Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2);		
Jerricans (3A2, 3B2, 3H2).		
Packagings shall conform to the packing group II performance level for solids.		
(2) For packages containing larger quantities of liquid:		
Drums (1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G);		
Jerricans (3A1, 3A2, 3B1, 3B2, 3H1, 3H2);		
Composites (6HA1, 6HB1, 6HG1, 6HH1, 6HD1, 6HA2, 6HB2, 6HC, 6HD2, 6HG2, 6HH2, 6PA1, 6PB1, 6PG1, 6PD1, 6PH1, 6PH2, 6PA2, 6PB2, 6PC, 6PG2 or 6PD2).		
Packagings shall conform to the packing group II performance level for liquids.		
Additional requirement:		
Packagings intended to contain sharp objects such as broken glass and needles shall be resistant to puncture and retain liquids under the performance test conditions in Chapter 6.1.		

P650 Amend paragraph (9) (a) to read as follows:

"(a) When dry ice or liquid nitrogen is used as a coolant, the requirements of 5.5.3 shall apply. When used, ice shall be placed outside the secondary packagings or in the outer packaging or an overpack. Interior supports shall be provided to secure the secondary packagings in the original position. If ice is used, the outside packaging or overpack shall be leakproof."

P800 Amend the entries under "Outer packagings", "Drums" to read:

steel (1A1, 1A2)
metal, other than steel or aluminium (1N1, 1N2)
plastics (1H1, 1H2)
plywood (1D)
fibre (1G)

P800 In paragraph (3) (d), for "Boxes", after "steel (4A)", insert the following row:

metal, other than steel or aluminium (4N)	400 kg
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P802 (1) Replace "1A2, 1B2, 1N2, 1H2, 1D, 4A, 4B, 4C1, 4C2, 4D, 4F, or 4H2" with "1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G, 4A, 4B, 4C1, 4C2, 4D, 4F, 4G or 4H2".

P802 (2) Replace "1A2, 1B2, 1N2, 1H2, 1D, 1G, 4A, 4B, 4C1, 4C2, 4D, 4F, 4G or 4H2" with "1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G, 4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G or 4H2".

P803 (2) Insert ", 4N" after "4B".

P804 (1), last indent Replace "1A2, 1B2, 1N2, 1H2, 1D, 1G, 4A, 4B, 4C1, 4C2, 4D, 4F, 4G or 4H2" with "1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G, 4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G or 4H2".

P804 (2) Replace "1A2, 1B2, 1N2, 1H2, 1D, 1G, 4A, 4B, 4C1, 4C2, 4D, 4F, 4G or 4H2" with "1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G, 4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G or 4H2".

P804 (3) After "Outer packagings:", replace "Steel or plastics drums, removable head (1A2 or 1H2)" with "Steel or plastics drums (1A1, 1A2, 1H1 or 1H2)".

P901 Amend to read as follows:

P901	PACKING INSTRUCTION	P901
This instruction applies to UN No. 3316.		
The following combination packagings are authorized provided the general provisions of 4.1.1 and 4.1.3 are met: 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). Packagings shall conform to the performance level consistent with the packing group assigned to the kit as a whole (see 3.3.1, special provision 251). Maximum quantity of dangerous goods per outer packaging: 10 kg excluding the mass of any carbon dioxide, solid (dry ice) used as a refrigerant.		
Additional requirement: Dangerous goods in kits shall be packed in inner packagings which shall not exceed either 250 ml or 250 g and shall be protected from other materials in the kit.		

P902 Amend to read as follows:

P902	PACKING INSTRUCTION	P902
This instruction applies to UN No. 3268.		
Packaged articles: The following packagings are authorized provided the general provisions of 4.1.1 and 4.1.3 are met: Drums (1A2, 1B2, 1N2, 1H2, 1D, 1G); Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2); Jerricans (3A2, 3B2, 3H2). Packagings shall conform to the packing group III performance level. The packagings shall be designed and constructed so as to prevent movement of the articles and inadvertent operation during normal conditions of carriage transport.		

Unpackaged articles:

The articles may also be ~~carried~~~~transported~~ unpackaged in dedicated handling devices, vehicles or containers when moved from where they are manufactured to an assembly plant.

Additional requirement:

Any pressure vessel shall be in accordance with the requirements of the competent authority for the substance(s) contained therein.

P903 Amend to read as follows:

P903	PACKING INSTRUCTION	P903
This instruction applies to UN Nos. 3090, 3091, 3480 and 3481.		
The following packagings are authorized provided that the general provisions of 4.1.1 and 4.1.3 are met:		
(1)	<p>For cells and batteries:</p> <p style="padding-left: 40px;">Drums (1A2, 1B2, 1N2, 1H2, 1D, 1G);</p> <p style="padding-left: 40px;">Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2);</p> <p style="padding-left: 40px;">Jerricans (3A2, 3B2, 3H2).</p> <p>Cells or batteries shall be packed in packagings so that the cells or batteries are protected against damage that may be caused by the movement or placement of the cells or batteries within the packaging.</p> <p>Packagings shall conform to the packing group II performance level.</p>	
(2)	<p>In addition for cells or batteries with a gross mass of 12 kg or more employing a strong, impact resistant outer casing, and assemblies of such cells or batteries:</p> <p style="padding-left: 40px;">(a) Strong outer packagings, in protective enclosures (e.g., in fully enclosed or wooden slatted crates); or</p> <p style="padding-left: 40px;">(b) Pallets or other handling devices.</p> <p>Cells or batteries shall be secured to prevent inadvertent movement, and the terminals shall not support the weight of other superimposed elements.</p> <p>Packagings need not meet the requirements of 4.1.1.3.</p>	
(3)	<p>For cells or batteries packed with equipment:</p> <p>Packagings conforming to the requirements in paragraph (1) of this packing instruction, then placed with the equipment in an outer packaging; or</p> <p>Packagings that completely enclose the cells or batteries, then placed with equipment in a packaging conforming to the requirements in paragraph (1) of this packing instruction.</p> <p>The equipment shall be secured against movement within the outer packaging.</p> <p>For the purpose of this packing instruction, "equipment" means apparatus requiring the lithium metal or lithium ion cells or batteries with which it is packed for its operation.</p>	
(4)	<p>For cells or batteries contained in equipment:</p> <p>Strong outer packagings constructed of suitable material of adequate strength and design, in relation to the packaging capacity and its intended use. They shall be constructed in such a manner as to prevent accidental operation during carriagetransport. Packagings need not meet the requirements of 4.1.1.3.</p> <p>Large equipment can be offered for carriagetransport unpackaged or on pallets when the cells or batteries are afforded equivalent protection by the equipment in which they are contained.</p> <p>Devices such as radio frequency identification (RFID) tags, watches and temperature loggers, which are not capable of generating a dangerous evolution of heat, may be carriedtransported when intentionally active in strong outer packagings. When active, these devices shall meet defined standards for electromagnetic radiation to ensure that the operation of the device does not interfere with aircraft systems.</p>	

The packagings shall be designed and constructed to prevent movement of the aerosols and inadvertent discharge during normal conditions of ~~carriage~~~~transport~~.

Special packing provision:

PP87 For UN 1950 waste aerosols ~~carried~~~~transported~~ in accordance with special provision 327, the packagings shall have a means of retaining any free liquid that might escape during ~~carriage~~~~transport~~, e.g. absorbent material. The packaging shall be adequately ventilated to prevent the creation of flammable atmosphere and the build-up of pressure.

RR6 For UN 1950 in the case of carriage by full load, metal articles may also be packed as follows: the articles shall be grouped together in units on trays and held in position with an appropriate plastics cover; these units shall be stacked and suitably secured on pallets.

Renumber existing P206 as P208 and amend the entry for UN 3150 in Table A accordingly.

4.1.4.2

IBC520 For UN 3119, in the entry for "Di-(3,5,5-trimethylhexanoyl) peroxide, not more than 38% in diluent type A", in column "Organic peroxide", replace "38%" with "52%".

For UN 3119, in the entry for "1,1,3,3-Tetramethylbutyl peroxyneodecanoate, not more than 52%, stable dispersion, in water", insert the following new row:

<i>Type of IBC</i>	<i>Maximum quantity (litres)</i>	<i>Control temperature</i>	<i>Emergency temperature</i>
31HA1	1 000	-5 °C	+5 °C

Insert the following new entries:

<i>UN No</i>	<i>Organic peroxide</i>	<i>Type of IBC</i>	<i>Maximum quantity (litres)</i>	<i>Control temperature</i>	<i>Emergency temperature</i>
3119	Diisobutyl peroxide, not more than 28% as a stable dispersion in water	31HA1	1 000	-20 °C	-10 °C
		31A	1 250	-20 °C	-10 °C
3119	Diisobutyl peroxide, not more than 42% as a stable dispersion in water	31HA1	1 000	-25 °C	-15 °C
		31A	1 250	-25 °C	-15 °C

4.1.4.3

~~LP02—Add a new special packing provision L3 to read as follows:~~

~~"L3—For UN Nos. 2208 and 3486, transport by sea in large packagings is prohibited."~~

LP902 Before "The following ~~large~~ packagings are authorized...", insert a new heading to read "**Packaged articles:**" and before "The articles may also...", insert a paragraph break and a new heading to read "**Unpackaged articles:**".

4.1.5.17 Replace "1A2, 1B2" with "1A1, 1A2, 1B1, 1B2".

[\[ST/SG/AC.10/38/Add.1/Corr.1\]](#)

~~4.1.6.1.5~~ **4.1.6.5** In the first sentence, add "and, in case of a chemical under pressure, for the pollutant" after "authorized for the ~~substance~~~~gas~~".

~~4.1.6.1.8~~ ~~4.1.6.15~~ In the paragraph following sub-paragraph (e) ~~In the entry for 4.1.6.8 (b) and (c)~~, replace "ISO 11117:1998" with "either ISO 11117:1998 or ISO 11117:2008 + Cor 1:2009".

~~4.1.6.1.10~~ ~~4.1.6.10~~ In the first sentence, replace "or P205" with ", P205 or P206".

Add a new second sentence to read as follows: "Pressure relief valves for closed cryogenic receptacles shall be subject to periodic inspections and tests according to the provisions of 6.2.1.6.3 and packing instruction P203."

Chapter 4.2

4.2.2 In the heading, add "and chemicals under pressure" at the end.

4.2.2.1 At the end, add "and chemicals under pressure".

4.2.2.2 In the second sentence, insert "and chemicals under pressure" after "Non-refrigerated liquefied gases".

4.2.2.7.1 In the first sentence, insert "or the propellant of the chemical under pressure" after "for the non-refrigerated liquefied gas" and insert ", or with chemicals under pressure" after "loaded with non-refrigerated liquefied gases". In the second sentence, insert "or propellant of chemicals under pressure" after "the temperature of the non-refrigerated liquefied gas".

4.2.5.2.6

T50 In the second heading row, amend the first sentence to read as follows "This portable tank instruction applies to non-refrigerated liquefied gases and chemicals under pressure (UN Nos. 3500, 3501, 3502, 3503, 3504 and 3505)".

T50 For UN 3220, in the last column (Maximum filling ratio), replace "0.95" with "0.87".

T50 Add the following new entries:

<i>UN No.</i>	<i>Non-refrigerated liquefied gases</i>	<i>Max. allowable working pressure (bar)</i>	<i>Openings below liquid level</i>	<i>Pressure-relief requirements (see 6.7.3.7)</i>	<i>Maximum filling ratio density (kg/l)</i>
3500	Chemical under pressure, n.o.s.	See MAWP definition in 6.7.3.1	Allowed	See 6.7.3.7.3	TP4 ^c
3501	Chemical under pressure, flammable, n.o.s.	See MAWP definition in 6.7.3.1	Allowed	See 6.7.3.7.3	TP4 ^c
3502	Chemical under pressure, toxic, n.o.s.	See MAWP definition in 6.7.3.1	Allowed	See 6.7.3.7.3	TP4 ^c
3503	Chemical under pressure, corrosive, n.o.s.	See MAWP definition in 6.7.3.1	Allowed	See 6.7.3.7.3	TP4 ^c

^c For UN Nos. 3500, 3501, 3502, 3503, 3504 and 3505, the degree of filling shall be considered instead of the maximum filling ~~ratio~~ density.

3504	Chemical under pressure, flammable, toxic, n.o.s.	See MAWP definition in 6.7.3.1	Allowed	See 6.7.3.7.3	TP4 ^c
3505	Chemical under pressure, flammable, corrosive, n.o.s.	See MAWP definition in 6.7.3.1	Allowed	See 6.7.3.7.3	TP4 ^c

4.2.5.3 ~~TP37 Amend to read as follows:~~

~~"TP37 Portable tank instruction T14 may continue to be applied until 31 December 2016 except that until that date:~~

- ~~———— (a) For UN Nos. 1810, 2474 and 2668, T7 may be applied;~~
- ~~———— (b) For UN No. 2486, T8 may be applied; and~~
- ~~———— (c) For UN No. 1838, T10 may be applied."~~

~~[\[Note: 1.6.4.36 could be deleted?\]](#)~~

Insert new portable tank special provisions TP38, TP39 and TP40 to read as follows:

"TP38 ~~The~~ Portable tank instruction T9 prescribed in ~~the Model Regulations annexed to the sixteenth revised edition of the Recommendations on the Transport of Dangerous Goods~~[RID/ADR applicable up to 31 December 2012](#) may continue to be applied until 31 December 2018."

"TP39 ~~The~~ Portable tank instruction T4 prescribed in [RID/ADR/ADN applicable up to 31 December 2012](#)~~the Model Regulations annexed to the sixteenth revised edition of the Recommendations on the Transport of Dangerous Goods~~ may continue to be applied until 31 December 2018."

"TP40 Portable tanks shall not be ~~carried~~[transported](#) when connected with spray application equipment."

~~4.2.6 At the end, add the following new paragraph:~~

~~[1.6.4 Add the following new transitional measure:](#)~~

~~"[1.6.4.42](#) Portable tanks and MECGs manufactured before 1 January 2014 need not comply with the requirements of 6.7.2.13.1 (f), 6.7.3.9.1 (e), 6.7.4.8.1 (e) and 6.7.5.6.1 (d) concerning the marking of the pressure relief devices."~~

Chapter 4.3

[In Part 7.](#)

~~4.3.1.1 — After the description of the meaning of BK1 and BK2, insert:~~

~~"BK3: the transport in flexible bulk containers is permitted"~~

~~Add a new 4.3.1.16 to read as follows:~~

~~"4.3.1.16 — 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 damages and that inner liners are free from rips, tears or any damage."~~

~~4.3.1.16.1 — For flexible bulk containers, the period of use permitted for the transport of dangerous goods shall be two years from the date of manufacture of the flexible bulk container.~~

~~4.3.1.16.2 — 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 is prevented under normal conditions of transport.~~

~~4.3.2.2 — Insert "and flexible bulk containers (code BK3)" after "(code BK2)". At the end, replace "watertight" with "waterproof".~~

Chapter 5.2

5.2.1.1 Insert the following new second sentence: "The UN number and the letters "UN" shall be at least 12 mm high, except for packagings of 30 litres or 30 kg capacity or less, when they shall be at least 6 mm in height and for packagings of 5 litres or 5 kg or less when they shall be of an appropriate size."

~~————— At the end, add the following new note:~~

~~"NOTE: The size requirements for the UN number marking shall apply as from 1 January 2014."~~

Consequential amendment:

Add the following new transitional measure in Chapter 1.6.

"1.6.1.24 Packagings marked with a UN number in accordance with the provisions of RID/ADR/ADN 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 31 December 2013."

5.2.1.3 Insert "and salvage pressure receptacles" after "salvage packagings".

~~5.2.1.8.3~~~~5.2.1.6.3~~ Add the following new note at the end:

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

~~5.2.1.9.2~~~~5.2.1.7.2~~ Amend to read as follows:

~~"5.2.1.9.2~~~~5.2.1.7.2~~ Orientation arrows are not required on:

(a) Outer packagings containing pressure receptacles except cryogenic receptacles;

(b) Outer packagings containing dangerous goods in inner packagings each containing not more than 120 ml, with sufficient absorbent material between the inner and outer packagings to completely absorb the liquid contents;

(c) Outer packagings containing Division 6.2 infectious substances in primary receptacles each containing not more than 50 ml;

(d) Type IP-2, type IP-3, type A, type B(U), type B(M) or type C packages containing Class 7 radioactive material;

(e) Outer packagings containing articles which are leak-tight in all orientations (e.g. alcohol or mercury in thermometers, aerosols, etc.); or

(f) Outer packagings containing dangerous goods in hermetically sealed inner packagings each containing not more than 500 ml."

Chapter 5.3

~~5.3.1.1.2 (a) Delete ", dangerous goods packed in limited quantities, or excepted packages of radioactive material (Class 7)".~~

Chapter 5.4

~~5.4.1.1.5~~ ~~5.4.1.5.3~~ Amend to read as follows:

~~"5.4.1.1.5~~ ~~5.4.1.5.3~~ *Special provisions for salvage packagings and salvage pressure receptacles*

~~When~~ ~~For~~ dangerous goods ~~are carried~~ ~~transported~~ in ~~a~~ salvage packagings or salvage pressure receptacles, the words "SALVAGE PACKAGING" or "SALVAGE PRESSURE RECEPTACLE" shall be ~~added after the description of the goods in the transport document~~ ~~included~~."

Add a new ~~5.4.1.5.10~~ to read as follows:

~~"5.4.1.5.10~~ *Firework classification reference*

~~When fireworks of UN Nos. 0333, 0334, 0335, 0336 and 0337 are transported, the dangerous goods transport document shall include a classification reference(s) issued by the competent authority.~~

~~The classification reference(s) shall consist of the competent authority's state, indicated by the distinguishing sign for motor vehicles in international traffic, the competent authority identification and a unique serial reference. Examples of such classification references are:~~

~~GB/HSE123456~~

~~D/BAM1234~~

~~USA-EX20091234."~~ ~~Already in 5.4.1.2.1 (g).~~

Chapter 5.5

Add the following new section:

5.5.3 Special provisions applicable to packages and (ADR:) vehicles and containers / (RID:) wagons and containers / (ADN:) cargo transport units containing substances presenting a risk of asphyxiation when used for cooling or conditioning purposes (such as dry ice (UN 1845) or nitrogen, refrigerated liquid (UN 1977) or argon, refrigerated liquid (UN 1951))

5.5.3.1 *Scope*

5.5.3.1.1 This section is not applicable to substances which may be used for cooling or conditioning purposes when ~~carried~~ ~~transported~~ as a consignment of dangerous goods. When they are ~~carried~~ ~~transported~~ as a consignment, these substances shall be ~~carried~~ ~~transported~~ under the relevant entry of ~~Table A~~ ~~the Dangerous Goods List~~ in Chapter 3.2 in accordance with the associated conditions of ~~carriage~~ ~~transport~~.

5.5.3.1.2 This section is not applicable to gases in cooling cycles.

5.5.3.1.3 Dangerous goods used for cooling or conditioning ~~portable~~ tanks during ~~carriage~~ ~~transport~~ are not subject to this section.

5.5.3.2 *General*

5.5.3.2.1 [\(ADR:\) Vehicles and containers / \(RID:\) Wagons and containers / \(ADN:\) Cargo transport units containing substances used for cooling or conditioning purposes \(other than fumigation\) during carriage transport](#) are not subject to any provisions of [RID/ADR/ADN these Regulations](#) other than those of this section.

5.5.3.2.2 When dangerous goods are loaded in cooled or conditioned [\(ADR:\) vehicles and containers / \(RID:\) wagons and containers / \(ADN:\) cargo transport units](#) any provisions of [RID/ADR/ADN these Regulations](#) relevant to these dangerous goods apply in addition to the provisions of this section.

5.5.3.2.3 ~~For air transport, arrangements between consignor and operator shall be made for each consignment, to ensure that ventilation safety procedures are followed.~~ [Reserved.](#)

5.5.3.2.4 Persons engaged in the handling or [carriage transport](#) of cooled or conditioned [\(ADR:\) vehicles and containers / \(RID:\) wagons and containers / \(ADN:\) cargo transport units](#) shall be trained commensurate with their responsibilities.

5.5.3.3 *Packages containing a coolant or conditioner*

5.5.3.3.1 Packaged dangerous goods requiring cooling or conditioning assigned to packing instructions P203, P620, P650, P800, P901 or P904 of 4.1.4.1 [\(ADN: of ADR\)](#) shall meet the appropriate requirements of that packing instruction.

5.5.3.3.2 For packaged dangerous goods requiring cooling or conditioning assigned to other packing instructions, the packages shall be capable of withstanding very low temperatures and shall not be affected or significantly weakened by the coolant or conditioner. Packages shall be designed and constructed to permit the release of gas to prevent a build-up of pressure that could rupture the packaging. The dangerous goods shall be packed in such a way to prevent movement after the dissipation of any coolant or conditioner.

5.5.3.3.3 Packages containing a coolant or conditioner shall be [carried transported](#) in well ventilated [\(ADR:\) vehicles and containers / \(RID:\) wagons and containers / \(ADN:\) cargo transport units](#).

5.5.3.4 *Marking of packages containing a coolant or conditioner*

5.5.3.4.1 Packages containing dangerous goods used for cooling or conditioning shall be marked with the proper shipping name of these dangerous goods followed by the words "AS COOLANT" or "AS CONDITIONER" as appropriate [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.](#)

5.5.3.4.2 The markings shall be durable, legible and placed in such a location and of such a size relative to the packaging as to be readily visible.

5.5.3.5 [\(ADR:\) Vehicles and containers / \(RID:\) Wagons and containers / \(ADN:\) Cargo transport units containing unpackaged dry ice](#)

5.5.3.5.1 If dry ice in unpackaged form is used, it shall not come into direct contact with the metal structure of a [\(ADR:\) vehicle or container / \(RID:\) wagon or container / \(ADN:\) cargo transport unit](#) to avoid embrittlement of the metal. Measures shall be taken to provide adequate insulation between the dry ice and the [\(ADR:\) vehicle or container / \(RID:\) wagon or container / \(ADN:\) cargo transport unit](#) by providing a minimum of 30 mm separation (e.g. by using suitable low heat conducting materials such as timber planks, pallets etc).

5.5.3.5.2 Where dry ice is placed around packages, measures shall be taken to ensure that packages remain in the original position during ~~carriage~~transport after the dry ice has dissipated.

5.5.3.6 *Marking of (ADR:) vehicles and containers / (RID:) wagons and containers / (ADN:) cargo transport units*

5.5.3.6.1 (ADR:) Vehicles and containers / (RID:) Wagons and containers / (ADN:) Cargo transport units containing dangerous goods used for cooling or conditioning 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 (ADR:) vehicle or container / (RID:) wagon or container / (ADN:) cargo transport unit. This mark shall remain on the (ADR:) vehicle or container / (RID:) wagon or container / (ADN:) cargo transport unit until the following provisions are met:

(a) The (ADR:) vehicle or container / (RID:) wagon or container / (ADN:) cargo transport unit has been ventilated to remove harmful concentrations of coolant or conditioner; and

(b) The cooled or conditioned goods have been unloaded.

5.5.3.6.2 The warning mark shall be rectangular and shall not be less than 150 mm wide and 250 mm high. The warning mark shall include:

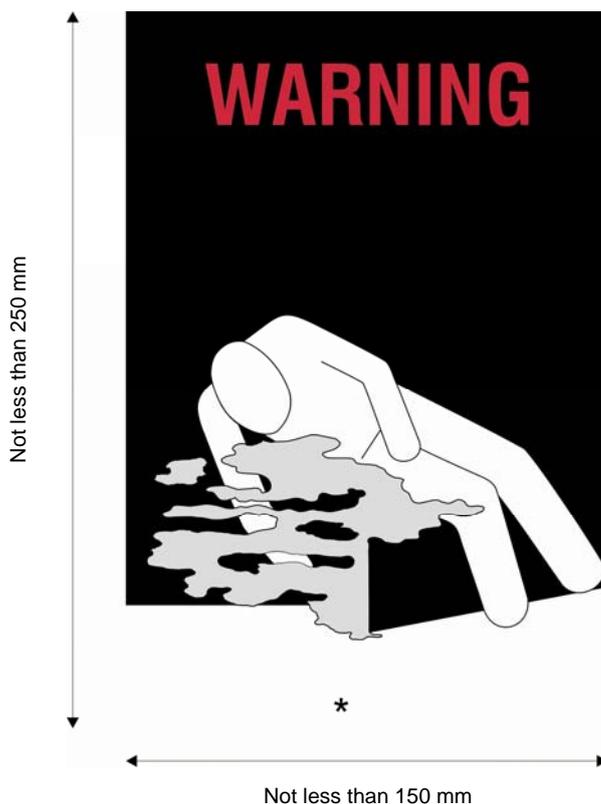
(a) The word "WARNING" in red or white with lettering not less than 25 mm high [in an official language of the country of origin and also, if that language is not English, French or German, in English, French or German, unless agreements, if any, concluded between the countries concerned in the transport operation provide otherwise]; and

(b) The proper shipping name followed by the words "AS COOLANT" or "AS CONDITIONER" as appropriate, shown below the symbol in black letters on a white background with lettering not less than 25 mm high [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].

For example: CARBON DIOXIDE, SOLID, AS COOLANT.

An illustration of this mark is given in Figure 5.5.2

Figure 5.5.2



* insert the proper shipping name followed by the words "AS COOLANT" or "AS CONDITIONER" as appropriate.

5.5.3.7 Documentation

5.5.3.7.1 Documents (such as a bill of lading or cargo manifest) associated with the carriage~~transport~~ of (ADR:) vehicles or containers / (RID:) wagons or containers / (ADN:) cargo transport units that have been cooled or conditioned and have not been completely ventilated before carriage~~transport~~ shall include the following information:

- (a) The UN number preceded by the letters "UN"; and
- (b) The proper shipping name followed by the words "AS COOLANT" or "AS CONDITIONER" as appropriate [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].

For example: UN 1845, CARBON DIOXIDE, SOLID, AS COOLANT".

5.5.3.7.2 The transport document may be in any form, provided it contains the information required in 5.5.3.7.1. This information shall be easy to identify, legible and durable."

Consequential amendment:In Chapter 3.3, special provision 593, at the end add "except as specified in Chapter 5.5".**Chapter 6.1**

6.1.2.7 In the table, under "4. Boxes", after the entries for "H. Plastics", insert the following row:

N. Metal, other than steel or aluminium	4N	6.1.4.14
---	----	----------

6.1.4.14 Amend to read as follows:

"6.1.4.14 Steel, aluminium or other metal boxes

4A steel boxes

4B aluminium boxes

4N metal, other than steel or aluminium, boxes"

Chapter 6.2

6.2.1.1.5 Amend the first sentence to read as follows: "The test pressure of cylinders, tubes, pressure drums and bundles of cylinders shall be in accordance with packing instruction P200 [of 4.1.4.1](#), or, for a chemical under pressure, with packing instruction P206 [of 4.1.4.1](#)".

6.2.1.6.1 At the end, amend ~~the~~ Note [4](#) to read as follows:

"NOTE 4: For the periodic inspection and test frequencies, see packing instruction P200 [of 4.1.4.1](#) or, for a chemical under pressure, packing instruction P206 of 4.1.4.1."

Add a new paragraph 6.2.1.6.3 to read as follows:

"6.2.1.6.3 Pressure relief valves for closed cryogenic receptacles shall be subject to periodic inspections and tests."

6.2.2.3 In the first table, amend the row for ISO 11117:1998 to read as follows:

ISO 11117:2008 + Cor 1:2009	Gas cylinders – Valve protection caps and valve guards – Design, construction and tests NOTE: Construction according to ISO 11117:1998 may continue until 31 December 2014.
--------------------------------	---

At the end of the first table, add a new row to read as follows:

ISO 13340:2001	Transportable gas cylinders – Cylinders valves for non-refillable cylinders – Specification and prototype testing
----------------	---

6.2.2.4 Insert the following new row in the table:

ISO 10460:2005	<p>Gas cylinders – Welded carbon-steel gas cylinders – Periodic inspection and testing</p> <p><i>NOTE: The repair of welds described in clause 12.1 of this standard shall not be permitted. Repairs described in clause 12.2 require the approval of the competent authority which approved the periodic inspection and test body in accordance with 6.2.2.6.</i></p>
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~~6.2.3.3~~4.1.3.6.1 Replace "and bundles of cylinders" with ", bundles of cylinders and salvage pressure receptacles".

Add a new ~~6.2.3.5~~6.2.3.11 to read as follows:

~~6.2.3.5~~6.2.3.11 **Salvage pressure receptacles**

6.2.3.11.1 To permit the safe handling and disposal of the pressure receptacles ~~transported~~carried within the salvage pressure receptacle, the design may include equipment not otherwise used for cylinders or pressure drums such as flat heads, quick opening devices and openings in the cylindrical part.

6.2.3.11.2 Instructions on the safe handling and use of the salvage pressure receptacle shall be clearly shown in the documentation for the application to the competent authority [of the country of approval] and shall form part of the approval certificate. In the approval certificate, the pressure receptacles authorized to be ~~transported~~carried in a salvage pressure receptacle shall be indicated. A list of the materials of construction of all parts likely to be in contact with the dangerous goods shall also be included.

6.2.3.11.3 A copy of the approval certificate shall be delivered by the manufacturer to the owner of a salvage pressure receptacle.

6.2.3.11.4 The marking of salvage pressure receptacles according to 6.2.3 shall be determined by the competent authority [of the country of approval] in taking into account suitable marking provisions of ~~6.2.2.7~~[6.2.3.9][6.2.3.10] as appropriate. The marking shall include the water capacity and test pressure of the salvage pressure receptacle.

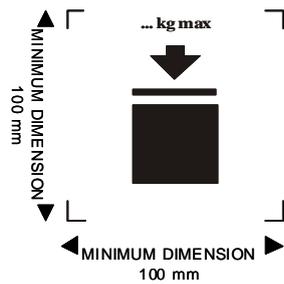
~~*NOTE: These provisions for salvage pressure receptacles may be applied for new salvage pressure receptacles as from 1 January 2013, unless otherwise authorized, and shall be applied for all new salvage pressure receptacles as from 1 January 2014. Salvage pressure receptacles approved in accordance with national regulations may be used with the approval of the competent authorities of the countries of use.*~~

Add the following new transitional measure in Chapter 1.6:

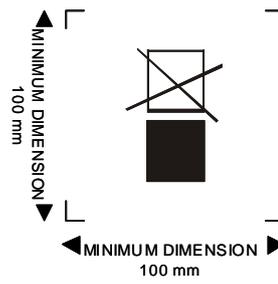
"1.6.2.12 Salvage pressure receptacles may continue to be constructed and approved according to national regulations up to 31 December 2013. Salvage pressure receptacles constructed and approved in accordance with national regulations before 1 January 2014 may continue to be used with the approval of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

Chapter 6.5

6.5.2.2.2 Amend the symbols to read as follows:



IBCs capable of being stacked



IBCs NOT capable of being stacked

6.5.6.2.1 Replace "6.5.6.5" with "6.5.6.4".

Chapter 6.6

6.6.3.1 In the first paragraph, replace "durable and legible markings showing:" with "markings which are durable, legible and placed in a location so as to be readily visible. Letters, numerals and symbols shall be at least 12 mm high and shall show:"

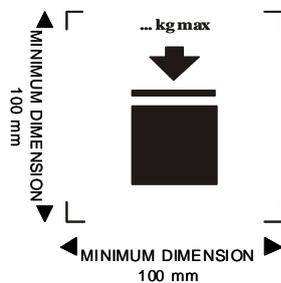
~~At the end, add the following new note:~~

~~"NOTE: The size requirement for the primary marking shall apply for large packagings manufactured as from 1 January 2014."~~

Add a new 6.6.3.3 to read as follows:

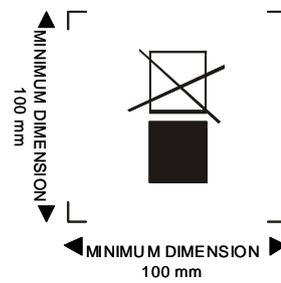
"6.6.3.3 The maximum permitted stacking load applicable when the large packaging is in use shall be displayed on a symbol as follows:

Large packaging capable of being stacked



Large packaging capable of being stacked

Large packaging NOT capable of being stacked



Large packaging NOT capable of being stacked

The symbol shall be not less than 100 mm × 100 mm, be durable and clearly visible. The letters and numbers indicating the mass shall be at least 12 mm high.

The mass marked above the symbol shall not exceed the load imposed during the design type test (see 6.6.5.3.3.4) divided by 1.8.

~~NOTE: The provisions of 6.6.3.3 shall apply to all large packagings manufactured, repaired or remanufactured as from 1 January 2015."~~

Consequential amendment:

Add the following transitional measure in Chapter 1.6:

"1.6.1.25 Large packagings manufactured or remanufactured before 1 January 2014 in accordance with the requirements of Chapter 6.6 applicable up to 31 December 2012 and

which do not conform to the requirements of 6.6.3.1 regarding the height of letters, numerals and symbols applicable as from 1 January 2013 may continue to be used. Those manufactured or remanufactured before 1 January 2015 in accordance with the requirements of Chapter 6.6 applicable up to 31 December 2012 need not be marked with the maximum permitted stacking load in accordance with 6.6.3.3. Such large packagings not marked in accordance with 6.6.3.3 may still be used after 31 December 2014 but must be marked in accordance with 6.6.3.3 if they are remanufactured after that date."

Chapter 6.7

6.7.2.13.1 After sub-paragraph (e), add the following new sub-paragraph (f):

"(f) The cross sectional flow areas of the spring loaded pressure-relief devices, frangible discs and fusible elements in mm²."

Renumber existing sub-paragraph (f) as sub-paragraph (g).

6.7.2.13.2, 6.7.3.9.2, 6.7.4.8.2 and 6.7.5.6.2 Replace "ISO 4126-1:1991" with "ISO 4126-1:2004 and ISO 4126-7:2004".

6.7.3 After the heading, insert the following new Note:

"NOTE: *These requirements also apply to portable tanks intended for the ~~transport~~ carriage of chemicals under pressure (UN Nos. 3500, 3501, 3502, 3503, 3504 and 3505)."*

6.7.3.1 In the definition of *Design reference temperature*, in the second sentence, insert "or liquefied gas propellants of chemicals under pressure" after "non-refrigerated liquefied gas".

6.7.3.1 In sub-paragraph (b) of the definition of *Maximum allowable working pressure*, add a new sub-paragraph (iii) to read as follows:

"(iii) for chemicals under pressure, the MAWP (in bar) given in T50 portable tank instruction for the liquefied gas portion of the propellants listed in T50 in 4.2.5.2.6;"

6.7.3.5.4 In the first sentence, insert "or chemicals under pressure" after "non-refrigerated liquefied gases".

6.7.3.9.1 and 6.7.4.8.1 After sub-paragraph (d), add the following new sub-paragraph (e):

"(e) The cross sectional flow areas of the spring loaded pressure-relief devices and frangible discs in mm²."

Renumber existing sub-paragraph (e) as sub-paragraph (f).

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

"(d) The cross sectional flow areas of the spring loaded pressure-relief devices and frangible discs in mm²."

Chapter ~~6.11~~6.8

~~6.11.1~~6.8.1 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~~6.8.2.3 In the table add the following new row:

Flexible bulk container

BK3

~~6.11.3.6.8.3~~ In the heading, insert "BK1 or BK2" before "bulk containers".

~~6.11.4.6.8.4~~ In the heading, insert "BK1 and BK2" before "bulk containers".

Add a new section ~~6.11.5.6.8.5~~ to read as follows:

~~6.11.5.6.8.5~~ Requirements for the design, construction, inspection and testing of flexible bulk containers BK3

~~6.11.5.1.6.8.5.1~~ Design and construction requirements

~~6.11.5.1.1.6.8.5.1.1~~ Flexible bulk containers shall be sift-proof.

~~6.11.5.1.2.6.8.5.1.2~~ Flexible bulk containers shall be completely closed to prevent the release of contents.

~~6.11.5.1.3.6.8.5.1.3~~ Flexible bulk containers shall be waterproof.

~~6.11.5.1.4.6.8.5.1.4~~ 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;

(c) Shall not allow permeation of the dangerous goods that could constitute a danger under normal conditions of ~~transport~~carriage.

~~6.11.5.2.6.8.5.2~~ Service equipment and handling devices

~~6.11.5.2.1.6.8.5.2.1~~ Filling and discharge devices shall be so constructed as to be protected against damage during ~~carriage~~transport and handling. The filling and discharge devices shall be capable of being secured against unintended opening.

~~6.11.5.2.2.6.8.5.2.2~~ Slings of the flexible bulk container, if fitted, shall withstand pressure and dynamic forces which can appear in normal conditions of handling and ~~transport~~carriage.

~~6.11.5.2.3.6.8.5.2.3~~ The handling devices shall be strong enough to withstand repeated use.

~~6.11.5.3.6.8.5.3~~ Inspection and testing

~~6.11.5.3.1.6.8.5.3.1~~ Each flexible bulk container design type shall successfully pass the tests prescribed in this Chapter before being used.

~~6.11.5.3.2.6.8.5.3.2~~ Tests shall also be repeated after each modification of design type which alters the design, material or manner of construction of a flexible bulk container.

~~6.11.5.3.3.6.8.5.3.3~~ Tests shall be carried out on flexible bulk containers prepared as for ~~carriage~~transport. 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~~transported in the flexible bulk container may be replaced by other substances except where this would invalidate the results of the tests. When another substance is used it shall have the same physical characteristics (mass, grain size, etc.) as the substance to be ~~carried~~transported. It is permissible to use additives, such as bags of lead shot, to achieve the requisite total package mass, so long as they are placed so that the test results are not affected.

[6.11.5.3.4](#)~~6.8.5.3.4~~ 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](#)~~6.8.5.3.5~~ *Drop test*

[6.11.5.3.5.1](#)~~6.8.5.3.5.1~~ Applicability

For all types of flexible bulk containers, as a design type test.

[6.11.5.3.5.2](#)~~6.8.5.3.5.2~~ Preparation for testing

The flexible bulk container shall be filled to its maximum permissible gross mass.

[6.11.5.3.5.3](#)~~6.8.5.3.5.3~~ 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](#)~~6.8.5.3.5.4~~ Drop height shall be:

Packing group III: 0.8 m

[6.11.5.3.5.5](#)~~6.8.5.3.5.5~~ 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~~~~transported~~ for salvage or for disposal.

[6.11.5.3.6](#)~~6.8.5.3.6~~ *Top lift test*

[6.11.5.3.6.1](#)~~6.8.5.3.6.1~~ Applicability

For all types of flexible bulk containers as a design type test.

[6.11.5.3.6.2](#)~~6.8.5.3.6.2~~ 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](#)~~6.8.5.3.6.3~~ 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](#)~~6.8.5.3.6.4~~ 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~~~~transport~~ or handling, and no loss of contents.

6.11.5.3.7~~6.8.5.3.7~~ *Topple test*6.11.5.3.7.1~~6.8.5.3.7.1~~ Applicability

For all types of flexible bulk containers as a design type test.

6.11.5.3.7.2~~6.8.5.3.7.2~~ Preparation for testing

The flexible bulk container shall be filled to its maximum permissible gross mass.

6.11.5.3.7.3~~6.8.5.3.7.3~~ 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 test flexible bulk container falls entirely upon the surface.

6.11.5.3.7.4~~6.8.5.3.7.4~~ For all flexible bulk containers, the topple height is specified as follows:

Packing group III: 0.8 m

6.11.5.3.7.5~~6.8.5.3.7.5~~ 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~~6.8.5.3.8~~ *Righting test*6.11.5.3.8.1~~6.8.5.3.8.1~~ Applicability

For all types of flexible bulk containers designed to be lifted from the top or side, as a design type test.

6.11.5.3.8.2~~6.8.5.3.8.2~~ 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~~6.8.5.3.8.3~~ 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~~6.8.5.3.8.4~~ 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 ~~transport~~carriage or handling.

6.11.5.3.9~~6.8.5.3.9~~ *Tear test*6.11.5.3.9.1~~6.8.5.3.9.1~~ Applicability

For all types of flexible bulk containers as a design type test.

6.11.5.3.9.2~~6.8.5.3.9.2~~ Preparation for testing

The flexible bulk container shall be filled to its maximum permissible gross mass.

[6.11.5.3.9.36-8.5.3.9.3](#) 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 of the package. 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.

[6.11.5.3.9.46-8.5.3.9.4](#) Criterion for passing the test: the cut shall not propagate more than 25% of its original length.

[6.11.5.3.106-8.5.3.10](#) *Stacking test*

[6.11.5.3.10.16-8.5.3.10.1](#) Applicability

For all types of flexible bulk containers as a design type test.

[6.11.5.3.10.26-8.5.3.10.2](#) Preparation for testing

The flexible bulk container shall be filled to its maximum permissible gross mass.

[6.11.5.3.10.36-8.5.3.10.3](#) 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.

[6.11.5.3.10.46-8.5.3.10.4](#) Criterion for passing the test: there shall be no loss of contents during the test or after removal of the load.

[6.11.5.46-8.5.4](#) *Test report*

[6.11.5.4.16-8.5.4.1](#) 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.

[6.11.5.4.26-8.5.4.2](#) The test report shall contain statements that the flexible bulk container prepared as for [transport carriage](#) was tested in accordance with the appropriate provisions of this Chapter and that the use of other packaging methods or components may render it invalid. A copy of the test report shall be available to the competent authority.

[6.11.5.56-8.5.5](#) *Marking*

6.8.5.5.1 Each flexible bulk container manufactured and intended for use according to [RID/ADR](#) ~~these Regulations~~ 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 Chapter 6.1, 6.2, 6.3, 6.5, 6.6, 6.7 or 6.11~~8~~;

- (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 traffic;
 (f) The name or symbol of the manufacturer and other identification of the FBC 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.

6.8.5.5.2 *Example of marking*



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

Consequential amendment:

6.1.3.1 (a), 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](#)~~6.8~~".

Chapter 7.3

[7.3.2.1](#) After the description of the meaning of BK1 and BK2, insert:

["BK3: the carriage in flexible bulk containers is permitted"](#).

[7.3.2.4](#) Insert "(code BK2) and flexible bulk containers (code BK3)". At the end, replace "watertight" with "waterproof".

[ADN:](#)

[7.1.1.18](#) Insert "Bulk containers" after "large packagings".

RID/ADR:

Add a new 7.3.2.9 to read as follows:

7.3.2.9 Use of flexible bulk containers

7.3.2.9.1 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 damages and that inner liners are free from rips, tears or any damage.

7.3.2.9.2 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.

7.3.2.9.3 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 is prevented under normal conditions of transport."

Chapter 7.5.7.1 (RID/ADR only)

~~7.1.1.2, 7.1.1.3.1, 7.1.1.4~~7.5.1.2, 7.5.1.3 At the beginning, insert "Unless otherwise specified in ~~these Regulations~~RID/ADR".

[ST/SG/AC.10/38/Add.1/Corr.1]

Add a new sub-section 7.5.7.6 ~~7.1.1.11~~ to read as follows:

~~"7.5.7.6~~7.1.1.11 Flexible bulk containers shall be ~~transported~~carried within a ~~conveyance~~container or vehicle (ADR) / container or wagon (RID) 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 ~~[freight]~~-container as defined in 5.4.2 particular attention shall be paid to the guidance on the handling and stowage of dangerous goods~~packing of cargo transport units~~ referred to in 7.5.7.17.1.1.10, Note 2 and ~~notably~~ to the IMO/ILO/UNECE Guidelines for Packing Cargo Transport Units (CTUs) contained in the supplement to the International Maritime Dangerous Goods Code.

~~7.5.7.6~~17.1.1.11.1 Flexible bulk containers shall be secured by suitable means capable of restraining ~~the container in the conveyance~~them in the container or vehicle (ADR) / container or wagon (RID) in a manner that will prevent any movement during ~~carriage~~transport which would change the orientation of the ~~container~~flexible bulk container or cause ~~the container~~it to be damaged. Movement of the ~~containers~~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 overtightened to cause damage or deformation to the flexible bulk containers.

~~7.5.7.6~~27.1.1.11.2 Flexible bulk containers shall not be stacked ~~for road or rail transport~~".