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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

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Item 2 of the provisional agenda
Harmonization with the United Nations Recommendations on the Transport of Dangerous Goods

Report of the Ad Hoc Working Group on the Harmonization of RID/ADR/ADN with the United Nations Recommendations on the Transport of Dangerous Goods

Note by the secretariat[1, 2]

Addendum

Draft amendments to RID/ADR/ADN proposed by the Ad Hoc Working Group

[1] In accordance with the programme of work of the Inland Transport Committee for 2014–2015 (ECE/TRANS/240, para. 100, ECE/TRANS/2014/23, cluster 9, para.9.2).

[2] Circulated by the Intergovernmental Organisation for International Carriage by Rail (OTIF) under the symbol OTIF/RID/RC/2015/23/Add.1.

Chapter 1.2

1.2.1 In the definition of "*Aerosol or aerosol dispenser*", insert "an article consisting of" after "means".

(RID/ADN:) 1.2.1 Under the definition of *"CGA"*, amend the address in brackets to read as follows: "(CGA, 14501 George Carter Way, Suite 103, Chantilly, VA 20151, United States of America)".

1.2.1 In the definition of "*GHS*", replace "fifth revised edition" by "sixth revised edition" and replace "ST/SG/AC.10/30/Rev.5" by "ST/SG/AC.10/30/Rev.6".

1.2.1 In the definition of "*Manual of Tests and Criteria*", replace "fifth revised edition" by "sixth revised edition" and replace "ST/SG/AC.10/11/Rev.5, Amend.1 and Amend.2" by "ST/SG/AC.10/11/Rev.6".

1.2.1 In the definition of "*Large salvage packaging"*, replace "or leaking" by ", leaking or non-conforming".

1.2.1 In the definition of "*Salvage pressure receptacle"* replace "1 000" by "3 000".

1.2.1 In the definition of "*Tube*", replace "a seamless transportable pressure receptacle of" by "a transportable pressure receptacle of seamless or composite construction having".

1.2.1 In the definition of "*UN Model Regulations*", replace "eighteenth" by "nineteenth" and "ST/SG/AC.10/1/Rev.18" by "ST/SG/AC.10/1/Rev.19".

1.2.1 Add the following new definitions in alphabetical order:

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

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

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

Chapter 1.6

1.6.1.25 Amend to read as follows:

"1.6.1.25 Cylinders of 60 litres water capacity or less marked with a UN number in accordance with the provisions of RID/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 the next periodic inspection but no later than 30 June 2018.".

Add the following new transitional measures:

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

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

"1.6.1.40 Notwithstanding the requirements of RID/ADR/ADN applicable as from 1 January 2017, large packagings conforming to the packing group III performance level in accordance with special packing provision L2 of packing instruction LP02 of 4.1.4.3 applicable until 31 December 2016 may continue to be used until 31 December 2022 for UN No. 1950.".

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

Chapter 2.1

2.1.1.1 For Class 4.1, after "self-reactive substances" insert ", polymerizing substances".

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

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

Add a new 2.1.2.8 to read as follows:

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

– Under the most appropriate collective entry listed in sub-sections 2.2.x.3 reflecting all hazards; or

– Under the same UN number and name but with additional hazard communication information as appropriate to reflect the additional subsidiary risk(s) (documentation, label, placard) provided that the class remains unchanged and that any other carriage conditions (e.g. limited quantity, packaging and tank provisions) that would normally apply to substances possessing such a combination of hazards are the same as those applicable to the substance listed.

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

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

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

Chapter 2.2

2.2.1.1.5 In the definition of Division 1.6, in the second sentence, replace "contain only extremely insensitive substance" by "predominantly contain extremely insensitive substances".

2.2.1.1.6 Amend the definition of Compatibility Group N to read as follows: "Articles predominantly containing extremely insensitive substances".

2.2.1.1.7.1 In the second sentence, insert a paragraph break after "However," and replace "," by ":". Remainder of the sentence becomes new subparagraph (b). In (b), replace "such articles" by "fireworks".

Insert a new subparagraph (a) to read as follows:

"(a) waterfalls giving a positive result when tested in the HSL Flash composition test in Appendix 7 of the Manual of Tests and Criteria shall be classified as 1.1G regardless of the results of Test Series 6;".

2.2.1.1.7.5 In the table, for the entry "Fountain" in the column "Includes: / Synonym", delete "showers". In the third column, at the end, add the following Note:

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

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

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

2.2.1.1 Add a new paragraph 2.2.1.1.9 to read as follows:

"2.2.1.1.9 *Classification documentation*

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

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

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

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

(a) The name of the competent authority and the provisions in national legislation under which it is granted its authority;

(b) The modal or national regulations for which the classification document is applicable;

(c) Confirmation that the classification has been approved, made or agreed in accordance with the UN Model Regulations or the relevant modal regulations;

(d) The name and address of the person in law to which the classification has been assigned and any company registration which uniquely identifies a company or other body corporate under national legislation;

(e) The name under which the explosives will be placed onto the market or otherwise supplied for carriage;

(f) The proper shipping name, UN number, class, division and corresponding compatibility group of the explosives;

(g) Where appropriate, the maximum net explosive mass of the package or article;

(h) The name, signature, stamp, seal or other identification of the person authorised by the competent authority to issue the classification document is clearly visible;

(i) Where safety in carriage or the division is assessed as being dependent upon the packaging, the packaging mark or a description of the permitted:

- Inner packagings

- Intermediate packagings

- Outer packagings

(j) The classification document states the part number, stock number or other identifying reference under which the explosives will be placed onto the market or otherwise supplied for carriage;

(k) The name and address of the person in law who manufactured the explosives and any company registration which uniquely identifies a company or other body corporate under national legislation;

(l) Any additional information regarding the applicable packing instruction and special packing provisions where appropriate;

(m) The basis for assigning the classification, i.e. whether on the basis of test results, default for fireworks, analogy with classified explosive, by definition from Table A of Chapter 3.2 etc.;

(n) Any special conditions or limitations that the competent authority has identified as relevant to the safety for carriage of the explosives, the communication of the hazard and international carriage;

(o) The expiry date of the classification document is given where the competent authority considers one to be appropriate.”.

2.2.1.4 In the definition of “ROCKET MOTORS”, after “0281”, insert “, 0510”.

2.2.2.2.1 Amend to read as follows:

“2.2.2.2.1 Chemically unstable gases of Class 2 shall not be accepted for carriage unless the necessary precautions have been taken to prevent the possibility of a dangerous decomposition or polymerization under normal conditions of carriage or unless carried in accordance with special packing provision (r) of packing instruction P200 (10) of 4.1.4.1, as applicable. For the precautions necessary to prevent polymerization, see special provision 386 of Chapter 3.3. To this end particular care shall be taken to ensure that receptacles and tanks do not contain any substances liable to promote these reactions.”.

2.2.3.1.5 Existing text becomes 2.2.3.1.5.1. At the beginning, replace "viscous liquids" by "Except as provided for in 2.2.3.1.5.2, viscous liquids".

Before this paragraph, add a new heading 2.2.3.1.5 to read as follows:

"2.2.3.1.5 *Viscous liquids*".

Insert a new 2.2.3.1.5.2 to read as follows:

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

2.2.3.2.2 Amend to read as follows:

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

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

2.2.41 In the heading of Class 4.1, after "self-reactive substances", insert ", polymerizing substances".

2.2.41.1.1 In the first paragraph, replace "and self-reactive liquids or solids" by ", self-reactive liquids or solids and polymerizing substances". In the second paragraph, insert a new indent at the end to read "- polymerizing substances (see 2.2.41.1.20/2.2.41.1.20 and 2.2.41.1.21).".

2.2.41.1.2 At the end, add the following new subdivisions:

"PM Polymerizing substances

PM1 Not requiring temperature control;

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

2.2.41.1.2 After "F3 Inorganic;", insert "F4 Articles;".

2.2.41 Insert the following new sub-sections 2.2.41.1.20 and 2.2.41.1.21:

"Polymerizing substances and mixtures (stabilized)

Definitions and properties

2.2.41.1.20 *Polymerizing substances* are substances which, without stabilization, are liable to undergo a strongly exothermic reaction resulting in the formation of larger molecules or resulting in the formation of polymers under conditions normally encountered in carriage. Such substances are considered to be polymerizing substances of Class 4.1 when:

(a) Their self-accelerating polymerization temperature (SAPT) is 75 °C or less under the conditions (with or without chemical stabilization as offered for carriage) and in the packaging, IBC or tank in which the substance or mixture is to be carried;

(b) They exhibit a heat of reaction of more than 300 J/g; and

(c) They do not meet any other criteria for inclusion in Classes 1-8.

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

Temperature control requirements

(ADR/ADN:)

2.2.41.1.21 Polymerizing substances are subject to temperature control in carriage if their self-accelerating polymerization temperature (SAPT) is:

(a) When offered for carriage in a packaging or IBC, 50 °C or less in the packaging or IBC in which the substance is to be carried; or

(b) When offered for carriage in a tank, 45 °C or less in the tank in which the substance is to be carried.”.

(RID:)

2.2.41.1.21 *(Reserved)”*.

(RID:)

2.2.41.2.3 At the end of the last indent, replace "." by ";" and add:

“UN 3533 POLYMERIZING SUBSTANCE, SOLID, TEMPERATURE CONTROLLED, N.O.S.;

UN 3534 POLYMERIZING SUBSTANCE, LIQUID, TEMPERATURE CONTROLLED, N.O.S..”.

2.2.41.3 Under “flammable solids - without subsidiary risk”, insert the following new arm:

		articles F4	3527 POLYESTER RESIN KIT, solid base material

At the end, add the following arm:

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

2.2.52.4 In the table, amend the entries listed below as indicated:

Organic peroxide		*Column*	*Amendment*
DIBENZOYL PEROXIDE	(first row)	Concentration (%)	Replace ">51 - 100" by ">52 - 100"
tert-BUTYL CUMYL	(first row)	Number (Generic	Replace "3107" by

Organic peroxide		*Column*	*Amendment*
PEROXIDE		entry)	"3109"
(ADR and ADN:) DICETYL PEROXYDICARBONATE	(first row)	Packing Method	Replace "OP7" by "OP8"
DICETYL PEROXYDICARBONATE	(first row)	Number (Generic entry)	Replace "3116" by "3120"
tert-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE	(first row)	Concentration (%)	Replace ">32-100" by ">37-100"
tert-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE	(third row)	Concentration (%)	Replace "≤ 32" by "≤37"
tert-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE	(third row)	Diluent type B (%)	Replace "≥ 68" by "≥ 63"

2.2.61.2.1 Amend to read as follows:

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

2.2.7.2.4.1.3 (b), (b) (ii) and (b) (iii) Replace "marking "RADIOACTIVE"" by "mark "RADIOACTIVE"" wherever it appears.

2.2.7.2.4.1.4 (b) Replace "marking "RADIOACTIVE"" by "mark "RADIOACTIVE"".

2.2.8.2.1 Amend to read as follows:

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

2.2.9.1.7 Insert the following new first paragraph:

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

2.2.9.1.7 In the second paragraph of the last Note, replace "Examples of such vehicles are electrically-powered cars, motorcycles, scooters, three- and four-wheeled vehicles or motorcycles, e-bikes, wheel-chairs, lawn tractors, boats and aircraft." by "Examples of such vehicles are electrically-powered cars, motorcycles, scooters, three- and four-wheeled vehicles or motorcycles, trucks, locomotives, bicycles (pedal cycles with an electric motor) and other vehicles of this type (e.g. self-balancing vehicles or vehicles not equipped with at least one seating position), wheel chairs, lawn tractors, self-propelled farming and construction equipment, boats and aircraft.".

At the end of the second paragraph of the last Note, insert the following sentence:

“This includes vehicles carried in a packaging. In this case some parts of the vehicle may be detached from its frame to fit into the packaging.”.

At the end of the last Note, insert the following new paragraph:

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

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

“OECD Test Guidelines 107, 117 or 123.”.

(ADN:)

2.2.9.1.14 At the end of the first paragraph, after “Electric double layer capacitors (with an energy storage capacity greater than 0.3 Wh)” add a new line to read:

“Engines and machinery, internal combustion.”.

(ADR:)

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

“Engines and machinery, internal combustion.”.

(ADR/ADN:)

2.2.9.1.14, In the Note:

Replace “*UN No. 3166 engine, internal combustion or 3166*” by “*UN No. 3166*”.

Delete “*or 3166 engine, fuel cell, flammable gas powered or 3166 vehicle, fuel cell, flammable liquid powered*”.

(RID:)

2.2.9.1.14, Note

Delete "UN No. 3166 ENGINE, INTERNAL COMBUSTION, FLAMMABLE GAS POWERED or 3166 ENGINE, INTERNAL COMBUSTION, FLAMMABLE LIQUID POWERED or", "or 3166 ENGINE, FUEL CELL, FLAMMABLE GAS POWERED or 3166 ENGINE, FUEL CELL, FLAMMABLE LIQUID POWERED"."

2.2.9.3, for M2 *Substances and [articles] / [apparatus] which, in the event of fire, may form dioxins*

After “3151 POLYHALOGENATED BIPHENYLS, LIQUID or”, add a new entry to read as follows: “3151 HALOGENATED MONOMETHYLDIPHENYLMETHANES, LIQUID or”.

After “3152 POLYHALOGENATED BIPHENYLS, SOLID or”, add a new entry to read as follows: “3152 HALOGENATED MONOMETHYLDIPHENYLMETHANES, SOLID or”.

Consequential amendments:

2.1.3.4.2 After “UN No. 3151 POLYHALOGENATED BIPHENYLS, LIQUID;”, add a new entry to read as follows: “UN No. 3151 HALOGENATED MONOMETHYLDIPHENYLMETHANES, LIQUID;”.

After "UN No. 3152 POLYHALOGENATED BIPHENYLS, SOLID;", add a new entry to read as follows: "UN No. 3152 HALOGENATED MONOMETHYLDIPHENYLMETHANES, SOLID;".

Chapter 3.3, special provision 663, under "Scope", in the last indent:

After "polyhalogenated biphenyls" insert ", halogenated monomethyldiphenylmethanes".

Chapter 3.1

3.1.2.2 At the end of the first sentence, replace "package marking" by "package marks".

3.1.2.3 At the end of the first sentence, replace "package marking" by "package marks".

3.1.2.6 In the introductory sentence, before subparagraphs (a) and (b), at the end, before "then:" insert "or the evolution of excessive heat, or when chemical stabilization is used in combination with temperature control,".

(ADR/ADN:)

3.1.2.6 (a) Amend to read as follows:

"(a) For liquids and solids where the SAPT[1] (measured without or with inhibitor, when chemical stabilization is applied) is less than or equal to that prescribed in 2.2.41.1.21, the provisions of 2.2.41.1.17, special provision 386 of Chapter 3.3, special provision V8 of Chapter 7.2, special provision S4 of Chapter 8.5 and the requirements of Chapter 9.6 apply except that the term "SADT" as used in these paragraphs is understood to include also "SAPT" when the substance concerned reacts by polymerization;".

Footnote [1] reads as follows: "[1] *For the definition of self-accelerating polymerization temperature (SAPT), see 1.2.1.*".

(RID:)

3.1.2.6 (a) Amend to read as follows:

"(a) For liquids and solids: liquids and solids requiring temperature control[2] shall not be accepted for carriage by rail;".

In footnote 2, after "(SADT)" insert "or self-accelerating polymerization temperature (SAPT)".

Consequential amendments:

(RID/ADR/ADN) 5.4.1.2.3 In the heading, after "self-reactive substances" insert "and polymerizing substances".

(ADR/ADN) 5.4.1.2.3.1 After "self-reactive substances" insert "or polymerizing substances". In the text in parenthesis, after "see 2.2.41.1.17;" insert "for polymerizing substance see 2.2.41.1.21".

Chapter 3.2, Table A

For UN No. 0015, insert a new row with the same information as for the other entries for UN No. 0015 except that the designation in column (2) reads "AMMUNITION, SMOKE

with or without burster, expelling charge or propelling charge, containing toxic by inhalation substances" and the codes for labels in column (5) read "1 +6.1".

For UN No. 0016, insert a new row with the same information as for the other entries for UN No. 0016 except that the designation in column (2) reads "AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge, containing toxic by inhalation substances" and the codes for labels in column (5) read "1 +6.1".

For UN No. 0303, insert a new row with the same information as for the other entries for UN No. 0303 except that the designation in column (2) reads "AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge, containing toxic by inhalation substances" and the codes for labels in column (5) read "1.4 +6.1".

For UN Nos. 1005 and 3516, add "379" in column (6).

For UN Nos. 1006, 1013, 1046, 1056, 1065, 1066, 1956, 2036, add "378" in column (6).

For UN Nos. 1010, 1051, 1060, 1081, 1082, 1085, 1086, 1087, 1092, 1093, 1143, 1167, 1185, 1218, 1246, 1247, 1251, 1301, 1302, 1303, 1304, 1545, 1589, 1614, 1724, 1829, 1860, 1917, 1919, 1921, 1991, 2055, 2200, 2218, 2227, 2251, 2277, 2283, 2348, 2352, 2383, 2396, 2452, 2521, 2527, 2531, 2607, 2618, 2838, 3022, 3073 and 3079, in column (6) insert "386". (ADR:) Insert "V8" in column (16) and insert "S4" in column (19).

For UN Nos. 1202, 1203, 1223, 1268 (all entries), 1863 (all entries) and 3475, in column (6) delete "363".

For UN No. 1415, add "T9" in column (10). Add "TP7" and "TP33" in column (11).

For UN No. 1950, in column (8), replace "LP02" by "LP200".

For UN No. 1966, delete "TP23" in column (11).

For UN No. 2000, insert "383" in column (6).

For UN No. 2211, replace "207" by "382" in column (6).

For UN No. 2813, all entries, in column (9a), delete "PP83".

For UN No. 2815, in column (5) insert "+ 6.1" and in column (3b) replace "C7" by "CT1". In column (20), replace "80" by "86".

Consequential amendment:

> 4.1.1.21.6 In Table 4.1.1.21.6, for UN No. 2815, amend the classification code to read "CT1".

For UN Nos. 2977 and 2978, in column (5) insert "+ 6.1" before "+ 8". In column (20), replace "78" by "768".

Consequential amendment:

> In 5.3.2.3.2, after "70 radioactive material" insert a new line to read "768 radioactive material, toxic, corrosive".

For UN Nos. 3090, 3091, 3480 and 3481, in column (5), replace "9" by "9A" and in column (8), insert "P910".

For UN Nos. 3091 and 3481, insert "310" in column (6).

For UN No. 3151, amend column (2) to read as follows: "POLYHALOGENATED BIPHENYLS, LIQUID or HALOGENATED MONOMETHYLDIPHENYLMETHANES, LIQUID or POLYHALOGENATED TERPHENYLS, LIQUID".

For UN No. 3152, amend column (2) to read as follows: “POLYHALOGENATED BIPHENYLS, SOLID or HALOGENATED MONOMETHYLDIPHENYLMETHANES, SOLID or POLYHALOGENATED TERPHENYLS, SOLID”.

For UN No. 3166 In column (2) amend the proper shipping name to read as follows: “vehicle, flammable gas powered or vehicle, flammable liquid powered or vehicle, fuel cell, flammable gas powered or vehicle, fuel cell, flammable liquid powered”.

For UN No. 3269, packing groups II and III, in column (2) add the following text at the end of the description: “, liquid base material”.

For UN No. 3507, in column (3), replace “8” by “6.1” and in column (5), replace “8” by “6.1 +8”. In column (8), replace “P805” by “P603”.

Consequential amendment for ADR:

In 1.9.5.2.2, for Tunnel Category D, in the first row of the table, for Class 8, delete “and UN No. 3507”. For Class 6.1, after “and TFW” insert “and UN No. 3507”.

(RID:)

For UN No. 3507, in column (20), replace “87” by “687”.

Consequential amendment:

In 5.3.2.3.2, after “68 Toxic substance, corrosive” insert a new line to read “687 Toxic substance, corrosive, radioactive”.

Add the following entries:

(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
3527	POLYESTER RESIN KIT, solid base material	4.1	F4	II	4.1	236 340	5kg	E0	P412								2 (E)				CE10	RID: 40
3527	POLYESTER RESIN KIT, solid base material	4.1	F4	III	4.1	236 340	5kg	E0	P412								3 (E)				CE11	RID: 40
0510	ROCKET MOTORS†	1	1.4C		1.4		0	E0	P130 LP101	PP67 L1	MP22						2 (E)	W2 / V2		CV1 CV2 CV3	S1	RID: 1.4C
3528	ENGINE, INTERNAL COMBUSTION, FLAMMABLE LIQUID POWERED or ENGINE, FUEL CELL, FLAMMABLE LIQUID POWERED or MACHINERY, INTERNAL COMBUSTION, FLAMMABLE LIQUID POWERED or MACHINERY, FUEL CELL, FLAMMABLE LIQUID POWERED	3			3	363	0	E0	P005													

(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
3529	ENGINE, INTERNAL COMBUSTION, FLAMMABLE GAS POWERED or ENGINE, FUEL CELL, FLAMMABLE GAS POWERED or MACHINERY, INTERNAL COMBUSTION, FLAMMABLE GAS POWERED or MACHINERY, FUEL CELL, FLAMMABLE GAS POWERED	2			2.1	363	0	E0	P005													
3530	ENGINE, INTERNAL COMBUSTION or MACHINERY, INTERNAL COMBUSTION	9			9	363	0	E0	P005													
3531	POLYMERIZING SUBSTANCE, SOLID, STABILIZED, N.O.S.	4.1	PM1	III	4.1	274 386	0	E0	P002 IBC07	PP92 B18		T7	TP4 TP6 TP33	[SGAN+]	[TU30]	[AT]	[2] [(D)]	[W7/ V1]		[CV15 CV22 /CW22]	[CE10]	40
3532	POLYMERIZING SUBSTANCE, LIQUID, STABILIZED, N.O.S.	4.1	PM1	III	4.1	274 386	0	E0	P001 IBC03	PP93 B19		T7	TP4 TP6	[L4BN+]	[TU30]	[AT]	[2] [(D)]	[W7/ V1]		[CV15 CV22 /CW22]	[CE6]	40
3533	POLYMERIZING SUBSTANCE, SOLID, TEMPERATURE CONTROLLED, N.O.S.	4.1	PM2	III	4.1	274 386	0	E0	P002 IBC07	PP92 B18		T7	TP4 TP6 TP33	[SGAN+]	[TU30]	[AT]	[1] [(D)]	V8		[CV15 CV21 CV22]	S4	40

(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
(RID:) 3533	POLYMERIZING SUBSTANCE, SOLID, TEMPERATURE CONTROLLED, N.O.S.	4.1	PM2	CARRIAGE PROHIBITED																		
3534	POLYMERIZING SUBSTANCE, LIQUID, TEMPERATURE CONTROLLED, N.O.S.	4.1	PM2	III	4.1	274 386	0	E0	P001 IBC03	PP93 B19		T7	TP4 TP6	[L4BN+]	[TU30]	[AT]	[1] [(D)]	V8		[CV15 CV21 CV22]	S4	40
(RID:) 3534	POLYMERIZING SUBSTANCE, LIQUID, TEMPERATURE CONTROLLED, N.O.S.	4.1	PM2	CARRIAGE PROHIBITED																		

Consequential amendments:

(ADR/ADN:) 1.1.3.6.3 For transport category 1, for Class 4.1, at the end replace “and 3231 to 3240” by “, 3231 to 3240, 3533 and 3534”.

1.1.3.6.3 For transport category 2, for Class 4.1, at the end insert “, 3531 and 3532”.

(ADR/ADN:) 1.9.5.2.2 For tunnel category D, in the first row of the table, for Class 4.1, at the end replace “and 3251” by “, 3251, 3531, 3532, 3533 and 3534”.

5.3.2.3.2 For hazard identification number 40, at the end insert “, or polymerizing substance”.

(ADR/ADN:) 7.5.5.3 After “or F” insert “and of polymerizing substances of Class 4.1”.

(ADR/ADN:) 7.5.11, CV22 After “of flammable solids” insert “, of polymerizing substances”.

Chapter 3.2, Table B

Amend the entries for Engine, fuel cell, flammable gas powered, Engine, fuel cell, flammable liquid powered and Engine, internal combustion to read:

ENGINE, FUEL CELL, FLAMMABLE GAS POWERED	3529	2.1
ENGINE, FUEL CELL, FLAMMABLE LIQUID POWERED	3528	3
ENGINE, INTERNAL COMBUSTION	3530	9

Amend the entry for “POLYESTER RESIN KIT” to read as follows:

POLYESTER RESIN KIT, liquid base material	3269	3
POLYESTER RESIN KIT, solid base material	3527	4.1

In the entry for ROCKET MOTORS, insert a new row with“0510” in the second column and “1” in the third column.

Add the following new entries in alphabetical order:

ENGINE, INTERNAL COMBUSTION, FLAMMABLE LIQUID POWERED	3528	3
MACHINERY, INTERNAL COMBUSTION, FLAMMABLE LIQUID POWERED	3528	3
MACHINERY, FUEL CELL, FLAMMABLE LIQUID POWERED	3528	3
ENGINE, INTERNAL COMBUSTION, FLAMMABLE GAS POWERED	3529	2
MACHINERY, INTERNAL COMBUSTION, FLAMMABLE GAS POWERED	3529	2
MACHINERY, FUEL CELL, FLAMMABLE GAS POWERED	3529	2
MACHINERY, INTERNAL COMBUSTION	3530	9
HALOGENATED MONOMETHYLDIPHENYLMETHANES, LIQUID	3151	9
HALOGENATED MONOMETHYLDIPHENYLMETHANES, SOLID	3152	9
Table Tennis Balls, see	2000	4.1

Chapter 3.3

3.3.1 Add the following second sentence: “Where a special provision includes a requirement for package marking, the provisions of 5.2.1.2 (a) and (b) shall be met. If the required mark is in the form of specific wording indicated in quotation marks, such as “Damaged Lithium Batteries”, the size of the mark shall be at least 12 mm, unless otherwise indicated in the special provision or elsewhere in RID/ADR/ADN.”.

SP188 (f) Amend to read as follows:

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

This requirement does not apply to:

(i) packages containing only button cell batteries installed in equipment (including circuit boards); and

(ii) packages containing no more than four cells or two batteries installed in equipment, where there are not more than two packages in the consignment.”.

SP188 (g) Delete.

SP188 (h) and (i) Renumber as (g) and (h) respectively.

SP188 Add the following paragraph at the end:

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

SP207 Delete “Polymeric beads and”.

SP225 In the last Note, replace “applicable to the relevant gas” by “applicable to the relevant dangerous goods”.

SP236 Amend to read as follows:

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

SP310 Amend to read as follows:

“310 The testing requirements in the Manual of Tests and Criteria, part III sub-section 38.3 do not apply to production runs, consisting of not more than 100 cells and batteries, or to pre-production prototypes of cells and batteries when these prototypes are carried for testing when packaged in accordance with packing instruction P910 of 4.1.4.1

The transport document shall include the following statement: “Carriage in accordance with special provision 310”.

Damaged or defective cells, batteries, or cells and batteries contained in equipment shall be carried in accordance with special provision 376 and packaged in accordance with packing instructions P908 of 4.1.4.1 or LP904 of 4.1.4.3, as applicable.

Cells, batteries or cells and batteries contained in equipment carried for disposal or recycling may be packaged in accordance with special provision 377 and packing instruction P909 of 4.1.4.1.”.

SP317 Amend to read as follows:

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

SP327 In the second sentence, insert "movement and" after "protected against".

SP327 In the third sentence, replace "LP02" by "LP200".

SP363 Amend to read as follows:

"363 (a) This entry applies to engines or machinery, powered by fuels classified as dangerous goods via internal combustion systems or fuel cells (e.g. combustion engines, generators, compressors, turbines, heating units, etc.), except those which are assigned under UN No. 3166 or UN No. 3363.

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

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

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

(c) Engines and machinery containing fuels meeting the classification criteria of Class 3, shall be consigned under the entries UN No. 3528 ENGINE, INTERNAL COMBUSTION, FLAMMABLE LIQUID POWERED or UN No. 3528 ENGINE, FUEL CELL, FLAMMABLE LIQUID POWERED or UN No. 3528 MACHINERY, INTERNAL COMBUSTION, FLAMMABLE LIQUID POWERED or UN No. 3528 MACHINERY, FUEL CELL, FLAMMABLE LIQUID POWERED, as appropriate.

(d) Engines and machinery containing fuels meeting the classification criteria of flammable gases of Class 2, shall be consigned under the entries UN No. 3529 ENGINE, INTERNAL COMBUSTION, FLAMMABLE GAS POWERED or UN No. 3529 ENGINE, FUEL CELL, FLAMMABLE GAS POWERED or UN No. 3529 MACHINERY, INTERNAL COMBUSTION, FLAMMABLE GAS POWERED or UN No. 3529 MACHINERY, FUEL CELL, FLAMMABLE GAS POWERED, as appropriate.

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

(e) Engines and machinery containing liquid fuels meeting the classification criteria of 2.2.9.1.10 for environmentally hazardous substances and not meeting the classification criteria of any other class shall be consigned under the entries UN No. 3530 ENGINE, INTERNAL COMBUSTION or UN No. 3530 MACHINERY, INTERNAL COMBUSTION, as appropriate.

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

specified in RID/ADR/ADN. However, lithium batteries shall meet the requirements of 2.2.9.1.7, except when otherwise specified by RID/ADR/ADN (e.g. for prototype batteries and small production runs under special provision 310 or damaged batteries under special provision 376).

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

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

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

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

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

Where the engine or machinery contains more than 60 l of liquid fuel and has a capacity of not more than 450 l, the labelling requirements of 5.2.2 shall apply.

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

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

(v) for UN No. 3529:

Where the fuel tank of the engine or machinery has a water capacity of not more than 450 l, the labelling requirements of 5.2.2 shall apply.

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

Where the fuel tank of the engine or machinery has a water capacity of more than 1 000 l, it shall be placarded on two opposing sides. Placards shall correspond to the labels required in Column (5) of Table A of Chapter 3.2 and shall conform to the specifications given

[2] For example, compliance with the relevant provisions of Directive 2006/42/EC of the European Parliament and of the Council of 17 May 2006 on machinery, and amending Directive 95/16/EC (Official Journal of the European Union No. L 157 of 9 June 2006, pp. 0024-0086).

in 5.3.1.7. Placards shall be displayed on a background of contrasting colour, or shall have either a dotted or solid outer boundary line.

[(vi) A transport document in accordance with 5.4 is required, except for UN No. 3528 and UN No. 3530, where a transport document is only required when the engine or machinery contains more than 60 l of liquid fuels. This transport document shall contain the following additional statement "Transport in accordance with special provision 363".".]

SP369 Amend the first paragraph to read as follows:

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

SP369 Amend the third paragraph to read as follows:

"In addition to the provisions applicable to the carriage of Class 6.1 substances with a corrosivity subsidiary risk, the provisions of 5.1.3.2, 5.1.5.2.2, 5.1.5.4.1 (b), 7.5.11 CW33/CV33 (3.1), (5.1) to (5.4) and (6) shall apply.".

SP370 In the second indent, replace "that is not too sensitive for acceptance into Class 1" with "that gives a positive result".

SP373 (b) (i) and (c) (ii) Insert "or adsorbent" after "absorbent". Insert "or adsorb" after "absorb".

SP373 In the penultimate paragraph, replace "carriage in accordance" by "transport in accordance".

Add the following new special provisions:

"378 Radiation detectors containing this gas in non-refillable pressure receptacles not meeting the requirements of Chapter 6.2 and packing instruction P200 of 4.1.4.1 may be carried under this entry provided:

(a) The working pressure in each receptacle does not exceed 50 bar;

(b) The receptacle capacity does not exceed 12 litres;

(c) Each receptacle has a minimum burst pressure of at least 3 times the working pressure when a relief device is fitted and at least 4 times the working pressure when no relief device is fitted;

(d) Each receptacle is manufactured from material which will not fragment upon rupture;

(e) Each detector is manufactured under a registered quality assurance programme;

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

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

(g) The transport document includes the following statement "Transport in accordance with special provision 378".

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

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

(a) The adsorption or absorption presents the following properties:

(i) The pressure at a temperature of 20 °C in the receptacle is less than 0.6 bar;

(ii) The pressure at a temperature of 35 °C in the receptacle is less than 1 bar;

(iii) The pressure at a temperature of 85 °C in the receptacle is less than 12 bar.

(b) The adsorbent or absorbent material shall not have dangerous properties listed in Classes 1 to 8;

(c) The maximum contents of a receptacle shall be 10 kg of ammonia; and

(d) Receptacles containing adsorbed or absorbed ammonia shall meet the following conditions:

(i) Receptacles shall be made of a material compatible with ammonia as specified in ISO 11114-1:2012;

(ii) Receptacles and their means of closure shall be hermetically sealed and able to contain the generated ammonia;

(iii) Each receptacle shall be able to withstand the pressure generated at 85 °C with a volumetric expansion no greater than 0.1%;

(iv) Each receptacle shall be fitted with a device that allows for gas evacuation once pressure exceeds 15 bar without violent rupture, explosion or projection; and

(v) Each receptacle shall be able to withstand a pressure of 20 bar without leakage when the pressure relief device is deactivated.

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

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

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

"380 *(Reserved)*".

"381 *(Reserved)*".

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

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

"384 *(Reserved)*".

"385 *(Reserved)*".

"386

(ADR/ADN:)

When substances are stabilized by temperature control, the provisions of 2.2.41.1.17, special provision V8 of Chapter 7.2, special provision S4 of Chapter 8.5 and the requirements of Chapter 9.6 apply. When chemical stabilization is employed, the person offering the packaging, IBC or tank for carriage shall ensure that the level of stabilization is sufficient to prevent the substance in the packaging, IBC or tank from dangerous polymerization at a bulk mean temperature of 50 °C, or, in the case of a portable tank, 45 °C. Where chemical stabilization becomes ineffective at lower temperatures within the anticipated duration of carriage, temperature control is required. In making this determination factors to be taken into consideration include, but are not limited to, the capacity and geometry of the packaging, IBC or tank and the effect of any insulation present, the temperature of the substance when offered for carriage, the duration of the journey and the ambient temperature conditions typically encountered in the journey (considering also the season of year), the effectiveness and other properties of the stabilizer employed, applicable operational controls imposed by regulation (e.g. requirements to protect from sources of heat, including other cargo carried at a temperature above ambient) and any other relevant factors.".

(RID:)

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

Chapter 3.4

3.4.7.1 Replace "marking" by "mark" wherever it appears (4 times).

3.4.7.2 At the end of the first sentence, replace "marking" by "mark".

3.4.8.1 Replace "marking" by "mark" wherever it appears (4 times).

3.4.8.2 At the end of the first sentence, replace "marking" by "mark".

3.4.9 Replace "marking" by "mark" (twice) and "markings" by "marks".

3.4.10 Replace "marking" by "mark".

3.4.11 Amend to read as follows:

"**3.4.11 Use of overpacks**

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

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

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

– marked with the marks required by this chapter.

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

Chapter 3.5

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

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

3.5.2 (e) Replace "markings" by "marks".

3.5.4.2 In the paragraph after the figure, replace "marking" by "mark".

3.5.4.3 Amend to read as follows:

"**3.5.4.3** ***Use of overpacks***

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

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

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

– marked with the marks required by this chapter.

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

Chapter 4.1

4.1.1 In the NOTE, replace “LP02” by “LP200”.

4.1.1.5 In the second sentence, replace “markings” by “marks”.

4.1.1.12 Amend the introductory sentence to read as follows:

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

4.1.1.19.1 Amend the second sentence to read as follows: “This does not prevent the use of a larger size packaging or large packaging of appropriate type and performance level and under the conditions of 4.1.1.19.2 and 4.1.1.19.3.”.

4.1.1.20.1 In the Note, replace “markings” by “marks”.

4.1.1.20.2 Add a second sentence to read as follows: “The maximum size of the placed pressure receptacle is limited to a water capacity of 1 000 litres.”. Add a penultimate sentence to read as follows: “In this case the total sum of water capacities of the placed pressure receptacles shall not exceed 1 000 litres.”.

4.1.2.4 At the end of the introductory sentence, before the subparagraphs, replace “marking” by “mark”.

4.1.4.1 For packing instruction P001, add a new special packing provision “PP93” to read:

“PP93 For UN Nos. 3532 and 3534, packagings shall be designed and constructed to permit the release of gas or vapour to prevent a build-up of pressure that could rupture the packagings in the event of loss of stabilization.”.

4.1.4.1 For packing instruction P002, add a new special packing provision “PP92” to read:

“PP92 For UN Nos. 3531 and 3533, packagings shall be designed and constructed to permit the release of gas or vapour to prevent a build-up of pressure that could rupture the packagings in the event of loss of stabilization.”.

4.1.4.1, packing instructions P112 (c), P114 (b) and P406 In special packing provision PP48, add a new last sentence to read as follows: “Packagings of other material with a small amount of metal, for example metal closures or other metal fittings such as those mentioned in 6.1.4, are not considered metal packagings.”.

4.1.4.1, packing instruction P130 In special packing provision PP67, replace “and 0502” by “, 0502 and 0510”.

4.1.4.1, packing instruction P131 Under “Outer packagings”, for “Boxes”, move the line “plastics, solid (4H2)” after “fibreboard (4G)”.

4.1.4.1, packing instruction P137 Under “Outer packagings”, for “Boxes”, move the line “plastics, solid (4H2)” after “fibreboard (4G)”.

4.1.4.1, packing instruction P137 In special packing provision PP70, replace “the package marked THIS SIDE UP” by “the package shall be marked in accordance with 5.2.1.10.1”.

4.1.4.1, packing instruction P200 (3) (d) Amend the NOTE to read as follows:

*“**NOTE:** For pressure receptacles which make use of composite materials, the maximum test period shall be 5 years. The test period may be extended to that specified in Tables 1*

and 2 (i.e. up to 10 years), if approved by the competent authority or body designated by this authority which issued the type approval.".

Consequential amendment:

4.1.4.1, packing instruction P200 (9) Amend the last paragraph to read as follows:

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

4.1.4.1, packing instruction P200 (3) (f) Amend to read as follows:

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

4.1.4.1, packing instruction P200 (5) Insert a new subparagraph (e) to read as follows:

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

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

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

(i) Calculation of the vapour pressure of the liquid component and of the partial pressure of the compressed gas at 15 °C (filling temperature);

(ii) Calculation of the volumetric expansion of the liquid phase resulting from the heating from 15 °C to 65 °C and calculation of the remaining volume for the gaseous phase;

(iii) Calculation of the partial pressure of the compressed gas at 65 °C considering the volumetric expansion of the liquid phase;

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

(iv) Calculation of the vapour pressure of the liquid component at 65 °C;

(v) The total pressure is the sum of the vapour pressure of the liquid component and the partial pressure of the compressed gas at 65 °C;

(vi) Consideration of the solubility of the compressed gas at 65 °C in the liquid phase;

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

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

4.1.4.1, packing instruction P200 (7) (a) Amend the first indent to read as follows:

“ - of the conformity of receptacles and accessories with RID/ADR/ADN;”.

Amend the last indent to read as follows:

“ - of marks and identification.”.

4.1.4.1, packing instruction P200 (11) In the table, after the third row, insert the following new rows:

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

Delete the two last rows.

4.1.4.1, packing instruction P200 Amend paragraph (10) as follows:

In special provision p, in the two first paragraphs, replace “or ISO 3807-2:2000” by “, ISO 3807-2:2000 or ISO 3807:2013”. In the last paragraph, replace “conforming to ISO 3807-2:2000” by “fitted with a fusible plug”.

In special provision u, replace “ISO 7866:2012” by “ISO 7866:2012 + Cor 1:2014”.

4.1.4.1, packing instruction P205 (6) Replace “markings” by “mark”.

4.1.4.1, packing instruction P206 (3) At the end add the following paragraph:

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

(a) Calculation of the vapour pressure of the liquid component and of the partial pressure of the compressed gas at 15 °C (filling temperature);

(b) Calculation of the volumetric expansion of the liquid phase resulting from the heating from 15 °C to 65 °C and calculation of the remaining volume for the gaseous phase;

(c) Calculation of the partial pressure of the compressed gas at 65 °C considering the volumetric expansion of the liquid phase;

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

(d) Calculation of the vapour pressure of the liquid component at 65 °C;

(e) The total pressure is the sum of the vapour pressure of the liquid component and the partial pressure of the compressed gas at 65 °C;

(f) Consideration of the solubility of the compressed gas at 65 °C in the liquid phase.

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

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

4.1.4.1, packing instruction P207 In the last sentence before the special packing provision, insert the word “excessive” after “to prevent”.

4.1.4.1, packing instructions P403 and P410 Delete special packing provision “PP83” and insert “PP83 *Deleted*”.

4.1.4.1, packing instruction P502 Amend special packing provision “PP28” to read as follows:

“PP28 For UN No. 1873, parts of packagings which are in direct contact with perchloric acid shall be constructed of glass or plastics.”.

4.1.4.1, packing instruction P650 (10) Replace “markings” by “marks”.

4.1.4.1, packing instruction P805 Renumber as “P603” and reorder accordingly.

4.1.4.1, packing instruction P903 The amendment does not apply to the English text.

4.1.4.1, packing instruction P906 (1) Amend to read as follows: “For liquids and solids containing or contaminated with PCBs, polyhalogenated biphenyls, polyhalogenated terphenyls or halogenated monomethyldiphenylmethanes: Packagings in accordance with P001 or P002, as appropriate.”.

4.1.4.1, packing instruction P906 (2) (b) Amend the end of the first sentence to read as follows: “PCBs, polyhalogenated biphenyls, polyhalogenated terphenyls or halogenated monomethyldiphenylmethanes present in them.”.

4.1.4.1, packing instruction P909 (3) Amend the beginning of the last sentence to read: “Equipment may also be…”. Remainder unchanged.

4.1.4.1 Add new packing instructions to read:

P005	PACKING INSTRUCTION	P005
This instruction applies to UN Nos. 3528, 3529 and 3530.		
If the engine or machinery is constructed and designed so that the means of containment containing the dangerous goods affords adequate protection, an outer packaging is not required. Dangerous goods in engines or machinery shall otherwise be packed in outer packagings constructed of suitable material, and of adequate strength and design in relation to the packaging capacity and its intended use, and meeting the applicable requirements of 4.1.1.1, or they shall be fixed in such a way that they will not become loose during normal conditions of carriage, e.g. in cradles or crates or other handling devices. In addition, the manner in which means of containment are contained within the engine or machinery, shall be such that under normal conditions of carriage, damage to the means of containment containing the dangerous goods is prevented; and in the event of damage to the means of containment containing liquid dangerous goods, no leakage of the dangerous goods from the engine or machinery is possible (a leakproof liner may be used to satisfy this requirement). Means of containment containing dangerous goods shall be so installed, secured or cushioned as to prevent their breakage or leakage and so as to control their movement within the engine or machinery during normal conditions of carriage. Cushioning material shall not react dangerously with the content of the means of containment. Any leakage of the contents shall not substantially impair the protective properties of the cushioning material.		
Additional requirement Other dangerous goods (e.g. batteries, fire extinguishers, compressed gas accumulators or safety devices) required for the functioning or safe operation of the engine or machinery shall be securely mounted in the engine or machine.		

P412	PACKING INSTRUCTION	P412
This instruction applies to UN No. 3527		
The following combination packagings are authorized, provided that the general provisions of **4.1.1** and **4.1.3** are met: (1) Outer packagings: Drums (1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G); Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2) Jerricans (3A1, 3A2, 3B1, 3B2, 3H1, 3H2); (2) Inner packagings: (a) The activator (organic peroxide) shall have a maximum quantity of 125 ml per inner packaging if liquid, and 500 g per inner packaging if solid. (b) The base material and the activator shall 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 4.1 applied to the base material.		

P910	PACKING INSTRUCTION	P910
This instruction applies to UN Nos. 3090, 3091, 3480 and 3481 production runs consisting of not more than 100 cells and batteries and to pre-production prototypes of cells and batteries when these prototypes are carried for testing**.**		

P910	PACKING INSTRUCTION	P910

The following packagings are authorized provided that the general provisions of **4.1.1** and **4.1.3** are met:

(1) For cells and batteries, including when packed with equipment:
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 and shall meet the following requirements:

(a) Batteries and cells, including equipment, of different sizes, shapes or masses shall be packaged in an outer packaging of a tested design type listed above provided the total gross mass of the package does not exceed the gross mass for which the design type has been tested;

(b) Each cell or battery shall be individually packed in an inner packaging and placed inside an outer packaging;

(c) Each inner packaging shall be completely surrounded by sufficient non-combustible and non-conductive thermal insulation material to protect against a dangerous evolution of heat;

(d) Appropriate measures shall be taken to minimize the effects of vibration and shocks and prevent movement of the cells or batteries within the package that may lead to damage and a dangerous condition during carriage. Cushioning material that is non-combustible and non-conductive may be used to meet this requirement;

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

(f) A cell or battery with a net mass of more than 30 kg shall be limited to one cell or battery per outer packaging.

(2) For cells and batteries contained in equipment:
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 and shall meet the following requirements:

(a) Equipment of different sizes, shapes or masses shall be packaged in an outer packaging of a tested design type listed above provided the total gross mass of the package does not exceed the gross mass for which the design type has been tested;

(b) The equipment shall be constructed or packaged in such a manner as to prevent accidental operation during carriage;

(c) Appropriate measures shall be taken to minimize the effects of vibration and shocks and prevent movement of the equipment within the package that may lead to damage and a dangerous condition during carriage. When cushioning material is used to meet this requirement it shall be non-combustible and non-conductive; and

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

(3) The equipment or the batteries may be carried unpackaged under conditions specified by the competent authority. Additional conditions that may be considered in the approval process include, but are not limited to:

(a) The equipment or the battery shall be strong enough to withstand the shocks and loadings normally encountered during carriage, including trans-shipment between cargo transport units and between

P910	PACKING INSTRUCTION	P910

cargo transport units and warehouses as well as any removal from a pallet for subsequent manual or mechanical handling; and

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

Additional requirements

The cells and batteries shall be protected against short circuit;

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

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

4.1.4.2, packing instruction IBC03 Add a new special packing provision "B19" to read:

"B19 For UN Nos. 3532 and 3534, IBCs shall be designed and constructed to permit the release of gas or vapour to prevent a build-up of pressure that could rupture the IBCs in the event of loss of stabilization.".

4.1.4.2, packing instruction IBC07 Add a new special packing provision "B18" to read:

"**Special packing provision**

B18 For UN Nos. 3531 and 3533, IBCs shall be designed and constructed to permit the release of gas or vapour to prevent a build-up of pressure that could rupture the IBCs in the event of loss of stabilization.".

4.1.4.2, packing instruction IBC520 Add the following new entries:

UN No.	*Organic peroxide*	*Type of IBC*	*Maximum quantity (litres)*	*Control temperature*	*Emergency Temperature*
3109	tert-Butyl cumyl peroxide	31HA1	1000		
(ADR:) 3119	1,1,3,3-Tetramethylbutyl peroxy-2-ethylhexanoate, not more than 67%, in diluent type A	31HA1	1000	+15 ºC	+20 ºC

(ADR:)

4.1.4.2, packing instruction IBC520 For UN No. 3119, in the entry for "Di-(2-ethylhexyl) peroxydicarbonate, not more than 62%, stable dispersion, in water", add the following new row:

Type of IBC	*Maximum quantity (litres)*	*Control temperature*	*Emergency Temperature*
31HA1	1000	-20 ºC	-10 ºC

4.1.4.3, packing instruction LP02 Delete special packing instruction L2 and insert "L2 *Deleted*".

4.1.4.3, packing instruction LP101 In special packing provision L1, replace "and 0502" by ", 0502 and 0510".

4.1.4.3 Add the following packing instruction:

LP200	PACKING INSTRUCTION	LP200
This instruction applies to UN No. 1950.		
The following large packagings are authorized for aerosols, provided that the general provisions of **4.1.1** and **4.1.3** are met: Rigid large packagings conforming to the packing group II performance level, made of: steel (50A); aluminium (50B); metal other than steel or aluminium (50N); rigid plastics (50H); natural wood (50C); plywood (50D); reconstituted wood (50F); rigid fibreboard (50G).		
Special packing provision: **L2** The large packagings shall be designed and constructed to prevent dangerous movement of the aerosols and inadvertent discharge during normal conditions of carriage. For waste aerosols carried in accordance with special provision 327, the large packagings shall have a means of retaining any free liquid that might escape during carriage, e.g. absorbent material. The large packagings shall be adequately ventilated to prevent the creation of a flammable atmosphere and the build-up of pressure.		

4.1.6.15 For 4.1.6.2, replace "ISO 11114-2:2000" with "ISO 11114-2:2013".

4.1.6.15 For 4.1.6.8, after "annex A of ISO 10297:2006", insert "or annex A of ISO 10297:2014".

4.1.6.12 (c) Replace "markings" by "marks".

4.1.6.13 (d) Replace "markings" by "marks".

4.1.8.4 Replace "marking" by "mark".

Chapter 4.2

4.2.1.13.14 Replace "marking" by "mark".

4.2.4.5.6 (c) Replace "markings" by "marks".

4.2.4.6 (d) Replace "markings" by "marks".

4.2.5.3 Delete TP23 and insert "TP23 *Deleted.*".

Chapter 5.1

5.1.2.1 Amend to read as follows:

"(a) Unless marks and labels representative of all dangerous goods in the overpack are visible, the overpack shall be:

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

– labelled and marked with the UN number and other marks, as required for packages in Chapter 5.2, for each item of dangerous goods contained in the overpack.

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

5.1.2.1 b) remains with the following change: Replace “marking” by “marks”.

5.1.2.3 Replace “markings” by “marks” (twice).

Chapter 5.2

5.2.1 In the Note, replace “markings” by “marks”.

5.2.1.1 Replace “marking” by “mark”.

5.2.1.2 Replace “markings” by “marks”.

5.2.1.3 In the second sentence, replace “marking” by “mark”.

5.2.1.5 In the second sentence replace “marking” by “mark”.

5.2.1.7.1 In the second sentence replace “markings” by “marks”.

5.2.1.7.7 Replace “marking” by “mark”.

5.2.1.8.2 Replace “markings” by “marks”..

5.2.1.8.3 In the paragraph after the figure, replace “marking” by “mark” (twice).

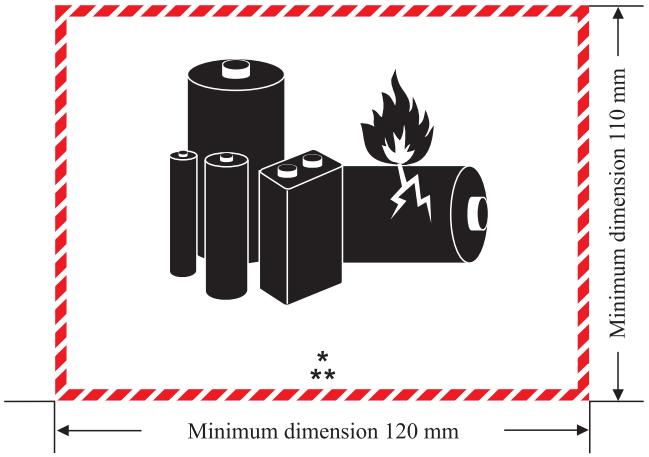
5.2.1 Add a new 5.2.1.9 to read as follows:

“**5.2.1.9** ***Lithium battery mark***

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

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

Figure 5.2.1.9.2



Lithium battery mark

* Place for UN number(s)

** Place for telephone number for additional information

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

Renumber 5.2.1.9 as 5.2.1.10 and renumber as appropriate subsequent paragraphs, references and figures in this sub-section.

Consequential amendments:

In 1.7.1.5.1 (a), 3.4.1 (e), 4.1.1.5, 5.1.2.3, replace "5.2.1.9" by "5.2.1.10".

In 5.1.2.1 (b), replace "5.2.1.9" by "5.2.1.10" and "5.2.1.9.1" by "5.2.1.10.1".

5.2.2.1.2 Replace "marking" by "mark".

5.2.2.1.6 (b) Replace "marking" by "mark".

5.2.2.1.11.1 In the penultimate sentence, replace "markings" by "marks".

5.2.2.2.1.1 Figure 5.2.2.2.1.1, in the text for figure note **, insert "/symbol" after "text/number".

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

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

5.2.2.2.1.3 (a) At the end, insert "and in addition for label No. 9A the symbol".

5.2.2.2.1.5 At the end, add the following sentence: "For label 9A, no text other than the class mark shall be included in the bottom part of the label.".

5.2.2.2.2 Under "**CLASS 9 HAZARD Miscellaneous dangerous substances and articles**", after the generic No. 9 label, add the following: "

(No.9A)

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

Background: white;

Figure “9” underlined in bottom corner”.

Chapter 5.3

5.3.1.2 At the end, add the following new sentence:

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

(RID:)5.3.1.4/(ADR:) 5.3.1.4.1 In the last sentence of the second paragraph, at the beginning, delete “However, in such case,”.

(RID:) 5.3.1.7.3 Amend the beginning to read: "For [tanks] / [tank-containers and portable tanks] …".

5.3.3 In the second paragraph, replace “marking” by “mark” and insert a new fourth sentence to read as follows:

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

5.3.6.2 Add a new penultimate sentence to read as follows:

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

Chapter 5.4

Insert a new 5.4.1.1.20 to read as follows:

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

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

Insert a new 5.4.1.1.21 to read as follows:

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

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

Chapter 5.5

5.5.2.3.2 In the paragraph after figure 5.5.2.3.2, replace "marking" by "mark" (twice).

5.5.3.4.2 Replace "markings" by "marks".

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

Chapter 6.1

6.1.1.3 Amend the introductory sentence to read as follows:

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

6.1.3 In Note 1, amend the beginning to read as follows: "*The marks indicate that the packaging which bears them correspond to…*". In the second sentence, replace "mark does" by "marks do". In Note 2, replace "marking is" by "marks are" (twice). In Note 3, replace "marking does" by "marks do". In the second sentence, replace "marking" by "mark".

6.1.3.1 In the first paragraph, replace "markings" by "marks" (twice). In the introductory sentence of the subparagraphs and in (e), replace "marking" by "marks". In note ***** related to the figure in (e), replace "marking" by "mark".

6.1.3.2 In the first sentence replace "markings" by "marks".

6.1.3.3 In the last sentence replace "markings" by "marks".

6.1.3.4 Replace "markings" by "marks" (twice).

6.1.3.5 Replace "markings" by "marks".

6.1.3.6 Replace "marking" by "marks" and replace "is valid" by "are valid".

6.1.3.7 At the beginning, replace "Marking" by "Marks" and "elements of the marking" by "mark". In the second paragraph, amend the end to read as follows: "…still enable the other marks required in 6.1.3.1 to be correctly identified.".

6.1.3.8 In the introductory sentence, amend the end to read as follows: "…in sequence, durable marks showing:".

6.1.3.9 Replace "markings" by "marks" (twice).

6.1.3.10 Replace "mark" (second occurrence) by "marks".

6.1.3.11 In the heading, replace "of markings for" by "for marking".

6.1.3.12 In the heading, replace "of markings for" by "for marking".

6.1.3.13 In the heading, replace “of markings for” by “for marking” and in the Note “markings” by “marking”.

6.1.5.1.6 In the NOTE, replace “assembling” by “using”. Add a new last sentence to read as follows: “These conditions do not limit the use of inner packagings when applying 6.1.5.1.7.”.

6.1.5.5.4 In the third sentence, replace “marking” by “mark”.

Chapter 6.2

6.2.1.1.9 In the introductory sentence, after “and testing specified by” insert “a standard or technical code recognised by”.

6.2.1.5.1 (g) Amend the text before the Note to read as follows:

“(g) A hydraulic pressure test. Pressure receptacles shall meet the acceptance criteria specified in the design and construction technical standard or technical code;”.

6.2.1.5.1 (i) Replace “markings” by “marks”.

6.2.1.6.1 (a) Replace “markings” by “marks”.

6.2.2.1.1 After the entry for ISO 9809-3:2010 insert a new entry to read as follows:

ISO 9809-4:2014	Gas cylinders – Refillable seamless steel gas cylinders – Design, construction and testing – Part 4: Stainless steel cylinders with an Rm value of less than 1 100 MPa	Until further notice

6.2.2.1.1 In the entry for ISO 7866:2012, in the first column, insert “+ Cor 1:2014” after “ISO 7866:2012”.

6.2.2.1.1 At the end of the table, replace the three last entries (corresponding to standards “ISO 11119-1:2002”, “ISO 11119-2:2002” and “ISO 11119-3:2002”) with the following entries:

ISO 11119-1:2002	Gas cylinders of composite construction – Specification and test methods – Part 1: Hoop wrapped composite gas cylinders	Until 31 December 2020
ISO 11119-1:2012	Gas cylinders – Refillable composite gas cylinders and tubes – Design, construction and testing – Part 1: Hoop wrapped fibre reinforced composite gas cylinders and tubes up to 450 l	Until further notice
ISO 11119-2:2002	Gas cylinders of composite construction – Specification and test methods – Part 2: Fully wrapped fibre reinforced composite gas cylinders with load-sharing metal liners	Until 31 December 2020
ISO 11119-2:2012 + Amd 1:2014	Gas cylinders – Refillable composite gas cylinders and tubes – Design, construction and testing – Part 2: Fully wrapped fibre reinforced composite gas cylinders and tubes up to 450 l with load-sharing metal liners	Until further notice
ISO 11119-3:2002	Gas cylinders of composite construction – Specification and test methods – Part 3: Fully wrapped fibre reinforced composite gas cylinders with non-load-sharing metallic or non-metallic liners	Until 31 December 2020
ISO 11119-3:2013	Gas cylinders – Refillable composite gas cylinders and tubes – Design, construction and testing – Part 3: Fully wrapped fibre reinforced composite gas cylinders and tubes up to 450 l with non-load-sharing metallic or non-metallic liners	Until further notice

6.2.2.1.1, Note 1 Replace “unlimited service life” with “a design life of not less than 15 years.”.

6.2.2.1.1 Amend Note 2 to read as follows:

"NOTE 2: *Composite cylinders with a design life longer than 15 years shall not be filled after 15 years from the date of manufacture, unless the design has successfully passed a service life test programme. The programme shall be part of the initial design type approval and shall specify inspections and tests to demonstrate that cylinders manufactured accordingly remain safe to the end of their design life. The service life test programme and the results shall be approved by the competent authority of the country of approval that is responsible for the initial approval of the cylinder design. The service life of a composite cylinder shall not be extended beyond its initial approved design life.".*

6.2.2.1.2 After the entry for standard "ISO 11120:1999", add the following new entries:

ISO 11119-1:2012	Gas cylinders – Refillable composite gas cylinders and tubes – Design, construction and testing – Part 1: Hoop wrapped fibre reinforced composite gas cylinders and tubes up to 450 l	Until further notice
ISO 11119-2:2012 + Amd 1:2014	Gas cylinders – Refillable composite gas cylinders and tubes – Design, construction and testing – Part 2: Fully wrapped fibre reinforced composite gas cylinders and tubes up to 450 l with load-sharing metal liners	Until further notice
ISO 11119-3:2013	Gas cylinders – Refillable composite gas cylinders and tubes – Design, construction and testing – Part 3: Fully wrapped fibre reinforced composite gas cylinders and tubes up to 450 l with non-load-sharing metallic or non-metallic liners	Until further notice
ISO 11515: 2013	Gas cylinders – Refillable composite reinforced tubes of water capacity between 450 l and 3 000 l – Design, construction and testing	Until further notice

6.2.2.1.2 Add the following NOTES after the table:

"***NOTE 1:*** *In the above referenced standards composite tubes shall be designed for a design life of not less than 15 years.*

NOTE 2: *Composite tubes with a design life longer than 15 years shall not be filled after 15 years from the date of manufacture, unless the design has successfully passed a service life test programme. The programme shall be part of the initial design type* approval *and shall specify inspections and tests to demonstrate that tubes manufactured accordingly remain safe to the end of their design life. The service life test programme and the results shall be approved by the competent authority of the country of approval that is responsible for the initial approval of the tube design. The service life of a composite tube shall not be extended beyond its initial approved design life.*".

6.2.2.1.3 In the second table, for standards "ISO 3807-1:2000" and "ISO 3807-2:2000", amend the text in column "Applicable for manufacture" to read "Until 31 December 2020". After these standards, add the following new row:

ISO 3807:2013	Gas cylinders – Acetylene cylinders – Basic requirements and type testing	Until further notice

6.2.2.2 In the table, replace the entry for "ISO 11114-2:2000" with the following entry:

ISO 11114-2:2013	Gas cylinders – Compatibility of cylinder and valve materials with gas contents – Part 2: Non-metallic materials

6.2.2.3 In the table, for ISO 10297:2006, in the column "Applicable for manufacture", replace "Until further notice" with "Until 31 December 2020".

After the entry for ISO 10297:2006, insert a new entry to read as follows:

ISO 10297:2014	Gas cylinders – Cylinder valves – Specification and type testing ***NOTE:*** *The EN version of this ISO standard fulfils the requirements and may also be used.*	Until further notice

6.2.2.4 In the table, for ISO 10462:2005, replace "Until further notice" by "Until 31 December 2018".

6.2.2.4 In the table, after ISO 10462:2005, insert a new row to read as follows:

ISO 10462:2013	Gas cylinders – Acetylene cylinders – Periodic inspection and maintenance.	Until further notice

6.2.2.5.2.1 Replace "marking" by "marks".

6.2.2.5.5 In the fourth paragraph, replace "certification marking" by "certification marks" (twice).

6.2.2.6.2.1 In the last sentence of the first paragraph, replace "marking" by "marks".

6.2.2.6.5 In the first paragraph, replace "marking" by "marks" (twice).

6.2.2.7.4 Insert the following new sub-paragraphs and note at the end:

"(q) For composite cylinders and tubes having a limited design life, the letters "FINAL" followed by the design life shown as the year (four digits) followed by the month (two digits) separated by a slash (i.e. "/").

(r) For composite cylinders and tubes having a limited design life greater than 15 years and for composite cylinders and tubes having non-limited design life, the letters "SERVICE" followed by the date 15 years from the date of manufacture (initial inspection) shown as the year (four digits) followed by the month (two digits) separated by a slash (i.e. "/").

NOTE: *Once the initial design type has passed the service life test programme requirements in accordance with 6.2.2.1.1 NOTE 2 or 6.2.2.1.2 NOTE 2, future production no longer requires this initial service life mark. The initial service life mark shall be made unreadable on cylinders and tubes of a design type that has met the service life test programme requirements."*.

Consequential amendment:

[6.2.3.9.2 Amend to read as follows:

6.2.3.9.2 The United Nations packaging symbol specified in 6.2.2.7.2 (a) and the provisions of 6.2.2.7.4 (q) and (r) shall not be applied.]

6.2.2.7.5 Add the following text at the end of the first indent: "…except for the marks described in 6.2.2.7.4 (q) and (r) which shall be adjacent to the periodic inspection and test marks of 6.2.2.7.7".

6.2.2.7.5 In the sentence after the subparagraphs, amend the end to read as follows: "…example of marking a cylinder.".

6.2.2.7.7 (a) In the second sentence, replace "marking" by "mark".

6.2.2.8.3 In the Note, amend the end to read as follows: "…substitute a label for these permanent marks.".

6.2.2.9.4 (a) In the second sentence, replace “marking” by “mark”.

Chapter 6.3

6.3.4 In Note 1, amend the beginning to read as follows: “*The marks indicate that the packaging which bears them correspond to…*”. In Note 2, replace “marking is” by “marks are”. In Note 3, replace “marking does” by “marks do”.

6.3.4.1 Replace “markings” by “marks” (twice).

6.3.4.2 (g) Replace “marking” by “mark”.

6.3.4.3 At the beginning, replace “Marking” by “Marks” and “element of the marking” by “mark”. In the second paragraph, amend the end to read as follows: “…still enable the marks required in 6.3.4.1 to be correctly identified.”.

6.3.5.1.6 (g) Replace “markings” by “marks”.

Chapter 6.4

6.4.23.12 (a) In the first sentence, replace “identification marking” by “identification marks”.

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

Chapter 6.5

6.5.2.1 The amendment does not apply to the English text.

6.5.2.1.1 In the first paragraph, replace “markings” by “marks”.

6.5.2.1.1 (a) Replace “marking is stamped” by “marks are stamped”.

6.5.2.1.1 Amend the text after sub-paragraph (h) to read:

“The primary marks required above shall be applied in the sequence of the subparagraphs above. The marks required by 6.5.2.2 and any further mark authorized by a competent authority shall still enable the primary marks to be correctly identified.

Each mark applied in accordance with (a) to (h) and with 6.5.2.2 shall be clearly separated, e.g. by a slash or space, so as to be easily identifiable.”.

6.5.2.1.2 In the heading, replace “markings” by “marking”.

6.5.2.2.1 Replace “markings” by “marks”. In the table, in the heading of the first column, replace “marking” by “marks” and in table note b, replace “marking” by “mark”.

6.5.2.2.3 Replace “markings” by “marks”.

6.5.2.2.4 Amend as follows:

Amend the beginning of the first sentence to read as follows: “Inner receptacles that are of composite IBC design type shall be identified by the application of the marks…”, remainder unchanged.

In the first paragraph, third sentence, replace “marking” by “marks”. In the second paragraph, replace “marking” by “marks” and “marking” by “mark”.

Renumber the existing Note as Note 1. Add a new Note 2 to read as follows:

"***NOTE 2:*** *The date of manufacture of the inner receptacle may be different from the marked date of manufacture (see 6.5.2.1), repair (see 6.5.4.5.3) or remanufacture (see 6.5.2.4) of the composite IBC.".*

6.5.2.3 Replace "marking indicates" by "marks indicate".

6.5.2.4 Replace "marking" by "marks" and "markings" by "marks"

6.5.4.4.1(a) (i) Replace "marking" by "marks".

6.5.4.4.2 Amend the introductory sentence to read as follows:

"6.5.4.4.2 Every metal, rigid plastics and composite IBC for liquids, or for solids which are filled or discharged under pressure, shall undergo a suitable leakproofness test. This test is part of a quality assurance programme as stipulated in 6.5.4.1 which shows the capability of meeting the appropriate test level indicated in 6.5.6.7.3:".

6.5.4.5.3 Replace "marking" by "marks".

Chapter 6.6

6.6.3.1 In the first paragraph, replace "markings" by "marks". In subparagraph (a), replace "marking is" by "marks are". In the sentences after the subparagraphs, replace "marking" by "mark", "element of the marking" by "mark".

6.6.3.2 In the heading, replace "the marking" by "marking".

Chapter 6.7

6.7.2.19.8 (a) and 6.7.3.15.8 (a) Add a new last sentence to read as follows:

"The wall thickness shall be verified by appropriate measurement if this inspection indicates a reduction of wall thickness;".

6.7.2.19.8 (g) Replace "markings" by "marks".

Figure 6.7.2.20.1 Amend the heading to read "Example of a plate for marking".

6.7.3.15.8 (f) Replace "markings" by "marks".

Figure 6.7.3.16.1 Amend the heading to read "Example of a plate for marking".

6.7.4.14.9 (e) Replace "markings" by "marks".

Figure 6.7.4.15.1 Amend the heading to read "Example of a plate for marking".

6.7.5.2.4 (a) Replace "ISO 11114-2:2000" with "ISO 11114-2:2013".

6.7.5.12.6 (e) Replace "markings" by "marks".

Figure 6.7.5.13.1 Amend the heading to read "Example of a plate for marking".

Chapter 6.11

6.11.5.5.1 In the first paragraph, replace "markings" by "marks". In the last paragraph, replace "Marking" by "Marks" and "element of the marking" by "mark".

Chapter 7.2

[(ADR:)

7.2.4 V8 (4) In the first paragraph (methods R4 and R5), replace “and self-reactive substances” by “, self-reactive substances and polymerizing substances”. In the second paragraph (method R3), after “Type B” insert “and polymerizing substances”. In the third paragraph (method R2), after “Types C, D, E and F” insert “and polymerizing substances”. In the fourth paragraph (method R1), after “Types C, D, E and F” insert “and polymerizing substances”.].

Chapter 7.5

7.5.2.1 In table note d, insert the phrase“, ammonium nitrate emulsion or suspension or gel (UN No. 3375)” after “(UN Nos. 1942 and 2067)”.

7.5.11, CV37/CW37 Replace the two first sentence by:

“Before loading, these by-products shall be cooled to ambient temperature, unless they have been calcined to remove moisture. Wagons/Vehicles and containers containing bulk loads shall be adequately ventilated and protected against ingress of water throughout the journey. ”.