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International Carriage by Rail

COTIF 1999

Modification of the Annex, as
amended, to the Regulation con-
cerning the International Carriage
of Dangerous Goods by Rail
**(RID – Appendix C to the Con-
vention)**

Authentic text

adopted by the RID Committee of Experts at its
59th session (28.05.2026)

TITLE PAGE

Replace "With effect from 1 January 2025" by:

"With effect from 1 January 2027".

Replace "This text replaces the requirements of 1 January 2023." by:

"This text replaces the requirements of 1 January 2025."

Replace "The following are RID Contracting States (as at 1 July 2024):" by:

"The following are RID Contracting States (as at 1 July 2026):".

At the end of the title page, insert the following text:

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1.6.5 Amend to read:

"1.6.5 Wagons other than tank-wagons or battery-wagons".

5.5.4 Replace "Dangerous goods contained in equipment in use" by:

"Devices containing dangerous goods, which are in use".

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

After the row for **6.8.5.4**, insert the following new row:

"Addendum: Special provisions TE 22 and TE 25 in force until 31 December 2026 and still applicable to tank-wagons constructed before 1 January 2033 on the basis of approvals issued up to 31 December 2026".

6.9.2.5 Replace "portable tanks with FRP shell" by:

"FRP portable tanks".

Insert the following rows:

"6.9.3 Requirements for design, construction, inspection and testing of FRP service equipment for portable tanks

- 6.9.3.1** Definitions
- 6.9.3.2** General design and construction requirements
- 6.9.3.3** Design criteria
- 6.9.3.4** Material testing
- 6.9.3.5** Design approval
- 6.9.3.6** Inspection and testing
- 6.9.3.7** Marking".
- "7.1.2** High-level safety objectives".

PART 1

Chapter 1.1

- 1.1.2.3** After "vehicles", insert a reference to footnote 1.

The footnote 1 reads as follows:

"¹ The term "vehicle" is used here in the sense of the definition of "vehicle" in Article 3 d) of the Uniform Rules concerning the Contract of International Carriage of Passengers by Rail (CIV – Appendix A to COTIF), i.e. a vehicle is a motor vehicle or a trailer carried on the occasion of the carriage of passengers."

- 1.1.3.2** Amend paragraph (d) to read as follows:

"(d) gases contained in the equipment used for the operation of the railway vehicle, road vehicle or vehicle in the sense of CIV (Appendix A to COTIF)² (e.g. fire extinguishers), including in spare parts (e.g. inflated pneumatic tyres); this exemption also applies to inflated pneumatic tyres carried as a load;

² In the sense of the definition of "vehicle" in Article 3 d) of the Uniform Rules concerning the Contract of International Carriage of Passengers by Rail (CIV – Appendix A to COTIF), i.e. a motor vehicle or a trailer carried on the occasion of the carriage of passengers."

In paragraph (e), amend the following:

- Replace "vehicles" by:
"road vehicles".
- Replace "vehicle" by:
"road vehicle".

- 1.1.3.6.3** In the table, for transport category 1, delete the reference to table note a wherever it appears.

Amend table note a to read:

"^a (Deleted)".

In the table, for transport category 2, in the second column, for Class 9, replace "and 3552" by:

", 3552, 3563 and 3564".

1.1.3.6.4 Delete the second indent.

1.1.3.7 Amend the introductory sentence to read as follows:

"The provisions laid down in RID do not apply to electric energy storage and production systems, i.e. batteries, electric capacitors, asymmetric capacitors, metal hydride storage systems and fuel cells:".

1.1.3.8 After "vehicles", insert a reference to footnote 3 (twice).

The footnote 3 reads as follows:

"³ The term "vehicle" is used here in the sense of the definition of "vehicle" in Article 3 d) of the Uniform Rules concerning the Contract of International Carriage of Passengers by Rail (CIV - Appendix A to COTIF), i.e. a vehicle is a motor vehicle or a trailer carried on the occasion of the carriage of passengers."

Renumber existing footnotes 1 to 3 as footnotes 4 to 6.

1.1.4.3 In footnote 4 (current footnote 1), replace "www.imo.org" by:

"https://docs.imo.org/Shared/Download.aspx?did=94421".

1.1.4.7.1 Amend the title to read:

"Import of dangerous substances in pressure receptacles".

1.1.4.7.2 Amend the title to read:

"Export of dangerous substances in pressure receptacles and of empty uncleaned pressure receptacles".

In (c), in the second sentence, replace "carriage operations" by "transport operations".

1.1.4.7 Add the following new **1.1.4.7.3**:

"1.1.4.7.3 *Disposal of refillable pressure receptacles*

(a) Refillable pressure receptacles authorised by the United States of America Department of Transportation and constructed in accordance with standards listed in Part 178, Specifications for Packagings of Title 49, Transportation, of the Code of Federal Regulations, that have been imported in accordance with 1.1.4.7.1, may be carried to a facility for disposal.

Such pressure receptacles shall not be offered for carriage:

(i) When leaking;

(ii) When damaged to such an extent that the integrity of the pressure receptacle or its service equipment may be affected;

- (iii) Unless the pressure receptacle and its service equipment have been examined and found to be in good working order; or
 - (iv) Unless the required certification, retest and filling marks are legible.
- (b) These pressure receptacles shall be marked and labelled in accordance with Chapter 5.2."

Chapter 1.2

1.2.1 In the definition of "**Bundle of cylinders**", at the end, before ";", add:

". The test *pressure volume product* taking into account the total water capacity of all pressure receptacles in the bundle shall not exceed 1.5 million bar·litres".

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

In the definition of "**Container**", in the sub-paragraph on "*swap body*", amend the following:

- In the first indent, replace "*vehicle*" by:
"*road vehicle*".
- In the third indent, replace "*vehicles*" by:
"*road vehicles*".
- Replace "on board the vehicle" by:
"on board the *road vehicle*".

In the definition of "**Cylinder**", after "150 litres", add:

"with a test *pressure volume product* not exceeding 1.5 million bar·litres".

Delete the definition of "**Flammable component**".

In the definition of "**Globally Harmonized System of Classification and Labelling of Chemicals**", amend the following:

- Replace "tenth" by:
"eleventh".
- Replace "(ST/SG/AC.10/30/Rev.10)" by:
"(ST/SG/AC.10/30/Rev.11)".

In the definition of "**Large packaging**", in (b), replace "a volume" by:

"an internal volume".

In the definition of "**Large salvage packaging**", in (b), replace "a volume" by:

"an internal volume".

In the definition of **"Liquefied Petroleum Gas (LPG)"**, at the end of the text before the notes, replace the semicolon by a period and add:

"LPG assigned to UN Nos. 1075 or 1965 may also include up to 12% dimethyl ether by mass;"

In the definition of **"Manual of Tests and Criteria"**, replace "(ST/SG/AC.10/11/Rev.8)" by:

"(ST/SG/AC.10/11/Rev.8 and Amend.1)".

In the definition of **"Net explosive mass (NEM)"**, delete:

", *net explosive weight (NEW)*".

In the definition of **"Packaging"** at the end of the text in parentheses, after **"Salvage packaging"**, add:

", *"Single packaging"*".

In the definition of **"Road vehicle"**, at the end, delete:

", by means of which *dangerous goods* are carried".

In the definition of **"Salvage pressure receptacle"**, amend the following:

– Delete:

"with a water capacity not exceeding 3 000 litres".

– After "pressure receptacle(s)", add:

"having a total test *pressure volume product* not exceeding 1.5 million bar·litres,".

In the definition of **"Service equipment"**, in paragraph (a), replace "heating and heat insulating devices" by:

"cooling, heating and thermal-insulating devices".

In the definition of **"Tank record"**, replace "certificates referred to in 6.8.2.3, 6.8.2.4 and 6.8.3.4" by:

"reports and certificates referred to in 1.8.7.2 and 1.8.7.4 to 1.8.7.6".

In the definition of **"Tube"**, at the end, before the semicolon, add:

"with a test *pressure volume product* not exceeding 1.5 million bar·litres".

In the definition of **"UN Model Regulations"**, amend the following:

– Replace "twenty-third" by:

"twenty-fourth".

- Replace "(ST/SG/AC.10/1/Rev.23)" by:

"(ST/SG/AC.10/1/Rev.24)".

Insert the following new definitions in alphabetical order:

"Assessing entity" means the body in accordance with the Uniform Rules concerning the Technical Admission of Railway Material used in International Traffic (ATMF – Appendix G to COTIF) responsible for carrying out UTP conformity assessment;⁷

⁷ For the purpose of assessing conformity with the Technical Specifications for Interoperability according to European Union law, assessing entity means the conformity assessment body in accordance with Article 2 (42) of Directive (EU) 2016/797 of the European Parliament and of the Council of 11 May 2016 on the interoperability of the rail system within the European Union."

Renumber existing footnotes 4 to 15 as footnotes 8 to 19.

"Pressure volume product" (pV-product) means the value resulting from multiplying the (*usable*) *water capacity* of a containment with its relevant maximum pressure during filling and usage (e.g. *test pressure* or charging pressure) as referenced for the relevant kind of containment. It is expressed in bar·litres;".

"Single packaging" means a *packaging* which does not require any *inner packaging* to perform its containment function during carriage;".

"Usable water capacity" means the water capacity of *salvage pressure receptacles* remaining after the installation of equipment into a *salvage pressure receptacle*, which is necessary for e.g. opening or drilling a stored *pressure receptacle* inside a closed *salvage pressure receptacle*. The usable water capacity may be lower than the water capacity originally approved and marked. It is expressed in litres;".

1.2.2.1

In the table, in the second row for "Mass", in column "Acceptable alternative unit", replace "(tonne)" by:

"(tonne (metric ton))".

In footnote 11 (current footnote 7), amend the following:

- Delete the sections for "Force" and "Stress".
- In the section for "Pressure", amend the following:
 - For "1 Pa", delete:

"= $1.02 \cdot 10^{-5} \text{ kg/cm}^2 = 0.75 \cdot 10^{-2} \text{ torr}$ ".
 - For "1 bar", delete:

"= $1.02 \text{ kg/cm}^2 = 750 \text{ torr}$ ".
 - Delete the lines for "1 kg/cm²" and "1 torr".

- In the section for "Energy, Work, Quantity of heat", amend the following:
 - For "1 J", delete:
"= 0.102 kgm".
 - For "1 kWh", delete:
"= 367×10^3 kgm".
 - Delete the line for "1 kgm".
 - For "1 kcal", delete:
"= 427 kgm".
- In the section for "Power", amend the following:
 - For "1 W", delete:
"= 0.102 kgm/s".
 - Delete the line for "1 kgm/s".
 - For "1 kcal/h", delete:
"= 0.119 kgm/s".
- In the section for "Dynamic viscosity", amend the following:
 - For "1 Pa·s", delete:
"= 0.102 kg·s/m²".
 - For "1 P", delete:
"= $1.02 \cdot 10^{-2}$ kg·s/m²".
 - Delete the line for "1 kg·s/m²".

1.2.3

Insert the following new abbreviation:

"UTP WAG" means the Uniform Technical Prescription applicable to the subsystem Rolling Stock – Freight Wagon in accordance with the Uniform Rules concerning the Validation of Technical Standards and the Adoption of Uniform Technical Prescriptions applicable to Railway Material intended to be used in International Traffic (APTU – Appendix F to COTIF).²⁰

²⁰ For the purpose of the authorisation of wagons according to European Union law, the term "UTP WAG" means the Technical Specification for Interoperability relating to the subsystem "rolling stock – freight wagons" (TSI WAG) of the rail system in the European Union."

Chapter 1.3

- 1.3.1** Amend the beginning of the first sentence to read:
- "Persons participating in the activities referred to in Chapter 1.4,".
- In the second sentence, replace "Employees" by:
- "They".
- 1.3.2** After the existing text, add the following sentence:
- "The term "personnel", as used in 1.3.2.1, 1.3.2.2 and 1.3.2.3, is understood to include each person with an equivalent role or function."
- 1.3.2.2.1** In the table, in the row for category 1, in the last column, after "drivers", insert a reference to the following footnote:
- ²¹ The use of the term "driver" corresponds to the definition of "train driver" in Directive 2007/59/EC of the European Parliament and of the Council of 23 October 2007 on the certification of train drivers operating locomotives and trains on the railway system in the Community."
- 1.3.2.2.2** In paragraph (a), after "Drivers", insert a reference to the new footnote 21.
- Renumber existing footnotes 16 to 23 as footnotes 22 to 29.
- 1.3.3** At the end, add the following sentence:
- "These record keeping obligations extend to the persons mentioned in 1.3.1 except if the participants referred to in Chapter 1.4 are keeping these records."

Chapter 1.4

- 1.4.2.2.1** In footnote 23 (current footnote 17), replace "1 January 2025" by:
- "1 January 2027".
- 1.4.3.3** [The amendment in the French version does not apply to the English text.]

Chapter 1.6

- 1.6.1.1** Amend the following:
- Replace "30 June 2025" by:
 - "30 June 2027".
 - Replace "31 December 2024" by:
 - "31 December 2026".
 - In footnote 27 (current footnote 21), replace "1 January 2023" by:
 - "1 January 2025".

1.6.1.8 Amend to read:

"1.6.1.8 (Deleted)".

1.6.1.45 Amend to read:

"1.6.1.45 (Deleted)".

"1.6.1.44 (Deleted)

1.6.1.45 (Deleted)

1.6.1.46 and
1.6.1.47 (Deleted)" amend to read:

"1.6.1.44 to
1.6.1.47 (Deleted)".

1.6.1.49 Amend to read:

"1.6.1.49 (Deleted)".

1.6.1.50 Amend to read:

"1.6.1.50 (Deleted)".

1.6.1.51 Amend to read:

"1.6.1.51 (Deleted)".

"1.6.1.49 (Deleted)

1.6.1.50 (Deleted)

1.6.1.51 (Deleted)" amend to read:

"1.6.1.49 to
1.6.1.51 (Deleted)".

Renumber existing footnote 25 as footnote 30.

1.6.1.55 Amend to read:

"1.6.1.55 (Deleted)".

1.6.1.56 Amend to read:

"1.6.1.56 (Deleted)".

"1.6.1.55 (Deleted)

1.6.1.56 (Deleted)" amend to read:

"1.6.1.55 and
1.6.1.56 (Deleted)".

1.6.1 Add the following new transitional provisions:

"1.6.1.58 The instructions in writing in accordance with the requirements of RID applicable up to 31 December 2026, but which do not however conform to the requirements of 5.4.3 applicable as from 1 January 2027, may continue to be used until 31 December 2027.

- 1.6.1.59** Plastic drums with removable heads containing more than 5 litres and not more than 20 litres of mixtures assigned to UN No. 3082 with less than 1% of substances of highly toxic ingredients with an M factor of 10, 100 or 1000 (as described in 2.2.9.1.10.4.6.4) are not subject to the performance tests in Chapter 6.1 until 31 December 2034, provided the packagings have successfully passed the stacking test in 6.1.5.6 for plastics drums intended for liquids and meet the general provisions of 4.1.1, except for 4.1.1.3, and 4.1.3.
- 1.6.1.60** Notwithstanding the provisions of 6.11.3.1.1, bulk container types complying with the specification and testing requirements of ISO 1496-4:1991 may continue to be used until 31 December 2034.
- 1.6.1.61** For the carriage of UN Nos. 0081, 0082, 0084, 0241, 0331, 0332, 0482, 1005 and 1017 in accordance with 1.1.3.6, table note a in 1.1.3.6.3 and the corresponding calculation factor in 1.1.3.6.4 applicable up to 31 December 2026 may continue to be applied until 31 December 2030."
- 1.6.2.19** Amend to read:
- "1.6.2.19** Acetylene cylinders constructed before 1 July 2023 which are not marked in accordance with 6.2.2.7.3 (k) (ii) and (iii) or (l) (ii) and (iii) applicable as from 1 January 2023 may continue to be used without the application of the marks detailed in 6.2.2.7.3 (k) (ii) and (iii) or (l) (ii) and (iii) if the marks can neither be applied on the cylinder shoulder nor on any neck ring."
- 1.6.2.23** Amend to read:
- "1.6.2.23** Notwithstanding the requirements of Note 3 of 6.2.1.6.1, standard ISO 18119:2018 + Amd 1:2021 referenced in Note 3 of 6.2.1.6.1 applicable until 31 December 2026 may continue to be used until 31 December 2028."
- 1.6.2.24** Amend to read:
- "1.6.2.24** (Deleted)".
- 1.6.2** Add the following new transitional provision:
- "1.6.2.25** Notwithstanding the requirements of 6.2.3.11.4, salvage pressure receptacles with a water capacity of not more than 3 000 litres may continue to be used without bearing the additional PVP mark until 31 December 2030."
- 1.6.3.27** In paragraph (a), amend the part of the sentence after the two indents to read:
- "constructed before 1 January 2005, the devices defined in special provision TE 22 of 6.8.4 (b) in force from 1 January 2005 to 31 December 2026 and in special provision for wagon equipment WE 2 of 7.1.2.2 in force from 1 January 2027 shall be capable of absorbing at least 500 kJ of energy at each end of the wagon."
- In paragraph (b), amend the following:
- Amend the part of the sentence after the two indents to read:
- "constructed before 1 January 2007 and which do not conform to the applicable requirements of special provision TE 22 of 6.8.4 (b) in force from 1 January 2007 to 31 December 2026 and in special provision for wagon equipment WE 2 of 7.1.2.2 in force from 1 January 2027, may still be used."

- Amend the second sub-paragraph after the two indents to read:

"Tank-wagons and battery-wagons for the carriage of these gases and substances, which are fitted with automatic couplers and were constructed before 1 July 2015, and which do not conform to the applicable requirements of special provision TE 22 of 6.8.4 (b) in force from 1 January 2015 to 31 December 2026 and of special provision for wagon equipment WE 2 of 7.1.2.2 in force from 1 January 2027, may still be used."

- 1.6.3.32** Amend the part of the sentence after the two indents to read:

"constructed before 1 January 2007 and which do not conform to the applicable requirements of special provision TE 25 of 6.8.4 (b) in force from 1 January 2007 to 31 December 2026 and in special provision for wagon equipment WE 3 of 7.1.2.2 in force from 1 January 2027, may still be used."

In the second sub-paragraph after the two indents, after "shall however", insert:

"meet the requirements of special provision for wagon equipment WE 3 of 7.1.2.2 in force from 1 January 2027 or".

- 1.6.3.33** Replace "the requirements of 6.8.3.1.6 concerning the buffers" by:

"the requirements of 6.8.3.1.6 concerning the buffers in force until 31 December 2026 and the requirements of special provision for wagon equipment WE 1 of 7.1.2.2 in force from 1 January 2027".

- 1.6.3.36** Amend "the requirements of 6.8.2.1.29 applicable as from 1 January 2011" to read:

"the requirements of 6.8.2.1.29 concerning the minimum distance between the headstock plane and the most protruding point at the shell extremity applicable from 1 January 2011 to 31 December 2026 and the requirements of 7.1.2.1.4 in force from 1 January 2027".

- 1.6.3.41** Amend to read:

"1.6.3.41 (Deleted)".

"1.6.3.40 (Deleted)

1.6.3.41 (Deleted)

1.6.3.42 (Deleted)" amend to read:

"1.6.3.40 to

1.6.3.42 (Deleted)".

- 1.6.3.45** Amend to read:

"1.6.3.45 (Deleted)".

- 1.6.3.47** Amend to read:

"1.6.3.47 (Deleted)".

- 1.6.3.48** Amend to read:

"1.6.3.48 (Deleted)".

"1.6.3.47 (Deleted)
1.6.3.48 (Deleted)" amend to read:

"1.6.3.47 and
1.6.3.48 (Deleted)".

1.6.3 Add the following new transitional provisions:

"1.6.3.62 Tank-wagons constructed before 1 January 2033 on the basis of approvals issued up to 31 December 2026 but not assessed and approved on the basis of the requirements of Chapter 7.1 applicable from 1 January 2027, may continue to be used.

Tank-wagons not marked with special provisions for wagon equipment WE in accordance with Chapter 7.1, but marked with special tank provisions TE 22 and/or TE 25 or tank-wagons for which no marking was required, may continue to be used for the carriage of substances for which a special provision for wagon equipment WE in column (14) of Table A in Chapter 3.2 is required.³¹

NOTE: Tank-wagons subject to this transitional measure may be used as follows:

- Tank-wagons that have to be marked with "WE 1" in accordance with the requirements in force from 1 January 2027 do not require this mark.
- Tank-wagons that have to be marked with "WE 2" in accordance with the requirements in force from 1 January 2027 do not require this mark but shall be marked with "TE 22".
- Tank-wagons that have to be marked with "WE 3" in accordance with the requirements in force from 1 January 2027 do not require this mark but shall be marked with "TE 25".
- Tank-wagons that have to be marked with "WE 4" in accordance with the requirements in force from 1 January 2027 do not require this mark.
- Tank-wagons that have to be marked with "WE 5" in accordance with the requirements in force from 1 January 2027 do not require this mark.
- Tank-wagons that have to be marked with "WE 6" in accordance with the requirements in force from 1 January 2027 do not require this mark.

³¹ Special provisions TE 22 and TE 25 in force until 31 December 2026 and still applicable to tank-wagons constructed before 1 January 2033 on the basis of approvals issued up to 31 December 2026 are reproduced in the Addendum to Chapter 6.8.

1.6.3.63 Tank-wagons constructed before 1 January 2029 in accordance with the requirements in force up to 31 December 2026, but which however do not conform to the requirements of 6.8.2.2.12 and 6.8.2.2.13 applicable from 1 January 2027 may continue to be used.

1.6.3.64 For UN No. 2372, the tank code specified in column (12) of Table A of Chapter 3.2 applicable up to 31 December 2026 may continue to be applied until 31 December 2030 for tank-wagons constructed before 1 July 2027.

1.6.3.65 (Reserved)

- 1.6.3.66** Demountable tanks that can be rolled, which were constructed in accordance with the requirements of 6.8.3.2.13 and special provision TE 17 (c) of 6.8.4 (b) in force up to 31 December 2026, may continue to be used until 1 July 2029.
- 1.6.3.67** Tank-wagons constructed before 1 January 2029 in accordance with the requirements in force up to 31 December 2026, but which do not conform to the requirements of 6.8.3.2.1.5 applicable from 1 January 2027 concerning valves and devices for filling and discharge openings situated in the upper part of tanks, may still be used."
- 1.6.4.42** Amend to read:
- "1.6.4.42** (Deleted)".
- "1.6.4.41** (Deleted)
- 1.6.4.42** (Deleted)" amend to read:
- "1.6.4.41 and 1.6.4.42** (Deleted)".
- 1.6.4.47** Amend to read:
- "1.6.4.47** (Deleted)".
- 1.6.4.49** Amend to read:
- "1.6.4.49** (Deleted)".
- 1.6.4.50** Amend to read:
- "1.6.4.50** (Deleted)".
- "1.6.4.49** (Deleted)
- 1.6.4.50** (Deleted)" amend to read:
- "1.6.4.49 and 1.6.4.50** (Deleted)".
- 1.6.4.55** Amend to read:
- "1.6.4.55** (Deleted)".
- Renumber existing footnotes 27 to 31 as footnotes 32 to 36.
- 1.6.4.64** Amend to read:
- "1.6.4.64** (Deleted)".
- 1.6.4** Add the following new transitional provisions:
- "1.6.4.67** Tank-containers constructed before 1 January 2029 in accordance with the requirements in force up to 31 December 2026, but which however do not conform to the requirements of 6.8.2.2.12 and 6.8.2.2.13 applicable from 1 January 2027 may continue to be used.

- 1.6.4.68** Portable tanks constructed before 1 January 2029 in accordance with the requirements in force up to 31 December 2026, but which do not, however, meet the requirements of 6.7.4.5.2 regarding the filling and discharge openings in the vapour phase applicable as from 1 January 2027 may continue to be used.
- 1.6.4.69** Design approvals for portable tanks and UN MEGCs including a protection against damage from impact or overturning by use of an ISO frame in accordance with the specifications and testing requirements of ISO 1496-3:1995 issued before 1 January 2030 may continue to be used.
- 1.6.4.70** For UN No. 2372, the tank code specified in column (12) of Table A of Chapter 3.2 applicable up to 31 December 2026 may continue to be applied until 31 December 2030 for tank-containers constructed before 1 July 2027.
- 1.6.4.71** Tanks approved in accordance with both Chapters 6.7 and 6.8 may be used until either the next 5-year periodic inspection according to Chapter 6.7 or the next periodic inspection according to Chapter 6.8, after 1 July 2031 is carried out, whichever is due first. From the date of this inspection, the tank shall only be assigned either as a portable tank or a tank-container. The corresponding marks which are no longer applicable shall be removed from the tank and the corresponding references which are no longer applicable shall not appear in the inspection report.
- 1.6.4.72** Tank-containers constructed before 1 January 2029 in accordance with the requirements in force up to 31 December 2026, but which do not conform to the requirements of 6.8.3.2.1.5 applicable from 1 January 2027 concerning valves and devices for filling and discharge openings situated in the upper part of tanks, may still be used."
- 1.6.5** Amend to read:
- "1.6.5 Wagons other than tank-wagons or battery-wagons**
- 1.6.5.1** Wagons constructed before 1 January 2033 on the basis of approvals issued up to 31 December 2026 but not assessed and approved on the basis of the requirements of Chapter 7.1 applicable from 1 January 2027, may continue to be used.
- Wagons not marked with special provisions for wagon equipment WE in accordance with Chapter 7.1 may continue to be used for the carriage of substances for which a special provision for wagon equipment WE in Table A of Chapter 3.2 is required.
- NOTE:** Wagons subject to this transitional measure may be used as follows:
- Wagons that have to be marked with "WE 4" in accordance with the requirements in force from 1 January 2027 do not require this mark.
 - Wagons that have to be marked with "WE 5" in accordance with the requirements in force from 1 January 2027 do not require this mark.
 - Wagons that have to be marked with "WE 6" in accordance with the requirements in force from 1 January 2027 do not require this mark."
- 1.6.6.3** [The amendment in the French version does not apply to the English text.]

Chapter 1.7

- 1.7.1.3** In the second sentence, after "in-transit storage", add:
- " , shipment after storage".

Chapter 1.8

1.8.3.2 [The amendment to paragraph (b) in the French and German versions does not apply to the English text.]

1.8.5.4 In the report on occurrences during the carriage of dangerous goods in accordance with RID/ADR section 1.8.5, under "6. Dangerous goods involved", in footnote (3), amend the following:

- Replace "6 Vehicle" by:
"6 Vehicle in the meaning of ADR".
- Replace "8 Tank-vehicle" by:
"8 Tank-vehicle in the meaning of ADR".
- Replace "10 Battery-vehicle" by:
"10 Battery-vehicle in the meaning of ADR".

1.8.7.2.1.2 Amend paragraph (d) to read:

"(d) As applicable, approve or verify the suitability of:

- (i) the qualification of the procedures for the permanent joining of parts;
- (ii) the qualification of the personnel undertaking the permanent joining of parts;
- (iii) the qualification of the personnel undertaking the non-destructive tests;"

1.8.7.2.2.2 In the first sub-paragraph, third sentence, replace "column (5)" by:

"column (4)".

In the note after the first sub-paragraph, replace "column (5)" by:

"column (4)".

1.8.7.3.2 Amend paragraph (d) to read:

"(d) As applicable, verify the validity of:

- (i) the qualification of the personnel undertaking the permanent joining of parts;
- (ii) the qualification of the personnel undertaking the non-destructive tests;"

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

Chapter 1.10

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

At the end, add the following sentence:

"These record keeping obligations extend to the persons mentioned in 1.3.1 except if the participants referred to in Chapter 1.4 are keeping these records."

PART 2

Chapter 2.1

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

2.1.3.4.1 In the second indent, for UN 1614, replace "not more than 3% water" by:
"less than 3% water".

2.1.3.5.3 In (h), amend the following:

- In the text in parenthesis, after "substances", add:
"or mixtures".
- In the text in parenthesis, after "ingestion", replace "or dermal contact only in the range" by:
"and dermal contact in the range".
- At the end, before the closing parenthesis, insert:
"(see 2.2.61.1.7.2 and 2.2.8.1.4.5)".

2.1.4.3 Add a new **2.1.4.3.2** and a new **2.1.4.3.3** to read:

"2.1.4.3.2 Samples of organic substances carrying functional groups listed in tables A6.1 or A6.3 in appendix 6 of the Manual of Tests and Criteria may be assigned to one of the appropriate entries for self-reactive substances type C (UN Nos. 3223, 3224, 3233 or 3234, as applicable) of Class 4.1 and carried under the provisions of 2.2.41.1.15 for the carriage in amounts of not more than 200 g per outer packaging provided that:

- (a) They fulfil the criteria of 2.1.4.3.1 (a) to (c); and
- (b) Their decomposition energy is:
 - (i) Less than 1 500 J/g for salts or complexes of organic compounds;
 - (ii) Less than 2 000 J/g for other organic substances;
 - (iii) 1 500 J/g or more for salts or complexes of organic compounds, and in test C.1 of the Manual of Tests and Criteria, Part II, Section 23 the result is not "yes, rapidly" and in any one of test series F of the Manual of Tests and Criteria, Part II, Section 26, the result is not "not low"; or
 - (iv) 2 000 J/g or more for other organic substances, and in test C.1 of the Manual of Tests and Criteria, Part II, Section 23 the result is not "yes, rapidly" and in any one of test series F of the Manual of Tests and Criteria, Part II, Section 26, the result is not "not low".

The assessment in (b) (iii) and (iv) may be based on a single test C.1 and one single test from test series F. If the criteria in (b) are fulfilled, it can be assumed that the sample is not more dangerous than self-reactive substances type B.

An appropriate method to determine temperature control requirements is described in the Manual of Tests and Criteria, Part II, Section 20.3.4.

Samples not passing the criteria in (b) (iii) or (iv) may be carried with the approval of the competent authority of the country of origin. If the country of origin is not an RID Contracting State, the approval shall be recognized by the competent authority of the first RID Contracting State reached by the consignment. The approval shall be based on the available information and contain the classification and the relevant carriage conditions. Alternatively, the sample may be dissolved or diluted with an inert compound to form a homogenous mixture in agreement with the criteria in (b) (i) or (ii), as applicable.

2.1.4.3.3 A flow chart describing the classification of energetic samples is shown in figure 2.1.4.3.

Figure 2.1.4.3: Classification of energetic samples

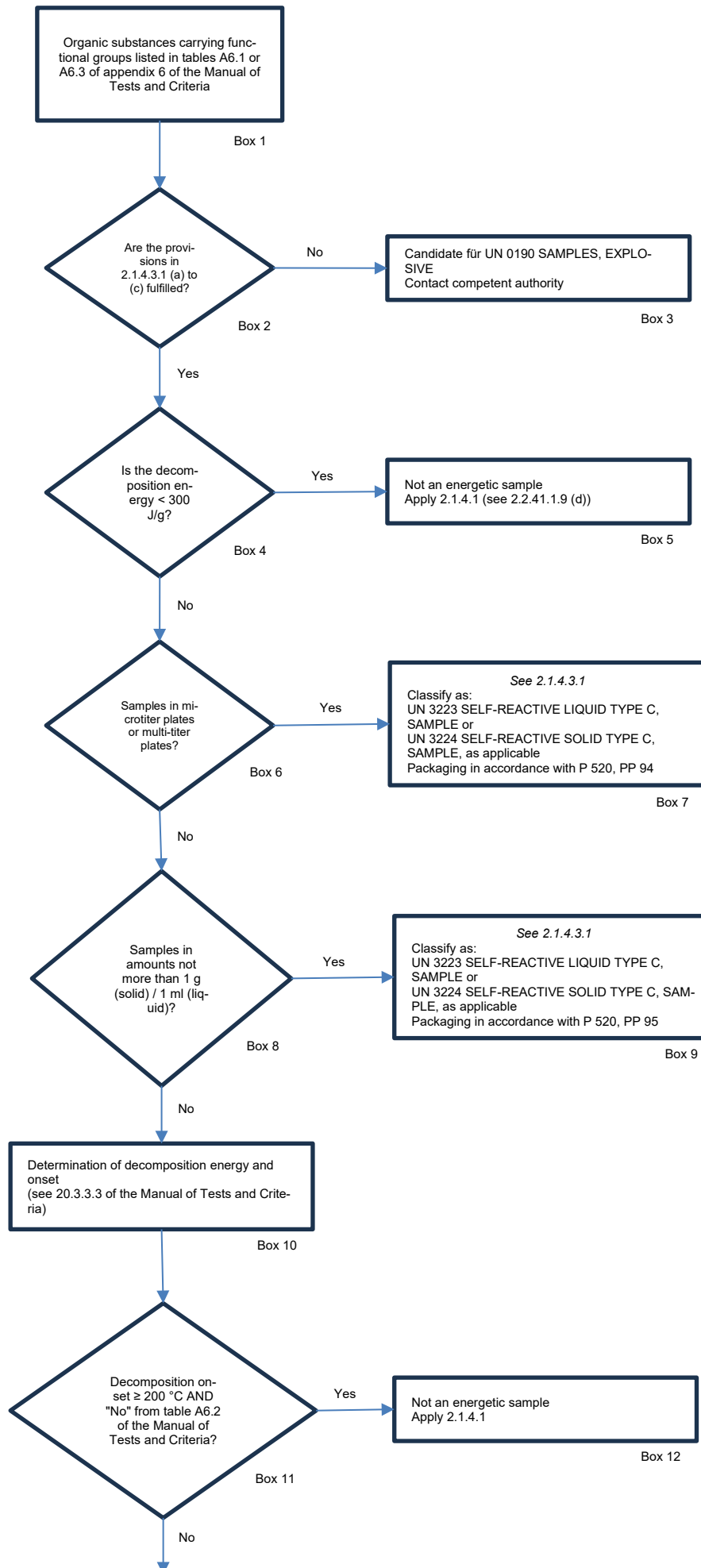
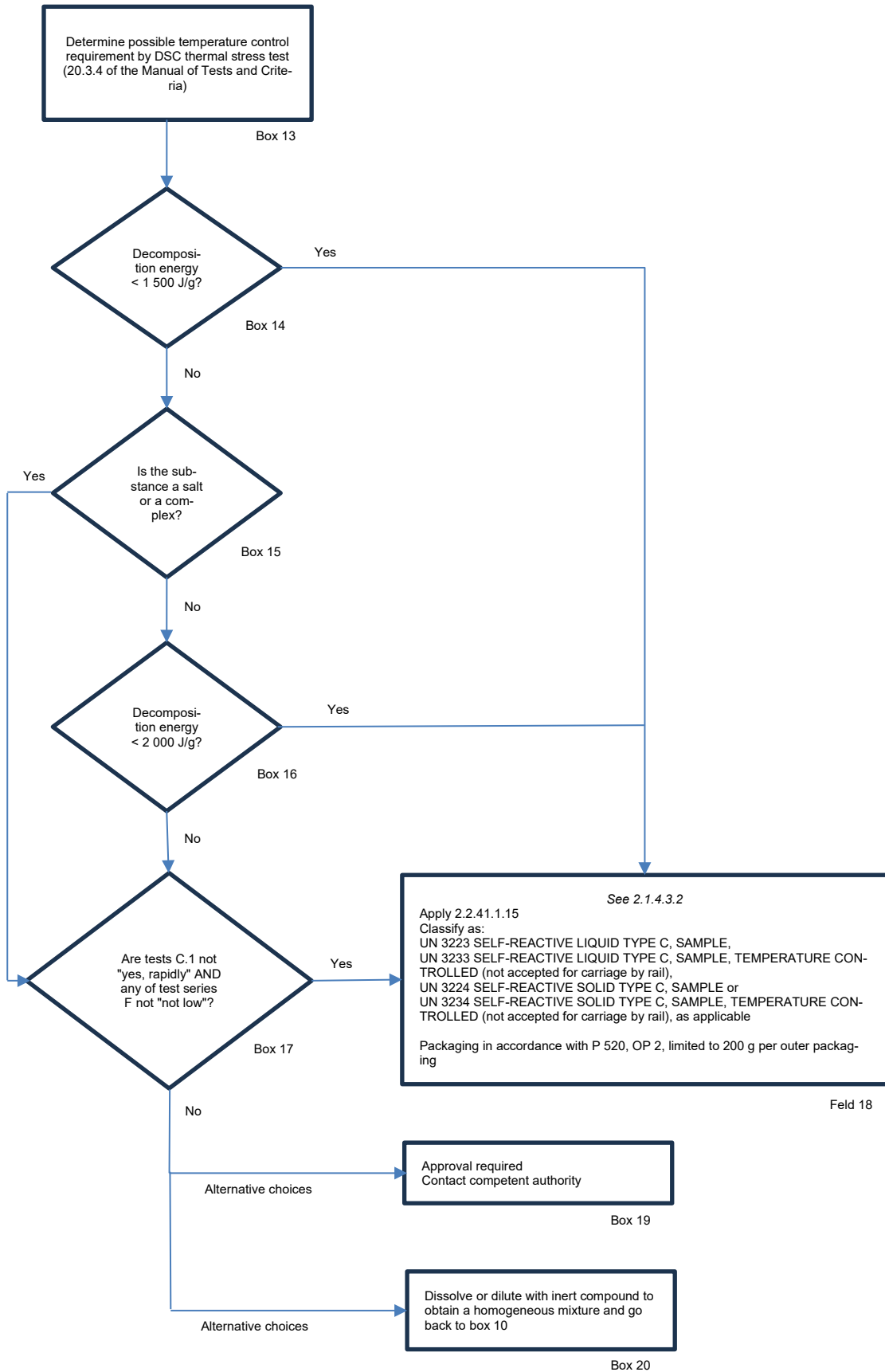


Figure 2.1.4.3: Classification of energetic samples (cont'd)

- 2.1.5** In the note after the heading, after "dangerous goods" add:
- " , other than cells or batteries,".
- 2.1.5.1** In the second sub-paragraph, replace "this section" by:
- "2.1.5.1 to 2.1.5.6".
- 2.1.5** Add the following new **2.1.5.7**:
- "2.1.5.7** Used articles, machinery and apparatus that may be internally contaminated with or contain residues of dangerous goods are not subject to the other provisions of RID if the following conditions are met:
- (a) The articles, machinery or apparatus are carried for repair, inspection, maintenance, disposal or recycling;
 - (b) The classification of the contained substances or mixtures is not possible without disproportionate cost or effort;
 - (c) The articles, machinery or apparatus do not contain substances of classes 1, 5.2, 6.2 or 7, or self-reactive substances of class 4.1;
 - (d) The contained dangerous goods are removed as far as possible but a complete removal before carriage is not possible;
 - (e) No residues of dangerous goods adhere to the outside;
 - (f) These articles, machinery or apparatus are either:
 - Packed in a strong outer packaging constructed of suitable material and of adequate strength and design in relation to the packaging's capacity and its intended use, and meeting the applicable requirements of 4.1.1.1; or
 - Carried without outer packaging if the article is constructed and designed so that the receptacle containing the dangerous goods are afforded adequate protection;
 - (g) Packages are marked "ARTICLE CONTAINING DANGEROUS GOODS";
 - (h) When it is required to ensure that residues of liquid dangerous goods remain in their intended orientation, orientation arrows are displayed on at least two opposite vertical sides with the arrows pointing in the correct direction in accordance with 5.2.1.10; and
 - (i) Documents associated with the carriage include the following statement:
- "TRANSPORT IN ACCORDANCE WITH RID 2.1.5.7".

NOTE: For medical devices or equipment see also 2.2.62.1.5.9."

Chapter 2.2

- 2.2.1.1.1** In paragraph (b), amend the following:
- Renumber the note as Note 1.

- In Note 1 (current Note), at the end, add the following sentence:

"In addition, see also 2.2.1.1.8."

- Add a new Note 2 to read:

"2: Articles that are too dangerous for carriage are not included in Class 1 (see 2.2.1.2.3)."

In the definitions after (c), for "*Explosive or pyrotechnic effect*", delete:

", in the context of (c);".

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

2.2.1.2 Add the following new **2.2.1.2.3**:

"2.2.1.2.3 Articles that are too dangerous for carriage shall not be accepted for carriage."

2.2.2.1.3 In the list of groups in the first paragraph, after the line for "T toxic;", insert the following new line:

"FC flammable, corrosive;".

In Note 1, for "Division 2.1", after "letter F" insert:

", i.e. F and FC".

Delete Note 3.

2.2.2.1.6 Number the first note as Note 1.

Transfer the second sentence of new Note 1 to a new Note 2.

In the new Note 2, delete:

"(see also 2.2.2.2.2)".

Add the following new Note 3:

"3: Aerosols with contents meeting the classification criteria of Class 1, liquid desensitized explosives of Class 3, self-reactive substances and solid desensitized explosives of Class 4.1, Class 4.2, Class 4.3, Class 5.2, Class 6.2 or Class 7, shall not be accepted for carriage."

In the note under (c), amend the following:

- Delete the second sentence.
- Amend the last sentence to read:

"The chemical heats of combustion shall be determined either by reference to published scientific literature, through calculation or by using suitable calorimetric test methods (e.g. ASTM D 240 and NFPA 30B)."

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

In Note 3, amend the following:

- Replace "meeting the properties" by:
"meeting the classification criteria".
- [The second amendment in the German version does not apply to the English text.]

In paragraph (b), in the second sentence, after "Flammable components", insert:

"(see also Note under 2.2.2.1.6 (c))".

2.2.2.2.2 Renumber the five first indents as paragraphs (a), (b), (c), (d) and (e).

Insert a new paragraph (f) to read:

"(f) Aerosols with the contents meeting the classification criteria of:

- (i) Explosives of Class 1;
- (ii) Liquid desensitized explosives of Class 3;
- (iii) Self-reactive substances and solid desensitized explosives of Class 4.1;
- (iv) Substances liable to spontaneous combustion of Class 4.2;
- (v) Substances which, in contact with water, emit flammable gases of Class 4.3;
- (vi) Organic peroxides of Class 5.2;
- (vii) Toxic substances of Class 6.1, packing group I;
- (viii) Infectious substances of Class 6.2;
- (ix) Radioactive material of Class 7; or
- (x) Corrosive substances of Class 8, packing group I;"

Amend the sixth indent to read:

"(g) Aerosols where gases which are toxic according to 2.2.2.1.5 or gases identified as "Considered as pyrophoric" in table note h of Table 2 of packing instruction P 200 in 4.1.4.1 are used as propellant;"

Delete the seventh indent.

Insert new paragraphs (h) and (i) to read:

"(h) Chemicals under pressure where gases which are toxic or oxidizing according to 2.2.2.1.5 or gases identified as "Considered as pyrophoric" in table note h of Table 2 of packing instruction P 200 in 4.1.4.1 are used as propellant;

- (i) Chemicals under pressure with components meeting the classification criteria of:
 - (i) Explosives of Class 1;

- (ii) Liquid desensitized explosives of Class 3;
- (iii) Self-reactive substances and solid desensitized explosives of Class 4.1;
- (iv) Substances liable to spontaneous combustion of Class 4.2;
- (v) Substances which, in contact with water, emit flammable gases of Class 4.3;
- (vi) Oxidizing substances of Class 5.1;
- (vii) Organic peroxides of Class 5.2;
- (viii) Toxic substances of Class 6.1, packing group I;
- (ix) Infectious substances of Class 6.2;
- (x) Radioactive material of Class 7; or
- (xi) Corrosive substances of Class 8, packing group I;".

Renumber the eighth indent as paragraph (j).

2.2.2.3

In the table for "Other articles containing gas under pressure", amend the following:

- For classification code 6A, at the end of the entry for UN No. 2857, add:

"or

2857 HEATING MACHINES containing non-flammable, non-toxic gases or ammonia solutions (UN 2672)".

- For classification code 6F, at the end of the entry for UN No. 3358, add:

"or

3358 HEATING MACHINES containing flammable, non-toxic, liquefied gas".

2.2.41.3

Under classification code F1, place the entry for UN No. 3175 before the entry for UN No. 1325.

2.2.42.1.5

In Note 1 and Note 2, replace "a volume" by:

"an internal volume".

2.2.52.4

In the table, amend the following:

- Under the entry for "tert-AMYL PEROXYPIVALATE", add the following new row:

Organic peroxide	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
"	≤ 72	≥ 28					3115	prohibited

"

- After the entry for "tert-AMYLPEROXY-3,5,5-TRIMETHYLHEXANOATE", insert the following entries:

Organic peroxide	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ARTEETHER (including stereoisomers)	≤ 100					OP7	3106	
ARTEMETHER (including stereoisomers)	≤ 100					OP7	3106	
ARTEMISININ	≤ 100					OP7	3106	
ARTESUNATE (including stereoisomers)	≤ 100					OP7	3106	

- Delete the entry for "([3R-(3R,5aS,6S,8aS,9R,10R,12S,12aR**)]-DECAHYDRO-10-METHOXY-3,6,9-TRIMETHYL-3,12-EPOXY-12H-PYRANO[4,3-j]-1,2-BENZODIOXEPIN)".

- Before the entry for "2,2-DIHYDROPEROXYPROPANE", insert the following row:

Organic peroxide	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
DIHYDROARTEMISININ (including stereoisomers)	≤ 100					OP7	3106	

- After the entry for "1-(2-ETHYLHEXANOYLPEROXY)-1,3-DIMETHYLBUTYLPEROXYPIVALATE", insert the following new row:

Organic peroxide	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1,2,4,5,7,8-HEXOXONANE, 3,6,9-TRIMETHYL-3,6,9-tris (Ethyl und Propyl) derivates	≤ 41	≥ 59				OP7	3105	35)

- In the first row for "METHYL ETHYL KETONE PEROXIDE(S)", in column "Packing Method", replace "OP8" by:

"OP7".

After the table, add the following new remark:

"(35) Available oxygen ≤ 7.3%."

2.2.61.1.7.2 After "Substances", insert:

"or mixtures".

At the end, replace "(see 2.2.8.1.4.5)" by:

"(see 2.1.3.5.3 (h) and 2.2.8.1.4.5)".

2.2.61.3

Under "Toxic substances and articles containing such substances, without subsidiary hazard, organic, liquid. T1", after the entry for UN No. 1851, insert:

"2021 CHLOROPHENOLS, TOXIC, LIQUID, N.O.S."

Under "Toxic substances and articles containing such substances, without subsidiary hazard, organic, solid. T2", after the entries for UN No. 1655, insert:

"2020 CHLOROPHENOLS, TOXIC, SOLID, N.O.S."

2.2.62.1.4 In the last sub-paragraph, replace "the following categories:" by:

"categories A and B."

2.2.62.1.4.1 Amend the text before the table to read:

"2.2.62.1.4.1 Category A

An infectious substance which is carried in a form that, when exposure to it occurs, is capable of causing permanent disability, life-threatening or fatal disease in otherwise healthy humans or animals is assigned to Category A. Indicative examples of substances that meet these criteria are given in the table in this paragraph.

NOTE: An exposure occurs when an infectious substance is released outside of the protective packaging, resulting in physical contact with humans or animals.

Infectious substances meeting these criteria which cause disease in humans or both in humans and animals shall be assigned to UN 2814 INFECTIOUS SUBSTANCE, AFFECTING HUMANS. Infectious substances which cause disease only in animals shall be assigned to UN 2900 INFECTIOUS SUBSTANCE, AFFECTING ANIMALS.

Assignment to UN Nos. 2814 or 2900 shall be based on the known medical history and symptoms of the source human or animal, endemic local conditions, or professional judgement concerning individual circumstances of the source human or animal.

The following table is not exhaustive. Infectious substances, including new or emerging pathogens, which do not appear in the table but which meet the same criteria shall be assigned to Category A. In addition, if there is doubt as to whether or not a substance meets the criteria it shall be included in Category A. To address emerging health situations, more up-to-date information on the applicable categories can be obtained from human and animal health inter-governmental organizations and national authorities."

In the table, amend the following:

– Delete:

"(see 2.2.62.1.4.1)".

– In the heading of the second column, after "Microorganism", add:

"(bacteria and fungi are written in italics)".

– In the first column, for UN No. 2900, at the end, delete:

"only".

2.2.62.1.4.2 Amend the text before the note to read:

"Category B

An infectious substance which does not meet the criteria for inclusion in Category A is assigned to Category B. Infectious substances in Category B shall be assigned to UN 3373 BIOLOGICAL SUBSTANCE, CATEGORY B."

Delete the note.

2.2.62.1.5.9 In paragraph (c), at the end, add:

"other than lithium cells or batteries or sodium ion cells or batteries contained in or packed with equipment (UN Nos. 3091, 3481 and 3552);".

In the current second to last paragraph, replace "devices and equipment" by:

"devices or equipment".

At the end, add the following new sub-paragraph:

"When used medical devices or equipment contain or are packed with lithium cells or batteries or sodium ion cells or batteries, the relevant entry of Table A of Chapter 3.2 shall be used and all applicable provisions of RID shall apply."

2.2.8.1.4.5 Replace "A substance or mixture" by:

"Substances or mixtures".

After "ingestion", replace "or dermal contact only in the range", by:

"and dermal contact in the range".

At the end, replace "(see 2.2.61.1.7.2)" by:

"(see 2.1.3.5.3 (h) and 2.2.61.1.7.2)".

2.2.8.3 In the table, for "Corrosive substances without subsidiary hazard and articles containing such substances", for classification code C4, after the entries for UN No. 2585, insert the following new entry:

"3562 CHLOROPHENOLS, CORROSIVE, SOLID, N.O.S."

In the table, for "Corrosive substances with subsidiary hazard and articles containing such substances", for code CT2, before the existing entry, insert the following new entry:

"3561 CHLOROPHENOLS, CORROSIVE, TOXIC, SOLID, N.O.S."

2.2.9.1.7.1 In the note after the first sub-paragraph, replace "For UN 3536 LITHIUM BATTERIES INSTALLED IN CARGO TRANSPORT UNIT" by:

"For UN 3536 LITHIUM ION BATTERIES INSTALLED IN CARGO TRANSPORT UNIT and UN 3563 LITHIUM METAL BATTERIES INSTALLED IN CARGO TRANSPORT UNIT".

Amend the sub-paragraph after the first note to read:

"Cells and batteries, cells and batteries contained in articles, engines, equipment or vehicles, or cells and batteries packed with equipment, containing lithium in any form may be carried under the appropriate entry if they meet the following provisions:".

In paragraph (a), renumber the existing note as Note 1 and add a new Note 2 to read:

"2: A battery with a change resulting from treatment, such as repairing, refurbishing, or remanufacturing in accordance with 38.3.2.2 (c) of the Manual of Tests and Criteria may be considered to differ from a tested type."

Before the last sub-paragraph, insert a new paragraph (h) to read:

"(h) Hybrid batteries, containing both lithium ion cells and sodium ion cells (see special provision 410 of Chapter 3.3), shall meet the following conditions:

- (i) The lithium ion cells and sodium ion cells are electrically connected;
- (ii) The battery has been tested as a lithium ion battery in accordance with 2.2.9.1.7.1 (a);
- (iii) Each component lithium ion and sodium ion cell of the battery shall be of a type proved to meet the respective testing requirements of the Manual of Tests and Criteria, part III, sub-section 38.3."

2.2.9.1.7.2 In the first sub-paragraph, amend the following:

- Replace "contained in equipment" by:

"contained in articles, engines, equipment or vehicles".

- Amend the end to read:

"... as electrolyte, may be carried under the appropriate entry if they meet the following provisions:".

Under the first paragraph, renumber existing note as Note 3.

Insert the following new notes 1 and 2:

"NOTE 1: For UN 3564 SODIUM ION BATTERIES INSTALLED IN CARGO TRANSPORT UNIT, see special provision 389 in Chapter 3.3.

2: For hybrid batteries, containing both lithium ion cells and sodium ion cells, see 2.2.9.1.7.1 (h)."

Delete the introductory sentence before paragraphs (a) to (f).

Under paragraph (a), renumber existing note as Note 1.

Insert a new Note 2 to read:

"2: A battery with a change resulting from treatment, such as repairing, refurbishing, or remanufacturing in accordance with 38.3.2.2 (c) of the Manual of Tests and Criteria may be considered to differ from a tested type."

2.2.9.1.14 In the Note, after "UN 3335 AVIATION REGULATED SOLID, N.O.S.", insert:
 "and
 UN 3496 BATTERIES, NICKEL-METAL HYDRIDE".

2.2.9.3 For classification code M4, amend the following:

- After the entries for "UN 3091", insert the following entry:
 "3563 LITHIUM METAL BATTERIES INSTALLED IN CARGO TRANSPORT UNIT".
- In the line for "3536", after "LITHIUM", insert:
 "ION".
- In the line for "3536", delete "lithium ion batteries or lithium metal batteries".
- Amend the entry for "UN 3552" to read:
 "3552 SODIUM ION BATTERIES CONTAINED IN EQUIPMENT, with organic electrolyte or
 3552 SODIUM ION BATTERIES PACKED WITH EQUIPMENT, with organic electrolyte".
- After the entries for "UN 3552" add a new entry to read:
 "3564 SODIUM ION BATTERIES INSTALLED IN CARGO TRANSPORT UNIT".

PART 3

Chapter 3.1

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

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

Chapter 3.2

3.2.1 In the explanatory notes for column (13), in the first paragraph after the title, replace "that have additionally to be met" with:

"that shall additionally be met".

Amend the explanatory note for column (14) to read:

"Column (14) "Wagon equipment"²"

Contains the alphanumeric codes starting with the letters "WE" of the special provisions for wagon equipment which shall be met in accordance with 7.1.2.2.

² See transitional measures 1.6.3.62 and 1.6.5.1."

Table A Amend the following:

- In column (13), delete:
"TE22".
- Between columns (13) and (15), insert a new column "(14)" with the following column headings:
"Wagon equipment"
4.3.2,
7.1.2.2
(14)".
- In the new column (14), assign "WE1" to all gases to which a tank code is currently assigned in column (12).
- In the new column (14), assign "WE2" to all substances to which "TE22" is currently assigned in column (13).
- In the new column (14), assign "WE3" to all substances to which "TE25" is currently assigned in column (13).
- In the new column (14), assign "WE6" to all entries of Class 1, divisions 1.1, 1.2, 1.3, 1.5 and 1.6 to which "W2" is assigned in column (16).
- In the new column (14), assign "WE6" to all entries to which "W8" is assigned in column (16) (UN numbers 3101, 3102, 3221 and 3222).

UN number	Column	Amendment
0012	(9a)	Against "P130" in Column (8), insert: "PP100".
0014	(9a)	Against "P130" in Column (8), insert: "PP100".
1040 (both entries)	(3b)	Replace "2TF" by: "2TFC".
	(5)	Replace "2.3+2.1" by: "2.3+2.1+8".
1041	(3b)	Replace "2F" by: "2FC".
	(5)	Replace "2.1" by: "2.1+8".
	(20)	Replace "239" by: "238".
1066	(6)	At the end, add "679".
1202, second entry	(2)	Replace "EN 590:2013 + A1:2017" by: "EN 590:2025" (twice).
	(6)	Add: "681".
1727	(3b)	Replace "C2" by: "CT2".
	(5)	After "8", add: "+6.1".

UN number	Co-column	Amendment
	(20)	Replace "80" by: "86".
2020	(2)	Amend to read: "CHLOROPHENOLS, TOXIC, SOLID, N.O.S.".
	(6)	Add: "274".
2021	(2)	Amend to read: "CHLOROPHENOLS, TOXIC, LIQUID, N.O.S.".
	(6)	Add: "274".
2029	(9a)	Insert: "PP98".
	(18)	After "CW13", insert: "CW14".
2359	(20)	Replace "338" by: "368".
2372	(3b)	Replace "F1" by: "FTC".
	(5)	After "3", insert: "+6.1+8".
	(8)	Delete: "R001".
	(10)	Replace "T4" by: "T7".
	(11)	Add: "TP28".
	(12)	Replace "LGBF" by: "L4BH".
	(13)	Insert: "TU15".
	(18)	Insert: "CW13 CW28".
	(20)	Replace "33" by: "368".
2672	(13)	Insert: "TA6".
2735, PG II	(11)	Replace "TP1" by: "TP2".
2815	(18)	Insert: "CW13 CW28".
2857	(2)	After "REFRIGERATING MACHINES", insert: "or HEATING MACHINES".
2862	(2)	At the end, add: ", containing less than 10 % respirable particles".
2941	(1) to (20)	Delete the entry.
2956	(7a)	Replace "5 kg" by: "0".
2977	(18)	Before "CW33", insert: "CW28".
2978	(18)	Before "CW33", insert: "CW28".

UN number	Co-column	Amendment
3065, PG III	(2)	[The amendment in the German version does not apply to the English text.]
3082	(6)	After "375", insert: "413".
3090	(6)	Add: "680".
3091	(6)	Add: "680".
3165	(20)	Replace "336" by: "368".
3300	(3b)	Replace "2TF" by: "2TFC".
	(5)	Replace "2.3+2.1" by: "2.3+2.1+8".
3358	(2)	After "REFRIGERATING MACHINES", insert: "or HEATING MACHINES".
3373, second entry	(17)	Insert: "VC3".
3480	(6)	After "387", insert: "410". At the end, add: "680".
3481	(6)	After "390", insert: "410". At the end, add: "680".
3507	(18)	Before "see SP 369", insert: "CW28".
3536	(2)	Amend to read: "LITHIUM ION BATTERIES INSTALLED IN CARGO TRANSPORT UNIT".
	(6)	Add: "410".
3538	(6)	After "396", insert: "411".
3551	(6)	After "401", insert: "410". At the end, add: "680".
3552	(6)	After "401", insert: "410". At the end, add: "680".
3553	(10)	Delete the entry.
	(12)	Delete the entry.
	(13)	Delete the entries.

Add the following new entries:

UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers		RID Tanks		Transport category	Special provisions for carriage			Colis express (express parcels)	Hazard identification No.
									Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions	Tank code	Special provisions		Packages	Bulk	Loading, unloading and handling		
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(15)	(16)	(17)	(18)	(19)	(20)
2348	BUTYL ACRYLATES, STABILIZED	3	F1	II	3	386 676	1 L	E2	P001 IBC02 R001		MP19	T4	TP1	LGBF		2				CE7	339
2862	VANADIUM PENTOXIDE, non-fused form, containing not less than 10 % respirable particles	6.1	T5	II	6.1	600	500 g	E4	P002 IBC08	B4	MP10	T3	TP33 TP43	SGAH	TU15	2	W11		CW13 CW28 CW31	CE9	60
3561	CHLOROPHENOLS, CORROSIVE, TOXIC, SOLID, N.O.S.	8	CT2	II	8+6.1	274	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	SGAN		2	W11		CW13 CW28	CE10	86
3562	CHLOROPHENOLS, CORROSIVE, SOLID, N.O.S.	8	C4	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	SGAN		2	W11			CE10	80
3563	LITHIUM METAL BATTERIES INSTALLED IN CARGO TRANSPORT UNIT	9	M4		9	389 410	0	E0								2					90
3564	SODIUM ION BATTERIES INSTALLED IN CARGO TRANSPORT UNIT	9	M4		9	389 410	0	E0								2					90

3.2.2

After the title "**Column "NHM-Code" (Nomenclature Harmonisée Marchandises – Harmonized Goods List)**", in the first sub-paragraph, amend the following:

- In the fourth sentence, after "a single", insert:
"or complete".
- In the last sentence, replace "where there is more than one NHM code to be considered" by:
"where two NHM codes can be considered".
- Add the following new sentence:
"If no NHM code is indicated in this column, the dangerous goods are not merchandise."

Table B

Amend the following entries:

Name and description	UN No.	Amendment
CHLOROPHENOLS, SOLID	2020	Amend the text in column "Name and description" to read: "CHLOROPHENOLS, TOXIC, SOLID, N.O.S."
CHLOROPHENOLS, LIQUID	2021	Amend the text in column "Name and description" to read: "CHLOROPHENOLS, TOXIC, LIQUID, N.O.S."
FLUOROANILINES	2941	Delete the entry.
LITHIUM BATTERIES INSTALLED IN CARGO TRANSPORT UNIT lithium ion batteries or lithium metal batteries	3536	Amend the text in column "Name and description" to read: "LITHIUM ION BATTERIES INSTALLED IN CARGO TRANSPORT UNIT". In column "NHM Code", delete the entry.

Insert the following new entries in alphabetical order:

Name and description	UN No.	Note	NHM Code
CHLOROPHENOLS, CORROSIVE, SOLID, N.O.S.	3562		290819
CHLOROPHENOLS, CORROSIVE, TOXIC, SOLID, N.O.S.	3561		290819
2,4-Difluoroaniline: see	2810		29++++
2-Fluoroaniline: see	1992		+++++
4-Fluoroaniline: see	3267		29++++
o-Fluoroaniline: see	1992		+++++
p-Fluoroaniline: see	3267		29++++
HEATING MACHINES containing flammable, non-toxic, liquefied gas	3358		8418++
HEATING MACHINES containing non-flammable, non-toxic gases or ammonia solutions (UN 2672)	2857		8418++

Name and description	UN No.	Note	NHM Code
Heat pumps: see	2857 3358		8418++ 8418++
LITHIUM METAL BATTERIES INSTALLED IN CARGO TRANSPORT UNIT	3563		
Liquid organic hydrogen carriers (LOHC): see	3082	See SP 413 in Chapter 3.3	++++++
Magnetic resonance imaging (MRI) scanners containing non-flammable, non-toxic gas: see	3538		901813
SODIUM ION BATTERIES INSTALLED IN CARGO TRANSPORT UNIT	3564		

[The amendment to "Fluorure d'hydrogène en solution" in the French version does not apply to the English text.]

Chapter 3.3

SP 119 After the first sentence add a new sentence to read:

"Heating machines include machines or other appliances which have been designed for the specific purpose of heating."

In the new third sentence (current second sentence), replace "Refrigerating machines and refrigerating machine components" by:

"Refrigerating or heating machines and their components"

At the end of the sub-paragraph, add a new sentence to read:

"Machines or other appliances that are used to perform heating and cooling functions may be carried either as "REFRIGERATING MACHINES" or "HEATING MACHINES"."

Delete the note.

SP 145 Replace "of packing group III" by:

"with more than 24% but not more than 70% alcohol by volume".

SP 172 [The amendment to the introductory sentence in the French version does not apply to the English text.]

In paragraph (c), replace "this (these) subsidiary hazard(s)" by:

"each subsidiary hazard".

SP 188 In paragraph (c), replace "and (g)" by:

", (g) and (h) if applicable".

In paragraph (f), amend the following:

- In the first sentence, replace "with the appropriate battery mark, as illustrated in" by:

"according to".

- In paragraph (ii), at the end, add the following new sentence:

"Where the equipment contains one or more button cells in addition to cells or batteries, the button cell or cells do not count toward package or consignment limits."

SP 235 In the second sentence, replace "vehicles" by:

"railway and road vehicles".

SP 280 In the first sentence, replace "vehicles" by:

"railway and road vehicles".

In the second sentence, delete:

"described in special provision 296".

At the end, add a new sentence to read:

"However, this entry may be used for safety devices of Class 9 carried for installation in life-saving appliances (UN No. 2990) in accordance with special provision 296."

SP 283 Amend the last sub-paragraph to read:

"See also 1.1.3.2 (d) for equipment used for the operation of the railway vehicle, road vehicle or vehicle in the sense of CIV (Appendix A to COTIF)¹."

¹ In the sense of the definition of "vehicle" in Article 3 d) of the Uniform Rules concerning the Contract of International Carriage of Passengers by Rail (CIV – Appendix A to COTIF), i.e. a motor vehicle or a trailer carried on the occasion of the carriage of passengers."

Renumber existing footnotes 1 to 6 as footnotes 2 to 7.

SP 289 Replace "wagons, vehicles" by:

"railway and road vehicles".

SP 291 In the first sentence, after "refrigerating", insert:

"or heating".

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

In the third sentence, replace "The refrigerating machines" by:

"Refrigerating or heating machines".

In the fourth sentence, replace "Refrigerating machines and refrigerating-machine components" by:

"Refrigerating or heating machines and their components".

At the end, add a new sentence to read:

"Machines that are used to perform heating and cooling functions may be carried either as "REFRIGERATING MACHINES" or "HEATING MACHINES"."

Delete the note.

SP 296

In the first sentence, after "personal flotation devices", insert:

", self-inflating protective equipment".

Amend paragraph (b) to read:

"(b) For UN No. 2990 only:

(i) Cartridges, power device of Division 1.4, Compatibility Group S; or

(ii) Safety devices of Class 9 (UN No. 3268);

installed for purposes of the self-inflating mechanism and provided that the quantity of explosives per appliance does not exceed 3.2 g;"

SP 301

After the third sentence, insert the following new sentence and paragraphs:

"Such articles may in addition contain lithium cells or batteries or sodium ion cells or batteries, provided that the cells or batteries:

(a) Provide electrical power for the operation of the article; and

(b) Meet the requirements of special provision 188 (a) to (c), (e) and (f)."

In the fifth sentence (current fourth sentence), after the first instance of "dangerous goods", insert:

"other than cells or batteries".

After the fifth sentence (current fourth sentence), insert a paragraph break.

Amend the first sentence of this new sub-paragraph to read:

"If the articles contain more than one item of dangerous goods and these could react dangerously with one another during carriage, each of the dangerous goods shall be enclosed separately (see 4.1.1.6)."

At the end, add the following new sub-paragraph:

"Articles containing no other dangerous goods than cells or batteries shall be carried under UN Nos. 3091, 3481 or 3552, as appropriate."

- SP 310** At the end of the first sub-paragraph, replace "and (g)" by:
- " , (g), (h) (ii) if applicable and (h) (iii) if applicable for lithium cells or batteries, and shall meet the provisions of 2.2.9.1.7.2 with the exception of 2.2.9.1.7.2 (a) and 2.2.9.1.7.1 (e) (vii) (as referred to in 2.2.9.1.7.2 (e)) for sodium ion cells or batteries".
- SP 328** [The amendment in the French version does not apply to the English text.]
- SP 356** In the first sentence, replace "wagons, vehicles" by:
- "railway and road vehicles".
- SP 357** [The amendment in the French version does not apply to the English text.]
- SP 360** Before the last sentence, add the following new sentence:
- "Vehicles powered only by hybrid batteries containing both lithium ion cells and sodium ion cells in accordance with 2.2.9.1.7.1 (h) shall be assigned to the entry UN 3556 VEHICLE, LITHIUM ION BATTERY POWERED."
- Amend the last sentence to read:
- "Lithium batteries, sodium ion batteries or hybrid batteries containing both lithium ion cells and sodium ion cells in accordance with 2.2.9.1.7.1 (h) installed in cargo transport units, designed only to provide power external to the transport unit shall be assigned to entries UN 3536 LITHIUM ION BATTERIES INSTALLED IN CARGO TRANSPORT UNIT, UN 3563 LITHIUM METAL BATTERIES INSTALLED IN CARGO TRANSPORT UNIT or UN 3564 SODIUM ION BATTERIES INSTALLED IN CARGO TRANSPORT UNIT, as applicable."
- SP 363** In paragraph (f), second sentence, replace "and (g)" by:
- " , (g), (h) (ii) if applicable and (h) (iii) if applicable".
- [The amendment to the last two sentences of paragraph (f) in the French version does not apply to the English text.]
- SP 376** [The amendment in the French version does not apply to the English text.]
- SP 379** In paragraph (d) (i), after "ISO 11114-1:2020", insert:
- " + Amd 1:2023".
- SP 387** In the second sentence, replace "capacity" by:
- "watt-hour rating".
- SP 388** In the second sub-paragraph, in the second sentence, replace "sodium batteries, lithium metal batteries or lithium ion batteries" by:
- "nickel-metal hydride batteries, metallic sodium batteries, sodium alloy batteries, lithium metal batteries, lithium ion batteries, hybrid batteries containing both lithium ion cells and sodium ion cells in accordance with 2.2.9.1.7.1 (h) or sodium ion batteries".

In the third sub-paragraph, in the second sentence, replace "sodium batteries, lithium metal batteries or lithium ion batteries" by:

"nickel-metal hydride batteries, metallic sodium batteries, sodium alloy batteries, lithium metal batteries, lithium ion batteries, hybrid batteries containing both lithium ion cells and sodium ion cells in accordance with 2.2.9.1.7.1 (h) or sodium ion batteries".

In the sixth sub-paragraph, add a new second sentence to read:

"Vehicles powered only by hybrid batteries containing both lithium ion cells and sodium ion cells in accordance with 2.2.9.1.7.1 (h) shall be assigned to the entry UN 3556 VEHICLE, LITHIUM ION BATTERY POWERED."

Amend the eighth sub-paragraph to read:

"Examples of equipment are lawnmowers, cleaning machines or model boats and model aircraft. Equipment powered by lithium metal batteries, lithium ion batteries or sodium ion batteries shall be assigned to the entries UN 3091 LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT or UN 3091 LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT or UN 3481 LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT or UN 3481 LITHIUM ION BATTERIES PACKED WITH EQUIPMENT or UN 3552 SODIUM ION BATTERIES CONTAINED IN EQUIPMENT or UN 3552 SODIUM ION BATTERIES PACKED WITH EQUIPMENT, as appropriate. Lithium ion batteries, lithium metal batteries, hybrid batteries containing both lithium ion cells and sodium ion cells in accordance with 2.2.9.1.7.1 (h) or sodium ion batteries installed in a cargo transport unit and designed only to provide power external to the cargo transport unit shall be assigned to the entries UN 3536 LITHIUM ION BATTERIES INSTALLED IN CARGO TRANSPORT UNIT, UN 3563 LITHIUM METAL BATTERIES INSTALLED IN CARGO TRANSPORT UNIT or UN 3564 SODIUM ION BATTERIES INSTALLED IN CARGO TRANSPORT UNIT, as appropriate."

In the ninth paragraph, second sentence, replace "and (g)" by:

", (g), (h) (ii) if applicable and (h) (iii) if applicable".

[The amendment to the last two sentences in the French version does not apply to the English text.]

SP 389

Amend the first sub-paragraph to read:

"This entry only applies to lithium ion batteries, lithium metal batteries, sodium ion batteries or hybrid batteries containing both lithium ion cells and sodium ion cells in accordance with 2.2.9.1.7.1 (h) installed in a cargo transport unit and designed only to provide power external to the cargo transport unit. Lithium batteries shall meet the requirements of 2.2.9.1.7.1 (a) to (g). Hybrid batteries shall meet the requirements of 2.2.9.1.7.1 (a) to (h). Sodium ion batteries shall meet the requirements of 2.2.9.1.7.2 (a) to (f). All batteries shall contain the necessary systems to prevent overcharge and over discharge between the batteries."

Amend the last sentence to read:

"The cargo transport unit shall bear placards in accordance with 5.3.1.1 on two opposing sides and orange-coloured plates in accordance with 5.3.2."

SP 393

At the end of the second sentence, add:

"to dry or unmodified nitrocellulose".

SP 406 [The amendments in the German version do not apply to the English text.]

**"409–
499** (Reserved)" amend to read:

**"414–
499** (Reserved)".

SP 666 Amend paragraph (e) to read:

"(e) Packaged vehicles of UN Nos. 3556, 3557 and 3558 are subject to the marking and labelling requirements of Chapter 5.2."

Add the following new special provisions:

"409 (Reserved)

410 Hybrid batteries in conformity with 2.2.9.1.7.1 (h) containing both lithium ion cells and sodium ion cells shall be assigned to UN Nos. 3480, 3481 or 3536, as appropriate. When such batteries are carried in accordance with special provision 188, the watt-hour rating shall not exceed 100 Wh and shall be marked on the outside case.

411 Articles carried under this entry include magnetic resonance imaging (MRI) scanners containing non-flammable, non-toxic gas. The non-flammable, non-toxic gas shall be contained within MRI scanner components. The MRI scanners shall be designed and constructed to contain the gas and preclude the risk of bursting or cracking of the gas retaining components during normal conditions of carriage. MRI scanners are not subject to the requirements of RID if they contain less than 12 kg of gas in Class 2, group A or O according to 2.2.2.1.3.

412 (Reserved)

413 Liquid organic hydrogen carriers (LOHC) based on substances classified under this entry with physically dissolved hydrogen may only be carried under this entry when the content of physically dissolved hydrogen does not exceed the limit of 0.5 L(H₂)/kg (LOHC)."

"679 Pressure receptacles approved in conformity with EN 17339 intended for the carriage of UN 1049 HYDROGEN, COMPRESSED may be carried filled with UN 1066 NITROGEN, COMPRESSED for the purpose of assembly, periodic inspection, maintenance or disposal with an internal pressure that supports the pressure receptacle liner. The pressure shall be not more than the lower value of either 10 % of the working pressure or 20 bar.

Battery-wagons and MEGCs intended for the carriage of UN 1049 HYDROGEN, COMPRESSED containing pressure receptacles approved in conformity with EN 17339 may be transported with UN 1066 NITROGEN, COMPRESSED for the purpose of first filling, periodic inspection, maintenance or disposal with an internal pressure that supports the liner of the pressure receptacles. The pressure shall be not more than the lower value of either 10 % of the working pressure or 20 bar.

The transport document shall include the following statement:

"CARRIAGE IN ACCORDANCE WITH SPECIAL PROVISION 679".

All other requirements of RID shall be met.

- 680** When the packaging is designed to be used and carried under the conditions specified in paragraph (f) of the packaging performance assessment criteria outlined in table note a of packing instruction P 911 (2) in 4.1.4.1 or LP 906 (2) in 4.1.4.3, the consignor shall provide the loader and the carrier with the description of the surrounding conditions in which the packaging may be used and carried. This description shall be attached to the transport document.
- 681** This entry shall also apply to diesel fuels in accordance with EN 16709:2024 or EN 16734:2023 or paraffinic diesel fuels in accordance with EN 15940:2023 or paraffinic heating oils with a flash-point according to EN 15940:2023."

PART 4

Chapter 4.1

In the note after the title, amend the following:

- [The amendment in the German version does not apply to the English text.]
- Replace "may nevertheless be used" by:
"may also be used".

- 4.1.1.4** In paragraph (a), in the table, in the first column, replace "capacity of the packaging" by:

"maximum capacity of the packaging".

In paragraph (b), in the first sentence, replace "capacity of the packaging" by:

"maximum capacity of the packaging".

- 4.1.1.11** Add the following new title to the paragraph:

"Empty packagings".

Number the existing text as **4.1.1.11.1**.

In the note, replace "may also be carried under UN No. 3509" by:

"may alternatively be carried under the provisions for UN No. 3509, in bulk or packaged,".

- 4.1.1.11** Add the following new **4.1.1.11.2**:

- "4.1.1.11.2** Empty, uncleaned drums and IBCs having small amounts of residues that can only be removed with disproportionate technical effort may be carried for disposal, recycling or recovery of their material even if:

- The permitted period of use according to 4.1.1.15 is exceeded;
- The date of expiry of the last periodic test or inspection has passed as determined by 4.1.2.2; or
- Information and documentation on the use of drums and IBCs as provided in 4.1.1.1, 6.1.1.5, 6.1.3.6, 6.1.5.8, 6.5.1.1.4 and 6.5.6.14 is not available.

The following requirements shall be fulfilled:

- (a) Drums and IBCs exceed a capacity of 150 litres;
- (b) Residues present in drums and IBCs shall not be:
 - (i) Dangerous goods of classes 1, 2, 4.2, 4.3, 5.2, 6.2 and 7;
 - (ii) Substances assigned to packing group I or that have "0" assigned in Column (7a) of Table A of Chapter 3.2;
 - (iii) Desensitized explosive substances of Class 3 or Class 4.1;
 - (iv) Self-reactive substances of Class 4.1;
 - (v) Radioactive material; or
 - (vi) Asbestos (UN Nos. 2212 and 2590), polychlorinated biphenyls (UN Nos. 2315 and 3432) and polyhalogenated biphenyls, halogenated monomethyl-diphenylmethanes or polyhalogenated terphenyls (UN Nos. 3151 and 3152);
- (c) Drums and IBCs remain upright and firmly closed using the original closure devices or other securing devices, so that they remain secure and leakproof under normal conditions of carriage;
- (d) The labelling and marking correspond to the residues present in the drums and IBCs; and
- (e) Information in the transport document complies with 5.4.1.1.6.

All other provisions of RID shall be fulfilled."

4.1.1.20.3 In paragraph (c), first sentence, replace "and volume" by:

", in usable water capacity and in pressure volume product".

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

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

4.1.1.21.6 In table 4.1.1.21.6, amend the following:

- In the table, place footnotes * and ** (currently below the line for UN No. 1791 and below the line for UN Nos. 3101 to 3119) directly below the table, on those pages on which they appear and renumber them sequentially, as a and b.
- For "UN 1202 Diesel fuel", in column (2b), replace "EN 590:2013 + A1:2017" by:
"EN 590:2025".
- For "UN 1202 Heating oil, light", second entry, in column (2b), replace "EN 590:2013 + A1:2017" by:
"EN 590:2025".

- In the row for UN No. 2372, in Column (3b), replace "F1" by:
"FTC".
- Delete the entry for UN No. 2941.

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

4.1.3.4 Amend the section for "Packagings" to read:

"Single packagings

For substances of packing group I, unless approved for the carriage of liquids of packing group I:

Drums: 1A2, 1B2, 1H2 and 1N2

Jerricans: 3A2, 3B2 and 3H2

For substances of packing groups I, II and III:

Drums: 1D and 1G

Boxes: 4A, 4B, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2 and 4N

Bags: 5L1, 5L2, 5L3, 5H1, 5H2, 5H3, 5H4, 5M1 and 5M2

Composite packagings: 6HC, 6HD1, 6HD2, 6HG1, 6HG2, 6PC, 6PD1, 6PD2, 6PG1, 6PG2, 6PH1 and 6PH2".

4.1.4.1

P 001 Add the following new special packing provisions **PP 98** and **PP 99**:

"PP 98 For UN No. 2029, when a pressure receptacle is used, the internal pressure at 65 °C shall not exceed the test pressure.

PP 99 (Reserved)".

P 002 Delete table notes d and e and references to these notes.

Before the special packing provisions, insert the following new row:

"Additional requirement:

Where the solid may become liquid during carriage, see 4.1.3.4."

P 006 [The amendment to paragraph (5) (d) in the French version does not apply to the English text.]

P 130 Amend the title of the last row to read:

"Special packing provisions".

Add the following new special packing provision:

"PP 100 For UN Nos. 0012 and 0014, despite the requirements of 4.1.5.11, articles may be packed without internal cushioning, fittings, coating or liner in metal outer packagings."

P 200 In paragraph (12) 1.3, insert the following new second indent:

"– EN 14140; or".

[The amendment to paragraph (12) 2.4 in the French version does not apply to the English text.]

In table 2, amend the following:

- In the row for UN No. 1040, in column "Classification code", replace "2TF" by:
"2TFC".
- In the row for UN No. 1041, in column "Classification code", replace "2F" by:
"2FC".
- In the row for UN No. 3300, in column "Classification code", replace "2TF" by:
"2TFC".

P 410 Delete table note c and references to this note.

Table note d becomes table note c.

Before the special packing provisions, insert the following new row:

"Additional requirement

Where the solid may become liquid during carriage, see 4.1.3.4."

P 520 [The amendment to special provision PP 94 in the French version does not apply to the English text.]

In special provision **PP 95**, in paragraph (b), at the end, add:

"or 24 ± 2.4 g/l".

P 903 In paragraph (2), at the beginning, replace "In addition" by:

"Alternatively".

P 907 At the end, add a new row with the following text:

"Additional requirement

Cells and batteries shall be protected from damage and short circuit, and the article shall be equipped with an effective means of preventing accidental activation."

P 908 [The amendment in the French version does not apply to the English text.]

- P 910** [The amendment to paragraph (3) in the French version does not apply to the English text.]
- P 911** In paragraph (2), first sentence, replace "as specified" by:
"as approved or specified".
- 4.1.4.2**
- IBC 04** At the end, add the following new row:

"Additional requirement"

Where the solid may become liquid during carriage, see 4.1.3.4."
- IBC 05** At the end, add the following new row:

"Additional requirement"

Where the solid may become liquid during carriage, see 4.1.3.4."
- 4.1.4.3**
- LP 02** Before the row for the special packing provisions, insert the following new:

"Additional requirement"

Where the solid may become liquid during carriage, see 4.1.3.4."
- LP 903** In the second row after the heading, first paragraph, delete:

"for a single battery and".
- LP 906** In paragraph (2), first sentence, replace "as specified" by:

"as approved or specified".
- 4.1.6.10** In the last sentence, replace "performing inspection or disposal, including the intermediate carriage operations" by:

"performing inspection, disposal, recycling or recovery of its material, including the intermediate transport operations".
- 4.1.7.1.1** At the end of the paragraph add the following new text:

"To avoid the unnecessary confinement of liquids, metal packagings meeting the criteria of the internal pressure (hydraulic) test for packing group I shall not be used.
- NOTE:** The consignor should consult with the packaging manufacturer to verify that the metal packaging does not meet the internal pressure (hydraulic) test criteria for packing group I."

Chapter 4.2

In Note 2, amend the following:

- Replace "requirements" by:
"provisions".
- Replace "State that" by:
"country which".
- Replace "may nevertheless be used" by:
"may also be used".

Insert the following Note 3:

"3. Portable tanks marked in accordance with the applicable provisions of Chapter 6.9, but which were approved in a country which is not an RID Contracting State or approved in accordance with Chapter 6.10 of the IMDG Code, may also be used for carriage under RID."

4.2.5.3 Add the following new portable tank special provision:

"TP 43 Portable tank instruction T 1 prescribed in RID applicable up to 31 December 2026 may continue to be applied until 31 December 2028."

Chapter 4.3

4.3.2.1.1 Insert the following new **4.3.2.1.1.1** and **4.3.2.1.1.2**:

"4.3.2.1.1.1	Wagons may be subject to additional special provisions for wagon equipment aimed at ensuring the necessary level of protection of the substance carried as well as the interoperability of the wagon in use.	(Reserved)
4.3.2.1.1.2	The required wagon equipment is given in code form in Column (14) of Table A in Chapter 3.2. The applicable special provisions of each wagon equipment code (WE) are defined in 7.1.2.2. NOTE: Wagons equipped with additional wagon equipment which conforms to a WE code in accordance with 7.1.2.2 but which is not required in Column (14) of Table A in Chapter 3.2 may also be used."	(Reserved)

4.3.2.2.3 In paragraph (b), replace "carriage operation" by:
"transport operation".

4.3.2.3 Insert the following new **4.3.2.3.8** and **4.3.2.3.9**:

"4.3.2.3.8 The heating system shall be set or controlled so that a substance cannot reach a temperature at which the pressure in the tank exceeds its maximum working pressure or causes other hazards (e.g. dangerous thermal decomposition).

4.3.2.3.9 The heating system shall be set or controlled so that power for internal heating elements shall not be available unless the heating elements are completely submerged. The surface temperature of the heating elements for internal heating equipment, or shell temperature if external heating equipment is employed shall not exceed 80% of the autoignition temperature (in °C) of the substance carried."

4.3.3.1.1 In the table, in row "2 Calculation pressure", in column "Tank Code", in the explanation of "X", replace "4.3.3.2.5" by:

"4.3.3.2.7".

In the table, in row "4 Safety valves/devices", in column "Tank Code", in the explanation of "N", replace "according to 6.8.3.2.9 or 6.8.3.2.10" by:

"according to 6.8.3.2.1.8.1 or 6.8.3.2.1.9".

4.3.3.2 Insert a new **4.3.3.2.5** to read:

"4.3.3.2.5 Prior to filling, the battery-wagons and MEGCs shall be inspected to ensure they are authorized for the gas to be carried and that the applicable provisions of RID have been met.

Furthermore, it shall also be verified by visual examination, where applicable, that:

- (a) The element supports are free from damage which may affect the mechanical integrity of the battery-wagon or MEGC;
- (b) The restraining systems that prevent the elements from moving are secure;
- (c) The main outlet connection is correct for the substance to be carried, free from contamination and undamaged.

The elements of battery-wagons or MEGCs that are pressure receptacles shall be filled according to the working pressures, filling ratios and filling provisions specified in packing instruction P 200 of 4.1.4.1 for the specific gas being filled into each element. When battery-wagons and MEGCs are filled as a whole or groups of their elements are filled simultaneously, the filling pressure or the load shall not exceed the lowest maximum filling pressure or the lowest maximum load of any single element. Battery-wagons and MEGCs shall not be filled above the applicable permissible masses."

4.3.3.2 Add the following new **4.3.3.2.6**:

"4.3.3.2.6 (Reserved)"

Renumber current **4.3.3.2.5** as **4.3.3.2.7**.

4.3.3.2.7 (current 4.3.3.2.5) In the table amend the following:

- In the row for UN No. 1040, in column "Classification code", replace "2 TF" by:
"2 TFC".
- In the row for UN No. 1041, in column "Classification code", replace "2 F" by:
"2 FC".
- In the row for UN No. 3300, in column "Classification code", replace "2 TF" by:
"2 TFC".

4.3.5

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In the left-hand column, in the first sub-paragraphs after the title, replace "When energy absorption elements have undergone plastic deformation in accordance with 6.8.4, special provision TE 22," by:

"When energy absorption elements (special provision for wagon equipment WE 2 in accordance with 7.1.2.2) have undergone plastic deformation,".

In the left-hand column, amend the second sub-paragraphs after the title to read:

"If the loaded tank-wagon or loaded battery-wagon is capable of absorbing the shocks of an impact that might occur in normal conditions of rail transport, e.g. after the energy absorption equipment fitted has been replaced with equipment of lower energy absorption or after the damaged energy absorption equipment has been temporarily blocked off, the tank-wagon or battery wagon may, after undergoing an inspection, be moved for the purpose of emptying and finally to a repair workshop."

PART 5

Chapter 5.1

5.1.4 [The amendment to the first sentence in the French and German versions does not apply to the English text.]

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

Chapter 5.2

5.2.1.9.2 At the end of the first sub-paragraph, add the following new sentence:

"However, where equipment contains one or more button cells in addition to cells or batteries there is no requirement for the UN number indicating the button cell or cells to be included on the mark."

5.2.1.9 Add a new **5.2.1.9.3** to read:

"5.2.1.9.3 When both the battery mark and labels in accordance with 5.2.2.2 other than model No. 9A are required, the battery mark shall be located on the same surface of the package as the labels if the package dimensions are adequate."

Chapter 5.3

5.3.2.1.1 In the penultimate sentence, replace "lithium batteries are installed (UN No. 3536)" by:

"lithium batteries or sodium ion batteries are installed (UN Nos. 3536, 3563 and 3564)".

5.3.4.2 In the explanation of shunting label No. 15, in the first sentence, replace "motive power unit" by:

"locomotive".

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

5.3.5 Amend to read:

"5.3.5 Orange band

Tank-wagons and extra-large tank-containers intended for the carriage of liquefied, refrigerated liquefied or dissolved gases shall be marked with an unbroken, orange, non-reflectorized band, about 30 cm wide, in the colour tone "RAL 2003 pastel orange" encircling the tank at mid-height. Changes in colour caused by weather exposure that do not affect the identification as an orange band are permitted."

Delete current footnote 4.

Chapter 5.4

5.4.1.1.1 Amend the following:

– In paragraph (c), in the second indent, amend the note to read:

"NOTE: For radioactive material with a subsidiary hazard, to which special provision 172 of Chapter 3.3 is assigned in Column (6) of Table A of Chapter 3.2, see paragraph (c) of this special provision."

– In paragraph (d), amend the note to read:

"NOTE: For radioactive material with a subsidiary hazard, to which special provision 172 of Chapter 3.3 is assigned in Column (6) of Table A of Chapter 3.2, see paragraph (d) of this special provision."

5.4.1.1.3.1 In the two first examples after the first sub-paragraph, at the end, replace "or" by:

",".

In the third example, at the end, replace "or" by:

"; or".

[The amendment to the example before the last sub-paragraph in the French version does not apply to the English text.]

5.4.1.1.3.2 Amend the following:

- Amend paragraph (c) to read:

"(c) For tanks, provided that a device or procedure is used to ensure compliance with the regulated degrees of filling."

- Amend the paragraph with the three indents to read:

"Such estimation of the quantity is not allowed for:

(d) Exemptions for which the exact quantity is essential (e.g. 1.1.3.6);

(e) Waste containing substances mentioned in 2.1.3.5.3, with the exception of:

(i) UN 3291 clinical waste, unspecified, n.o.s. or (bio)medical waste, n.o.s. or regulated medical waste, in packagings conforming to packing instruction P 621, IBC 620 or LP 621;

(ii) UN 1950 aerosols and UN 2037 receptacles, small, containing gas (gas cartridges);

(iii) Waste carried in accordance with 4.1.1.5.3;

(f) Substances of Class 4.3."

5.4.1.1.6.2.2 After the terms "EMPTY TANK-VEHICLE", "EMPTY BATTERY-VEHICLE" and "EMPTY VEHICLE", add a reference to the following footnote:

"⁴ The terms "EMPTY TANK-VEHICLE", "EMPTY BATTERY-VEHICLE" and "EMPTY VEHICLE" are to be understood as those defined in ADR, which can also be carried by rail in piggyback transport."

5.4.1.1.6.3 In paragraph (a), after the term "battery-vehicles", add a reference to the following footnote:

"⁵ The term "battery-vehicles" is to be understood as that defined in ADR, which can also be carried by rail in piggyback transport."

Renumber existing footnotes 5 to 12 as footnotes 6 to 13.

5.4.1.1.12 Replace "1 JANUARY 2025" by:

"1 JANUARY 2027".

5.4.1.1.21 After "chapters", insert:

"2.1,".

5.4.1.1.24 At the end, replace the last line by the two following lines:

""CARRIAGE IN ACCORDANCE WITH 1.1.4.7.2" or
"CARRIAGE IN ACCORDANCE WITH 1.1.4.7.3", as appropriate."

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

"For radioactive material with a subsidiary hazard, to which special provision 172 of Chapter 3.3 is assigned in Column (6) of Table A of Chapter 3.2, see paragraph (c) of this special provision;"

5.4.3.4 [The amendment to the title of the first page of the RID instructions in writing in the French version does not apply to the English text.]

[The amendment to the second and seventh indents on the first page of the RID instructions in writing in the French version does not apply to the English text.]

In the tables on pages 2 and 3 of the instructions in writing, amend the following:

- In the row for label 1.4, amend the text in column (2) to read:

"Slight possibility of explosion and fire."

- In the row for label 2.1, in column (2), replace "Risk of fire. Risk of explosion." by:

"May cause fire.
May cause explosion."

- In the row for label 2.1, in column (2), replace "Risk of asphyxiation." by:

"May cause asphyxiation."

- In the row for label 2.2, in column (2), replace "Risk of asphyxiation." by:

"May cause asphyxiation."

- In the row for label 2.3, in column (2), replace "Risk of intoxication." by:

"May cause intoxication."

- In the row for label 3, in column (2), replace "Risk of fire. Risk of explosion." by:

"May cause fire.
May cause explosion."

- In the row for label 4.1, in column (2), replace "Risk of fire." by:

"May cause fire."

- In the row for label 4.1, in column (2), replace "Risk of explosion of desensitized explosives after loss of desensitizer." by:

"Loss of desensitizer in desensitized explosives may lead to an explosion."

- In the row for label 4.2, in column (2), in the first sentence, replace "Risk of" by:

"May cause".

- In the row for label 4.3, in column (2), replace "Risk of" by:

"May cause".

- In the row for label 5.1, in column (2), replace "Risk of" by:
"May cause".
- In the row for label 5.2, in column (2), in the first sentence, replace "Risk of" by:
"May cause".
- In the row for label 6.1, in column (2), in the first sentence, replace "Risk of" by:
"May cause".
- In the row for label 6.1, in column (2), in the second sentence, replace "Risk" by:
"Hazardous".
- In the row for label 6.2, in column (2), in the first sentence, replace "Risk of" by:
"May cause".
- In the row for label 6.2, in column (2), in the third sentence, replace "Risk" by:
"Hazardous".
- In the row for labels 7A, 7B, 7C and 7D, in column (2), replace "Risk" by:
"Hazard".
- In the row for label 7E, in column (2), replace "Risk of" by:
"May cause".
- In the row for label 8, in column (2), in the first sentence, replace "Risk of" by:
"May cause".
- In the row for label 8, in column (2), in the fourth sentence, replace "Risk" by:
"Hazardous".
- In the row for labels 9 and 9A, in column (2), in the first three sentences, replace
"Risk of" by:
"May cause".
- In the row for label labels 9 and 9A, in column (2), in the fourth sentence, replace
"Risk" by:
"Hazardous".

On page 3 of the instructions in writing, in Note 1 replace "risks" by:

"hazards".

In the table on page 4 of the instructions in writing, amend the following:

- In the column heading of column (1), replace "Mark" by:
"Marks".
- In the row for the mark for environmentally hazardous substances, in column (2), replace "Risk" by:
"Hazardous".
- In the row for the mark for elevated temperature substances, in column (2), replace "Risk of" by:
"May cause".

5.4.5 After the first sub-paragraph, insert following Note:

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

Chapter 5.5

5.5.4 In the heading, replace "**Dangerous goods contained in equipment in use**" by:

"Devices containing dangerous goods, which are in use".

5.5.4.1 In the first sentence, amend the following:

- Replace "Dangerous goods (e.g. lithium batteries, fuel cell cartridges) contained in equipment such as data loggers" by:

"Devices in use or intended for use during carriage containing dangerous goods, such as data loggers, sensors".

- Replace "containers or load compartments" by:

"containers or other types of cargo transport units".

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

"device".

In paragraph (c), amend the following:

- Replace "equipment" by:

"device".

- At the end, before the full stop, insert:

"and shall be safe for use in the dangerous environments to which it may be exposed".

5.5.4.2 Replace "equipment" by:

"a device".

PART 6

Chapter 6.1

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

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

6.1.4.12.1 In the second sentence, replace "ISO 535:2014" by:
"ISO 535:2023".

6.1.5.1.3 At the beginning of the first sentence, replace "Tests" by:
"Appropriate tests".

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

Chapter 6.2

6.2.1.5.1 In paragraph (g), before "technical code", insert:
"recognized".

6.2.1.5.2 In paragraph (d), before "technical code", insert:
"recognized".

In paragraph (e), before "technical code", insert:
"recognized".

In paragraph (f), before "technical code", insert:
"recognized".

In paragraph (p), before "technical code", insert:
"recognized".

6.2.1.6.1 In Note 3, after "Amd 1:2021", insert:
"+ Amd 2:2024".

6.2.2.1.1 In the table amend the following:

- In the row for "ISO 4706:2008", in column "Applicable for manufacture", replace "Until further notice" by:
"Until 31 December 2030".

- After the row for "ISO 4706:2008", insert the following row:

"

Reference	Title	Applicable for manufacture
ISO 4706:2023	Gas cylinders – Refillable welded steel cylinders – Test pressure 60 bar and below	Until further notice

"

6.2.2.1.2 In the sentence before the table, replace "The following standard" by:

"The following standards".

In the table amend the following:

- In the row for "ISO 11515:2013 + Amd 1:2018", in column "Applicable for manufacture", replace "Until further notice" by:

"Until 31 December 2030".

- After the row for "ISO 11515:2013 + Amd 1:2018", insert the following row:

"

Reference	Title	Applicable for manufacture
ISO 11515:2022	Gas cylinders – Refillable composite reinforced tubes of water capacity between 450 l and 3000 l – Design, construction and testing	Until further notice

"

6.2.2.1.3 In the first table amend the following:

- In the row for "ISO 4706:2008", in column "Applicable for manufacture", replace "Until further notice" by:

"Until 31 December 2030".

- After the row for "ISO 4706:2008", insert the following row:

"

Reference	Title	Applicable for manufacture
ISO 4706:2023	Gas cylinders – Refillable welded steel cylinders – Test pressure 60 bar and below	Until further notice

"

6.2.2.1.8 In the table amend the following:

- In the row for "ISO 4706:2008", in column "Applicable for manufacture", replace "Until further notice" by:

"Until 31 December 2030".

- After the row for "ISO 4706:2008", insert the following row:

Reference	Title	Applicable for manufacture
ISO 4706:2023	Gas cylinders – Refillable welded steel cylinders – Test pressure 60 bar and below	Until further notice

- 6.2.2.2** In the table, in the row for "ISO 11114-1:2020", in the first column, after "ISO 11114-1:2020", insert:

" + Amd 1:2023".

- 6.2.2.3** In the first table amend the following:

- In the row for "ISO 10297:2014 + Amd 1:2017", in column "Applicable for manufacture", replace "Until further notice" by:

"Until 31 December 2028".

- After the row for "ISO 10297:2014 + Amd 1:2017", insert the following row:

Reference	Title	Applicable for manufacture
ISO 10297:2024	Gas cylinders – Cylinder valves – Specification and type testing	Until further notice

- In the row for "ISO 14246:2014 + Amd 1:2017", in column "Applicable for manufacture", replace "Until further notice" by:

"Until 31 December 2030".

- After the row for "ISO 14246:2014 + Amd 1:2017", insert the following row:

Reference	Title	Applicable for manufacture
ISO 14246:2022	Gas cylinders – Cylinder valves – Manufacturing tests and examinations	Until further notice

- 6.2.2.4** In the first table amend the following:

- In the row for "ISO 18119:2018 + Amd 1:2021", in column "Applicable", replace "Until further notice" by:

"Until 31 December 2028".

- After the row for "ISO 18119:2018 + Amd 1:2021", insert the following row:

Reference	Title	Applicable
ISO 18119:2018 + Amd 1:2021 + Amd 2:2024	Gas cylinders – Seamless steel and seamless aluminium-alloy gas cylinders and tubes – Periodic inspection and testing	Until further notice

- In the row for "ISO 11623:2015", in column "Applicable", replace "Until further notice" by:

"Until 31 December 2028".

- After the row for "ISO 11623:2015", insert the following row:

Reference	Title	Applicable
ISO 11623:2023	Gas cylinders – Composite cylinders and tubes – Periodic inspection and testing NOTE: The pressure test shall not be replaced by a non-destructive examination (NDE) technique, though such techniques can be used for monitoring purposes.	Until further notice

- In the row for "ISO 22434:2006", in column "Applicable", replace "Until further notice" by:

"Until 31 December 2028".

- After the row for "ISO 22434:2006", insert the following row:

Reference	Title	Applicable
ISO 22434:2022	Gas cylinders – Inspection and maintenance of valves NOTE: These requirements may be met at times other than at the periodic inspection and test of UN cylinders.	Until further notice

- 6.2.2.7.4** In paragraph (p), after "ISO 11114-1:2020", insert:

"+ Amd 1:2023".

- 6.2.2.8.1** At the end, add a new paragraph to read as follows:

"Non-refillable UN cylinders of seamless construction with a diameter of 40 mm or less may instead be permanently marked (e.g. stencilled, stamped, engraved or etched) on their side walls provided no harmful stress concentration is created, and the minimum cylindrical shell wall thickness is maintained. The minimum size of the marks shall be 1.5 mm. The minimum size of the UN packaging symbol shall be 3 mm. The minimum size of the "DO NOT REFILL" mark shall be 3 mm."

- 6.2.2.9.2** In paragraph (j), after "ISO 11114-1:2020", insert:

"+ Amd 1:2023".

- 6.2.3.5.1** In Note 3, first sentence, replace "EN ISO 18119:2018 + A1:2021" by:

"EN ISO 18119:2018 + A1:2021 + A2:2024".

6.2.3.11.2 Before the last sentence, insert the following:

"This indication of authorized pressure receptacles shall contain the following information:

- (a) The test pressure to which the salvage pressure receptacle can be loaded at maximum temperature, which limits the storage of pressure receptacles filled with liquified gases.
- (b) The usable water capacity and the maximum pV-product authorized for stored pressure receptacles, which limits the storage of pressure receptacles filled with compressed gases. The value of this maximum pV-product is the lowest value of either of the following:
 - (i) the general limit of the pV-product of 1.5 million bar-litres; or
 - (ii) the pV-product of the salvage pressure receptacle based on the test pressure to which it is allowed to be loaded at maximum temperature and its usable water capacity."

The last sentence becomes a new sub-paragraph. At the end of this sentence, add:

"in the approval certificate".

6.2.3.11.4 Amend the last sentence to read as follows:

"The marking of the salvage pressure receptacle shall include the usable water capacity, the test pressure and the maximum pressure volume product. This mark shall start with the letters "PVP", followed by the pV-product and the units. The pV-product shall include a space in front of the last 3 digits of the value. The units "BAR" and "L" shall be separated by a dot. For harmonised readability and to avoid subsequent manipulation, the mark shall not contain more spaces. An example of the PVP mark is given below:

"PVP1500 000BAR.L".

6.2.4.1 Amend the following:

- In the second sub-paragraph, second sentence, replace "column (4)" by:
"column (3)".
- Delete the third sub-paragraph ("Column (3) shows the paragraphs of Chapter 6.2 to which the standard conforms.")
- In the new third sub-paragraph (current fourth sub-paragraph), replace "Column (5)" by:
"Column (4)".
- In the table, delete column "Requirements the standard complies with".
- In the table, in column "**Applicable for new type approvals or for renewals**", replace "(4)" by:
"(3)".

- In the table, in column "**Latest date for withdrawal of existing type approvals**", replace "(5)" by:

"(4)".

In the table, under "**for design and construction of pressure receptacles or pressure receptacle shells**", amend the following:

- In the row for "EN ISO 7866:2012 + A1:2020", in column (3) (current column (4)), replace "Until further notice" by:

"Between 1 January 2027 and 31 December 2029".

- After the row for "EN ISO 7866:2012 + A1:2020", insert the following new row:

(1)	(2)	(3)	(4)
EN ISO 7866:2012 + A2:2025	Gas cylinders – Refillable seamless aluminium alloy gas cylinders – Design, construction and testing	Until further notice	

In the table, under "**for design and construction of closures**", amend the following:

- In the row for "EN ISO 17871:2020", in column (3) (current column (4)), replace "Until further notice" by:

"Between 1 January 2025 and 31 December 2028".

- After the row for "EN ISO 17871:2020", insert the following new row:

(1)	(2)	(3)	(4)
EN ISO 17871:2020 + A1:2024	Gas cylinders – Quick-release cylinder valves – Specification and type testing	Until further notice	

6.2.4.2

In the table, amend the following:

- In the row for "EN ISO 18119:2018 + A1:2021", in column (3), replace "Mandatorily from 1 January 2025" by:

"Until 31 December 2028".

- After the row for "EN ISO 18119:2018 + A1:2021", insert the following new row:

(1)	(2)	(3)
EN ISO 18119:2018 + A1:2021 + A2:2024	Gas cylinders – Seamless steel and seamless aluminium-alloy gas cylinders and tubes – Periodic inspection and testing	Mandatorily from 1 January 2029

- In the row for "EN ISO 11623:2023", in column (2), add the following new note:

"NOTE: The pressure test shall not be replaced by a non-destructive examination (NDE) technique, though such techniques can be used for monitoring purposes."

- 6.2.5.4.2** At the end, replace "EN ISO 7866:2012 + A1:2020" by:
"EN ISO 7866:2012 + A2:2025".

Chapter 6.3

- 6.3.5.1.3** At the beginning, replace "Tests" by:
"Appropriate tests".

Chapter 6.4

- 6.4.11.2** In paragraph (d), second sentence, replace "weight" by:
"mass".
- 6.4.22.8** [The amendments to the first sub-paragraph and paragraph (a) in the German version do not apply to the English text.]

Chapter 6.5

- 6.5.2.1.1** In paragraph (g), first sentence, replace "stacking test load" by:
"superimposed stacking test mass".
- 6.5.2.1.3** In the first example, in the text before the last slash, replace "stacking test load" by:
"superimposed stacking test mass".
- 6.5.2.2.2** In the first sentence, replace "stacking load" by:
"superimposed stacking mass".
- 6.5.4.4.2** [The amendment to the last sentence in the German version does not apply to the English text.]
- At the end, add a new note to read:
- "NOTE:** The initial leakproofness test in accordance with (a) does not necessarily have to comply with the design type test in 6.5.6.7. However, samples of IBCs taken from the production shall meet the requirements for the leakproofness test according to 6.5.6.7. The periodic leakproofness test in accordance with (b) does not necessarily have to comply with the design type test in 6.5.6.7."
- 6.5.4.5.1** [The amendment in the German version does not apply to the English text.]
- 6.5.5.2.2** After the first sentence, insert the following new sentences:
- "No parts of IBC bodies recovered from previously used flexible IBCs shall be used in the manufacture of new IBC bodies, except as recycled material. For IBC bodies manufactured from recycled plastics material, only recycled plastics material as defined in 1.2.1 shall be used."

6.5.5.2.8 Delete the first two sentences.

In the remaining sentence, replace "may also be used" by:
"may be reused".

6.5.5.4.16 In the second sentence, replace "'ISO 535:2014" by:
"ISO 535:2023".**6.5.5.5.3** In the second sentence, replace "ISO 535:2014" by:
"ISO 535:2023".**6.5.6.6.4** Replace "load to be placed on the IBC" by:
"mass placed on the IBC surface to create the superimposed test load".**6.5.6.8** [The amendment in the German version does not apply to the English text.]**Chapter 6.6****6.6.3.1** In paragraph (g), first sentence, replace "stacking test load" by:
"superimposed stacking test mass".**6.6.3.2** In the first and second examples, replace "stacking load" by:
"superimposed stacking test mass".**6.6.3.3** In the first sentence, replace "stacking load" by:
"superimposed stacking mass".**6.6.4.4.1** In the second sentence, replace "ISO 535:2014" by:
"ISO 535:2023".**6.6.5.1.3** In the first sentence, replace "Tests" by:
"Appropriate tests".**6.6.5.3.3.4** Replace "load to be placed on the large packagings" by:
"mass placed on the large packaging surface to create the superimposed test load".**Chapter 6.7**

In Note 1 after the Chapter heading, at the end, add:

"A portable tank constructed from 1 January 2030, which is approved in accordance with Chapter 6.7, shall not also be approved in accordance with Chapter 6.8."

- 6.7.2.1** In the definition of "*Portable tank*", in the last sentence, amend the following:
- Replace "Tank-vehicles" by:
"Road tank-vehicles".
 - Delete:
", non-metallic tanks (except FRP portable tanks, see Chapter 6.9)".
- 6.7.2.5.11** After "metals", insert:
"or FRP in accordance with section 6.9.3".
- 6.7.2.5.14** [The amendment in the French version does not apply to the English text.]
- 6.7.2.17.5** In paragraph (d), replace "ISO 1496-3:1995" by:
"ISO 1496-3:2019".
- 6.7.2.18.2** In paragraph (a), replace "ISO 1496-3:1995" by:
"ISO 1496-3:2019".
- 6.7.3.1** In the definition of "*Portable tank*", in the last sentence, replace "Tank-vehicles" by:
"Road tank-vehicles".
- 6.7.3.13.5** In paragraph (d), replace "ISO 1496-3:1995" by:
"ISO 1496-3:2019".
- 6.7.3.14.2** In paragraph (a), replace "ISO 1496-3:1995" by:
"ISO 1496-3:2019".
- 6.7.4.1** In the definition of "*Portable tank*", in the last sentence, replace "Tank-vehicles" by:
"Road tank-vehicles".
- 6.7.4.5.2** After the first sentence, add the following new sentence:
"Filling and discharge openings also include the openings in the vapour phase of the portable tank that are used for vapour recovery."
- 6.7.4.12.5** In paragraph (d), replace "ISO 1496-3:1995" by:
"ISO 1496-3:2019".
- 6.7.4.13.2** In paragraph (a), replace "ISO 1496-3:1995" by:
"ISO 1496-3:2019".
- 6.7.5.2.4** In paragraph (a), after "ISO 11114-1:2020", insert:
"+ Amd 1:2023".

6.7.5.10.4 In paragraph (d), replace "ISO 1496-3:1995" by:
"ISO 1496-3:2019".

6.7.5.11.2 In paragraph (a), replace "ISO 1496-3:1995" by:
"ISO 1496-3:2019".

Chapter 6.8

In Note 1 after the Chapter heading, at the end, add:

"A tank-container constructed from 1 January 2030, which is approved in accordance with Chapter 6.8, shall not also be approved in accordance with Chapter 6.7."

6.8.1.1 Amend the first indent to read:

"– to the tanks of tank-wagons, demountable tanks and elements of battery-wagons (left hand column);".

6.8.1.2 In the left-hand column, replace "tank-wagons, demountable tanks and battery-wagons" by:

"the tanks of tank-wagons, demountable tanks and elements of battery-wagons".

6.8.1.4 Replace "concerning use" by:

"concerning the use".

Add the following sentence:

"For the provisions concerning the wagons, see 4.3.2.1.1.1, 4.3.2.1.1.2 and Chapter 7.1."

6.8.1.5.1 In paragraph (b), before "an RID Contracting State", insert:

"the competent authority of".

6.8.2.1.2 Amend the text in the left-hand column to read:

"Tank-wagons shall be capable of absorbing under the maximum permissible load the forces defined in 7.1.2.1.1."

In the right-hand column, insert the following Note:

"NOTE: In rail transport, these load assumptions correspond to transport operations with shunting restrictions defined for carrying wagons of category F-II in EN 12663."

Renumber existing footnotes 3 to 6 as footnotes 2 to 5.

6.8.2.1.13 In the left-hand column, add the following sentence at the end:

"In addition, the applicable provisions of 7.1.2.1.1 shall be met."

6.8.2.1.29 Amend the text in the left-hand column to read:

"The provisions of 7.1.2.1.4 and the construction requirements of UTP WAG, Appendix I, section D shall apply."

Renumber existing footnotes 8 to 17 as footnotes 6 to 15.

6.8.2.2 Add the following new **6.8.2.2.12** and **6.8.2.2.13**:

"6.8.2.2.12 If an electrical heating system is installed, all electrical circuits shall be protected by fuses or automatic circuit breakers. Heating systems powered by external, earthed power supply, shall have an earth leakage circuit breaker with a releasing current of less than 100 mA.

6.8.2.2.13 Electrical switch cabinets mounted to tanks shall not have a direct connection to the tank interior and shall provide protection of at least the equivalent to type IP 56 of IEC 144 or IEC 529."

6.8.2.3.3 In the second sub-paragraph, first sentence, amend the following:

- Replace the "or" by a comma.
- At the end of the sentence, before the full stop, insert:
"or allow alternative service equipment with an equivalent technical specification".

6.8.2.4.1 In the sentence after the table, replace "4.3.3.2.5" by:

"4.3.3.2.7".

6.8.2.4.3 Introduce a new third paragraph to read:

"If the specified date of the intermediate inspection has passed, an intermediate inspection shall be performed or alternatively a periodic inspection may be performed in accordance with 6.8.2.4.2."

6.8.2.4.4 Include a new second paragraph to read:

"If service equipment of tanks is replaced by equipment not listed in the type approval of the tank, the tank shall be submitted to an exceptional inspection for the replacement of the service equipment without issuing a supplementary approval certificate for the modification according to 6.8.2.3.4, provided that the replacement equipment:

- Is approved in accordance with the relevant standard referenced in 6.8.2.6;
- Is of the correct technical specification for the tank;
- Does not modify the initial dimensions and connections;

and that the replacement of the service equipment is carried out without any operation involving the application of heat to the tank."

6.8.2.5.2 In the left-hand column, in the seventh indent, amend the following:

- After "TE", insert:
 "(except TE 25)".
- At the end, delete:
 "and".

In the left-hand column, after the seventh indent, insert the following new indents:

- the alphanumeric code TE 25 if the tank-wagon conforms to special provision TE 25 (b) or TE 25 (c) of 6.8.4 (b);
- the alphanumeric codes of the special provisions relating to wagon equipment WE with which the tank-wagon is equipped (see 7.1.2.3)¹⁶; and

¹⁶ See transitional measure 1.6.3.62."

Renumber existing footnotes 18 to 23 as footnotes 17 to 22.

6.8.2.6.1 In the text before the table, amend the following:

- In the second sub-paragraph, second sentence, replace "column (4)" by:
 "column (3)".
- Delete the third sub-paragraph ("Column (3) shows the paragraphs of Chapter 6.8 to which the standard conforms.").
- In the new third sub-paragraph (current fourth sub-paragraph), replace "Column (5)" by:
 "Column (4)".
- In the table, delete column "**Requirements the standard complies with**".
- In the table, in column "**Applicable to new type approvals or to renewals**", replace "(4)" by:
 "(3)".
- In the table, in column "**Latest date for withdrawal of existing type approvals**", replace "(5)" by:
 "(4)".

6.8.2.6.2

In the text before the table, amend the following:

- In the second sub-paragraph, replace "column (4)" by:
"column (3)".
- Delete the third sub-paragraph ("Column (3) shows the paragraphs of Chapter 6.8 to which the standard conforms").
- In the table, delete column **"Requirements the standard complies with"**.
- In the table, in column **"Applicable"**, replace "(4)" by:
(3).

6.8.3.1.5

Amend the first sentence to read:

"Elements and their fastenings of battery wagons shall be capable of absorbing under the maximum permissible load the forces defined in 7.1.2.1.1."	and the frame of MEGCs shall be capable of absorbing under the maximum permissible load the forces defined in 6.8.2.1.2."
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6.8.3.1.6

Amend the text in the left-hand column to read:

"(Deleted) NOTE: Former provision of 6.8.3.1.6 is superseded by special provision for wagon equipment WE 1 of 7.1.2.2."	
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6.8.3.2

Replace **6.8.3.2.1** to **6.8.3.2.1.17** with the following text:

"6.8.3.2.1

Items of equipment for tanks intended for the carriage of compressed, liquefied and dissolved gases

6.8.3.2.1.1

Shells intended for the carriage of liquefied gases may be provided with openings for the fitting of gauges, thermometers, manometers and with level detection valves, as required for their operation and safety, in addition to the openings prescribed in 6.8.2.2.2 and 6.8.2.2.4.

6.8.3.2.1.2

All openings, other than those accommodating safety valves and closed level detection valves, of tanks intended for the carriage of liquefied flammable or toxic gases shall, if their nominal diameter is more than 1.5 mm, be equipped with an internal shut-off device.

6.8.3.2.1.3

Filling and discharge openings shall be equipped with at least three mutual independent closures mounted in series.

6.8.3.2.1.4

The internal stop-valve of all filling and all discharge openings of tanks
| with a capacity greater than 1 m³
intended for the carriage of liquefied flammable or toxic gases shall be instant-closing and shall close automatically in the event of an unintended movement of the tank or in the event of fire. It shall also be possible to operate the internal stop-valve by remote control.

The device which keeps the internal closure open, e.g. a rail hook, is not a component of the wagon.	
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- 6.8.3.2.1.5** Filling and discharge openings situated in the upper part of tanks shall be equipped with an internal stop valve and an external closing device. This device shall be capable of being closed by a blank flange or some other equally reliable device in accordance with 6.8.3.2.1.6.
- 6.8.3.2.1.6** The external connection end of each filling and discharge pipe shall be capable of being closed by a blank flange or some other equally reliable device.
- 6.8.3.2.1.7** If there are thermometers, they shall not project directly into the gas or liquid through the shell.
- 6.8.3.2.1.8** Safety valves shall meet the requirements of 6.8.3.2.1.8.1 to 6.8.3.2.1.8.6 below:
- | | | |
|----------------------|---|---|
| 6.8.3.2.1.8.1 | Tanks intended for the carriage of compressed or liquefied or dissolved gases may be fitted with safety valves. | Tanks intended for the carriage of flammable liquefied gases shall be fitted with safety valves. Tanks intended for the carriage of compressed gases, non-flammable liquefied gases or dissolved gases, may be fitted with safety valves. |
|----------------------|---|---|

Safety valves, where fitted, shall meet the requirements of 6.8.3.2.1.8.2 to 6.8.3.2.1.8.6.

- 6.8.3.2.1.8.2** Safety valves shall be capable of opening automatically under a pressure between 0.9 and 1.0 times the test pressure of the tank to which they are fitted. They shall be of such a type as to resist dynamic stresses, including liquid surge. The use of dead weight or counterweight valves is prohibited. The required capacity of the safety valves shall be calculated in accordance with the formula contained in 6.7.3.8.1.1 and the safety valve shall conform at least to the requirement of 6.7.3.9.

Safety valves shall be designed to prevent or be protected from the entry of water or other foreign matter which may impair their correct functioning. Any protection shall not impair their performance.

- 6.8.3.2.1.8.3** If tanks required to be hermetically closed are equipped with safety valves, these shall be preceded by a bursting disc and the following conditions shall be met:
- (a) The minimum burst pressure at 20 °C, tolerances included, shall be greater than or equal to 1.0 times the test pressure;
 - (b) The maximum burst pressure at 20 °C, tolerances included, shall be less than or equal to 1.15 times the test pressure; and
 - (c) The bursting disc shall not reduce the required discharge capacity or correct operation of the safety valve.

A pressure gauge or another suitable indicator shall be provided in the space between the bursting disc and the safety valve, to enable detection of any rupture, perforation or leakage of the disc.

- 6.8.3.2.1.8.4** Safety valves shall be directly connected to the shell or directly connected to the outlet of the bursting disc.
- 6.8.3.2.1.8.5** Each safety valve inlet shall be situated on top of the shell as close as practicable to the top generating line. All safety valve inlets shall, under maximum filling conditions, be situated in the vapour space of the shell and the devices shall be so arranged as to ensure that the escaping vapour is discharged unrestrictedly. For flammable liquefied gases, the escaping vapour shall be directed away from the shell in such a manner that it cannot impinge upon the shell. Protective devices which deflect the flow of vapour are permissible provided the required safety valve capacity is not reduced.

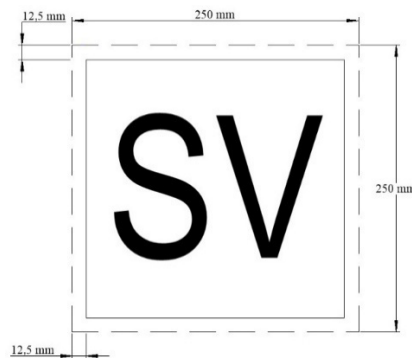
6.8.3.2.1.8.6 Arrangements shall be made to protect the safety valves from damage caused by the tank overturning or striking overhead obstacles. Where possible, safety valves shall not project outside of the profile of the shell.

6.8.3.2.1.8.7 Safety valve mark

6.8.3.2.1.8.7.1 Tanks fitted with safety valves in accordance with 6.8.3.2.1.8.1 to 6.8.3.2.1.8.6 shall display the mark as set out in 6.8.3.2.1.8.7.3 to 6.8.3.2.1.8.7.6.

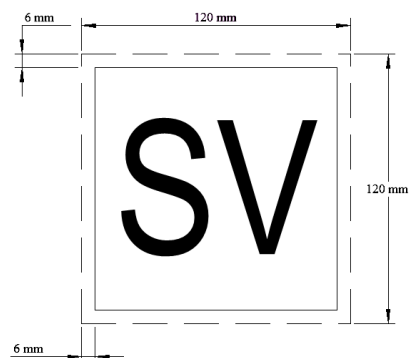
6.8.3.2.1.8.7.2 Tanks not fitted with safety valves in accordance with 6.8.3.2.1.8.1 to 6.8.3.2.1.8.6 shall not display the mark as set out in 6.8.3.2.1.8.7.3 to 6.8.3.2.1.8.7.6.

6.8.3.2.1.8.7.3 The mark shall consist of a white square with minimum dimensions of 250 mm × 250 mm. The line inside the edge shall be black, parallel and approximately 12.5 mm from the outside of that line to the outside edge of the mark. The letters "SV" shall be black, a minimum of 120 mm high and have a minimum stroke thickness of 12 mm.



6.8.3.2.1.8.7.4 (Reserved)

For tank-containers with a capacity of not more than 3 000 litres the mark may be reduced in size to not less than 120 mm × 120 mm. The line inside the edge shall be black, parallel and approximately 6 mm from the outside of that line to the outside edge of the mark. The letters "SV" shall be black, a minimum of 60 mm high and have a minimum stroke thickness of 6 mm.



6.8.3.2.1.8.7.5 The material used shall be weather-resistant and it shall be ensured that the mark is durable. The mark shall not become detached from its mount in the event of 15 minutes' engulfment in fire. It shall remain affixed irrespective of the orientation of the tank.

6.8.3.2.1.8.7.6 The letters "SV" shall be indelible and shall remain legible after 15 minutes' engulfment in fire.

6.8.3.2.1.8.7.7	The marks shall be displayed on both sides of tank-wagons.	The marks shall be displayed on both sides and both ends of tank-containers. For tank-containers with a capacity of not more than 3 000 litres the marks may be displayed either on both sides or on both ends.
6.8.3.2.1.9	Where tanks are intended for carriage by sea, the requirements of 6.8.3.2.1.8 shall not prohibit the fitting of safety valves conforming to the IMDG Code.	
6.8.3.2.1.10	Demountable tanks shall be so fixed on the underframe of the wagon that they cannot move.	(Reserved)
6.8.3.2.1.11	If tanks intended for the carriage of liquefied gases are equipped with thermal insulation, such insulation shall consist of either: – A sun shield covering not less than the upper third but not more than the upper half of the tank surface and separated from the shell by an air space at least 4 cm across; or – A complete cladding, of adequate thickness, of insulating materials.	
6.8.3.2.2	<i>Items of equipment for tanks intended for the carriage of refrigerated liquefied gases</i>	
6.8.3.2.2.1	Bottom filling and discharge openings shall be equipped with at least three mutually independent closures mounted in series.	
6.8.3.2.2.2	By derogation from the requirements of 6.8.2.2.2, tanks may be equipped with external devices in place of internal devices if the external devices afford protection against external damage at least equivalent to that afforded by the wall of the shell. Each filling or discharge connection to the vapour phase in the upper part of the shell for the carriage of – non-flammable gases shall be provided with two closures in series, comprising a stop-valve and a second stop-valve or device in accordance with 6.8.3.2.2.4; – flammable gases shall be provided with three closures in series, comprising two stop valves, and a third stop-valve or device in accordance with 6.8.3.2.2.4.	
6.8.3.2.2.3	(Reserved)	
6.8.3.2.2.4	The external connection end of each filling and discharge pipe shall be capable of being closed by a blank flange or equivalent device. The blank flange or equivalent device may be fitted with an opening with a maximum diameter of 1.5 mm.	
6.8.3.2.2.5	If there are thermometers, they shall not project directly into the gas or liquid through the shell.	
6.8.3.2.2.6	Safety valves shall meet the requirements below.	
6.8.3.2.2.6.1	Tanks shall be equipped with two or more independent safety valves, capable of opening at the maximum working pressure indicated on the tank. Two of these safety valves shall be individually sized to allow the gases formed by evaporation during normal operation to escape from the tank in such a way that the pressure does not at any time exceed by more than 10% the working pressure indicated on the tank. In the event of loss of the vacuum in a double-walled tank, or of destruction of 20% of the insulation of a single-walled tank, the combination of the pressure relief devices shall permit an outflow such that the pressure in the shell cannot exceed the test pressure. The provisions of 6.8.2.1.7 shall not apply to vacuum insulated tanks.	

One of the safety valves may be replaced by a bursting disc which shall be such as to burst at the test pressure.

Pressure relief devices shall be so designed as to function faultlessly even at their lowest working temperature. The reliability of their operation at that temperature shall be established and checked either by testing each device or by testing a specimen device of each design-type.

6.8.3.2.2.6.2 If the sheathing is so closed as to be gas-tight, a device shall be provided to prevent any dangerous pressure from developing in the insulating layer in the event of inadequate gas-tightness of the shell or of its items of equipment. The device shall prevent the infiltration of moisture into the thermal-insulating sheath.

6.8.3.2.2.6.3 Demountable tanks shall be so fixed on the underframe of the wagon that they cannot move. (Reserved)

6.8.3.2.2.7 Tanks shall be thermally insulated. Thermal insulation shall be ensured by means of a continuous sheathing. If the space between the shell and the sheathing is under vacuum (vacuum insulation), the protective sheathing shall be so designed as to withstand without deformation an external pressure of at least 100 kPa (1 bar) (gauge pressure). By derogation from the definition of "calculation pressure" in 1.2.1, external and internal reinforcing devices may be taken into account in the calculations.

For type testing of the effectiveness of the insulation system, see 6.8.3.4.11.

Tanks intended for the carriage of gases having a boiling point below -182 °C at atmospheric pressure shall not include any combustible material either in the thermal insulation or in the means of attachment.

The means of attachment for vacuum insulated tanks may, with the approval of the competent authority, contain plastics substances between the shell and the sheathing.

6.8.3.2.2.8 By derogation from the requirements of 6.8.2.2.4 vacuum insulated shells need not have an inspection opening."

6.8.3.2.3 Introduce a new paragraph number and use existing header:

"6.8.3.2.3 *Items of equipment for battery-wagons and MEGCs*".

Renumber paragraphs **6.8.3.2.18** to **6.8.3.2.28** as **6.8.3.2.3.1** to **6.8.3.2.3.11**.

6.8.3.2.3.1 (current 6.8.3.2.18) [The amendments in the French version do not apply to the English text.]

6.8.3.2.3.3 (current 6.8.3.2.20) [The amendment in the French version does not apply to the English text.]

6.8.3.2.3.5 (current 6.8.3.2.22) Replace "6.8.3.2.3, 6.8.3.2.4 and 6.8.3.2.7" by:

"6.8.3.2.1.2, 6.8.3.2.1.4 and 6.8.3.2.1.5".

6.8.3.2.3.9 (current 6.8.3.2.26) [The amendment in the French version does not apply to the English text.]

6.8.3.2.3.10 (current 6.8.3.2.27) Replace "6.8.3.2.26" by:

"6.8.3.2.3.9".

6.8.3.4.2 Replace "4.3.3.2.5" by:

"4.3.3.2.7".

6.8.3.4.7 Replace "and measurement of the vacuum" by:

"and verification of the vacuum".

6.8.3.4.12 At the end, add the following new sub-paragraph:

"The elements of battery-wagons and MEGCs shall be inspected in accordance with packing instruction P 200 of 4.1.4.1 or 6.8.3.4.14. The five-year intervals for the inspection of the battery-wagons and MEGCs are independent of the periodic inspection for the elements. However, these inspections shall take place no later than the earliest periodic inspection date of any of the elements of the battery-wagon or MEGC."

6.8.3.4.13 In the last paragraph, before "fittings", insert:

"closures or".

At the end of the last paragraph, add the following sentence:

"Elements that have already been subjected to a leakproofness test during initial inspection and test, do not need to be leak tested if it can be visually verified that the elements and their closures have not been disassembled prior to assembly of the battery-wagon or MEGC."

6.8.3.4.16 After the current text, add the following sub-paragraph:

"If service equipment of battery-wagons or MEGCs is replaced by equipment not listed in the type approval of the battery-wagon or MEGC, the battery-wagon or MEGC shall be submitted to an exceptional inspection for the replacement of the service equipment without issuing a supplementary approval certificate for the modification according to 6.8.2.3.4, provided that the replacement equipment:

- Is approved in accordance with the relevant standard referenced in 6.8.3.6;
- Is of the correct technical specification for the battery-wagon or MEGC;
- Does not modify the initial dimensions and connections;

and that the replacement of the service equipment is carried out without any operation involving the application of heat to the battery-wagon or MEGC."

6.8.3.5.11 In the left-hand column, in the first sentence, replace "plate" by:

"panel".

In the right-hand column, in the first sentence, replace "on a plate" by:

"on a panel on the MEGC".

6.8.3.6

In the text before the table, amend the following:

- In the second sub-paragraph after the note, in the second sentence, replace "column (4)" by:

"column (3)".

- Delete the third sub-paragraph after the note ("Column (3) shows the paragraphs of Chapter 6.8 to which the standard conforms.").

- In the new third sub-paragraph after the note (current fourth sub-paragraph), replace "Column (5)" by:

"Column (4)".

In the table, amend the following:

- Delete column **"Requirements the standard complies with"**.

- In column **"Applicable for new type approvals or for renewals"**, replace "(4)" by:

"(3)".

- In column **"Latest date for withdrawal of existing type approvals"**, replace "(5)" by:

"(4)".

6.8.4 (b)**TE 17**

In paragraph (b), at the end, replace ";" by:

". "

Delete paragraph (c).

TE 22

Amend the text in the left-hand column to read:

"(Deleted)

NOTE: Former special provision TE 22 is superseded by special provision for wagon equipment WE 2 of 7.1.2.2."

TE 25

In the left-hand column, amend the following:

- Amend the first sub-paragraph, the subheading "Measures to avoid overriding" and paragraph (a) to read:

"In order to reduce the extent of damage to the tank in the event of an impact affecting the tank-wagon or if the tank-wagon is involved in a collision, one of the following measures shall be taken to protect the tank of the tank-wagon:

(a) (Deleted)

NOTE: Former special provision TE 25 (a) is superseded by special provision for wagon equipment WE 3 of 7.1.2.2."

- Delete the subheading "Measures to limit damage when buffers override".
- In paragraph (b), amend the following:
 - Amend the title "Increasing the wall thickness of the tank ends or using other materials with a greater energy absorption capacity" to read:

"Increasing the resistance of the tank ends".
 - Insert the following first sub-paragraph after the heading:

"The wall thickness of the tank ends shall be increased or other materials with a greater energy absorption capacity shall be used."
- In paragraph (c), amend the heading to read:

"Protecting the tank ends by a sandwich cover".
- Amend paragraph (d) to read:

"(d) (Deleted)

NOTE: Former special provision TE 25 (d) is superseded by special provision for wagon equipment WE 3 of 7.1.2.2."

- Amend paragraph (e) to read:

"(e) (Deleted)
- NOTE:** Former special provision TE 25 (e) is superseded by special provision for wagon equipment WE 3 of 7.1.2.2."
- In the last sub-paragraph following paragraph (e), amend "The wall thicknesses specified in (b), (c) and (d)" to read:

"The wall thicknesses specified in (b) and (c)".
 - Insert the following Note after the last sub-paragraph:

"NOTE: If the wagon is protected with equipment preventing overriding or limiting the effects of overriding which conforms to special provision for wagon equipment WE 3 of 7.1.2.2, then the application of special provisions TE 25 (b) and TE 25 (c) is not mandatory."

TE 26 Replace "(see 6.8.3.2.3)" by:
 "(see 6.8.3.2.1.4)".

6.8.4 (c) Add the following new special provision **TA 6**:

"TA 6 This substance may be authorized for carriage in a tank approved for the carriage of UN No. 2073."

6.8.4 (e) Amend special provision **TM 6** to read:

"TM 6 Tank-wagons | Extra-large tank-containers
shall bear an orange band in accordance with 5.3.5."

At the end of Chapter 6.8, add the following new Addendum:

"Addendum: Special provisions TE 22 and TE 25 in force until 31 December 2026 and still applicable to tank-wagons constructed before 1 January 2033 on the basis of approvals issued up to 31 December 2026¹

TE 22 In order to reduce the extent of damage in the event of a collision shock or accident, each end of tank-wagons for substances carried in the liquid state and gases or battery-wagons shall be capable of absorbing at least 800 kJ of energy by means of elastic or plastic deformation of defined components of the subframe or by means of a similar procedure (e.g. crash elements). The energy absorption shall be determined in relation to a collision on a straight track.

Energy absorption by means of plastic deformation shall only occur in conditions other than those encountered during normal conditions of rail transport (impact speed higher than 12 km/h or individual buffer force greater than 1500 kN).

Energy absorption of not more than 800 kJ at each end of the wagon shall not lead to transfer of energy to the shell which could cause visible, permanent deformation of the shell.

The requirements of this special provision are deemed to be met if crashworthy buffers (energy absorption elements) that conform to clause 7 of standard EN 15551:2009 + A1:2010 (Railway applications – Railway rolling stock – Buffers) are used and if the resistance of the wagon body satisfies clause 6.3 and sub clause 8.2.5.3 of standard EN 12663-2:2010 (Railway applications – Structural requirements of railway vehicle bodies – Part 2: Freight wagons).

TE 25 The requirements of this special provision are deemed to be met by tank-wagons with an automatic coupling device equipped with energy absorption elements capable of absorbing at least 130 kJ at each end of the wagon. Shells of tank-wagons shall also be protected against the overriding of buffers and derailment or, failing that, to limit damage when buffers override by at least one of the following measures.

Measures to avoid overriding

(a) Device to protect against the overriding of buffers

The device to protect against the overriding of buffers shall ensure that the sub-frames of the wagons remain on the same horizontal level. The following requirements shall be fulfilled:

- The device to protect against the overriding of buffers shall not interfere with the normal operation of the wagons (for example negotiating curves, Berne rectangle, shunter's handle). The device to protect against the overriding of buffers shall permit the free taking of curves by another wagon fitted with a device to protect against the overriding of buffers in a curve of 75 m radius).

- The device to protect against the overriding of buffers shall not interfere with the normal functioning of the buffers (elastic or plastic deformation) (see also special provision TE 22 in 6.8.4 (b)).
- The device to protect against the overriding of buffers shall function independently of the condition of the load and the wear and tear of the wagons concerned.
- The device to protect against the overriding of buffers shall withstand a vertical force (upwards or downwards) of 150 kN.
- The device to protect against the overriding of buffers shall be effective irrespective of whether the other wagon concerned is fitted with a device to protect against the overriding of buffers. It shall not be possible for devices to protect against the overriding of buffers to obstruct each other.
- The increase in the overhang for fixing the device to protect against the overriding of buffers shall be less than 20 mm.
- The width of the device to protect against the overriding of buffers shall be at least as big as the width of the buffer head (with the exception of the device to protect against the overriding of buffers located above the left-hand footboard, which shall be tangent to the free space for the shunter, although the maximum width of the buffer must be covered).
- A device to protect against the overriding of buffers shall be located above every buffer.
- The device to protect against the overriding of buffers shall permit the attachment of buffers prescribed in standards EN 12663-2:2010 (Railway applications – Structural requirements of railway vehicle bodies – Part 2: Freight wagons) and EN 15551:2009 + A1:2010 (Railway applications – Railway rolling stock – Buffers) and shall not present an obstacle to maintenance work.
- The device to protect against the overriding of buffers shall be built in such a way that the risk of penetration of the tank end is not increased in the event of a shock.

Measures to limit damage when buffers override

- (b) Increasing the wall thickness of the tank ends or using other materials with a greater energy absorption capacity

In this case, the wall thickness of the tank ends shall be at least 12 mm.

However, the wall thickness of the ends of tanks for the carriage of gases UN 1017 chlorine, UN 1749 chlorine trifluoride, UN 2189 dichlorosilane, UN 2901 bromine chloride and UN 3057 trifluoroacetyl chloride shall in this case be at least 18 mm.

- (c) Sandwich cover for tank ends

If protection is provided by a sandwich cover, it shall cover the entire area of the tank ends and shall have a specific energy absorption capacity of

at least 22 kJ (corresponding to a wall thickness of 6 mm), which shall be measured in accordance with the method described in Annex B to standard EN 13094 "Tanks for the transport of dangerous goods – Metallic tanks with a working pressure not exceeding 0.5 bar – Design and construction". If the risk of corrosion cannot be eliminated by structural measures, it shall be made possible to undertake an inspection of the external wall of the tank end, e.g. by providing a removable cover.

(d) Protective shield at each end of the wagon

If a protective shield is used at each end of the wagon, the following requirements shall apply:

- the protective shield shall cover the width of the tank in each case, up to the respective height. In addition, the width of the protective shield shall, over the entire height of the shield, be at least as wide as the distance defined by the outside edge of the buffer heads;
- the height of the protective shield, measured from the top edge of the headstock, shall cover
 - either two thirds of the tank diameter
 - or at least 900 mm and shall in addition be equipped at the top edge with an arresting device for climbing buffers;
- the protective shield shall have a minimum wall thickness of 6 mm;
- the protective shield and its attachment points shall be such that the possibility of the tank ends being penetrated by the protective shield itself is minimized.

(e) Protective shield at each end of wagons fitted with automatic couplers

If a protective shield is used at each end of the wagon, the following requirements shall apply:

- the protective shield shall cover the tank end to a height of at least 1100 mm, measured from the top edge of the headstock, the couplers shall be fitted with anticreep devices to prevent unintentional uncoupling and the protective shield shall, over the entire height of the shield, be at least 1200 mm wide;
- the protective shield shall have a minimum wall thickness of 12 mm;
- the protective shield and its attachment points shall be such that the possibility of the tank ends being penetrated by the protective shield itself is minimized.

The wall thicknesses specified in (b), (c) and (d) above relate to reference steel. If other materials are used, except if mild steel is used, the equivalent thickness shall be calculated in accordance with the formula in 6.8.2.1.18. The values of R_m and A to be used shall be specified minimum values according to material standards.

¹ See transitional measure 1.6.3.62."

Special provisions TE 22 and TE 25 in force until 31 December 2026 are assigned to the following substances:

UN No.	Name and description	Class	Pack- ing group	Special provisions
1001	ACETYLENE, DISSOLVED	2		TE22
1005	AMMONIA, ANHYDROUS	2		TE22 TE25
1008	BORON TRIFLUORIDE	2		TE22 TE25
1010	BUTADIENES, STABILIZED or BUTADIENES AND HYDROCARBON MIXTURE, STABILIZED, containing more than 20% butadienes	2		TE22
1011	BUTANE	2		TE22
1012	BUTYLENE	2		TE22
1016	CARBON MONOXIDE, COMPRESSED	2		TE22 TE25
1017	CHLORINE	2		TE22 TE25
1023	COAL GAS, COMPRESSED	2		TE22 TE25
1026	CYANOGEN	2		TE22 TE25
1027	CYCLOPROPANE	2		TE22
1030	1,1-DIFLUOROETHANE (REFRIGERANT GAS R 152a)	2		TE22
1032	DIMETHYLAMINE, ANHYDROUS	2		TE22
1033	DIMETHYL ETHER	2		TE22
1035	ETHANE	2		TE22
1036	ETHYLAMINE	2		TE22
1037	ETHYL CHLORIDE	2		TE22
1038	ETHYLENE, REFRIGERATED LIQUID	2		TE22
1039	ETHYL METHYL ETHER	2		TE22
1040	ETHYLENE OXIDE WITH NITROGEN up to a total pressure of 1 MPa (10 bar) at 50 °C	2		TE22 TE25
1041	ETHYLENE OXIDE AND CARBON DIOXIDE MIXTURE with more than 9% but not more than 87% ethylene oxide	2		TE22
1048	HYDROGEN BROMIDE, ANHYDROUS	2		TE22 TE25
1049	HYDROGEN, COMPRESSED	2		TE22
1050	HYDROGEN CHLORIDE, ANHYDROUS	2		TE22 TE25
1052	HYDROGEN FLUORIDE, ANHYDROUS	8	I	TE22 TE25
1053	HYDROGEN SULPHIDE	2		TE22 TE25
1055	ISOBUTYLENE	2		TE22
1060	METHYLACETYLENE AND PROPADIENE MIXTURE, STABILIZED such as mixture P1 or mixture P2	2		TE22
1061	METHYLAMINE, ANHYDROUS	2		TE22
1062	METHYL BROMIDE with not more than 2% chloropicrin	2		TE22 TE25
1063	METHYL CHLORIDE (REFRIGERANT GAS R 40)	2		TE22
1064	METHYL MERCAPTAN	2		TE22 TE25
1067	DINITROGEN TETROXIDE (NITROGEN DIOXIDE)	2		TE22
1071	OIL GAS, COMPRESSED	2		TE22 TE25
1075	PETROLEUM GASES, LIQUEFIED	2		TE22
1076	PHOSGENE	2		TE22
1077	PROPYLENE	2		TE22
1079	SULPHUR DIOXIDE	2		TE22 TE25
1081	TETRAFLUOROETHYLENE, STABILIZED	2		TE22
1082	TRIFLUOROCHLOROETHYLENE, STABILIZED (REFRIGERANT GAS R 1113)	2		TE22 TE25
1083	TRIMETHYLAMINE, ANHYDROUS	2		TE22

UN No.	Name and description	Class	Pack- ing group	Special provisions
1085	VINYL BROMIDE, STABILIZED	2		TE22
1086	VINYL CHLORIDE, STABILIZED	2		TE22
1087	VINYL METHYL ETHER, STABILIZED	2		TE22
1092	ACROLEIN, STABILIZED	6.1	I	TE22 TE25
1093	ACRYLONITRILE, STABILIZED	3	I	TE22
1098	ALLYL ALCOHOL	6.1	I	TE22
1099	ALLYL BROMIDE	3	I	TE22
1100	ALLYL CHLORIDE	3	I	TE22
1131	CARBON DISULPHIDE	3	I	TE22
1135	ETHYLENE CHLOROHYDRIN	6.1	I	TE22
1143	CROTONALDEHYDE or CROTONALDEHYDE, STABILIZED	6.1	I	TE22
1163	DIMETHYLHYDRAZINE, UNSYMMETRICAL	6.1	I	TE22
1182	ETHYL CHLOROFORMATE	6.1	I	TE22
1183	ETHYLDICHLOROSILANE	4.3	I	TE22
1185	ETHYLENEIMINE, STABILIZED	6.1	I	TE22 TE25
1194	ETHYL NITRITE SOLUTION	3	I	TE22
1221	ISOPROPYLAMINE	3	I	TE22
1238	METHYL CHLOROFORMATE	6.1	I	TE22 TE25
1239	METHYL CHLOROMETHYL ETHER	6.1	I	TE22 TE25
1242	METHYLDICHLOROSILANE	4.3	I	TE22
1244	METHYLHYDRAZINE	6.1	I	TE22 TE25
1251	METHYL VINYL KETONE, STABILIZED	6.1	I	TE22 TE25
1259	NICKEL CARBONYL	6.1	I	TE22 TE25
1295	TRICHLOROSILANE	4.3	I	TE22
1297	TRIMETHYLAMINE, AQUEOUS SOLUTION, not more than 50% trimethylamine, by mass	3	I	TE22
1380	PENTABORANE	4.2	I	TE22 TE25
1381	PHOSPHORUS, WHITE or YELLOW, UNDER WATER or IN SOLUTION	4.2	I	TE22
1381	PHOSPHORUS, WHITE or YELLOW, DRY	4.2	I	TE22
1407	CAESIUM	4.3	I	TE22
1423	RUBIDIUM	4.3	I	TE22
1510	TETRANITROMETHANE	6.1	I	TE22
1541	ACETONE CYANOHYDRIN, STABILIZED	6.1	I	TE22
1553	ARSENIC ACID, LIQUID	6.1	I	TE22
1556	ARSENIC COMPOUND, LIQUID, N.O.S., inorganic, including: Arsenates, n.o.s.; Arsenites, n.o.s.; and Arsenic sulphides, n.o.s.	6.1	I	TE22
1557	ARSENIC COMPOUND, SOLID, N.O.S., inorganic, including: Arsenates, n.o.s.; Arsenites, n.o.s.; and Arsenic sulphides, n.o.s.	6.1	I	TE22
1560	ARSENIC TRICHLORIDE	6.1	I	TE22
1570	BRUCINE	6.1	I	TE22
1580	CHLOROPICRIN	6.1	I	TE22 TE25
1581	CHLOROPICRIN AND METHYL BROMIDE MIXTURE with more than 2% chloropicrin	2		TE22 TE25
1582	CHLOROPICRIN AND METHYL CHLORIDE MIXTURE	2		TE22 TE25
1583	CHLOROPICRIN MIXTURE, N.O.S.	6.1	I	TE22
1595	DIMETHYL SULPHATE	6.1	I	TE22
1601	DISINFECTANT, SOLID, TOXIC, N.O.S.	6.1	I	TE22
1602	DYE, LIQUID, TOXIC, N.O.S. or DYE INTERMEDIATE, LIQUID, TOXIC, N.O.S.	6.1	I	TE22
1605	ETHYLENE DIBROMIDE	6.1	I	TE22

UN No.	Name and description	Class	Pack- ing group	Special provisions
1612	HEXAETHYL TETRAPHOSPHATE AND COMPRESSED GAS MIXTURE	2		TE22 TE25
1613	HYDROCYANIC ACID, AQUEOUS SOLUTION (HYDROGEN CYANIDE, AQUEOUS SOLUTION) with not more than 20% hydrogen cyanide	6.1	I	TE22 TE25
1647	METHYL BROMIDE AND ETHYLENE DIBROMIDE MIXTURE, LIQUID	6.1	I	TE22
1649	MOTOR FUEL ANTI-KNOCK MIXTURE	6.1	I	TE22
1655	NICOTINE COMPOUND, SOLID, N.O.S. or NICOTINE PREPARATION, SOLID, N.O.S.	6.1	I	TE22
1670	PERCHLOROMETHYL MERCAPTAN	6.1	I	TE22
1672	PHENYLCARBYLAMINE CHLORIDE	6.1	I	TE22
1693	TEAR GAS SUBSTANCE, LIQUID, N.O.S.	6.1	I	TE22
1694	BROMOBENZYL CYANIDES, LIQUID	6.1	I	TE22
1695	CHLOROACETONE, STABILIZED	6.1	I	TE22
1699	DIPHENYLCHLOROARSINE, LIQUID	6.1	I	TE22
1722	ALLYL CHLOROFORMATE	6.1	I	TE22
1739	BENZYL CHLOROFORMATE	8	I	TE22
1744	BROMINE or BROMINE SOLUTION	8	I	TE22 TE25
1745	BROMINE PENTAFLUORIDE	5.1	I	TE22
1746	BROMINE TRIFLUORIDE	5.1	I	TE22
1749	CHLORINE TRIFLUORIDE	2		TE22 TE25
1752	CHLOROACETYL CHLORIDE	6.1	I	TE22
1754	CHLOROSULPHONIC ACID (with or without sulphur trioxide)	8	I	TE22
1758	CHROMIUM OXYCHLORIDE	8	I	TE22
1759	CORROSIVE SOLID, N.O.S.	8	I	TE22
1760	CORROSIVE LIQUID, N.O.S.	8	I	TE22
1777	FLUOROSULPHONIC ACID	8	I	TE22
1786	HYDROFLUORIC ACID AND SULPHURIC ACID MIXTURE	8	I	TE22
1790	HYDROFLUORIC ACID with more than 85% hydrogen fluoride	8	I	TE22 TE25
1790	HYDROFLUORIC ACID with more than 60% but not more than 85% hydrogen fluoride	8	I	TE22
1796	NITRATING ACID MIXTURE with more than 50% nitric acid	8	I	TE22
1809	PHOSPHORUS TRICHLORIDE	6.1	I	TE22
1810	PHOSPHORUS OXYCHLORIDE	6.1	I	TE22
1826	NITRATING ACID MIXTURE, SPENT, with more than 50% nitric acid	8	I	TE22
1828	SULPHUR CHLORIDES	8	I	TE22
1829	SULPHUR TRIOXIDE, STABILIZED	8	I	TE22
1831	SULPHURIC ACID, FUMING	8	I	TE22
1834	SULPHURYL CHLORIDE	6.1	I	TE22
1836	THIONYL CHLORIDE	8	I	TE22
1838	TITANIUM TETRACHLORIDE	6.1	I	TE22
1859	SILICON TETRAFLUORIDE	2		TE22 TE25
1860	VINYL FLUORIDE, STABILIZED	2		TE22
1889	CYANOGEN BROMIDE	6.1	I	TE22
1892	ETHYLDICHLOROARSINE	6.1	I	TE22
1903	DISINFECTANT, LIQUID, CORROSIVE, N.O.S.	8	I	TE22
1912	METHYL CHLORIDE AND METHYLENE CHLORIDE MIXTURE	2		TE22
1921	PROPYLENEIMINE, STABILIZED	3	I	TE22 TE25
1928	METHYL MAGNESIUM BROMIDE IN ETHYL ETHER	4.3	I	TE22
1935	CYANIDE SOLUTION, N.O.S.	6.1	I	TE22
1953	COMPRESSED GAS, TOXIC, FLAMMABLE, N.O.S.	2		TE22 TE25
1954	COMPRESSED GAS, FLAMMABLE, N.O.S.	2		TE22
1955	COMPRESSED GAS, TOXIC, N.O.S.	2		TE22 TE25

UN No.	Name and description	Class	Pack- ing group	Special provisions
1957	DEUTERIUM, COMPRESSED	2		TE22
1959	1,1-DIFLUOROETHYLENE (REFRIGERANT GAS R 1132a)	2		TE22
1961	ETHANE, REFRIGERATED LIQUID	2		TE22
1962	ETHYLENE	2		TE22
1964	HYDROCARBON GAS MIXTURE, COMPRESSED, N.O.S.	2		TE22
1965	HYDROCARBON GAS MIXTURE, LIQUEFIED, N.O.S. such as mixtures A, A01, A02, A0, A1, B1, B2, B or C	2		TE22
1966	HYDROGEN, REFRIGERATED LIQUID	2		TE22
1967	INSECTICIDE GAS, TOXIC, N.O.S.	2		TE22 TE25
1969	ISOBUTANE	2		TE22
1971	METHANE, COMPRESSED or NATURAL GAS, COMPRESSED with high methane content	2		TE22
1972	METHANE, REFRIGERATED LIQUID or NATURAL GAS, REFRIGERATED LIQUID with high methane content	2		TE22
1978	PROPANE	2		TE22
1986	ALCOHOLS, FLAMMABLE, TOXIC, N.O.S.	3	I	TE22
1988	ALDEHYDES, FLAMMABLE, TOXIC, N.O.S.	3	I	TE22
1991	CHLOROPRENE, STABILIZED	3	I	TE22
1992	FLAMMABLE LIQUID, TOXIC, N.O.S.	3	I	TE22
1994	IRON PENTACARBONYL	6.1	I	TE22 TE25
2024	MERCURY COMPOUND, LIQUID, N.O.S.	6.1	I	TE22
2026	PHENYLMERCURIC COMPOUND, N.O.S.	6.1	I	TE22
2030	HYDRAZINE AQUEOUS SOLUTION, with more than 37% hydrazine by mass	8	I	TE22
2031	NITRIC ACID, other than red fuming, with more than 70% nitric acid	8	I	TE22
2032	NITRIC ACID, RED FUMING	8	I	TE22
2034	HYDROGEN AND METHANE MIXTURE, COMPRESSED	2		TE22
2035	1,1,1-TRIFLUOROETHANE (REFRIGERANT GAS R 143a)	2		TE22
2044	2,2-DIMETHYLPROPANE	2		TE22
2054	MORPHOLINE	8	I	TE22
2189	DICHLOROSILANE	2		TE22 TE25
2191	SULPHURYL FLUORIDE	2		TE22 TE25
2197	HYDROGEN IODIDE, ANHYDROUS	2		TE22 TE25
2200	PROPADIENE, STABILIZED	2		TE22
2203	SILANE	2		TE22
2204	CARBONYL SULPHIDE	2		TE22 TE25
2232	2-CHLOROETHANAL	6.1	I	TE22
2240	CHROMOSULPHURIC ACID	8	I	TE22
2295	METHYL CHLOROACETATE	6.1	I	TE22
2317	SODIUM CUPROCYANIDE SOLUTION	6.1	I	TE22
2334	ALLYLAMINE	6.1	I	TE22
2336	ALLYL FORMATE	3	I	TE22
2337	PHENYL MERCAPTAN	6.1	I	TE22
2382	DIMETHYLHYDRAZINE, SYMMETRICAL	6.1	I	TE22
2401	PIPERIDINE	8	I	TE22
2417	CARBONYL FLUORIDE	2		TE22 TE25
2419	BROMOTRIFLUOROETHYLENE	2		TE22
2420	HEXAFLUOROACETONE	2		TE22 TE25
2430	ALKYLPHENOLS, SOLID, N.O.S. (including C ₂ -C ₁₂ homologues)	8	I	TE22
2438	TRIMETHYLACETYL CHLORIDE	6.1	I	TE22
2444	VANADIUM TETRACHLORIDE	8	I	TE22
2447	PHOSPHORUS, WHITE, MOLTEN	4.2	I	TE22
2452	ETHYLACETYLENE, STABILIZED	2		TE22

UN No.	Name and description	Class	Pack- ing group	Special provisions
2453	ETHYL FLUORIDE (REFRIGERANT GAS R 161)	2		TE22
2454	METHYL FLUORIDE (REFRIGERANT GAS R 41)	2		TE22
2474	THIOPHOSGENE	6.1	I	TE22
2477	METHYL ISOTHIOCYANATE	6.1	I	TE22
2480	METHYL ISOCYANATE	6.1	I	TE22 TE25
2481	ETHYL ISOCYANATE	6.1	I	TE22 TE25
2482	n-PROPYL ISOCYANATE	6.1	I	TE22
2483	ISOPROPYL ISOCYANATE	6.1	I	TE22
2484	tert-BUTYL ISOCYANATE	6.1	I	TE22
2485	n-BUTYL ISOCYANATE	6.1	I	TE22
2486	ISOBUTYL ISOCYANATE	6.1	I	TE22
2487	PHENYL ISOCYANATE	6.1	I	TE22
2488	CYCLOHEXYL ISOCYANATE	6.1	I	TE22
2495	IODINE PENTAFLUORIDE	5.1	I	TE22
2517	1-CHLORO-1,1-DIFLUOROETHANE (REFRIGERANT GAS R 142b)	2		TE22
2521	DIKETENE, STABILIZED	6.1	I	TE22
2558	EPIBROMOHYDRIN	6.1	I	TE22
2570	CADMIUM COMPOUND	6.1	I	TE22
2588	PESTICIDE, SOLID, TOXIC, N.O.S.	6.1	I	TE22
2601	CYCLOBUTANE	2		TE22
2604	BORON TRIFLUORIDE DIETHYL ETHERATE	8	I	TE22
2605	METHOXYMETHYL ISOCYANATE	6.1	I	TE22
2606	METHYL ORTHOSILICATE	6.1	I	TE22
2630	SELENATES or SELENITES	6.1	I	TE22
2642	FLUOROACETIC ACID	6.1	I	TE22
2644	METHYL IODIDE	6.1	I	TE22
2646	HEXACHLOROCYCLOPENTADIENE	6.1	I	TE22
2668	CHLOROACETONITRILE	6.1	I	TE22
2692	BORON TRIBROMIDE	8	I	TE22
2699	TRIFLUOROACETIC ACID	8	I	TE22
2733	AMINES, FLAMMABLE, CORROSIVE, N.O.S. or POLYAMINES, FLAMMABLE, CORROSIVE, N.O.S.	3	I	TE22
2734	AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S.	8	I	TE22
2735	AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S.	8	I	TE22
2740	n-PROPYL CHLOROFORMATE	6.1	I	TE22
2757	CARBAMATE PESTICIDE, SOLID, TOXIC	6.1	I	TE22
2758	CARBAMATE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	I	TE22
2759	ARSENICAL PESTICIDE, SOLID, TOXIC	6.1	I	TE22
2760	ARSENICAL PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	I	TE22
2761	ORGANOCHLORINE PESTICIDE, SOLID, TOXIC	6.1	I	TE22
2762	ORGANOCHLORINE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	I	TE22
2763	TRIAZINE PESTICIDE, SOLID, TOXIC	6.1	I	TE22
2764	TRIAZINE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	I	TE22
2771	THIOCARBAMATE PESTICIDE, SOLID, TOXIC	6.1	I	TE22
2772	THIOCARBAMATE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	I	TE22
2775	COPPER BASED PESTICIDE, SOLID, TOXIC	6.1	I	TE22
2776	COPPER BASED PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	I	TE22
2777	MERCURY BASED PESTICIDE, SOLID, TOXIC	6.1	I	TE22
2778	MERCURY BASED PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	I	TE22

UN No.	Name and description	Class	Pack- ing group	Special provisions
2779	SUBSTITUTED NITROPHENOL PESTICIDE, SOLID, TOXIC	6.1	I	TE22
2780	SUBSTITUTED NITROPHENOL PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	I	TE22
2781	BIPYRIDILIUM PESTICIDE, SOLID, TOXIC	6.1	I	TE22
2782	BIPYRIDILIUM PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	I	TE22
2783	ORGANOPHOSPHORUS PESTICIDE, SOLID, TOXIC	6.1	I	TE22
2784	ORGANOPHOSPHORUS PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	I	TE22
2786	ORGANOTIN PESTICIDE, SOLID, TOXIC	6.1	I	TE22
2787	ORGANOTIN PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	I	TE22
2788	ORGANOTIN COMPOUND, LIQUID, N.O.S.	6.1	I	TE22
2801	DYE, LIQUID, CORROSIVE, N.O.S. or DYE INTERMEDIATE, LIQUID, CORROSIVE, N.O.S.	8	I	TE22
2810	TOXIC LIQUID, ORGANIC, N.O.S.	6.1	I	TE22
2811	TOXIC SOLID, ORGANIC, N.O.S.	6.1	I	TE22
2813	WATER-REACTIVE SOLID, N.O.S.	4.3	I	TE22
2845	PYROPHORIC LIQUID, ORGANIC, N.O.S.	4.2	I	TE22 TE25
2870	ALUMINIUM BOROHYDRIDE	4.2	I	TE22 TE25
2879	SELENIUM OXYCHLORIDE	8	I	TE22
2901	BROMINE CHLORIDE	2		TE22 TE25
2902	PESTICIDE, LIQUID, TOXIC, N.O.S.	6.1	I	TE22
2903	PESTICIDE, LIQUID, TOXIC, FLAMMABLE, N.O.S., flash-point not less than 23 °C	6.1	I	TE22
2920	CORROSIVE LIQUID, FLAMMABLE, N.O.S.	8	I	TE22
2921	CORROSIVE SOLID, FLAMMABLE, N.O.S.	8	I	TE22
2922	CORROSIVE LIQUID, TOXIC, N.O.S.	8	I	TE22
2923	CORROSIVE SOLID, TOXIC, N.O.S.	8	I	TE22
2924	FLAMMABLE LIQUID, CORROSIVE, N.O.S.	3	I	TE22
2927	TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S.	6.1	I	TE22
2929	TOXIC LIQUID, FLAMMABLE, ORGANIC, N.O.S.	6.1	I	TE22
2965	BORON TRIFLUORIDE DIMETHYL ETHERATE	4.3	I	TE22
2983	ETHYLENE OXIDE AND PROPYLENE OXIDE MIXTURE, not more than 30% ethylene oxide	3	I	TE22
2988	CHLOROSILANES, WATER-REACTIVE, FLAMMABLE, CORROSIVE, N.O.S.	4.3	I	TE22
2991	CARBAMATE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	I	TE22
2992	CARBAMATE PESTICIDE, LIQUID, TOXIC	6.1	I	TE22
2993	ARSENICAL PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	I	TE22
2994	ARSENICAL PESTICIDE, LIQUID, TOXIC	6.1	I	TE22
2995	ORGANOCHLORINE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	I	TE22
2996	ORGANOCHLORINE PESTICIDE, LIQUID, TOXIC	6.1	I	TE22
2997	TRIAZINE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	I	TE22
2998	TRIAZINE PESTICIDE, LIQUID, TOXIC	6.1	I	TE22
3005	THIOCARBAMATE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	I	TE22
3006	THIOCARBAMATE PESTICIDE, LIQUID, TOXIC	6.1	I	TE22
3009	COPPER BASED PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	I	TE22
3010	COPPER BASED PESTICIDE, LIQUID, TOXIC	6.1	I	TE22
3011	MERCURY BASED PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	I	TE22
3012	MERCURY BASED PESTICIDE, LIQUID, TOXIC	6.1	I	TE22

UN No.	Name and description	Class	Pack- ing group	Special provisions
3013	SUBSTITUTED NITROPHENOL PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	I	TE22
3014	SUBSTITUTED NITROPHENOL PESTICIDE, LIQUID, TOXIC	6.1	I	TE22
3015	BIPYRIDILIUM PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	I	TE22
3016	BIPYRIDILIUM PESTICIDE, LIQUID, TOXIC	6.1	I	TE22
3017	ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	I	TE22
3018	ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC	6.1	I	TE22
3019	ORGANOTIN PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	I	TE22
3020	ORGANOTIN PESTICIDE, LIQUID, TOXIC	6.1	I	TE22
3021	PESTICIDE, LIQUID, FLAMMABLE, TOXIC, N.O.S., flash-point less than 23 °C	3	I	TE22
3023	2-METHYL-2-HEPTANETHIOL	6.1	I	TE22
3024	COUMARIN DERIVATIVE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	I	TE22
3025	COUMARIN DERIVATIVE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	I	TE22
3026	COUMARIN DERIVATIVE PESTICIDE, LIQUID, TOXIC	6.1	I	TE22
3027	COUMARIN DERIVATIVE PESTICIDE, SOLID, TOXIC	6.1	I	TE22
3057	TRIFLUOROACETYL CHLORIDE	2		TE22 TE25
3079	METHACRYLONITRILE, STABILIZED	6.1	I	TE22
3083	PERCHLORYL FLUORIDE	2		TE22 TE25
3084	CORROSIVE SOLID, OXIDIZING, N.O.S.	8	I	TE22
3086	TOXIC SOLID, OXIDIZING, N.O.S.	6.1	I	TE22
3093	CORROSIVE LIQUID, OXIDIZING, N.O.S.	8	I	TE22
3094	CORROSIVE LIQUID, WATER-REACTIVE, N.O.S.	8	I	TE22
3096	CORROSIVE SOLID, WATER-REACTIVE, N.O.S.	8	I	TE22
3122	TOXIC LIQUID, OXIDIZING, N.O.S.	6.1	I	TE22
3123	TOXIC LIQUID, WATER-REACTIVE, N.O.S.	6.1	I	TE22
3124	TOXIC SOLID, SELF-HEATING, N.O.S.	6.1	I	TE22
3125	TOXIC SOLID, WATER-REACTIVE, N.O.S.	6.1	I	TE22
3129	WATER-REACTIVE LIQUID, CORROSIVE, N.O.S.	4.3	I	TE22
3130	WATER-REACTIVE LIQUID, TOXIC, N.O.S.	4.3	I	TE22
3131	WATER-REACTIVE SOLID, CORROSIVE, N.O.S.	4.3	I	TE22
3138	ETHYLENE, ACETYLENE AND PROPYLENE MIXTURE, REFRIGERATED LIQUID containing at least 71.5% ethylene with not more than 22.5% acetylene and not more than 6% propylene	2		TE22
3140	ALKALOIDS, LIQUID, N.O.S. or ALKALOID SALTS, LIQUID, N.O.S.	6.1	I	TE22
3142	DISINFECTANT, LIQUID, TOXIC, N.O.S.	6.1	I	TE22
3143	DYE, SOLID, TOXIC, N.O.S. or DYE INTERMEDIATE, SOLID, TOXIC, N.O.S.	6.1	I	TE22
3144	NICOTINE COMPOUND, LIQUID, N.O.S. or NICOTINE PREPARATION, LIQUID, N.O.S.	6.1	I	TE22
3145	ALKYLPHENOLS, LIQUID, N.O.S. (including C ₂ -C ₁₂ homologues)	8	I	TE22
3146	ORGANOTIN COMPOUND, SOLID, N.O.S.	6.1	I	TE22
3147	DYE, SOLID, CORROSIVE, N.O.S. or DYE INTERMEDIATE, SOLID, CORROSIVE, N.O.S.	8	I	TE22
3148	WATER-REACTIVE LIQUID, N.O.S.	4.3	I	TE22
3153	PERFLUORO(METHYL VINYL ETHER)	2		TE22
3154	PERFLUORO(ETHYL VINYL ETHER)	2		TE22
3160	LIQUEFIED GAS, TOXIC, FLAMMABLE, N.O.S.	2		TE22 TE25
3161	LIQUEFIED GAS, FLAMMABLE, N.O.S.	2		TE22
3162	LIQUEFIED GAS, TOXIC, N.O.S.	2		TE22 TE25

UN No.	Name and description	Class	Pack- ing group	Special provisions
3172	TOXINS, EXTRACTED FROM LIVING SOURCES, LIQUID, N.O.S.	6.1	I	TE22
3194	PYROPHORIC LIQUID, INORGANIC, N.O.S.	4.2	I	TE22 TE25
3246	METHANESULPHONYL CHLORIDE	6.1	I	TE22
3252	DIFLUOROMETHANE (REFRIGERANT GAS R 32)	2		TE22
3259	AMINES, SOLID, CORROSIVE, N.O.S. or POLYAMINES, SOLID, CORROSIVE, N.O.S.	8	I	TE22
3261	CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S.	8	I	TE22
3262	CORROSIVE SOLID, BASIC, INORGANIC, N.O.S.	8	I	TE22
3263	CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.	8	I	TE22
3264	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.	8	I	TE22
3265	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.	8	I	TE22
3266	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.	8	I	TE22
3267	CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.	8	I	TE22
3273	NITRILES, FLAMMABLE, TOXIC, N.O.S.	3	I	TE22
3275	NITRILES, TOXIC, FLAMMABLE, N.O.S.	6.1	I	TE22
3276	NITRILES, LIQUID, TOXIC, N.O.S.	6.1	I	TE22
3278	ORGANOPHOSPHORUS COMPOUND, LIQUID, TOXIC, N.O.S.	6.1	I	TE22
3279	ORGANOPHOSPHORUS COMPOUND, TOXIC, FLAMMABLE, N.O.S.	6.1	I	TE22
3280	ORGANOARSENIC COMPOUND, LIQUID, N.O.S.	6.1	I	TE22
3281	METAL CARBONYLS, LIQUID, N.O.S.	6.1	I	TE22
3282	ORGANOMETALLIC COMPOUND, LIQUID, TOXIC, N.O.S.	6.1	I	TE22
3283	SELENIUM COMPOUND, SOLID, N.O.S.	6.1	I	TE22
3284	TELLURIUM COMPOUND, N.O.S.	6.1	I	TE22
3285	VANADIUM COMPOUND, N.O.S.	6.1	I	TE22
3286	FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S.	3	I	TE22
3287	TOXIC LIQUID, INORGANIC, N.O.S.	6.1	I	TE22
3288	TOXIC SOLID, INORGANIC, N.O.S.	6.1	I	TE22
3289	TOXIC LIQUID, CORROSIVE, INORGANIC, N.O.S.	6.1	I	TE22
3290	TOXIC SOLID, CORROSIVE, INORGANIC, N.O.S.	6.1	I	TE22
3294	HYDROGEN CYANIDE, SOLUTION IN ALCOHOL with not more than 45% hydrogen cyanide	6.1	I	TE22 TE25
3300	ETHYLENE OXIDE AND CARBON DIOXIDE MIXTURE with more than 87% ethylene oxide	2		TE22 TE25
3301	CORROSIVE LIQUID, SELF-HEATING, N.O.S.	8	I	TE22
3303	COMPRESSED GAS, TOXIC, OXIDIZING, N.O.S.	2		TE22 TE25
3304	COMPRESSED GAS, TOXIC, CORROSIVE, N.O.S.	2		TE22 TE25
3305	COMPRESSED GAS, TOXIC, FLAMMABLE, CORROSIVE, N.O.S.	2		TE22 TE25
3306	COMPRESSED GAS, TOXIC, OXIDIZING, CORROSIVE, N.O.S.	2		TE22 TE25
3307	LIQUEFIED GAS, TOXIC, OXIDIZING, N.O.S.	2		TE22 TE25
3308	LIQUEFIED GAS, TOXIC, CORROSIVE, N.O.S.	2		TE22 TE25
3309	LIQUEFIED GAS, TOXIC, FLAMMABLE, CORROSIVE, N.O.S.	2		TE22 TE25
3310	LIQUEFIED GAS, TOXIC, OXIDIZING, CORROSIVE, N.O.S.	2		TE22 TE25
3312	GAS, REFRIGERATED LIQUID, FLAMMABLE, N.O.S.	2		TE22
3318	AMMONIA SOLUTION, relative density less than 0.880 at 15 °C in water, with more than 50% ammonia	2		TE22 TE25
3345	PHENOXYACETIC ACID DERIVATIVE PESTICIDE, SOLID, TOXIC	6.1	I	TE22
3346	PHENOXYACETIC ACID DERIVATIVE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	I	TE22
3347	PHENOXYACETIC ACID DERIVATIVE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	I	TE22

UN No.	Name and description	Class	Pack- ing group	Special provisions
3348	PHENOXYACETIC ACID DERIVATIVE PESTICIDE, LIQUID, TOXIC	6.1	I	TE22
3349	PYRETHROID PESTICIDE, SOLID, TOXIC	6.1	I	TE22
3350	PYRETHROID PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	I	TE22
3351	PYRETHROID PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	I	TE22
3352	PYRETHROID PESTICIDE, LIQUID, TOXIC	6.1	I	TE22
3354	INSECTICIDE GAS, FLAMMABLE, N.O.S.	2		TE22
3355	INSECTICIDE GAS, TOXIC, FLAMMABLE, N.O.S.	2		TE22 TE25
3381	TOXIC BY INHALATION LIQUID, N.O.S. with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀	6.1	I	TE22 TE25
3382	TOXIC BY INHALATION LIQUID, N.O.S. with an LC ₅₀ lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀	6.1	I	TE22
3383	TOXIC BY INHALATION LIQUID, FLAMMABLE, N.O.S. with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀	6.1	I	TE22 TE25
3384	TOXIC BY INHALATION LIQUID, FLAMMABLE, N.O.S. with an LC ₅₀ lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀	6.1	I	TE22
3385	TOXIC BY INHALATION LIQUID, WATER-REACTIVE, N.O.S. with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀	6.1	I	TE22 TE25
3386	TOXIC BY INHALATION LIQUID, WATER-REACTIVE, N.O.S. with an LC ₅₀ lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀	6.1	I	TE22
3387	TOXIC BY INHALATION LIQUID, OXIDIZING, N.O.S. with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀	6.1	I	TE22 TE25
3388	TOXIC BY INHALATION LIQUID, OXIDIZING, N.O.S. with an LC ₅₀ lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀	6.1	I	TE22
3389	TOXIC BY INHALATION LIQUID, CORROSIVE, N.O.S. with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀	6.1	I	TE22 TE25
3390	TOXIC BY INHALATION LIQUID, CORROSIVE, N.O.S. with an LC ₅₀ lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀	6.1	I	TE22
3391	ORGANOMETALLIC SUBSTANCE, SOLID, PYROPHORIC	4.2	I	TE22 TE25
3392	ORGANOMETALLIC SUBSTANCE, LIQUID, PYROPHORIC	4.2	I	TE22 TE25
3393	ORGANOMETALLIC SUBSTANCE, SOLID, PYROPHORIC, WATER-REACTIVE	4.2	I	TE22 TE25
3394	ORGANOMETALLIC SUBSTANCE, LIQUID, PYROPHORIC, WATER-REACTIVE	4.2	I	TE22 TE25
3395	ORGANOMETALLIC SUBSTANCE, SOLID, WATER-REACTIVE	4.3	I	TE22
3396	ORGANOMETALLIC SUBSTANCE, SOLID, WATER-REACTIVE, FLAMMABLE	4.3	I	TE22
3397	ORGANOMETALLIC SUBSTANCE, SOLID, WATER-REACTIVE, SELF-HEATING	4.3	I	TE22
3398	ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE	4.3	I	TE22
3399	ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE	4.3	I	TE22
3413	POTASSIUM CYANIDE SOLUTION	6.1	I	TE22
3414	SODIUM CYANIDE SOLUTION	6.1	I	TE22
3423	TETRAMETHYLAMMONIUM HYDROXIDE, SOLID	6.1	I	TE22
3439	NITRILES, SOLID, TOXIC, N.O.S.	6.1	I	TE22

UN No.	Name and description	Class	Pack- ing group	Special provisions
3440	SELENIUM COMPOUND, LIQUID, N.O.S.	6.1	I	TE22
3448	TEAR GAS SUBSTANCE, SOLID, N.O.S.	6.1	I	TE22
3449	BROMOBENZYL CYANIDES, SOLID	6.1	I	TE22
3450	DIPHENYLCHLOROARSINE, SOLID	6.1	I	TE22
3462	TOXINS, EXTRACTED FROM LIVING SOURCES, SOLID, N.O.S.	6.1	I	TE22
3464	ORGANOPHOSPHORUS COMPOUND, SOLID, TOXIC, N.O.S.	6.1	I	TE22
3465	ORGANOARSENIC COMPOUND, SOLID, N.O.S.	6.1	I	TE22
3466	METAL CARBONYLS, SOLID, N.O.S.	6.1	I	TE22
3467	ORGANOMETALLIC COMPOUND, SOLID, TOXIC, N.O.S.	6.1	I	TE22
3469	PAINT, FLAMMABLE, CORROSIVE (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL, FLAMMABLE, CORROSIVE (including paint thinning and reducing compound)	3	I	TE22
3483	MOTOR FUEL ANTI-KNOCK MIXTURE, FLAMMABLE	6.1	I	TE22
3484	HYDRAZINE AQUEOUS SOLUTION, FLAMMABLE with more than 37% hydrazine, by mass	8	I	TE22
3488	TOXIC BY INHALATION LIQUID, FLAMMABLE, CORROSIVE, N.O.S. with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀	6.1	I	TE22 TE25
3489	TOXIC BY INHALATION LIQUID, FLAMMABLE, CORROSIVE, N.O.S. with an LC ₅₀ lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀	6.1	I	TE22
3490	TOXIC BY INHALATION LIQUID, WATER-REACTIVE, FLAMMABLE, N.O.S. with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀	6.1	I	TE22 TE25
3491	TOXIC BY INHALATION LIQUID, WATER-REACTIVE, FLAMMABLE, N.O.S. with an LC ₅₀ lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀	6.1	I	TE22
3494	PETROLEUM SOUR CRUDE OIL, FLAMMABLE, TOXIC	3	I	TE22
3553	DISILANE	2		TE22
3560	TETRAMETHYLAMMONIUM HYDROXIDE AQUEOUS SOLUTION with not less than 25% tetramethylammonium hydroxide	6.1	I	TE22

Chapter 6.9

6.9.1 Add a new 6.9.1.5 to read:

"6.9.1.5 The requirements of section 6.9.3 are applied to FRP service equipment for portable tanks with shells made of metallic or FRP materials intended for the carriage of dangerous goods of Classes 1, 3, 5.1, 6.1, 6.2, 8 and 9 by all modes of transport."

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

Amend the definition of "*FRP shell*" to read as follows:

"*FRP shell* means the part of the portable tank constructed from FRP, which retains the substance intended for carriage (tank proper), including openings and their closures, but does not include service equipment or external structural equipment. Openings and their closures may be manufactured from metallic materials or FRP;"

Replace the definition of "*FRP tank*" by the following new definition, which is to be included in alphabetical order:

"*FRP portable tank* means a portable tank, as defined in 6.7.2.1, with an FRP shell;".

6.9.2.2.3.14.1 Replace "FRP tanks" by:

"FRP portable tanks".

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

6.9.2.2.3.16.2 In the first sentence, replace "weight" by:

"mass".

6.9.2.5 In the heading, replace "**portable tanks with FRP shell**" by:

"**FRP portable tanks**".

In the first sentence under the heading, amend the following:

– Delete:

"bottom openings, pressure relief devices, gauging devices,".

– Replace the comma after "frameworks" by:

"and".

– Replace "portable tanks" by:

"FRP portable tanks".

At the end, add a new sentence to read:

"FRP service equipment in accordance with section 6.9.3 may be used."

6.9.2.6.4 Replace "tank" by:

"FRP portable tank".

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

6.9.2.7.1.5.1 In the first sentence, amend the following:

– Replace "tank" by:

"FRP portable tank".

– At the end, delete:

", caused by an open heating oil pool fire or any other type of fire with the same effect".

In the second sentence, replace "tank" by:

"FRP shell".

After the third sentence, insert the following new sentence:

"These requirements shall be deemed to be met if the fire is caused by an open heating oil pool fire or any other type of fire with the same effect."

In the fifth sentence (current fourth sentence), amend the following:

- Replace the first instance of "tank" by:
"FRP portable tank".
- Replace the second instance of "tank" by:
"FRP shell".

In the last sentence, replace "tank" by:

"FRP portable tank".

6.9.2.8.1 In the first sentence, replace "portable FRP tanks" by:

"FRP portable tanks".

6.9.2.8.3 Replace "tank" by:

"FRP portable tank".

6.9.2.8.4 Replace "shell" by:

"FRP shell" (twice).

6.9.2.9 In the text under the heading, amend the following:

- Replace "shell" by:
"FRP shell" (twice).
- Replace "tank" by:
"FRP portable tank".

6.9.2.10.2 Replace "Shell" by:

"FRP shell".

6.9 Add a new **6.9.3** to read as follows:

"6.9.3 Requirements for design, construction, inspection and testing of FRP service equipment for portable tanks"

6.9.3.1 Definitions

For the purposes of this section, the definitions in 6.7.2.1 and 6.9.2.1 apply except for definitions related to metal materials for the construction of the service equipment of portable tanks.

Additionally, the following definitions apply to FRP service equipment:

Compression moulding means a process for producing composite parts in a wide range of volumes typically employing a matched metal tool in a heated (normally hydraulic) press to consolidate sheet materials or moulding compounds under pressure;

Coupon-sample means an FRP sample fabricated and tested in accordance with national or international standards to determine design allowables;

FRP constituents means reinforcement fibres or particles, thermoset or thermoplastic polymer (matrix), adhesives, and additives;

FRP service equipment means service equipment as defined in 6.7.2.1 made of FRP materials including parts fabricated from other materials, as gate and seal assemblies, metallic parts, e.g. springs, fixings, applicable to both metallic and FRP shells of the portable tanks;

Injection moulding means a process of melting plastic pellets (thermosetting/thermoplastic polymers) and mixing with reinforcement agents like chopped glass fibres. Then, the mixture is metered into a mould with the help of high-pressure pumps or injection cylinders, which fills and solidifies to produce the final product;

Inspection-sample means a sample cut out from the FRP service equipment to establish the conformity of the serial FRP device to the prototype;

Reinforced reaction injection moulding (RRIM) means a process of mixing of two or more resins together in the mixing chamber to form a thermosetting polymer under high pressure. Reinforcement agents like glass fibres are added to the mixture. Then, the resin mixture is metered into a mould with the help of high-pressure pumps or injection cylinders.

6.9.3.2 General design and construction requirements

6.9.3.2.1 For the purposes of this section, the requirements of 6.7.2.2.11, 6.7.2.5.1 to 6.7.2.5.6, 6.7.2.5.10, 6.7.2.6.3, 6.7.2.8.2, 6.7.2.8.3, 6.7.2.9, 6.7.2.12, 6.7.2.14 and 6.7.2.15 shall be applied to FRP service equipment including metallic parts (springs, fixings, etc.). FRP service equipment shall be designed and constructed in accordance with the requirements of a pressure vessel code and national and international standards, applicable to FRP materials and recognized by the competent authority.

6.9.3.2.2 Manufacturer's quality system

6.9.3.2.2.1 FRP service equipment manufacturers shall have a documented quality system ensuring conformity of every item of the serial production of FRP service equipment to the approved prototype. The quality assurance program shall be submitted to the competent authority for approval. All manufacturer's suppliers of material and components for FRP service equipment shall have a documented quality system. The quality system shall be developed in compliance with the general principles of international and national quality standards.

6.9.3.2.2.2 The applicable provisions of 6.9.2.2.2 shall apply to FRP service equipment manufacturer's quality system.

6.9.3.2.3 *FRP service equipment*

- 6.9.3.2.3.1** FRP service equipment shall have appropriate rigid joints to the portable tank shell. The connections shall cause no local stress concentrations exceeding the design allowables for all operating and test conditions.
- 6.9.3.2.3.2** FRP service equipment shall be made of suitable materials, capable of operating within a minimum design temperature range of -40 °C to +50 °C, unless temperature ranges are specified for specific more severe climatic or operating conditions (e.g. heating elements), by the competent authority of the country where the transport operation is being performed.
- 6.9.3.2.3.3** FRP service equipment shall be designed and manufactured to withstand a test pressure that is not less than 1.5 times MAWP. Stop valves, piping devices and pipefittings intended for filling or discharging shall be designed and manufactured to withstand a pressure that is not less than 4 times MAWP. Specific provisions are laid down for certain substances in the applicable portable tank instruction indicated in Column (10) of Table A in Chapter 3.2 and described in 4.2.5.2.6, or by the portable tank special provision indicated in Column (11) of Table A in Chapter 3.2 and described in 4.2.5.3.
- 6.9.3.2.3.4** FRP service equipment shall withstand vibration, service impacts, exposure to substance temperature and environmental effects.
- 6.9.3.2.3.5** Design calculations for FRP service equipment and its joints to the portable tank shell shall be performed by the finite element method or another method recognized by the competent authority.
- 6.9.3.2.3.6** FRP service equipment shall meet the same requirements as given in 6.9.2.2.3.14 for the carriage of substances with a flash point of not more than 60 °C.

6.9.3.2.4 *Materials*

6.9.3.2.4.1 Resins

The processing of the resin mixture shall be carried out in strict compliance with the recommendations of the supplier. This concerns mainly the use of hardeners, initiators and accelerators. The resins can be:

- (a) Unsaturated polyester resins;
- (b) Vinyl ester resins;
- (c) Epoxy resins;
- (d) Phenolic resins; or
- (e) Thermoplastic resins.

The heat distortion temperature (HDT) of the resin and FRP, determined in accordance with standard ISO 75-1:2020 shall be at least 20 °C higher than the maximum service temperature of the tank, but shall in any case not be lower than 70 °C.

6.9.3.2.4.2 Additives

Additives necessary for the treatment of the resin, such as catalysts, accelerators, hardeners and thixotropic substances as well as materials used to improve the FRP service equipment, such as fillers, colours, pigments, etc. shall not cause weakening of the material, taking into account lifetime and temperature expectancy of the design.

6.9.3.2.4.3 Reinforcement fibres

Reinforcement fibres shall be chopped or continuous fibres of several types.

6.9.3.2.4.4 FRP service equipment shall be manufactured by compression moulding, injection moulding, reinforced reaction injection moulding or hand lay-up. Other manufacturing technologies may be applied with the approval of the competent authority.**6.9.3.3 Design criteria****6.9.3.3.1 FRP service equipment shall be of a design capable of being stress-analysed mathematically or experimentally by resistance strain gauges, or by other methods approved by the competent authority.****6.9.3.3.2 FRP service equipment shall be designed and manufactured to withstand the test pressures specified in 6.9.3.2.3.3.****6.9.3.3.3 At the specified test pressure, the maximum tensile relative deformation measured in mm/mm in the FRP service equipment shall not result in the formation of microcracks, and therefore not be greater than the first measured point of elongation-based fracture or damage of the resin, measured during the tensile tests prescribed under 6.9.2.7.1.2 (c) and 6.9.3.4.1.1.****6.9.3.3.4 For the internal test pressure specified in 6.9.3.2.3.3, the failure criterion (FC) shall not exceed the following value:**

$$FC \leq \frac{1}{K}$$

where:

$$K = K_0 \times K_1 \times K_2 \times K_3 \times K_4 \times K_5$$

where:

K shall have a minimum value of 4;

K₀, K₁, K₂, K₃, K₄ are given in 6.9.2.3.4;

K₅ is a factor related to the deterioration in the material properties due to effects of salt fog spray and ultraviolet exposure. It shall be determined by the formula:

$$K_5 = \frac{\sigma_n}{\sigma_{eff}}$$

where:

σ_n is the nominal (under normal conditions) tensile strength of the FRP material and σ_{eff} is the tensile strength of the material after consecutive salt fog exposure in accordance with ISO 12944-2:2017, ISO 12944-6:2018, 168 hours at 35 ± 2 °C and ultraviolet exposure in accordance with ISO 4892-2, 168 hours at 23 ± 2 °C;

σ_{eff} is the minimum of σ_{eff1} , σ_{eff2} , ..., σ_{effk} , where 1, 2, ... k are identifiers of substances approved for carriage by the given portable tank. If a protective coating is used, the samples with the coating shall be fabricated and tested.

A design validation exercise using numerical analysis and a suitable composite failure criterion is to be undertaken to verify that stresses in the FRP service equipment are below the allowable. Suitable composite failure criteria include, but are not limited to strain invariant failure theory, maximum strain, or maximum stress. Other relations for the strength criterion are allowed upon agreement with the competent authority. The method, a proof of suitability for the chosen failure criterion with a list of relevant experiments for all parameters used in the chosen failure criterion, and results of this design validation exercise are to be submitted to the competent authority.

The parameters used in the chosen failure criterion are to be determined using the relevant experiments and the maximum strain in tension prescribed in 6.9.2.3.5, combined with factor of safety K. At least all experiments defined in 6.9.3.4.2 shall be performed.

6.9.3.3.5 Check calculations of the strength for FRP service equipment and its joints to the portable tank shell shall be performed by finite element method. Treatment of singularities shall be undertaken using an appropriate method in accordance with the applicable pressure vessel code.

6.9.3.4 Material testing

6.9.3.4.1 Resins

Where neat resin specimens are used for the materials testing set out in 6.9.3.4.1.1 and 6.9.3.4.1.2, the resin shall be processed in the same manner as when it is used in a composite material, taking into account mix ratios, resin additives, post-cure, and any other parameters deemed relevant to cure.

6.9.3.4.1.1 Resin tensile elongation shall be tested in accordance with ISO 527-2:2012.

6.9.3.4.1.2 Heat distortion temperature shall be tested in accordance with ISO 75-1:2020.

6.9.3.4.2 Coupon-samples

Coupon-samples shall be manufactured by the same technology as the appropriate FRP service equipment.

6.9.3.4.2.1 Ultimate tensile strength and elongation shall be tested in accordance with ISO 527-4:2021 or ISO 527-5:2021 depending of the reinforcing fibres and layups used.

6.9.3.4.2.2 Determination of compressive properties shall be tested in the in-plane direction in accordance with ISO 14126:1999 + Cor 1:2001.

6.9.3.4.2.3 Determination of the in-plane shear stress/strain response and shear modulus shall be tested in accordance with ISO 20337:2018.

- 6.9.3.4.2.4** Mass density shall be tested in accordance with ISO 1183-1:2019.
- 6.9.3.4.2.5** Mass content and composition of the reinforcement fibres shall be tested in accordance with ISO 1172:1996 or ISO 14127:2008. The fibre mass content of the coupon-samples shall be between 90% and 100% of the minimum fibre mass content specified for the appropriate FRP service equipment and obtained from testing of the inspection-samples.
- 6.9.3.4.2.6** Heat distortion temperature shall be tested in accordance with ISO 75-1:2020, ISO 75-2:2013, ISO 75-3:2004 depending of the reinforcing fibres and layups used.
- 6.9.3.4.2.7** Hardness shall be tested in accordance with ISO 868:2003.
- 6.9.3.4.2.8** Creep factor α shall be measured in accordance with the procedure prescribed by 6.9.2.7.1.2 (e). The test samples shall be taken in accordance with ISO 14125:1998 + Amd 1:2011.
- 6.9.3.4.2.9** Aging factor β shall be determined in accordance with the procedure prescribed by 6.9.2.7.1.2 (f). The test samples shall be taken in accordance with ISO 14125:1998 + Amd 1:2011. This testing may be undertaken on either pristine samples or on samples pre-subjected to salt fog spray exposure conditioning as outlined in 6.9.3.2.4.10.
- 6.9.3.4.2.10** Salt fog exposure test shall be determined in accordance with ISO 12944-2:2017, ISO 12944-6:2018, 168 hours at 35 ± 2 °C.
- 6.9.3.4.2.11** Ultraviolet exposure test shall be determined in accordance with ISO 4892-2:2013, 168 hours at 23 ± 2 °C.
- 6.9.3.4.2.12** The chemical compatibility with the carried substances shall be tested in accordance with 6.9.2.7.1.3.
- 6.9.3.4.3** *Additional material tests*
- The additional material tests shall be carried out for determination of material properties required for design calculation.
- 6.9.3.4.3.1** Flexural strength shall be measured in accordance with ISO 14125:1998 + Amd 1:2011.
- 6.9.3.4.3.2** Bearing test shall be determined in accordance with ISO 12815:2013.
- 6.9.3.4.4** *Inspection-samples*
- Prior to testing all coatings shall be removed from the samples. The tests shall cover 6.9.3.4.2.1 to 6.9.3.4.2.8.
- 6.9.3.5** **Design approval**
- 6.9.3.5.1** The competent authority or its authorized body shall issue the type approval certificate for FRP service equipment. This certificate shall attest that the design has been surveyed by the authority and is suitable for its intended purpose and meets the requirements of this chapter. The certificate shall have a reference that prototype testing was carried out in accordance with 6.9.3.5.2, the information on the substances allowed for carriage, body and seal materials and certificate number.

- 6.9.3.5.2** The FRP service equipment prototype test report shall include at least the following:
- (a) Results of the material tests used for fabrication of FRP service equipment in accordance with 6.9.3.4.1 to 6.9.3.4.3;
 - (b) Results of tests in accordance with ISO 4126-1:2013 for the appropriate relief devices;
 - (c) Results of the pressure tests carried out in accordance with relevant ISO standards, where applicable, or in accordance with the procedure approved by the competent authority. The test pressure shall not be less than the pressure defined in 6.9.3.2.3.3;
 - (d) Results of the fire test prescribed in the Manual of Tests and Criteria, part IV, section 42 on a representative prototype of FRP service equipment;
 - (e) Results of the electrical resistance tests in accordance with a procedure recognized by the competent authority; and
 - (f) Results of the other tests prescribed in applicable pressure equipment standards or codes in agreement with the competent authority.

6.9.3.5.3 A service life inspection program shall be established, which shall be a part of the operation manual, to monitor the condition of the FRP service equipment at periodic inspections. The service life inspection program shall be approved by the competent authority.

6.9.3.6 Inspection and testing

6.9.3.6.1 FRP service equipment shall be inspected and tested before being put into service. The initial inspection and test after manufacture shall include a check of the design characteristics and an external examination of FRP service equipment with due regard to the substances to be carried, and a pressure test. Before putting the FRP service equipment into service, a leakproofness test and a test of the satisfactory operation shall also be performed. Relief valves shall be tested for opening/closing pressure before installation. The initial inspection and testing program shall be approved by the competent authority.

6.9.3.6.2 Periodic inspection and testing of FRP service equipment shall be carried out during inspection of the portable tank in accordance with 6.7.2.19.2, 6.7.2.19.4, and 6.7.2.19.5 or 6.9.2.8.1 in accordance with the service life inspection program approved by the competent authority.

6.9.3.6.3 The inspections and tests in 6.9.3.6.1 and 6.9.3.6.2 shall be performed or witnessed by an expert approved by the competent authority.

6.9.3.6.4 Repair work of FRP service equipment shall be limited to replacement of damaged components by components covered by the type approval of the service equipment.

6.9.3.7 Marking

6.9.3.7.1 *Marking of relief devices*

Each relief device shall be marked as follows:

- (a) Name of the manufacturer and the serial number of the equipment;

- (b) Name of body and seal materials;
- (c) Type approval certificate number;
- (d) The pressure at which the device is set to discharge (MPa or bar);
- (e) The allowable tolerance at the discharge pressure for spring-loaded devices;
- (f) The rated flow capacity of spring-loaded pressure relief devices under normal conditions (external pressure is 1 bar and ambient temperature is 0 °C) in standard (normal) cubic meters of air per second, m³/s (determined in accordance with 6.7.2.13.2);
- (g) Cross-sectional area of spring-loaded pressure relief devices, mm²;
- (h) Maximum allowable working pressure (MAWP), MPa or bar;
- (i) External design pressure (if relevant), MPa or bar; and
- (j) Design temperature range.

6.9.3.7.2 *Marking of stop valves*

Each stop valve shall be marked as follows:

- (a) Name of the manufacturer and the serial number of the equipment;
- (b) Name of body and seal materials;
- (c) Type approval certificate number;
- (d) Designation of the stop device;
- (e) Nominal diameter, mm;
- (f) Maximum allowable working pressure (MAWP), MPa or bar;
- (g) Test pressure, MPa or bar;
- (h) Direction of medium flow; and
- (i) Design temperature range."

Chapter 6.11

6.11.3.1.1 Replace "ISO 1496-4:1991" by:

"ISO 1496-4:2023".

6.11.3.1.2 At the end, replace "ISO 1496-4:1991" by:

"ISO 1496-4:2023".

6.11.4.1 Amend footnote 3 to read:

"³ Fourth edition of IRS (International Railway Solution) applicable as from 1 October 2025."

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

6.11.5.5.1 In paragraph (g), replace "stacking test load" by:

"superimposed stacking test mass".

PART 7

Chapter 7.1

7.1.1 Insert the following new second sub-paragraph:

"Wagons shall be built taking into account the high-level safety objectives for the protection of the substance carried set out in 7.1.2."

In the third sub-paragraph (current second sub-paragraph), before "(16)", insert:

"(14)".

Delete the note.

7.1.2 Amend to read:

"7.1.2 High-level safety objectives

Wagons shall fulfil the high-level safety objectives and the associated applicable requirements of this section.

The requirements below are met if the assessing entity in charge of verifying conformity with UTP WAG has successfully evaluated conformity with the applicable version of the UTP, and has confirmed this conformity with the required certificates.

7.1.2.1 Construction requirements for wagons¹

¹ See transitional measures 1.6.3.62 and 1.6.5.1.

7.1.2.1.1 Tank-wagons and battery-wagons shall withstand the normal operational stresses encountered in rail transport.

These wagons shall be constructed taking into account the maximum stresses which occur during normal carriage by rail, under the maximum permissible load, so as to ensure the structural integrity of the fastenings between the tank-wagon and the tank, or between the battery-wagon and the elements mounted or fixed on it.

This provision is met if UTP WAG Appendix I, section A is complied with.

7.1.2.1.2 (Reserved)

7.1.2.1.3 Wagons shall be compatible with the characteristics of the areas in which they are intended to be operated in order to prevent risks related to the substances carried (for example, in the case of operation within explosive atmospheres).

This provision is met if UTP WAG, Appendix I, section C is complied with.

- 7.1.2.1.4** Tank-wagons shall be built and equipped in such a way that the impact of collisions that produce stresses exceeding those that occur during normal operating conditions is limited.

This provision is met if UTP WAG, Appendix I, section D is complied with.

- 7.1.2.1.5** Tank-wagons for the carriage of specific dangerous goods shall be equipped with devices preventing overriding or limiting the effects of overriding.

This provision is met if special provision TE 25 (b) or TE 25 (c) of 6.8.4 (b) or UTP WAG, Appendix I, section E, or a combination of them, is/are complied with.

- 7.1.2.1.6** Wagons may be equipped with optional devices

(a) limiting the consequences of a derailment;

NOTE: If applied, such a system shall conform to the requirements of UTP WAG, Appendix I, section F.1

(b) preventing a derailment;

NOTE: If applied, such a system shall conform to the requirements of UTP WAG, Appendix I, section F.2

7.1.2.2 Special provisions for wagon equipment¹

Wagons equipped with wagon equipment conforming to a WE code shall comply with the specification of this equipment as defined in UTP WAG.

NOTE: Wagons equipped with additional wagon equipment conforming to a WE code in accordance with 7.1.2.2, but which are not required in Column (14) of Table A in Chapter 3.2, may also be used.

When an alphanumeric code beginning with the letters “WE” is shown in column (14) of Table A of Chapter 3.2, the following special provisions apply:

- WE 1** The tank-wagon or battery-wagon shall be equipped with (an) energy absorption element(s) which conform/s to the requirements of UTP WAG, Appendix I, section D.1.

This provision does not apply to wagons fitted with energy absorption elements in accordance with WE 2.

- WE 2** The tank-wagon or battery-wagon shall be equipped with (an) energy absorption element(s) which conform/s to the requirements of UTP WAG, Appendix I, section D.2.

- WE 3** The tank-wagon shall be equipped with a system

- preventing the tank-wagon from overriding onto other wagons, which conforms to the requirements of UTP WAG, Appendix I, section E.1; or
- limiting the impact of another wagon overriding it. This system shall conform to the requirements of UTP WAG, Appendix I, section E.2.

If the tank of the tank-wagon is protected by a measure according to special provision TE 25 (b) or TE 25 (c) of 6.8.4 (b) or by both measures, the application of special provision WE 3 is not mandatory.

WE 4 The wagon may be equipped with a system limiting the consequences of its derailment, when it occurs. If used, this system shall conform to the requirements of UTP WAG, Appendix I, section F.1.²

² This special provision is not currently assigned to any entry in Table A. However, wagons may be equipped with a system described in this special provision on a voluntary basis (see Note to 4.3.2.1.1.2 and 7.1.2.2).

WE 5 The wagon may be equipped with a system preventing its derailment. If used, this system shall conform to the requirements of UTP WAG, Appendix I, section F.2.²

WE 6 The wagon shall be equipped with spark arresters which conform to the requirements of UTP WAG, Appendix I, section B.

7.1.2.3 Wagon marking³

The alphanumeric codes of the special provisions relating to wagon equipment WE with which the wagon is equipped shall be marked on both sides of the wagon, as specified in point 7.1.2 (g) of the UTP WAG⁴.

NOTE: For tank-wagons see also 6.8.2.5.2.

³ See transitional measures 1.6.3.62 and 1.6.5.1.

⁴ See also the specific transition regime set out in Table A.2 of Appendix A to this UTP."

Renumber existing footnotes 1 to 4 as footnotes 5 to 8.

7.1.3 Amend footnote 6 (current footnote 2) to read:

"⁶ Fourth edition of IRS (International Railway Solution) applicable as from 1 October 2025."

Chapter 7.2

7.2.4

W 2 In the first sub-paragraph, in the fourth sentence, replace "fitted with regulation sheet steel spark-guards" by:

"complying with special provision for wagon equipment WE 6".

In the first sub-paragraph, delete the last sentence ("For wagons fitted with a combustible floor, the sheet steel spark-guards shall not be fixed directly to the floor of the wagon.").

In the second sub-paragraph, in the second indent, replace "military vehicles" by:

"military road vehicles".

W 8 In the first sentence, replace "fitted with regulation sheet steel spark-guards" by:

"complying with special provision for wagon equipment WE 6"

Delete the last sentence ("For wagons fitted with a combustible floor, the sheet steel spark-guards shall not be fixed directly to the floor of the wagon.").

Chapter 7.3

7.3.1.4 At the beginning, replace "Substances" by:

"Dangerous goods".

7.3.1.6 In the first sentence, amend the following:

- Replace "Substances" by:

"Dangerous goods".

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

In the second sentence, amend the following:

- Replace "that the goods cannot penetrate" by:

"that dangerous goods cannot penetrate".

- Replace "by the materials or residues thereof" by:

"by the dangerous goods or residues thereof".

7.3.1.10 Amend the following:

- Replace "a dangerous solid substance" by:

"dangerous goods".

- Delete:

"by RID".

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

7.3.1.12 In the first sentence, amend the following:

- At the beginning, replace "Substances" by:

"Dangerous goods".

- "and substances" by:

"and dangerous goods".

7.3.1.13 In paragraph (b), replace "or vehicle" by:

"or road vehicle".

7.3.2.10 In the note, amend the following:

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

- Replace "may nevertheless be used" by:

"may also be used".

7.3.3.2.7 [The amendment to AP 11 in the German version does not apply to the English text.]

Chapter 7.5

7.5.1.2 In paragraph (b), replace "or vehicle" by:

"or road vehicle".

7.5.4 In the second sub-paragraph, replace "and those bearing labels conforming to model No. 9 containing goods of UN Nos. 2212, 2315, 2590, 3151, 3152 or 3245" by:

"and those containing dangerous goods to which special provision CW 28 is assigned in Column (18) of Table A in Chapter 3.2".

Amend paragraph (b) to read:

"(b) by packages not bearing labels conforming to models Nos. 6.1 or 6.2 or packages not containing dangerous goods to which special provision CW 28 is assigned in Column (18) of Table A in Chapter 3.2; or".

7.5.7.2 Add a new second sentence to read:

"Unless otherwise indicated, packagings that have had a stacking test shall be loaded in the same orientation as the samples were tested."

At the end, add the following new note:

"NOTE: The stacking test is generally carried out on the top surface of the packaging. Packages, other than bags, should therefore be stacked on the top surface of the packages unless indicated otherwise."

Chapter 7.6

CE 1 In the second sentence, amend the following:

– Replace "railway wagons" by:

"railway vehicles".

– Replace "per wagon" by:

"per vehicle".
