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Economic Commission for Europe

Administrative Committee of the European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN)

European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN) ¹

Draft amendments to the Regulations annexed to ADN

At its sixteenth session (Geneva, 29 January 2016), the ADN Administrative Committee requested the secretariat to prepare a consolidated list of all the amendments it had adopted for entry into force on 1 January 2017 so that they could be made the subject of an official proposal in accordance with the procedure set out in article 20 of ADN. The notification would have to be issued no later than 1 July 2016, with a reference to 1 January 2017 as the scheduled date of entry into force (see ECE/ADN/35, paragraph 15).

The present document² contains the requested consolidated list of amendments adopted by the Administrative Committee at its sixteenth session on the basis of those proposed by the Safety Committee at its twenty-eighth session (see ECE/ADN/35, paragraph 14 and ECE/TRANS/WP.15/AC.2/58, Annex I under cover of ECE/TRANS/WP.15/AC.2/58/Add.1). These amendments have been prepared by the Safety Committee at its twenty-fifth, twenty-sixth, twenty-seventh and twenty-eighth sessions (see ECE/TRANS/WP.15/AC.2/52 and Corr.1, ECE/TRANS/WP.15/AC.2/54, ECE/TRANS/WP.15/AC.2/56 and ECE/TRANS/WP.15/AC.2/58 and Add.1).

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² For technical reasons, the paper version of this document is printed in black and white. For pages 57 and 58 which contain colour, the electronic version should be consulted.

Chapter 1.1

- 1.1.3.3. Insert a new second indent to read as follows:
- "- for the upkeep of vessels,".
- 1.1.4.2.1 (a) Replace "shall bear markings" by "shall bear marks".
- 1.1.4.2.1 (c) Not applicable to the English text.

Chapter 1.2

- 1.2.1 In the definition of "Aerosol or aerosol dispenser", insert "an article consisting of" after "means" and replace "6.2.6 of ADR" by "6.2.4 of ADR".
- 1.2.1 In the definition of "*Unilateral approval*" under "*Approval*", replace "by the competent authority of the first Contracting Party to ADN reached by the consignment" by "by the competent authority of a Contracting Party to ADN".
- 1.2.1 Under the definition of "CGA", amend the address in brackets to read as follows: "(CGA, 14501 George Carter Way, Suite 103, Chantilly, VA 20151, United States of America)".
- 1.2.1 In the definition of "Vacuum-operated waste tank", replace "loading and unloading" by "filling and discharging".
- 1.2.1 Under the definition of "Bulk container", insert the following definition:
- "Flexible bulk container means a flexible container with a capacity not exceeding 15 m³ and includes liners and attached handling devices and service equipment;".
- 1.2.1 Amend the definition of LNG to read as follows:
- "Liquefied Natural Gas (LNG) means a refrigerated liquefied gas composed of natural gas with a high methane content assigned to UN No. 1972;".
- 1.2.1 In the definition of "Large salvage packaging", replace "or leaking" by", leaking or non-conforming".
- 1.2.1 In the definition of "Manual of Tests and Criteria", replace "fifth revised edition" by "sixth revised edition" and replace "ST/SG/AC.10/11/Rev.5, Amend.1 and Amend.2" by "ST/SG/AC.10/11/Rev.6".
- 1.2.1 In the definition of "Salvage pressure receptacle" replace "1 000" by "3 000".
- 1.2.1 In the definition of "UN Model Regulations", replace "eighteenth" by "nineteenth" and "ST/SG/AC.10/1/Rev.18" by "ST/SG/AC.10/1/Rev.19".
- 1.2.1 In the definition of "GHS", replace "fifth revised edition" by "sixth revised edition" and replace "ST/SG/AC.10/30/Rev.5" by "ST/SG/AC.10/30/Rev.6".
- 1.2.1 Amend the definition of *Holding time* to read as follows:
- "Holding time means the time that will elapse from the establishment of the initial filling condition until the pressure has risen due to heat influx to the lowest set pressure of the pressure limiting devices (s) of tanks intended for the carriage of refrigerated liquefied gases

NOTE: For portable tanks, see 6.7.4.1 of ADR.".

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

1.2.1 Add the following new definitions in alphabetical order:

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

"Flexible bulk container, see Bulk container;".

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

"Vessel record means a file containing all the important technical information concerning a vessel or a barge such as construction plans and documents about the equipment;".

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

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

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

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

"SAPT see Self-accelerating polymerization temperature;".

Chapter 1.4

- 1.4.2.1.1(c) Replace "markings" by "marks".
- 1.4.2.1.1 (e) Amend the text after "empty uncleaned vehicles" to read as follows: "and bulk containers are placarded, marked and labelled in accordance with Chapter 5.3 and that empty uncleaned tanks are closed and present the same degree of leakproofness as if they were full.".
- 1.4.2.2.1 (c) The amendment does not apply to the English text.
- 1.4.3.1.1 (c) Delete ", when loading dangerous goods in a vessel, a vehicle, a wagon, or a large or small container,".
- 1.4.3.1.1 (d) Amend the text after "requirements concerning" to read as follows: "placarding, marking and orange-coloured plates conforming to Chapter 5.3.".
- 1.4.3.3 (h) Amend to read as follows:
- "(h) he shall, in preparing the dangerous goods for carriage, ensure that the placards, marks, orange-coloured plates and labels are affixed in accordance with Chapter 5.3.".
- 1.4.3.3 (s) Replace "loading instructions" by "loading and unloading instructions".
- 1.4.3.3 (u) Amend to read as follows:
- "(u) He shall ascertain that during the entire duration of loading a permanent and appropriate supervision is assured."

- 1.4.3.3 (v) Amend to read as follows:
- "(v) When special provision 803 applies, shall guarantee and document, using an appropriate procedure, that the maximum permissible temperature of the cargo is not exceeded and shall provide instructions to the master in a traceable form."
- 1.4.3.7 Delete the Note after the heading.
- 1.4.3.7.1 (c) At the end, add "and handling;".
- 1.4.3.7.1 (f) Amend the end to read as follows: "...no longer display the placards, marks and orange-coloured plates that had been displayed in accordance with Chapter 5.3.".
- 1.4.3.7.1 (j) Amend the beginning to read: "Ascertain that the unloading flows conform to the instructions on loading and unloading flows referred to in...". Remainder unchanged.

Chapter 1.6

- 1.6.1.1 Replace "30 June 2015" by "30 June 2017". Replace "31 December 2014" by "31 December 2016".
- 1.6.1.15 Not applicable to the English text.
- 1.6.1.20, 1.6.1.28, 1.6.1.30, 1.6.1.31, 1.6.1.32 Delete and insert "(*Deleted*)".
- 1.6.1.25 Amend to read as follows:
- "1.6.1.25 Cylinders of 60 litres water capacity or less marked with a UN number in accordance with the provisions of ADN applicable up to 31 December 2012 and which do not conform to the requirements of 5.2.1.1 regarding the size of the UN number and of the letters "UN" applicable as from 1 January 2013 may continue to be used until the next periodic inspection but no later than 30 June 2018."
- 1.6.1.26 Not applicable to the English text.

Add the following new transitional measures:

- "1.6.1.35 (Reserved)".
- "1.6.1.36 (Reserved)".
- "1.6.1.37 (Reserved)".
- "1.6.1.38 Contracting Parties may continue to issue training certificates for dangerous goods safety advisers conforming to the model applicable until 31 December 2016, instead of those conforming to the requirements of 1.8.3.18 applicable from 1 January 2017, until 31 December 2018. Such certificates may continue in use to the end of their five year validity."
- "1.6.1.39 Notwithstanding the requirements of special provision 188 of Chapter 3.3 applicable as from 1 January 2017, packages containing lithium cells or batteries may continue to be marked until 31 December 2018 in accordance with the requirements of special provision 188 of Chapter 3.3 in force up to 31 December 2016."
- "1.6.1.40 Notwithstanding the requirements of ADN applicable as from 1 January 2017, articles of UN Nos. 0015, 0016 and 0303 containing smoke-producing substance(s) toxic by inhalation according to the criteria for Class 6.1 manufactured before 31 December 2016 may be carried until 31 December 2018 without a "TOXIC" subsidiary risk label (model No. 6.1, see 5.2.2.2.2.)."
- "1.6.1.41 Notwithstanding the requirements of ADN applicable as from 1 January 2017, large packagings conforming to the packing group III performance level in

accordance with special packing provision L2 of packing instruction LP02 of 4.1.4.3 of ADR applicable until 31 December 2016 may continue to be used until 31 December 2022 for UN No. 1950.".

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

1.6.7.1.2 (c) Insert the following text after "means that":

"when a vessel has benefitted from the transitional measure in paragraph (b)".

1.6.7.2.2.2 Amend the following entries in the table to read as follows:

	Timena die following charles in the table to feat as follows.						
Paragraphs	Subject	Time limit and comments					
1.2.1	Hold spaces	N.R.M. for Type N open vessels whose hold spaces contain auxiliary appliances and which are carrying only substances of Class 8, with remark 30 in column (20) of Table C of Chapter 3.2.					
		Renewal of the certificate of approval after 31 December 2038.					
7.2.3.20.1	Fitting of ballast tanks and compartments with level	N.R.M. after 1 January 2013 for Type C and Type G tank vessels and Type N double hull tank vessels.					
	indicators	Renewal of the certificate of approval after 31 December 2012.					
7.2.3.20.1	Proof of stability in the	N.R.M. for Type G and Type N vessels.					
event of a leak connected with ballast water		Renewal of the certificate of approval after 31 December 2044.					
7.2.3.31.2	Motor vehicles only outside	N.R.M. for Type N vessels.					
the ca	the cargo area	Renewal of the certificate of approval after 31 December 2034					
		Until then, the following requirement applies on board vessels in service: the vehicle shall not be started on board.					
7.2.3.51.3	Delete						
7.2.4.22.3	Sampling from other	N.R.M. for Type N open vessels.					
	openings	Renewal of the certificate of approval after 31 December 2018					
		Until then, on board vessels in service, cargo tank covers may be opened during loading for control and sampling.					
9.3.3.8.1	Continuation of class	N.R.M. for Type N open vessels with flame arresters and Type N open vessels.					
		Renewal of the certificate of approval after 31 December 2044.					
		Until then, the following requirements apply on board vessels in service:					

Paragraphs	Subject	Time limit and comments						
		Except where otherwise provided, the type of construction, the strength, the subdivision, the equipment and the gear of the vessel shall conform or be equivalent to the construction requirements for classification in the highest class of a recognized classification society.						
9.3.1.11.2 (a) (first entry)	Arrangement of cargo tanks Distance between cargo	N.R.M. for Type G vessels whose keels were laid before 1 January 1977.						
	tanks and side walls Height of saddles	Renewal of the certificate of approval after 31 December 2044.						
9.3.3.11.4	Penetrations through the end bulkheads of hold	N.R.M. from 1 January 2005 for Type N open vessels whose keels were laid before 1 January 1977.						
	spaces	Renewal of the certificate of approval after 31 December 2044.						
9.3.3.11.6 (a)	Form of cofferdam arranged as a pump room	N.R.M for Type N vessels whose keels were laid before 1 January 1977.						
		Renewal of the certificate of approval after 31 December 2044.						
9.3.3.11.8	Arrangement of service	N.R.M. for Type N open vessels.						
spaces located in the cargo area below deck	Renewal of the certificate of approval after 31 December 2038.							
9.3.3.12.7	Approval of flame arresters	N.R.M for Type N vessels whose keels were laid before 1 January 1977.						
		Renewal of the certificate of approval after 31 December 2018.						
9.3.3.16.1	Internal combustion engine	N.R.M. for Type N open vessels.						
	outside the cargo area	Renewal of the certificate of approval after 31 December 2034.						
9.3.1.16.2	Hinges of doors facing the	N.R.M. for vessels whose keels were laid before						
9.3.3.16.2	cargo area	1 January 1977 where alterations would obstruct other major openings.						
		Renewal of the certificate of approval after 31 December 2034.						
9.3.3.16.2	Engine rooms accessible	N.R.M. for Type N open vessels.						
	from the deck	Renewal of the certificate of approval after 31 December 2034.						
9.3.1.17.1	Accommodation and	N.R.M. for vessels whose keels were laid before						
9.3.3.17.1	wheelhouse outside the cargo area	1 January 1977, provided that there is no connection between the wheelhouse and other enclosed spaces.						
		Renewal of the certificate of approval after 31 December 2044.						
		Renewal of the certificate of approval after 31 December 2044 for vessels up to 50 m in length whose keels were laid before 1 January 1977 and						

Paragraphs	Subject	Time limit and comments
		whose wheelhouses are located in the cargo area even if it provides access to another enclosed space, provided that safety is ensured by appropriate service requirements of the competent authority.
9.3.3.17.1	Accommodation and	N.R.M. for Type N open vessels.
	wheelhouse outside the cargo area	Renewal of the certificate of approval after 31 December 2044.
9.3.1.17.2	Entrances facing the cargo	N.R.M. for vessels up to 50 m in length whose keels
9.3.2.17.2	area	were laid before 1 January 1977, provided that gas screens are installed.
9.3.3.17.2		Renewal of the certificate of approval after 31 December 2044.
9.3.3.17.2	Entrances and openings	N.R.M. for Type N open vessels.
		Renewal of the certificate of approval after 31 December 2044.
9.3.3.17.3	Delete	
9.3.3.17.5	Approval of shaft passages	N.R.M. for Type N open vessels.
(b),(c)	and displaying of instructions	Renewal of the certificate of approval after 31 December 2018.
9.3.3.20.2	Filling of cofferdams with	N.R.M. for Type N open vessels.
	pump	Renewal of the certificate of approval after 31 December 2018.
9.3.3.21.1 (b)	Liquid level gauge	N.R.M. from 1 January 2005 for vessels of Type N open with flame-arresters and those of Type N open.
		Renewal of the certificate of approval after 31 December 2018
		Until then, on board vessels in service fitted with gauging openings, such openings shall:
		• Be arranged so that the degree of filling can be measured using a sounding rod;
		• Be fitted with an automatically-closing cover.
9.3.3.21.1	Sampling opening	N.R.M. for Type N open vessels.
(g)		Renewal of the certificate of approval after 31 December 2018.
9.3.3.23.2	Test pressure for cargo tanks	N.R.M. for vessels whose keels were laid before 1 January 1977, for which a test pressure of 15 kPa (0.15 bar) is required.
		Renewal of the certificate of approval after 31 December 2044. Until then, a test pressure of 10 kPa (0.10 bar) shall be sufficient.
9.3.3.23.2	Test pressure for cargo tanks	N.R.M. for oil-separator vessels in service before 1 January 1999.

Paragraphs	Subject	Time limit and comments				
		Renewal of the certificate of approval after 31 December 2044. Until then, a test pressure of 5 kPa (0.05 bar) is sufficient.				
9.3.3.23.3	Test pressure for piping for loading and unloading	N.R.M. for oil-separator vessels in service before 1 January 1999.				
		Renewal of the certificate of approval at the latest by 1 January 2039. Until then, a test pressure of 400 kPa (4 bar) is sufficient.				
9.3.3.42.2	Cargo heating system	N.R.M for Type N open vessels.				
		Renewal of the certificate of approval after 31 December 2034.				
		Until then, the following requirements apply on board vessels in service: This can be achieved by one oil separator fitted to the condensed water return pipe.				
9.3.3.52.1	Electrical installations	N.R.M. for Type N open vessels.				
(b), (c), (d) and (e)		Renewal of the certificate of approval after 31 December 2034.				
9.3.1.52.1 (e) 9.3.3.52.1 (e)	Electrical installations of the "certified safe" type in	N.R.M. for vessels whose keels were laid before 1 January 1977.				
).3.3.3 <u>2.1</u> (c)	the cargo area	Renewal of the certificate of approval after 31 December 2034.				
		Until then, the following conditions shall be met during loading, unloading and gas freeing on board vessels having non-gastight wheelhouse openings (e.g. doors, windows, etc.) in the cargo area:				
		(a) All electrical installations designed to be used shall be of a limited explosion-risk type, i.e. they shall be so designed that there is no sparking under normal operating conditions and the temperature of their outer surface does not rise above 200°C, or be of a type protected against water spray the temperature of whose outer surfaces does not exceed 200°C under normal operating conditions;				
		(b) Electrical installations which do not meet the requirements of (a) above shall be marked in red and it shall be possible to switch them off by means of a central switch.				
9.3.3.52.2	Accumulators located	N.R.M. for Type N open vessels.				
	outside the cargo area	Renewal of the certificate of approval after 31 December 2034.				
9.3.1.52.3 (a)	Electrical installations used	N.R.M. for vessels whose keels were laid before				
9.3.1.52.3 (b)	during loading, unloading or gas-freeing	1 January 1977.				
9.3.3.52.3 (a)		Renewal of the certificate of approval after 31 December 2034 for the following installations:				
9.3.3.52.3 (b)		Lighting installations in accommodation, with				

Paragraphs	Subject	Time limit and comments						
		the exception of switches near the entrances to accommodation;						
		• Radio telephone installations in accommodation and wheelhouses and combustion engine control appliances.						
		Until then, all other electrical installations shall meet the following requirements:						
		a) Generators, engine, etc.IP 13 protection mode;						
		b) Control panels, lamps, etc. IP 23 protection mode;						
		c) Appliances, etc. IP 55 protection mode.						
9.3.3.52.3 (a)	Electrical installations used	N.R.M. for Type N open vessels.						
9.3.3.52.3 (b)	during loading, unloading or gas-freeing	Renewal of the certificate of approval after 31 December 2034.						
9.3.3.52.4	Red mark on electrical	N.R.M. for Type N open vessels.						
	installations	Renewal of the certificate of approval after 31 December 2034.						
9.3.3.52.5	Shutting down switch for	N.R.M. for Type N open vessels.						
	continuously driven generator	Renewal of the certificate of approval after 31 December 2034.						
9.3.3.52.6	Permanently fitted sockets	N.R.M. for Type N open vessels.						
		Renewal of the certificate of approval after 31 December 2034.						
9.3.1.56.1 9.3.3.56.1	Metallic sheaths for all cables in the cargo area	N.R.M. for vessels whose keels were laid before 1 January 1977.						
9.3.3.30.1		Renewal of the certificate of approval after 31 December 2034.						

1.6.7.3 Amend the entry for 9.3.3.8.1 to read as follows:

Paragraph	Subject	Time limit and comments						
9.3.3.8.1	Classification	N.R.M. for Type N open vessels with flame arresters and Type N open vessels.						
		Renewal of the certificate of approval after 31 December 2044.						

- 1.6.7.2 Add new transitional provisions to read as follows:
- "1.6.7.2.1.4 For a vessel or a barge whose keel was laid before 1 July 2017 and which does not conform to the requirements of 9.0.X.1 concerning the vessel record, the retention of files for the vessel record shall start at the latest at the next renewal of the certificate of approval."
- "1.6.7.2.2.5 For a vessel or a barge whose keel was laid before 1 July 2017 and which does not conform to the requirements of 9.3.X.1 concerning the vessel record, the retention of files for the vessel record shall start at the latest at the next renewal of the certificate of approval."
- 1.6.7.4.2 Delete Table 2 and insert "Table 2. Until 31.12.2015 (Deleted)".

Insert a new 1.6.9 to read as follows:

"1.6.9 Transitional provisions concerning recognition of classification societies

1.6.9.1 The provisions of 1.15.3.8 concerning the maintenance of an effective system of internal quality by the recommended classification societies still applicable on 31 December 2015 may continue to be applied until 14 September 2018.".

Chapter 1.7

1.7.1.5.1 (a) Replace "5.2.1.9" by "5.2.1.10".

Chapter 1.8

- 1.8.3.2 In paragraph (b), before "loading or unloading", insert: "packing, filling," (twice).
- 1.8.3.3 In the third, fifth, sixth and ninth indent of the third sub-paragraph, before "loading or unloading", insert "packing, filling," (four times). In the tenth and twelfth indent, before "loading and unloading", insert "packing, filling," (twice).
- 1.8.3.6 Before "loading or unloading", insert "packing, filling,"
- 1.8.3.9 After "carriage", insert "packing, filling, loading or unloading".
- 1.8.3.10 At the end of the second indent, add: ", including, if necessary, the infrastructure and organisation of electronic examinations in accordance with 1.8.3.12.5, if these are to be carried out;"
- 1.8.3.11 (b) In the third indent, replace "orange plates marking" by "orange-coloured plate marking" and "orange plates" by "orange-coloured plates".
- 1.8.3.11 (b) In the tenth indent, between the brackets, before "loading and unloading", insert "packing, filling,". In the eleventh indent, before "loading and after unloading", insert: "packing, filling,".

- 1.8.3.12.2 Amend to read as follows:
- "1.8.3.12.2 The competent authority or an examining body designated by the competent authority shall invigilate every examination. Any manipulation and deception shall be ruled out as far as possible. Authentication of the candidate shall be ensured. The use in the written test of documentation other than international or national regulations is not permitted. All examination documents shall be recorded and kept as a print-out or electronically as a file."
- 1.8.3.12.4 (a) Amend the fourth indent to read as follows: "-danger marking, labelling and placarding;".

Add a new 1.8.3.12.5 to read as follows:

- "1.8.3.12.5 Written examinations may be performed, in whole or in part, as electronic examinations, where the answers are recorded and evaluated using electronic data processing (EDP) processes, provided the following conditions are met:
 - (a) The hardware and software shall be checked and accepted by the competent authority or by an examining body designated by the competent authority;
 - (b) Proper technical functioning shall be ensured. Arrangements as to whether and how the examination can be continued shall be made for a failure of the devices and applications. No aids shall be available on the input devices (e.g. electronic search function), the equipment provided according to 1.8.3.12.3 shall not allow the candidates to communicate with any other device during the examination;
 - (c) Final inputs of each candidate shall be logged. The determination of the results shall be transparent.".
- 1.8.3.18 In the eighth entry ("Valid until ..."), before "loading or unloading", insert: "packing, filling,".
- 1.8.3.18 Delete the last 2 lines of the model certificate.

Chapter 1.15

1.15.3.8 Replace "EN ISO 9001:2008 + AC:2009" by "EN ISO 9001:2015".

Chapter 1.16

- 1.16 Add a new paragraph to read as follows:
- "1.16.0 For the purposes of this Chapter, "owner" means "the owner or his designated representative or, if the vessel is chartered by an operator, the operator or his designated representative"."
- 1.16.1.2.1 Amend to read as follows:
- "1.16.1.2.1 The certificate of approval shall conform to the model 8.6.1.1 or 8.6.1.3 with regard to content, form and layout and include the required particulars, as appropriate. It shall include the date of expiry of the period of validity.

Its dimensions are 210 mm x 297 mm (A4). Front and back pages may be used.

It shall be drawn up in the language or one of the languages of the issuing country. If this language is not English, French or German, the title of the certificate and each entry under

- items 5, 9 and 10 in the certificate of approval for dry cargo vessels (8.6.1.1) and under items 12, 16 and 17 in the certificate of approval for tank vessels (8.6.1.3) shall also be provided in English, French or German.".
- 1.16.1.2.2 Amend the end to read as follows: "...construction and equipment comply completely with the applicable requirements of this Regulation.".
- 1.16.1.2.5, second paragraph In the third sentence at the end, insert "recognized" before "classification society".
- 1.16.1.2.5, last paragraph before the Note Amend the beginning to read as follows: "The recognized classification society shall without delay, after the delivery to the holder of the certificate of approval, transmit a copy of the vessel substance list...". Remainder unchanged.
- 1.16.1.3.1 Amend as follows:
- 1.16.1.3.1 (a) Replace "provisions" by "requirements".
- 1.16.1.3.1 Add a new subparagraph (b) to read:
- "(b) The vessel does not comply with every applicable requirement of these Regulations, but the safety of carriage is not impaired according to the appraisal of the competent authority.

The one-off provisional certificate of approval shall be valid for an appropriate period to bring the vessel into compliance with the applicable provisions, but not exceeding three months.

The competent authority may request additional reports in addition to the inspection report and may require additional conditions.

NOTE: For the issuance of the final certificate of approval according to 1.16.1.2 a new inspection report according to 1.16.3.1 shall be prepared, which confirms conformity also with all hitherto unfulfilled requirements of these Regulations.".

Renumber existing subparagraph (b) as (c).

1.16.1.3.2 Insert the following text after "model in 8.6.1.2 or 8.6.1.4": "with regard to content, form and layout" and the following text at the end:

"Its dimensions are 210 mm x 297 mm (A4). Front and back pages may be used.

It shall be drawn up in the language or one of the languages of the issuing country. If this language is not English, French or German, the title of the certificate and each entry under item 5 in the provisional certificate of approval for dry cargo vessels (8.6.1.2) and under item 12 in the provisional certificate of approval for tank vessels (8.6.1.4) shall also be provided in English, French or German.".

- 1.16.1.3 Add a new 1.16.1.3.3 to read as follows:
- "1.16.1.3.3 For tank vessels, the relief pressure of the safety valves or of the high-velocity vent valves shall be entered in the certificate of approval.

If a vessel has cargo tanks with different valve opening pressures, the opening pressure of each tank shall be entered in the certificate of approval.".

- 1.16.2.1 At the end of the first paragraph, delete "or his representative".
- 1.16.2.1 Delete the last sentence that reads: "The period of validity shall not exceed five years subject to the provisions of 1.16.11.".
- 1.16.2.1 At the end, add a new paragraph to read as follows:

"The Contracting Parties shall communicate to the secretariat of the United Nations Economic Commission for Europe (UNECE) the contact information of the authorities and bodies designated by them which are competent in accordance with national law for the issuance of certificates of approval.

The UNECE secretariat shall bring them to the attention of the Contracting Parties through its website.".

1.16.3 Amend as follows:

1.16.3.1 At the end of the second sentence, insert "according to Chapter 1.15" after "a recognized classification society". Amend the end of the second sentence to read as follows: "...conforms partially or completely to the applicable requirements of these Regulations related to the construction and equipment of the vessel."

Insert a new 1.16.3.2 to read:

"1.16.3.2 This inspection report shall contain:

- Name and address of the Inspection Body or the recognized classification society that carried out the inspection;
- Applicant of the inspection;
- Date and place of the inspection;
- Type of the inspected vessel;
- Identification of the vessel (name, vessel number, ENI number, etc.);
- Declaration that the vessel conforms partially or completely to the applicable requirements of ADN on the construction and equipment of the vessel (in the version applicable on the date of the inspection or, if later, on the estimated date of issuance of the certificate of approval);
- Indication (list, description and references in ADN) of any non-conformities;
- Used transitional provisions;
- Used equivalents and derogations from the regulations applicable to the vessel with reference to the relevant recommendation of the ADN Administrative Committee;
- Date of issuance of the inspection report;
- Signature and official seal of the inspection body or recognized classification society.

If the inspection report does not ensure that all the applicable requirements referred to in 1.16.3.1 are fulfilled, the competent authority may require any additional information in order to issue a provisional certificate of approval according to 1.16.1.3.1 (b).

The authority which is issuing the certificate of approval may request information about the name of the office and surveyor(s) which carried out the inspection including email and phone number, but this information will not become part of the vessel record."

Renumber existing 1.16.3.2 as 1.16.3.3. At the beginning, replace "This inspection report" by "The inspection report".

Insert two new paragraphs to read as follows:

- "1.16.3.4 The provisions of 1.16.3.1, 1.16.3.2 and 1.16.3.3 apply to the first inspection referred to in 1.16.8, to the special inspection referred to in 1.16.9 and to the periodic inspection referred to in 1.16.10.".
- "1.16.3.5 Where the inspection report is issued by a recognized classification society, the inspection report may include the certificate referred to in 9.1.0.88.1, 9.2.0.88.1, 9.3.1.8.1, 9.3.2.8.1 or 9.3.3.8.1.

The presence on board of the certificates issued by the recognized classification society for the purposes of 8.1.2.3 (f) and 8.1.2.3 (o) remains mandatory.".

- 1.16.5 Amend the first sentence to read: "The owner of a vessel shall deposit an application for a certificate of approval with the competent authority referred to in 1.16.2.1.". Amend the last sentence to read: "In order to obtain a certificate of approval, at least a valid vessel certificate, the inspection report referred to in 1.16.3.1 and the certificate referred to in 9.1.0.88.1, 9.2.0.88.1, 9.3.1.8.1, 9.3.2.8.1 or 9.3.3.8.1 shall accompany the request."
- 1.16.6.1, 1.16.6.3, 1.16.7.1, 1.16.9, 1.16.10.1 (twice) and 1.16.11 Delete "or his representative".
- 1.16.10.3 Insert a new last sentence to read: "After this period of time, the vessel shall undergo a first inspection in accordance with 1.16.8.".
- 1.16.10.4 Insert "periodic" before "inspection".
- 1.16.11 Amend the beginning to read as follows: "By derogation from 1.16.10, at the substantiated request of the owner, the competent authority that has issued the certificate of approval may grant an extension...". Remainder of the text unchanged.
- 1.16.12.2 Delete "or operator".
- 1.16.13 Amend as follows:

Amend the title to read: "Withdrawal, withholding and return of the certificate of approval".

- 1.16.13.1 After "these Regulations" add ", or if the vessel's highest class according to 9.2.0.88.1, 9.3.1.8.1, 9.3.2.8.1 or 9.3.3.8.1 is not valid".
- 1.16.13.2 In the second paragraph, replace "1.16.2.1 to 1.16.9" by "1.16.9 and 1.16.13.1".
- 1.16.13.4 In the first paragraph, insert "recognized" before "classification society". Amend the end to read: "...hazard for the environment, or when the vessel's highest class is not valid, it shall immediately notify the competent authority on behalf of which it acts with a view to a decision to withhold the certificate.".
- 1.16.13.5 In the first paragraph, insert "recognized" before "classification society", replace "1.16.13.1" by "1.16.13.4" and delete "or to his representative". In the second paragraph, delete "or to his representative", insert "recognized" before "classification society" twice and replace "retuned" by "returned".

Chapter 2.1

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

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

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

Add a new 2.1.2.8 to read as follows:

- "2.1.2.8 A consignor who has identified, on the basis of test data, that a substance listed by name in column 2 of Table A of Chapter 3.2 meets classification criteria for a class that is not identified in column 3a or 5 of Table A of Chapter 3.2, may, with the approval of the competent authority, consign the substance:
- Under the most appropriate collective entry listed in sub-sections 2.2.x.3 reflecting all hazards; or
- Under the same UN number and name but with additional hazard communication information as appropriate to reflect the additional subsidiary risk(s) (documentation, label, placard) provided that the class remains unchanged and that any other carriage conditions (e.g. limited quantity, packaging and tank provisions) that would normally apply to substances possessing such a combination of hazards are the same as those applicable to the substance listed.
- **NOTE 1:** The competent authority granting the approval may be the competent authority of any ADN Contracting Party who may also recognize an approval granted by the competent authority of a country which is not an ADN Contracting Party provided that this approval has been granted in accordance with the procedures applicable according to RID, ADR, ADN, the IMDG Code or the ICAO Technical Instructions.
- **NOTE 2:** When a competent authority grants such approvals, it should inform the United Nations Sub-Committee of Experts on the Transport of Dangerous Goods accordingly and submit a relevant proposal of amendment to the Dangerous Goods List of the UN Model Regulations. Should the proposed amendment be rejected, the competent authority should withdraw its approval.
- **NOTE 3:** For carriage in accordance with 2.1.2.8, see also 5.4.1.1.20.".
- 2.1.3.4.2 After "UN No. 3151 POLYHALOGENATED BIPHENYLS, LIQUID;", add a new entry to read as follows:

"UN No. 3151 HALOGENATED MONOMETHYLDIPHENYLMETHANES, LIQUID;".

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

"UN No. 3152 HALOGENATED MONOMETHYLDIPHENYLMETHANES, SOLID;".

2.1.3.5.5, Footnote 2 Amend as follows:

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

At the end, insert: "; and Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives (Official Journal of the European Union No. L312 of 22 November 2008, pages 3-30)".

Chapter 2.2

- 2.2.1.1.5 In the definition of Division 1.6, in the second sentence, replace "contain only extremely insensitive substance" by "predominantly contain extremely insensitive substances".
- 2.2.1.1.6 Amend the definition of Compatibility Group N to read as follows: "Articles predominantly containing extremely insensitive substances".
- 2.2.1.1.7.1 In the second sentence, insert a paragraph break after "However," and replace "," by ":". Remainder of the sentence becomes new subparagraph (b).

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

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

In (b), replace "such articles" by "fireworks".

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

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

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

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

- 2.2.1.1 Add a new paragraph 2.2.1.1.9 to read as follows:
- "2.2.1.1.9 Classification documentation
- 2.2.1.1.9.1 A competent authority assigning an article or substance into Class 1 shall confirm with the applicant that classification in writing.
- 2.2.1.1.9.2 A competent authority classification document may be in any form and may consist of more than one page, provided pages are numbered consecutively. The document shall have a unique reference.
- 2.2.1.1.9.3 The information provided shall be easy to identify, legible and durable.
- 2.2.1.1.9.4 Examples of the information that may be provided in the classification documents are as follows:
 - (a) The name of the competent authority and the provisions in national legislation under which it is granted its authority;

- (b) The modal or national regulations for which the classification document is applicable;
- (c) Confirmation that the classification has been approved, made or agreed in accordance with the UN Model Regulations or the relevant modal regulations;
- (d) The name and address of the person in law to which the classification has been assigned and any company registration which uniquely identifies a company or other body corporate under national legislation;
- (e) The name under which the explosives will be placed onto the market or otherwise supplied for carriage;
- (f) The proper shipping name, UN number, class, division and corresponding compatibility group of the explosives;
- (g) Where appropriate, the maximum net explosive mass of the package or article;
- (h) The name, signature, stamp, seal or other identification of the person authorised by the competent authority to issue the classification document is clearly visible;
- (i) Where safety in carriage or the division is assessed as being dependent upon the packaging, the packaging mark or a description of the permitted:
 - Inner packagings
 - Intermediate packagings
 - Outer packagings
- (j) The classification document states the part number, stock number or other identifying reference under which the explosives will be placed onto the market or otherwise supplied for carriage;
- (k) The name and address of the person in law who manufactured the explosives and any company registration which uniquely identifies a company or other body corporate under national legislation;
- (l) Any additional information regarding the applicable packing instruction and special packing provisions where appropriate;
- (m) The basis for assigning the classification, i.e. whether on the basis of test results, default for fireworks, analogy with classified explosive, by definition from Table A of Chapter 3.2 etc.;
- (n) Any special conditions or limitations that the competent authority has identified as relevant to the safety for carriage of the explosives, the communication of the hazard and international carriage;
- (o) The expiry date of the classification document is given where the competent authority considers one to be appropriate.".
- 2.2.1.4 In the definition of "ROCKET MOTORS", after "0281", insert ", 0510".

- 2.2.2.2.1 Amend to read as follows:
- "2.2.2.2.1 Chemically unstable gases of Class 2 shall not be accepted for carriage unless the necessary precautions have been taken to prevent the possibility of a dangerous decomposition or polymerization under normal conditions of carriage or unless carried in accordance with special packing provision (r) of packing instruction P200 (10) of 4.1.4.1 of ADR, as applicable. For the precautions necessary to prevent polymerization, see special provision 386 of Chapter 3.3. To this end particular care shall be taken to ensure that receptacles and tanks do not contain any substances liable to promote these reactions."
- 2.2.3.1.5 Existing text becomes 2.2.3.1.5.1. At the beginning, replace "viscous liquids" by "Except as provided for in 2.2.3.1.5.2, viscous liquids".

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

"2.2.3.1.5 Viscous liquids".

Insert a new 2.2.3.1.5.2 to read as follows:

- "2.2.3.1.5.2 Viscous liquids which are also environmentally hazardous, but meet all other criteria in 2.2.3.1.5.1, are not subject to any other provisions of ADN when they are carried in single or combination packagings containing a net quantity per single or inner packaging of 5 litres or less, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8 of ADR."
- 2.2.3.2.2 Amend to read as follows:
- "2.2.3.2.2 Chemically unstable substances of Class 3 shall not be accepted for carriage unless the necessary precautions have been taken to prevent the possibility of a dangerous decomposition or polymerization under normal conditions of carriage. For the precautions necessary to prevent polymerization, see special provision 386 of Chapter 3.3. To this end particular care shall be taken to ensure that receptacles and tanks do not contain any substances liable to promote these reactions."
- 2.2.3.3 For "F3 articles", at the end of the proper shipping name for UN 3269, add ", liquid base material".
- 2.2.41 In the heading of Class 4.1, after "self-reactive substances", insert ", polymerizing substances".
- 2.2.41.1.1 In the first paragraph, replace "and self-reactive liquids or solids "by", self-reactive liquids or solids and polymerizing substances". In the second paragraph, insert a new indent at the end to read:
- "- polymerizing substances (see 2.2.41.1.20 and 2.2.41.1.21).".
- 2.2.41.1.2 At the end, add the following new subdivisions:
- "PM Polymerizing substances
 - PM1 Not requiring temperature control;
 - PM2 Requiring temperature control.".
- 2.2.41.1.2 After "F3 Inorganic;", insert "F4 Articles;".
- 2.2.41.1 Insert the following new sub-sections 2.2.41.1.20 and 2.2.41.1.21:

"Polymerizing substances

Definitions and properties

2.2.41.1.20 *Polymerizing substances* are substances which, without stabilization, are liable to undergo a strongly exothermic reaction resulting in the formation of larger

molecules or resulting in the formation of polymers under conditions normally encountered in carriage. Such substances are considered to be polymerizing substances of Class 4.1 when:

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

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

Temperature control requirements

- 2.2.41.1.21 Polymerizing substances are subject to temperature control in carriage if their self-accelerating polymerization temperature (SAPT) is:
- (a) When offered for carriage in a packaging or IBC, 50 °C or less in the packaging or IBC in which the substance is to be carried; or
- (b) When offered for carriage in a tank, 45 °C or less in the tank in which the substance is to be carried.".
- 2.2.41.3 Under "flammable solids without subsidiary risk", insert the following new arm:

		3527	POLYESTER RESIN KIT, solid base material
articles	F4		

At the end, add the following arm:

	not re	quiring	PM1	3531	POLYMERIZING	SUBSTANCE,	SOLID,
Polymerizing	temperatur	re			STABILIZED, N.O.	S.	
substances	control			3532	POLYMERIZING	SUBSTANCE,	LIQUID,
PM					STABILIZED, N.O.	S.	
				3533	POLYMERIZING	SUBSTANCE,	SOLID,
	requiring				TEMPERATURE C	ONTROLLED, N.	O.S.
	temperatur	re					
	control		PM2				
		•		3534	POLYMERIZING	SUBSTANCE,	LIQUID,
					TEMPERATURE C	ONTROLLED, N.	O.S.

2.2.52.1.17 In the Note, amend "Manual of Tests and Criteria, Part II, Section 20 and Sub-section 28.4" to read "Manual of Tests and Criteria, Part II, Section 20 and test series E in Section 25".

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

Organic peroxide		Column	Amendment		
DIBENZOYL PEROXIDE	(first row)	Concentration (%)	Replace ">51 - 100" by ">52 - 100"		
tert-BUTYL CUMYL PEROXIDE	(first row)	Number (Generic entry)	Replace "3107" by "3109"		
DICETYL	(first row)	Packing Method	Replace "OP7" by		

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

2.2.61.2.1 Amend to read as follows:

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

2.2.62.1.1 Amend Note 1 to read as follows:

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

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

2.2.62.1.12.1 Delete footnote 6. Renumber the following footnotes accordingly.

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

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

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

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

- 2.2.7.2.4.1.3 Replace "marking "RADIOACTIVE"" by "mark "RADIOACTIVE"" wherever it appears (4 times).
- 2.2.7.2.4.1.4 (b) Replace "marking "RADIOACTIVE"" by "mark "RADIOACTIVE"".
- 2.2.8.2.1 Amend to read as follows:

- "2.2.8.2.1 Chemically unstable substances of Class 8 shall not be accepted for carriage unless the necessary precautions have been taken to prevent the possibility of a dangerous decomposition or polymerization under normal conditions of carriage. For the precautions necessary to prevent polymerization, see special provision 386 of Chapter 3.3. To this end particular care shall be taken to ensure that receptacles and tanks do not contain any substances liable to promote these reactions."
- 2.2.9.1.2 In the M2 entry, replace "apparatus" by "articles".
- 2.2.9.1.5 In the title and in the text, replace "apparatus" by "articles" wherever it appears (4 times).
- 2.2.9.1.7 Insert the following new first paragraph:

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

- 2.2.9.1.7 Delete the last Note.
- 2.2.9.1.11 For Note 2, amend the text of footnote 13 to read as follows:

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

Insert a new Note 3 to read as follows:

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

Renumber existing Note 3 as Note 4.

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

"Engines and machinery, internal combustion.".

- 2.2.9.1.14 In the Note, delete the entries for UN Nos. 3166 and 3171.
- 2.2.9.3 In the title of M2, replace "apparatus" by "articles".
- 2.2.9.3, for M2 Substances and articles which, in the event of fire, may form dioxins

After "3151 POLYHALOGENATED BIPHENYLS, LIQUID or", add a new entry to read as follows:

"3151 HALOGENATED MONOMETHYLDIPHENYLMETHANES, LIQUID or".

After "3152 POLYHALOGENATED BIPHENYLS, SOLID or", add a new entry to read as follows:

"3152 HALOGENATED MONOMETHYLDIPHENYLMETHANES, SOLID or".

2.2.9.3 In M11, insert the following new entries:

"3166 VEHICLE, FLAMMABLE GAS POWERED or 3166 VEHICLE, FLAMMABLE LIQUID POWERED or 3166 VEHICLE, FUEL CELL, FLAMMABLE GAS POWERED or 3166 VEHICLE, FUEL CELL, FLAMMABLE LIQUID POWERED

3171 BATTERY POWERED VEHICLE or 3171 BATTERY POWERED EQUIPMENT".

Chapter 2.4

2.4.2.5 In the second paragraph, in the first sentence, amend the end to read as follows: "OECD Test Guidelines 107, 117 or 123.".

Chapter 3.1

- 3.1.2.2 At the end of the first sentence, replace "package marking" by "package marks".
- 3.1.2.3 At the end of the second sentence, replace "package marking" by "package marks".
- 3.1.2.6 In the introductory sentence, before subparagraphs (a) and (b), at the end, before "then:" insert "or the evolution of excessive heat, or when chemical stabilization is used in combination with temperature control,"
- 3.1.2.6 (a) Amend to read as follows:
- "(a) For liquids and solids where the SAPT¹ (measured without or with inhibitor, when chemical stabilization is applied) is less than or equal to that prescribed in 2.2.41.1.21, the provisions of 2.2.41.1.17, special provision 386 of Chapter 3.3, special provision V8 of Chapter 7.2, special provision S4 of Chapter 8.5 and the requirements of Chapter 9.6 apply except that the term "SADT" as used in these paragraphs is understood to include also "SAPT" when the substance concerned reacts by polymerization;".

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

Chapter 3.2, Table A

For UN No. 0015, insert a new row with the same information as for the other entries for UN No. 0015 except that the designation in column (2) reads "AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge, containing toxic by inhalation substances" and the codes for labels in column (5) read "1 +6.1".

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

For UN No. 0303, insert a new row with the same information as for the other entries for UN No. 0303 except that the designation in column (2) reads "AMMUNITION, SMOKE

with or without burster, expelling charge or propelling charge, containing toxic by inhalation substances" and the codes for labels in column (5) read "1.4 +6.1".

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

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

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

For UN No. 1202, in column (2), replace "EN 590:2009 + A1:2010" by "EN 590:2013 + AC:2014" (twice).

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

For UN No. 1845, replace "NOT SUBJECT TO ADN - When used as a coolant, see 5.5.3" by "NOT SUBJECT TO ADN except for 5.5.3".

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

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

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

For UN Nos. 2977 and 2978, in column (5) insert "+ 6.1" before "+ 8".

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

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

For UN No. 3151, amend column (2) to read as follows:

"POLYHALOGENATED BIPHENYLS, LIQUID or HALOGENATED MONOMETHYLDIPHENYLMETHANES, LIQUID or POLYHALOGENATED TERPHENYLS, LIQUID".

For UN No. 3152, amend column (2) to read as follows:

"POLYHALOGENATED BIPHENYLS, SOLID or HALOGENATED MONOMETHYLDIPHENYLMETHANES, SOLID or POLYHALOGENATED TERPHENYLS, SOLID".

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

(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a) to (13)
3166	VEHICLE, FLAMMABLE GAS POWERED or VEHICLE, FLAMMABLE LIQUID POWERED or VEHICLE, FUEL CELL, FLAMMABLE GAS POWERED or VEHICLE, FUEL CELL, FLAMMABLE LIQUID POWERED	9	M11			312 385 666 667	
3171	BATTERY POWERED VEHICLE or BATTERY POWERED EQUIPMENT	9	M11			240 666 667	

For UN Nos. 3257 In column (6), insert "668".

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

For UN No. 3507, in column (3), replace "8" by "6.1" and in column (5), replace "8" by "6.1 \pm 8".

Add the following entries:

(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)
0510	ROCKET MOTORS	1	1.4C		1.4		0	E0							
3527	POLYESTER RESIN KIT, solid base material	4.1	F4	II	4.1	236 340	5kg	E0							
3527	POLYESTER RESIN KIT, solid base material	4.1	F4	III	4.1	236 340	5kg	E0							
3528	ENGINE, INTERNAL COMBUSTION, FLAMMABLE LIQUID POWERED or ENGINE, FUEL CELL, FLAMMABLE LIQUID POWERED or MACHINERY, INTERNAL COMBUSTION, FLAMMABLE LIQUID POWERED or MACHINERY, FUEL CELL, FLAMMABLE LIQUID POWERED	3			3	363 667	0	E0							
3529	ENGINE, INTERNAL COMBUSTION, FLAMMABLE GAS POWERED or ENGINE, FUEL CELL, FLAMMABLE GAS POWERED or MACHINERY, INTERNAL COMBUSTION, FLAMMABLE GAS POWERED or MACHINERY, FUEL CELL, FLAMMABLE GAS POWERED				2.1	363 667	0	E0							
3530	ENGINE, INTERNAL COMBUSTION or MACHINERY, INTERNAL COMBUSTION	9			9	363 667	0	E0							
3531	POLYMERIZING SUBSTANCE, SOLID, STABILIZED, N.O.S.	4.1	PM1	III	4.1	274 386	0	E0							
3532	POLYMERIZING SUBSTANCE, LIQUID, STABILIZED, N.O.S.	4.1	PM1	III	4.1	274 386	0	E0							
3533	POLYMERIZING SUBSTANCE, SOLID, TEMPERATURE CONTROLLED, N.O.S.	4.1	PM2	III	4.1	274 386	0	E0							
3534	POLYMERIZING SUBSTANCE, LIQUID, TEMPERATURE CONTROLLED, N.O.S.	4.1	PM2	III	4.1	274 386	0	E0							

Chapter 3.2, Table C

- 3.2.3.1 In the introductory text, second paragraph, add a new third indent to read as follows:
- "- If a cell contains an asterisk, "*", the applicable requirements should be determined in accordance with 3.2.3.3.".
- 3.2.3.1, Column (5), "Dangers" At the end, add a new paragraph to read as follows:
- "Where the information is shown in brackets, only the relevant codes for the substance carried should be used.".
- 3.2.3.1, Column (16), "Explosion group" Amend the explanation to read as follows:
- "Contains the explosion group of the substance.

Values between square brackets indicate the explosion group II B subgroups to be used in selecting the relevant self-contained protection systems (flame arresters, pressure/vacuum relief valves with integrated backfire-prevention device, and high velocity vent valves).

NOTE:

Where self-contained protection systems for explosion group II B are in place, products in explosion group II A or II B, including subgroups II B3, II B2 and II B1, may be transported.

Where self-contained protection systems for explosion group II B3 are in place, products in explosion subgroups II B3, II B2 and II B1, or in explosion group II A, may be transported.

Where self-contained protection systems for explosion group II B2 are in place, products in explosion subgroups II B2 and II B1, or in explosion group II A, may be transported.

Where self-contained protection systems for explosion group II B1 are in place, products in explosion subgroup II B1 or in explosion group II A may be transported.".

- 3.2.3.1, Column (20), paragraph 5 Amendment does not apply to the English text.
- 3.2.3.1, Column (20), Remark 35 Amend to read as follows:
- "35. Only an indirect system for the cargo refrigerating system is permitted for this substance. Direct or combined systems are not permitted.".
- 3.2.3.1, Column (20), Remark 36 Amend to read as follows:
- "36. Merged with remark 35.".
- 3.2.3.1, Column (20), Remark 38 Amend to read as follows:
- "38. For an initial boiling point above 60 °C and under or equal to 85 °C as determined in accordance with ASTMD 86-01, the applicable conditions of transport are identical to those stipulated for an initial boiling point under or equal to 60 °C."
- 3.2.3.1, Column (20) Add a new remark 43 to read as follows:
- "43. It may be that the mixture has been classified as a floater as a precautionary measure, because some of its components meet the relevant criteria.".

HYLENE, REFRIGERATED LIQUID HYLENE OXIDE WITH NITROGEN up to a total pressure of 1 MPa bar) at 50 °C ROLEIN, STABILIZED LYL ALCOHOL OXANNE ICHLOROHYDRIN In the following entries, insert "(II B2)" in column (16). OIMETHYL ETHER ACRYLONITRILE, STABILIZED BUTANOLS (n- BUTYL ALCOHOL) CROTONALDEHYDE or CROTONALDEHYDE, STABILIZED ETHYLENE GLYCOL DIETHYL ETHER
D bar) at 50 °C ROLEIN, STABILIZED LYL ALCOHOL DXANNE ICHLOROHYDRIN In the following entries, insert "(II B2)" in column (16). DIMETHYL ETHER ACRYLONITRILE, STABILIZED BUTANOLS (n- BUTYL ALCOHOL) CROTONALDEHYDE or CROTONALDEHYDE, STABILIZED
LYL ALCOHOL DXANNE ICHLOROHYDRIN In the following entries, insert "(II B2)" in column (16). DIMETHYL ETHER ACRYLONITRILE, STABILIZED BUTANOLS (n- BUTYL ALCOHOL) CROTONALDEHYDE or CROTONALDEHYDE, STABILIZED
DXANNE ICHLOROHYDRIN In the following entries, insert "(II B2)" in column (16). DIMETHYL ETHER ACRYLONITRILE, STABILIZED BUTANOLS (n- BUTYL ALCOHOL) CROTONALDEHYDE or CROTONALDEHYDE, STABILIZED
ICHLOROHYDRIN In the following entries, insert "(II B2)" in column (16). DIMETHYL ETHER ACRYLONITRILE, STABILIZED BUTANOLS (n- BUTYL ALCOHOL) CROTONALDEHYDE or CROTONALDEHYDE, STABILIZED
In the following entries, insert "(II B2)" in column (16). DIMETHYL ETHER ACRYLONITRILE, STABILIZED BUTANOLS (n- BUTYL ALCOHOL) CROTONALDEHYDE or CROTONALDEHYDE, STABILIZED
DIMETHYL ETHER ACRYLONITRILE, STABILIZED BUTANOLS (n- BUTYL ALCOHOL) CROTONALDEHYDE or CROTONALDEHYDE, STABILIZED
ACRYLONITRILE, STABILIZED BUTANOLS (n- BUTYL ALCOHOL) CROTONALDEHYDE or CROTONALDEHYDE, STABILIZED
BUTANOLS (n- BUTYL ALCOHOL) CROTONALDEHYDE or CROTONALDEHYDE, STABILIZED
CROTONALDEHYDE or CROTONALDEHYDE, STABILIZED
THYLENE GLYCOL DIETHYL ETHER
THYLENE GLYCOL MONOETHYL ETHER
SOPRENE, STABILIZED
NITROPROPANES
In the following entries, insert "(II B2 ⁴)" in column (16).
,3-BUTADIENE, STABILIZED
UTADIENES STABILIZED or BUTADIENES AND HYDROCARBON MIXTURE, STABILIZED, having a vapour pressure at 70 °C not sceeding 1.1 MPa (11 bar) and a density at 50 °C not lower than .525 kg/l (contains less than 0.1% 1.3-butadiene)
UTADIENES, STABILIZED or BUTADIENES AND HYDROCARBON MIXTURE, STABILIZED, having a vapour pressure at 70 °C not exceeding 1.1 MPa (11 bar) and a density at 50 °C not lower than

3.2.3.2	In the following entries, insert "(II B1)" in column (16).
1155	DIETHYL ETHER
1170	ETHANOL (ETHYL ALCOHOL) or ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), aqueous solution with more than 70% alcohol by volume
1199	FURALDEHYDES (α -FURALDEHYDE) or FURFURALDEHYDES (α -FURFURYLALDEHYDE)
1662	NITROBENZENE
1917	ETHYL ACRYLATE, STABILIZED
1919	METHYL ACRYLATE, STABILIZED
2056	TETRAHYDROFURAN
2218	ACRYLIC ACID, STABILIZED
2278	n-HEPTENE
2303	ISOPROPENYLBENZENE
2348	BUTYL ACRYLATES, STABILIZED (n-BUTYL ACRYLATE, STABILIZED)
3092	1-METHOXY-2-PROPANOL
3.2.3.2	In the following entries, insert "(II B1 ⁴)" in column (16).
1170	ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), aqueou solution with more than 24 % and not more than 70 % alcohol by volume
3.2.3.2	In the following entries, replace "(II B ⁴)" by "(II A ⁷)" in column (16).
2458	HEXADIENES
2491	ETHANOLAMINE or ETHANOLAMINE SOLUTION
2811	TOXIC SOLID, ORGANIC, N.O.S. (1,2,3-TRICHLOROBENZENE, MOLTEN)
2811	TOXIC SOLID, ORGANIC, N.O.S. (1,3,5-TRICHLOROBENZENE, MOLTEN)
3.2.3.2	For UN Nos. 1040, 1089, 1280 and 2983, insert "; 35" in column (20).
3.2.3.2	For UN No. 1230 METHANOL In column (19), replace "1" with "2".
3.2.3.2	Delete the existing entries corresponding to UN Nos. 1267, 1268, 1863, 19

(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		, ,		, ,					, ,	, ,	, ,	<u> </u>	, ,	, ,	, ,	, ,	` ′		, ,
1267	PETROLEUM CRUDE OIL	3	F1	I	3+(N1, N2, N3, CMR, F)	*	*	*	*	*	*		*	yes	T4 ³⁾	II B ⁴⁾	yes	*	1	14; *see 3.2.3.3
1267	PETROLEUM CRUDE OIL	3	F1	II	3+(N1, N2, N3, CMR, F)	*	*	*	*	*	*		*	yes	T4 ³⁾	II B ⁴⁾	yes	*	1	14; *see 3.2.3.3
1267	PETROLEUM CRUDE OIL	3	F1	III	3+(N1, N2, N3, CMR, F)	*	*	*	*	*	*		*	yes	T4 ³⁾	II B ⁴⁾	yes	*	0	14; *see 3.2.3.3
1267	PETROLEUM CRUDE OIL WITH MORE THAN 10% BENZENE INITIAL BOILING POINT ≤ 60 °C	3	F1	I	3+CMR+F+ (N1, N2, N3)	С	1	1			95		1	yes	T4 ³⁾	II $\mathbf{B}^{4)}$	yes	PP, EP, EX, TOX, A	1	29; 43
1267	PETROLEUM CRUDE OIL WITH MORE THAN 10% BENZENE INITIAL BOILING POINT ≤ 60 °C	3	F1	II	3+CMR+F+ (N1, N2, N3)	С	1	1			95		1	yes	T4 ³⁾	II B ⁴⁾	yes	PP, EP, EX, TOX, A	1	29
1267	PETROLEUM CRUDE OIL WITH MORE THAN 10% BENZENE 60 °C < INITIAL BOILING POINT ≤ 85 °C	3	F1	II	3+CMR+F+ (N1, N2, N3)	С	2	2	3	50	95		2	yes	T4 ³⁾	II B ⁴⁾	yes	PP, EP, EX, TOX, A	1	23; 29; 38
1267	PETROLEUM CRUDE OIL WITH MORE THAN 10% BENZENE 85 °C < INITIAL BOILING POINT ≤ 115 °C	3	F1	II	3+CMR+F+ (N1, N2, N3)	С	2	2		50	95		2	yes	T4 ³⁾	II B ⁴⁾	yes	PP, EP, EX, TOX, A	1	29
1267	PETROLEUM CRUDE OIL WITH MORE THAN 10% BENZENE INITIAL BOILING POINT				3+CMR+F+													PP, EP, EX,		
1267	> 115 °C PETROLEUM CRUDE OIL WITH MORE THAN 10% BENZENE INITIAL BOILING POINT	3	F1	II	(N1, N2, N3) 3+CMR+F+	С	2	2		35	95		2			II B ⁴⁾	yes	TOX, A PP, EP, EX,	1	29
	≤ 60 °C	3	F1	III	(N1, N2, N3)	C	1	1			95		1	yes	T4 3)	II B ⁴⁾	yes	TOX, A	0	29

(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
1267	PETROLEUM CRUDE OIL WITH MORE THAN 10% BENZENE 60 °C < INITIAL BOILING POINT ≤ 85 °C	3	F1	III	3+CMR+F+ (N1, N2, N3)	С	2	2	3	50	95		2	yes	T4 ³⁾	$\mathrm{II}~\mathrm{B}^{4)}$	yes	PP, EP, EX, TOX, A		23; 29; 38
1267	PETROLEUM CRUDE OIL WITH MORE THAN 10% BENZENE 85 °C < INITIAL BOILING POINT ≤ 115 °C	3	F1	III	3+CMR+F+ (N1, N2, N3)	С	2	2		50	95		2	yes	T4 ³⁾	II B ⁴⁾	yes	PP, EP, EX, TOX, A		29
1267	PETROLEUM CRUDE OIL WITH MORE THAN 10% BENZENE INITIAL BOILING POINT > 115 °C	3	F1	III	3+CMR+F+ (N1, N2, N3)	С	2	2		35	95		2	yes	T4 ³⁾	II B ⁴⁾	yes	PP, EP, EX, TOX, A		29
	PETROLEUM DISTILLATES, N.O.S. or PETROLEUM PRODUCTS, N.O.S.	3	F1		3+(N1, N2, N3, CMR, F)	*	*	*	*	*	*		*	yes	T4 ³⁾	II B ⁴⁾	yes	冰	1	14; 27 *see 3.2.3.3
	PETROLEUM DISTILLATES, N.O.S. or PETROLEUM PRODUCTS, N.O.S.	3	F1	II	3+(N1, N2, N3, CMR, F)	*	*	*	*	*	*		*	yes	T4 ³⁾	II B ⁴⁾	yes	*	1	14; 27 *see 3.2.3.3
	PETROLEUM DISTILLATES, N.O.S. or PETROLEUM PRODUCTS, N.O.S.	3	F1	III	3+(N1, N2, N3, CMR, F)	*	*	*	*	*	*		*	yes	T4 ³⁾	II B ⁴⁾	yes	*	0	14; 27 *see 3.2.3.3
	PETROLEUM DISTILLATES, N.O.S. or PETROLEUM PRODUCTS, N.O.S. WITH MORE THAN 10% BENZENE INITIAL BOILING POINT ≤ 60 °C	3	F1	I	3+CMR+F+ (N1, N2, N3)	C	1	1			95		1	yes	T4 ³⁾	II B ⁴⁾	yes	PP, EP, EX, TOX, A	1	27; 29; 43

(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
1268	PETROLEUM DISTILLATES, N.O.S. or PETROLEUM PRODUCTS, N.O.S. WITH MORE THAN 10% BENZENE INITIAL BOILING POINT ≤ 60 °C	3	F1	п	3+CMR+F+ (N1, N2, N3)	С	1	1			95		1	yes	T4 ³⁾	II B ⁴⁾	yes	PP, EP, EX, TOX, A	1	27; 29
1268	PETROLEUM DISTILLATES, N.O.S. or PETROLEUM PRODUCTS, N.O.S. WITH MORE THAN 10% BENZENE 60 °C < INITIAL BOILING POINT ≤ 85 °C	3	F1	п	3+CMR+F+ (N1, N2, N3)	С	2	2	3	50	95		2	ves	T4 ³⁾	II B ⁴⁾	ves	PP, EP, EX, TOX, A	1	23; 27; 29; 38
1268	PETROLEUM DISTILLATES, N.O.S. or PETROLEUM PRODUCTS, N.O.S. WITH MORE THAN 10% BENZENE 85 °C < INITIAL BOILING POINT ≤ 115 °C	3	F1	II	3+CMR+F+ (N1, N2, N3)	С	2	2	3	50	95				T4 ³⁾		yes	PP, EP, EX, TOX, A		27; 29
1268	PETROLEUM DISTILLATES, N.O.S. or PETROLEUM PRODUCTS, N.O.S. WITH MORE THAN 10% BENZENE INITIAL BOILING POINT > 115 °C	3	F1	п	3+CMR+F+ (N1, N2, N3)	С	2	2		35	95		2	yes	T4 ³⁾	II B ⁴⁾	yes	PP, EP, EX, TOX, A	1	27; 29
1268	PETROLEUM DISTILLATES, N.O.S. or PETROLEUM PRODUCTS, N.O.S. (NAPHTA) 110 kPa < vp50 ≤ 175 kPa	3	F1	II	3+N2+ CMR+F	N	2	3		50	97	0,735	3	yes	Т3	II A	yes	PP, EP, EX, TOX, A	1	14; 29

(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
	PETROLEUM DISTILLATES, N.O.S. or PETROLEUM PRODUCTS, N.O.S. (NAPHTA) 110 kPa < vp50 ≤ 150 kPa	3	F1	II	3+N2+ CMR+F	N	2	3	3	10	97	0,735	3	yes	Т3	II A	yes	PP, EP, EX, TOX, A	1	14; 29
	PETROLEUM DISTILLATES, N.O.S. or PETROLEUM PRODUCTS, N.O.S. (NAPHTA) vp50 ≤ 110 kPa	3	F1		3+N2+ CMR+F	N	2	3		10	97	0,735	3	yes	Т3	II A	yes	PP, EP, EX, TOX, A	1	14; 29
	PETROLEUM DISTILLATES, N.O.S. or PETROLEUM PRODUCTS, N.O.S (BENZENE HEART CUT) vp50 ≤ 110 kPa	3	F1	II	3+N2+ CMR+F	N	2	3		10	97	0,765	3	yes	Т3	II A	yes	PP, EP, EX, TOX, A	1	14; 29
1863	FUEL, AVIATION, TURBINE ENGINE	3	F1		3+(N1, N2, N3, CMR, F)	*	*	*	*	*	*		*	yes	T4 ³⁾	II B ⁴⁾	yes	*	1	14; *see 3.2.3.3
1863	FUEL, AVIATION, TURBINE ENGINE	3	F1		3+(N1, N2, N3, CMR, F)	*	*	*	*	*	*		*	yes	T4 ³⁾	II B ⁴⁾	yes	*	1	14; *see 3.2.3.3
1863	FUEL, AVIATION, TURBINE ENGINE	3	F1		3+(N1, N2, N3, CMR, F)	*	*	*	*	*	*		*	yes	T4 ³⁾	II B ⁴⁾	yes	*	0	14; *see 3.2.3.3
1863	FUEL, AVIATION, TURBINE ENGINE WITH MORE THAN 10% BENZENE INITIAL BOILING POINT ≤ 60 °C	3	F1	I	3+CMR+F+ (N1, N2, N3)	С	1	1			95		1	yes	T4 ³⁾	II B ⁴⁾	yes	PP, EP, EX, TOX, A	1	29; 43
1863	FUEL, AVIATION, TURBINE ENGINE WITH MORE THAN 10% BENZENE INITIAL BOILING POINT ≤ 60 °C	3	F1	II	3+CMR+F+ (N1, N2, N3)	C	1	1			95		1	yes	T4 ³⁾	II B ⁴⁾	yes	PP, EP, EX, TOX, A	1	29

(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
1863	FUEL, AVIATION, TURBINE ENGINE WITH MORE THAN 10% BENZENE 60 °C < INITIAL BOILING POINT ≤ 85 °C	3	F1	III	3+CMR+F+ (N1, N2, N3)	С	2	2	3	50	95		2	yes	T4 ³⁾	II B ⁴⁾	yes	PP, EP, EX, TOX, A	0	23; 29; 38
1863	FUEL, AVIATION, TURBINE ENGINE WITH MORE THAN 10% BENZENE 85 °C < INITIAL BOILING POINT ≤ 115 °C	3	F1	III	3+CMR+F+ (N1, N2, N3)	C	2	2		50	95		2	yes	T4 ³⁾	II $\mathrm{B}^{4)}$	yes	PP, EP, EX, TOX, A	0	29
1863	FUEL, AVIATION, TURBINE ENGINE WITH MORE THAN 10% BENZENE INITIAL BOILING POINT > 115 °C	3	F1	III	3+CMR+F+ (N1, N2, N3)	C	2	2		35	95		2	yes	T4 ³⁾	II B ⁴⁾	yes	PP, EP, EX, TOX, A	0	29
1986	ALCOHOLS, FLAMMABLE, TOXIC, N.O.S.	3	FT1	I	3+6.1+(N1, N2, N3, CMR, F or S)	С	1	1	*	*	95		1	no	T4 ³⁾	II $\mathbf{B}^{4)}$	yes	PP, EP, EX, TOX, A	2	27; 29; *see 3.2.3.3
1992	FLAMMABLE LIQUID, TOXIC, N.O.S.	3	FT1	I	3+6.1+(N1, N2, N3, CMR, F or S)	С	1	1	*	*	95		1	no	T4 ³⁾	II B ⁴⁾	yes	PP, EP, EX, TOX,	2	27; 29 *see 3.2.3.3
1993	FLAMMABLE LIQUID, N.O.S.	3	F1	I	3+(N1, N2, N3, CMR, F)	*	*	*	*	*	*		*	yes	T4 ³⁾	II B ⁴⁾	yes	*	1	14; *see 3.2.3.3
1993	FLAMMABLE LIQUID, N.O.S.	3	F1	II	3+(N1, N2, N3, CMR, F)	*	*	*	*	*	*		*	yes	T4 ³⁾	II B ⁴⁾	yes	*	1	14; *see 3.2.3.3
1993	FLAMMABLE LIQUID, N.O.S.	3	F1	III	3+(N1, N2, N3, CMR, F)	*	*	*	*	*	*		*	yes	T4 ³⁾	II B ⁴⁾	yes	*	0	14; *see 3.2.3.3

(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
1993	FLAMMABLE LIQUID, N.O.S. WITH MORE THAN 10% BENZENE INITIAL BOILING POINT ≤ 60 °C	3	F1	I	3+(N1, N2, N3, CMR, F)	С	1	1			95		1	yes	T4 ³⁾	II $\mathbf{B}^{4)}$	yes	PP, EP, EX, TOX, A		29
1993	FLAMMABLE LIQUID, N.O.S. WITH MORE THAN 10% BENZENE INITIAL BOILING POINT ≤ 60 °C	3	F1		3+(N1, N2, N3, CMR, F)	С	1	1			95		1	yes	T4 ³⁾	II B ⁴⁾	yes	PP, EP, EX, TOX, A	1	29
1993	FLAMMABLE LIQUID, N.O.S. WITH MORE THAN 10% BENZENE 60 °C < INITIAL BOILING POINT ≤ 85 °C	3	F1		3+(N1, N2, N3, CMR, F)	С	2	2	3	50	95		2	yes	T4 ³⁾	II $B^{4)}$	yes	PP, EP, EX, TOX, A	1	23; 29; 38
1993	FLAMMABLE LIQUID, N.O.S. WITH MORE THAN 10% BENZENE 85 °C < INITIAL BOILING POINT ≤ 115 °C	3	F1	II	3+(N1, N2, N3, CMR, F)	С	2	2		50	95		2	yes	T4 ³⁾	II B ⁴⁾	yes	PP, EP, EX, TOX, A	1	29
1993	FLAMMABLE LIQUID, N.O.S. WITH MORE THAN 10% BENZENE INITIAL BOILING POINT > 115 °C	3	F1	II	3+(N1, N2, N3, CMR, F)	С	2	2		35	95		2	yes	T4 ³⁾	$\mathrm{II}~\mathrm{B}^{4)}$	yes	PP, EP, EX, TOX, A	1	29
1993	FLAMMABLE LIQUID, N.O.S. WITH MORE THAN 10% BENZENE INITIAL BOILING POINT ≤ 60 °C	3	F1	III	3+(N1, N2, N3, CMR, F)	С	1	1			95		1	yes	T4 ³⁾	II B ⁴⁾	yes	PP, EP, EX, TOX, A	0	29
1993	FLAMMABLE LIQUID, N.O.S. WITH MORE THAN 10% BENZENE 60 °C < INITIAL BOILING POINT ≤ 85 °C	3	F1	III	3+(N1, N2, N3, CMR, F)	С	2	2	3	50	95		2	yes	T4 ³⁾	II B ⁴⁾	yes	PP, EP, EX, TOX, A		23; 29; 38

(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
1993	FLAMMABLE LIQUID, N.O.S. WITH MORE THAN 10% BENZENE 85 °C < INITIAL BOILING POINT ≤ 115 °C	3	F1	III	3+(N1, N2, N3, CMR, F)	С	2	2		50	95		2	yes	T4 ³⁾	II B ⁴⁾	yes	PP, EP, EX, TOX, A	0	29
1993	FLAMMABLE LIQUID, N.O.S. WITH MORE THAN 10% BENZENE INITIAL BOILING POINT > 115 °C	3	F1	III	3+(N1, N2, N3, CMR, F)	С	2	2		35	95		2	yes	T4 ³⁾	II B ⁴⁾	yes	PP, EP, EX, TOX, A	0	29
1993	FLAMMABLE LIQUID, N.O.S. (CYCLOHEXANONE/ CYCLOHEXANOL MIXTURE)	3	F1	III	3+F	N	3	3			97	0,95	3	yes	Т3	II A	yes	PP, EX, A	0	
2924	FLAMMABLE LIQUID, CORROSIVE, N.O.S.	3	FC	I	3+8+(N1, N2, N3, CMR, F or S)	С	1	1	*	*	95		1	yes	T4 ³⁾	II B ⁴⁾	yes	*	1	27; 29 *see 3.2.3.3
3257	ELEVATED TEMPERATURE LIQUID, N.O.S. at above 100°C and below its flash- point (including molten metals, molten salts, etc.)	9	M9	III	9+(N1, N2, N3, CMR, F or S)	*	*	*	*	*	95		*	yes			no	*	0	7; 20:+250°C; 22; 24; 27 *see 3.2 3.3
3286	FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S.	3	FT C	I	3+6.1+8+(N1, N2, N3, CMR, F or S)	С	1	1	*	*	95		1	no	T4 ³⁾	II B ⁴⁾	yes	PP, EP, EX, TOX,	2	27; 29 *see 3.2.3.3
3295	HYDROCARBONS, LIQUID, N.O.S.	3	F1	I	3+(N1, N2, N3, CMR, F)	*	*	*	*	*	*		*	yes	T4 ³⁾	II B ⁴⁾	yes	*	1	14; *see 3.2.3.3
3295	HYDROCARBONS, LIQUID, N.O.S.	3	F1	II	3+(N1, N2, N3, CMR, F)	*	*	*	*	*	*		*	yes	T4 ³⁾	II B ⁴⁾	yes	*	1	14; *see 3.2.3.3
3295	HYDROCARBONS, LIQUID, N.O.S.	3	F1	III	3+(N1, N2, N3, CMR, F)	*	*	*	*	*	*		*	yes	T4 ³⁾	II B ⁴⁾	yes	*	0	14; *see 3.2.3.3

(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
	HYDROCARBONS, LIQUID, N.O.S. WITH MORE THAN 10% BENZENE INITIAL BOILING POINT ≤ 60 °C	3	F1		3+CMR+ (N1, N2, N3)	С	1	1			95		1	yes	T4 ³⁾	II B ⁴⁾	yes	PP, EP, EX, TOX, A	1	29
	HYDROCARBONS, LIQUID, N.O.S. WITH MORE THAN 10% BENZENE INITIAL BOILING POINT ≤ 60 °C	3	F1		3+CMR+ (N1, N2, N3)	С	1	1			95		1	yes	T4 ³⁾	II B ⁴⁾	yes	PP, EP, EX, TOX, A	1	29
	HYDROCARBONS, LIQUID, N.O.S. WITH MORE THAN 10% BENZENE 60 °C < INITIAL BOILING POINT ≤ 85 °C	3	F1		3+CMR+ (N1, N2, N3)	С	2	2	3	50	95		2	yes	T4 ³⁾	II B ⁴⁾	yes	PP, EP, EX, TOX, A	1	23; 29; 38
	HYDROCARBONS, LIQUID, N.O.S. WITH MORE THAN 10% BENZENE 85 °C < INITIAL BOILING POINT ≤ 115 °C	3	F1	II	3+CMR+ (N1, N2, N3)	С	2	2		50	95		2	yes	T4 ³⁾	II B ⁴⁾	yes	PP, EP, EX, TOX, A		29
	HYDROCARBONS, LIQUID, N.O.S. WITH MORE THAN 10% BENZENE INITIAL BOILING POINT > 115°C	3	F1		3+CMR+ (N1, N2, N3)	С	2	2		35	95		2	yes	T4 ³⁾	II $\mathbf{B}^{4)}$	yes	PP, EP, EX, TOX, A	1	29
	HYDROCARBONS, LIQUID, N.O.S. WITH MORE THAN 10% BENZENE INITIAL BOILING POINT ≤ 60 °C	3	F1	III	3+CMR+ (N1, N2, N3)	C	1	1			95		1	yes	T4 ³⁾	II B ⁴⁾	yes	PP, EP, EX, TOX, A	0	29
	HYDROCARBONS, LIQUID, N.O.S. WITH MORE THAN 10% BENZENE 60 °C < INITIAL BOILING POINT ≤ 85 °C	3	F1	III	3+CMR+ (N1, N2, N3)	С	2	2	3	50	95		2	yes	T4 ³⁾	II B ⁴⁾	yes	PP, EP, EX, TOX, A	0	23; 29; 38

(1)		(2) (3	(Ba)	(3b)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
3295	HYDROCARBONS, LIQUID, N.O.S. WITH MORE THAN 10% BENZENE 85 °C < INITIAL BOILING POINT ≤ 115 °C		3	F1	III	3+CMR+ (N1, N2, N3)	C	2	2		50	95		2	yes	T4 ³⁾	II B ⁴⁾	yes	PP, EP, EX, TOX, A	0	29
3295	HYDROCARBONS, LIQUID, N.O.S. WITH MORE THAN 10% BENZENE INITIAL BOILING POINT > 115 °C		3	F1	III	3+CMR+ (N1, N2, N3)	C	2	2		35	95		2	yes	T4 ³⁾	II B ⁴⁾	yes	PP, EP, EX, TOX, A		29
3295	HYDROCARBONS, LIQUID, N.O.S. CONTAINING ISOPRENE AND PENTADIENE, STABILIZED		3	F1	I	3+inst.+ N2+CMR	С	2	2	3	50	95	0,678	1	yes	T4 ³⁾	II B ⁴⁾	yes	PP, EX, A	1	3; 27
3295	HYDROCARBONS, LIQUID, N.O.S. (1-OCTEN)		3	F1	II	3+N2+F	N	2	3		10	97	0,71	3	yes	Т3	II B ⁴⁾	yes	PP, EP, EX, TOX, A		14
3295	HYDROCARBONS, LIQUID, N.O.S. (POLYCYCLIC AROMATIC HYDOCARBONS MIXTURE)		3	F1	III	3+CMR+F	N	2	3	3	10	97	1,08	3	yes	Т1	II A	yes	PP, EP, EX, TOX, A		14

- 3.2.3.3, Column (20) and 3.2.4.3 L, Column (20) Amend remark 35 to read as follows:
- "Remark 35: Reference shall be made in column (20) to remark 35 for substances for which complete refrigeration may cause dangerous reactions in the event of compression. This is also applicable if the refrigeration is partly done by compression."
- 3.2.3.3, Column (20) and 3.2.4.3 L, Column (20) Delete remark 36 and insert "Remark 36: No longer used."
- 3.2.3.3 Column (20) and 3.2.4.3 L Column (20) In remark 38, insert "or under or equal to 85 °C" after "boiling point above 60 °C".
- 3.2.3.3 Column (20) and 3.2.4.3 L Column (20) Insert a new remark 43 to read as follows:
- "Remark 43: Reference shall be made in column (20) to remark 43 for all packing group I entries with letter F (flammable) in the classification code indicated in column (3b), and with letter F (floater) in column (5), Dangers."
- 3.2.4.3 A In point 2 "Halogenated hydrocarbons", replace "Environmentally hazardous substances, Acute or Chronic Category 1 (group N1 in accordance with 2.2.9.1.10.2)" by "Environmentally hazardous substances, aquatic toxicity category Acute 1 or Chronic 1 (group N1 in accordance with 2.2.9.1.10.2 of ADN) and vapour pressure at 50 °C \geq 1 kPa".
- 3.2.4.3 A In point 5, insert a new first indent to read as follows:
 - Aquatic toxicity Acute 1 or Chronic 1 (group N1 in accordance with 2.2.9.1.10.2) and vapour pressure below 1 kPa at 50 °C

closed type N cargo tank walls must be distinct from vessel hull

Chapter 3.3

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

Special provision 172 (b) Replace "vehicles or containers" by "cargo transport units".

Special provision 188 (f) Amend to read as follows:

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

This requirement does not apply to:

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

Special provision 188 (g) Delete.

Special provision 188 (h) and (i) Renumber as (g) and (h) respectively.

Special provision 188 Add the following paragraph at the end:

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

Special provision 207 Delete "Polymeric beads and".

Special provision 216 Replace "vehicle, wagon or container" by "or cargo transport

unit".

Special provision 217 Replace "vehicle, wagon or container" by "or cargo transport

unit".

Special provision 218 Replace "vehicle, wagon or container" by "or cargo transport

unit".

Special provision 225 In the last Note, replace "applicable to the relevant gas" by "applicable to the relevant dangerous goods".

Special provision 236 Amend to read as follows:

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

Special provision 240 Amend to read as follows:

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

For the purpose of this special provision, vehicles are self-propelled apparatus designed to carry one or more persons or goods. Examples of such vehicles are electrically-powered cars, motorcycles, scooters, three- and four-wheeled vehicles or motorcycles, trucks, locomotives, bicycles (pedal cycles with an electric motor) and other vehicles of this type (e.g. self-balancing vehicles or vehicles not equipped with at least one seating position), wheel chairs, lawn tractors, self-propelled farming and construction equipment, boats and aircraft. This includes vehicles carried in a packaging. In this case some parts of the vehicle may be detached from its frame to fit into the packaging.

Examples of equipment are lawnmowers, cleaning machines or model boats and model aircraft. Equipment powered by lithium metal batteries or lithium ion batteries shall be assigned to the entries UN 3091 LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT or UN 3091 LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT or UN 3481 LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT or UN 3481 LITHIUM ION BATTERIES PACKED WITH EQUIPMENT, as appropriate. Hybrid electric vehicles powered by both an internal combustion engine and wet batteries, sodium batteries, lithium metal batteries or lithium ion batteries, carried with the battery(ies) installed shall be assigned to the entries UN 3166 VEHICLE, FLAMMABLE GAS POWERED or UN 3166 VEHICLE, FLAMMABLE LIQUID POWERED, as appropriate. Vehicles which contain a fuel cell shall be assigned to the entries UN 3166 VEHICLE, FUEL CELL, FLAMMABLE GAS POWERED or UN 3166 VEHICLE, FUEL CELL, FLAMMABLE GAS POWERED or UN 3166 VEHICLE, FUEL CELL, FLAMMABLE LIQUID POWERED, as appropriate.

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

Special provision 295 Not applicable to the English text.

Special provision 310 Amend to read as follows:

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

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

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

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

Special provision 312 Amend to read as follows: "312 Vehicles powered by a fuel cell engine shall be assigned to UN No. 3166 VEHICLE, FUEL CELL, FLAMMABLE GAS POWERED or UN No. 3166 VEHICLE, FUEL CELL, FLAMMABLE LIQUID POWERED, as appropriate. These entries include hybrid electric vehicles powered by both a fuel cell and an internal combustion engine with wet batteries, sodium batteries, lithium metal batteries or lithium ion batteries, carried with the battery(ies) installed.

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

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

Special provision 317 Amend to read as follows:

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

Special provision 327 In the second sentence, insert "movement and" after "protected against". In the third sentence, replace "LP02" by "LP200".

Special provision 335 Replace "vehicle, wagon or container" by "cargo transport unit", 3 times.

Special provision 339 Not applicable to the English text.

Special provision 356 Delete "installed in vehicles, wagons, vessels or aircraft or in completed components or".

Special provision 363 Amend to read as follows:

"363 (a) This entry applies to engines or machinery, powered by fuels classified as dangerous goods via internal combustion systems or fuel cells (e.g.

combustion engines, generators, compressors, turbines, heating units, etc.), in quantities above those specified in column (7a) of Table A of Chapter 3.2, except vehicle equipment assigned to UN No. 3166 referred to in special provision 666.

NOTE: This entry does not apply to equipment referred to in 1.1.3.3.

- (b) Engines or machinery which are empty of liquid or gaseous fuels and which do not contain other dangerous goods, are not subject to ADN.
 - **NOTE 1:** An engine or machinery is considered to be empty of liquid fuel when the liquid fuel tank has been drained and the engine or machinery cannot be operated due to a lack of fuel. Engine or machinery components such as fuel lines, fuel filters and injectors do not need to be cleaned, drained or purged to be considered empty of liquid fuels. In addition, the liquid fuel tank does not need to be cleaned or purged.
 - **NOTE 2:** An engine or machinery is considered to be empty of gaseous fuels when the gaseous fuel tanks are empty of liquid (for liquefied gases), the pressure in the tanks does not exceed 2 bar and the fuel shut-off or isolation valve is closed and secured.
- (c) Engines and machinery containing fuels meeting the classification criteria of Class 3, shall be assigned to the entries UN No. 3528 ENGINE, INTERNAL COMBUSTION, FLAMMABLE LIQUID POWERED or UN No. 3528 ENGINE, FUEL CELL, FLAMMABLE LIQUID POWERED or UN No. 3528 MACHINERY, INTERNAL COMBUSTION, FLAMMABLE LIQUID POWERED or UN No. 3528 MACHINERY, FUEL CELL, FLAMMABLE LIQUID POWERED, as appropriate.
- (d) Engines and machinery containing fuels meeting the classification criteria of flammable gases of Class 2, shall be assigned to the entries UN No. 3529 ENGINE, INTERNAL COMBUSTION, FLAMMABLE GAS POWERED or UN No. 3529 ENGINE, FUEL CELL, FLAMMABLE GAS POWERED or UN No. 3529 MACHINERY, INTERNAL COMBUSTION, FLAMMABLE GAS POWERED or UN No. 3529 MACHINERY, FUEL CELL, FLAMMABLE GAS POWERED, as appropriate.
 - Engines and machinery powered by both a flammable gas and a flammable liquid shall be assigned to the appropriate UN No. 3529 entry.
- (e) Engines and machinery containing liquid fuels meeting the classification criteria of 2.2.9.1.10 for environmentally hazardous substances and not meeting the classification criteria of any other class shall be assigned to the entries UN No. 3530 ENGINE, INTERNAL COMBUSTION or UN No. 3530 MACHINERY, INTERNAL COMBUSTION, as appropriate.
- (f) Engines or machinery may contain other dangerous goods than fuels (e.g. batteries, fire extinguishers, compressed gas accumulators or safety devices) required for their functioning or safe operation without being subject to any additional requirements for these other dangerous goods, unless otherwise specified in ADN. However, lithium batteries shall meet the requirements of 2.2.9.1.7, except as provided for in special provision 667.
- (g) The engines or machinery are not subject to any other requirements of ADN if the following requirements are met:
 - (i) The engine or machinery, including the means of containment containing dangerous goods, shall be in compliance with the

construction requirements specified by the competent authority of the country of manufacture²;

- (ii) Any valves or openings (e.g. venting devices) shall be closed during carriage;
- (iii) The engines or machinery shall be oriented to prevent inadvertent leakage of dangerous goods and secured by means capable of restraining the engines or machinery to prevent any movement during carriage which would change the orientation or cause them to be damaged;
- (iv) For UN No. 3528 and UN No. 3530:

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

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

(v) For UN No. 3529:

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

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

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

This transport document shall contain the following additional statement "Transport in accordance with special provision 363".".

Footnote * does not apply to the English text.

Special provision 369 Amend the first paragraph to read as follows:

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

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

Special provision 369 Amend the third paragraph to read as follows:

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

Special provision 370 In the second indent, replace "that is not too sensitive for acceptance into Class 1" with "that gives a positive result".

Special provision 373 (b) (i) and (c) (ii) Insert "or adsorbent" after "absorbent". Insert "or adsorb" after "absorb".

Special provision 373 In the penultimate paragraph, replace "carriage in accordance" by "transport in accordance".

Special provision 376 Amend the end of the last sentence to read as follows: "...shall not be carried except under conditions approved by the competent authority of any ADN Contracting Party who may also recognize an approval granted by the competent authority of a country which is not a ADN Contracting Party provided that this approval has been granted in accordance with the procedures applicable according to RID, ADR, ADN, the IMDG Code or the ICAO Technical Instructions."

Special provision 529 Amend the last sentence to read "Mercurous chloride (calomel) is a substance of Class 6.1 (UN No. 2025).".

Special provision 581 Amend to read as follows:

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

Mixture	Content, % by volun			
	Methylacetylene propadiene, not than	and Propane more propylene, than	and C ₄ -saturated not more hydrocarbons, not than	Permitted technical less name for purposes of 5.4.1.1
P1	63	24	14	"Mixture P1"
P2	48	50	5	"Mixture P2"

Special provision 633 Replace "marking" by "mark", twice.

Special provision 653 In the last indent, replace "marking" by "mark".

Special provision 655 In the first sentence, replace "Directive 97/23/EC⁴" by "Directive 97/23/EC⁴ or Directive 2014/68/EU⁵". At the end of the second sentence, add "or Directive 2014/68/EU".

Add a new footnote 5 to read as follows: "5 Directive 2014/68/EU of the European Parliament and of the Council of 15 May 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of pressure equipment (PED) (Official Journal of the European Union No. L 189 of 27 June 2014, p. 164 - 259)."

Renumber existing footnotes accordingly.

Special provision 658 (b) Insert "or large container" after "vehicle".

Special provision 660 Amend footnote 6 (former 5) to read as follows:

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

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

Special provision 660 (f) In the last sentence, replace "markings" by "marks".

Special provision 663, under "Scope", in the last indent:

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

Special provision 803 Amend to read as follows:

"803 Hard coal, coke and anthracite, when carried in bulk, are not subject to the provisions of ADN if:

- (a) The temperature of the cargo has been determined using an appropriate procedure and is not higher than 60°C before, during or immediately after loading of the hold;
- (b) Depending on the temperature of the cargo before, during and immediately after loading of the hold, the expected duration of carriage without temperature monitoring does not exceed the maximum number of days shown in the table below:

Maximum temperature on loading (°C)	Maximum duration of journey (days)
60	10
50	18
40	32
30	57

- (c) Where the effective duration of carriage exceeds the maximum duration shown in sub-paragraph (b), temperature monitoring is carried out from the first day over the maximum duration. The necessary monitoring apparatus shall be on board as from the first day of the carriage following the maximum duration of the journey;
- (d) The master is given, at the time of loading and in a traceable form, instructions on how to proceed if there is a significant heating of the cargo.".

Add the following new special provisions:

- "378 Radiation detectors containing this gas in non-refillable pressure receptacles not meeting the requirements of Chapter 6.2 and packing instruction P200 of 4.1.4.1 of ADR may be carried under this entry provided:
 - (a) The working pressure in each receptacle does not exceed 50 bar;
 - (b) The receptacle capacity does not exceed 12 litres;
 - (c) Each receptacle has a minimum burst pressure of at least 3 times the working pressure when a relief device is fitted and at least 4 times the working pressure when no relief device is fitted;
 - (d) Each receptacle is manufactured from material which will not fragment upon rupture;
 - (e) Each detector is manufactured under a registered quality assurance programme;

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

(f) Detectors are carried in strong outer packagings. The complete package shall be capable of withstanding a 1.2 metre drop test without breakage of the detector or

rupture of the outer packaging. Equipment that includes a detector shall be packed in a strong outer packaging unless the detector is afforded equivalent protection by the equipment in which it is contained; and

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

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

- "379 Anhydrous ammonia adsorbed or absorbed on a solid contained in ammonia dispensing systems or receptacles intended to form part of such systems are not subject to the other provisions of ADN if the following conditions are observed:
- (a) The adsorption or absorption presents the following properties:
 - (i) The pressure at a temperature of 20 °C in the receptacle is less than 0.6 bar;
 - (ii) The pressure at a temperature of 35 °C in the receptacle is less than 1 bar;
 - (iii) The pressure at a temperature of 85 °C in the receptacle is less than 12 bar.
- (b) The adsorbent or absorbent material shall not have dangerous properties listed in classes 1 to 8;
- (c) The maximum contents of a receptacle shall be 10 kg; and
- (d) Receptacles containing adsorbed or absorbed ammonia shall meet the following conditions:
- (i) Receptacles shall be made of a material compatible with ammonia as specified in ISO 11114-1:2012;
- (ii) Receptacles and their means of closure shall be hermetically sealed and able to contain the generated ammonia;
- (iii) Each receptacle shall be able to withstand the pressure generated at 85 °C with a volumetric expansion no greater than 0.1%;
- (iv) Each receptacle shall be fitted with a device that allows for gas evacuation once pressure exceeds 15 bar without violent rupture, explosion or projection; and
- (v) Each receptacle shall be able to withstand a pressure of 20 bar without leakage when the pressure relief device is deactivated.

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

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

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

"380 (Reserved)".

"381 (Reserved)".

"382 Polymeric beads may be made from polystyrene, poly (methyl methacrylate) or other polymeric material. When it can be demonstrated that no flammable vapour, resulting in a flammable atmosphere, is evolved according to test U1 (Test method for substances

liable to evolve flammable vapours) of Part III, sub-section 38.4.4 of the Manual of Tests and Criteria, polymeric beads, expandable need not be classified under this UN number. This test should only be performed when de-classification of a substance is considered.".

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

"384 (Reserved)".

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

Hybrid electric vehicles powered by both, an internal combustion engine and wet batteries, sodium batteries, lithium metal batteries or lithium ion batteries, carried with the batteries installed shall be assigned to this entry. Vehicles powered by wet batteries, sodium batteries, lithium metal batteries or lithium ion batteries, carried with the batteries installed, shall be assigned to the entry UN No. 3171 BATTERYPOWERED VEHICLE (see special provision 240).

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

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

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

Delete "378-499 (Reserved)". After special provision 386, insert "387-499 (Reserved)".

"664-665 (Reserved)".

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

- (a) For liquid fuels, any valves between the engine or equipment and the fuel tank shall be closed during carriage unless it is essential for the equipment to remain operational. Where appropriate, the vehicles shall be loaded upright and secured against falling;
- (b) For gaseous fuels, the valves between the gas tank and engine shall be closed and the electric contact open;
- (c) Metal hydride storage systems shall be approved by the competent authority of the country of manufacture. If the country of manufacture is not a contracting party to ADN the approval shall be recognized by the competent authority of a contracting party to ADN;
- (d) The provisions of (a) and (b) do not apply to vehicles which are empty of liquid or gaseous fuels,
 - **NOTE 1**: A vehicle is considered to be empty of liquid fuel when the liquid fuel tank has been drained and the vehicle cannot be operated due to a lack of fuel. Vehicle components such as fuel lines, fuel filters and injectors do not need to be cleaned, drained or purged to be considered empty of liquid fuels. In addition, the liquid fuel tank does not need to be cleaned or purged.
 - **NOTE 2:** A vehicle is considered to be empty of gaseous fuels when the gaseous fuel tanks are empty of liquid (for liquefied gases), the pressure in the tanks does not exceed 2 bar and the fuel shut-off or isolation valve is closed and secured."

Footnote * does not apply to the English text.

- "667 (a) The requirements of 2.2.9.1.7 (a) do not apply when pre-production prototype lithium cells or batteries or lithium cells or batteries of a small production run, consisting of not more than 100 cells or batteries, are installed in the vehicle, engine or machinery;
 - (b) The requirements of 2.2.9.1.7 do not apply to lithium cells or batteries installed in damaged or defective vehicles, engine or machinery. In such cases the following conditions shall be met:
 - If the damage or defect has no significant impact on the safety of the cell or battery, damaged and defective vehicles, engines or machinery, may be carried under the conditions defined in special provisions 363 or 666, as appropriate;
 - (ii) If the damage or defect has a significant impact on the safety of the cell or battery, the lithium cell or battery shall be removed and carried according to special provision 376.

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

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

- (a) They do not fulfil the criteria of any class other than Class 9;
- (b) The temperature of the outer surface of the boiler does not exceed 70 °C;
- (c) The boiler is closed in such a way that any loss of product is prevented during carriage;
- (d) The maximum capacity of the boiler is limited to 3 000 l.".

Chapter 3.4

- 3.4.1 (e) Replace "5.2.1.9" by "5.2.1.10".
- 3.4.7 In the heading, replace "Marking for" by "Marking of".
- 3.4.7.1 Replace "marking" by "mark" wherever it appears (4 times).
- 3.4.7.2 At the end of the first sentence, replace "marking" by "mark".
- 3.4.8 In the heading, replace "Marking for" by "Marking of".
- 3.4.8.1 Replace "marking" by "mark" wherever it appears (4 times). Second amendment does not apply to the English text.
- 3.4.8.2 At the end of the first sentence, replace "marking" by "mark".
- 3.4.9 Replace "marking" by "mark" (twice) and "markings" by "marks".
- 3.4.10 Replace "marking" by "mark".
- 3.4.11 Amend to read as follows:

"3.4.11 Use of overpacks

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

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

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

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

- 3.4.13 (a) Amend the end of the second sentence to read as follows: "...and the marks in accordance with 3.4.15.".
- 3.4.13 (b) Amendment does not apply to the English text.
- 3.4.13 (c) Amend the end to read as follows: "...and the marks in accordance with 3.4.15.".
- 3.4.13 In the paragraph after (c), replace "marking affixed to the container is" by "marks affixed to the container are" and at the end, replace "same marking" by "same marks"."
- 3.4.14 Replace "Markings" by "The marks".

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

Chapter 3.5

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

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

- 3.5.2 (e) Replace "markings" by "marks".
- 3.5.4.2 In the paragraph after the figure, replace "marking" by "mark".
- 3.5.4.3 Amend to read as follows:

"3.5.4.3 Use of overpacks

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

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

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

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

Chapter 4.1

4.1.3 In the first sentence, replace "wagons or containers" by "wagons, containers or bulk containers".

In the first indent, delete "with the exception of BK3 containers".

Chapter 5.1

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

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

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

- 5.1.2.1 b) Replace "marking" by "marks".
- 5.1.2.1 b) Replace "5.2.1.9" by "5.2.1.10" and "5.2.1.9.1" by "5.2.1.10.1".
- 5.1.2.3 Replace "markings" by "marks" (twice).
- 5.1.2.3 Replace "5.2.1.9" by "5.2.1.10".

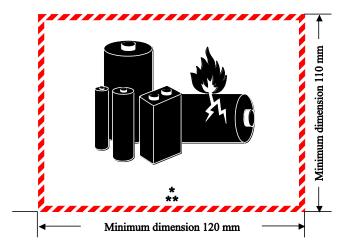
Chapter 5.2

- 5.2.1 In the Note, replace "markings" by "marks".
- 5.2.1.1 Replace "marking" by "mark".
- 5.2.1.2 Replace "markings" by "marks".
- 5.2.1.3 In the second sentence, replace "marking" by "mark".
- 5.2.1.5 In the second sentence replace "marking" by "mark".
- 5.2.1.6 In the last paragraph, replace "These marks" by "These particulars" and replace "marking" by "mark".
- 5.2.1.7.1 In the second sentence replace "markings" by "marks".
- 5.2.1.7.7 Replace "marking" by "mark".
- 5.2.1.8.2 Replace "markings" by "marks".
- 5.2.1.8.3 In the paragraph after the figure, replace "marking" by "mark" (twice).
- 5.2.1 Add a new 5.2.1.9 to read as follows:

"5.2.1.9 Lithium battery mark

- 5.2.1.9.1 Packages containing lithium cells or batteries prepared in accordance with special provision 188 shall be marked as shown in Figure 5.2.1.9.2.
- 5.2.1.9.2 The mark shall indicate the UN number preceded by the letters "UN", i.e. 'UN 3090' for lithium metal cells or batteries or 'UN 3480' for lithium ion cells or batteries. Where the lithium cells or batteries are contained in, or packed with, equipment, the UN number preceded by the letters "UN", i.e. 'UN 3091' or 'UN 3481' as appropriate shall be indicated. Where a package contains lithium cells or batteries assigned to different UN numbers, all applicable UN numbers shall be indicated on one or more marks.

Figure 5.2.1.9.2



Lithium battery mark

- * Place for UN number(s)
- ** Place for telephone number for additional information

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

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

- 5.2.2.1.2 Replace "marking" by "mark".
- 5.2.2.1.6 (b) Replace "marking" by "mark".
- 5.2.2.1.11.1 In the penultimate sentence, replace "markings" by "marks".
- 5.2.2.2.1.1 Figure 5.2.2.2.1.1, in the text for figure note **, insert "/symbol" after "text/number".
- 5.2.2.2.1.2 After the first paragraph, add a new Note to read as follows:

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

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

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

At the beginning of the last paragraph, insert "Except for label model No. 9A,"

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



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

Background: white;

Figure "9" underlined in bottom corner.

Chapter 5.3

- 5.3.1 Insert a new 5.3.1.1.4 to read as follows:
- "5.3.1.1.4 For Class 9 the placard shall correspond to the label model No. 9 as in 5.2.2.2.2; label model No. 9A shall not be used for placarding purposes.".

Renumber existing paragraphs accordingly.

- 5.3.1.2 At the end, add the following new sentence:
- "If all compartments have to bear the same placards, these placards need to be displayed only once along each side and at both ends of the tank container or portable tank.".
- 5.3.1.4.1 In the last sentence of the second paragraph, at the beginning, delete "However, in such case,".
- 5.3.2.1.8 Replace "Orange-coloured marking" by "Orange-coloured plates".
- 5.3.2.3.2 For hazard identification number 40, at the end insert ", or polymerizing substance".
- 5.3.2.3.2 After "68 Toxic substance, corrosive" insert a new line to read "687 Toxic substance, corrosive, radioactive".
- 5.3.2.3.2 After "70 radioactive material" insert a new line to read "768 radioactive material, toxic, corrosive".
- 5.3.3 In the second paragraph, replace "marking" by "mark" and insert a new fourth sentence to read as follows:

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

5.3.6.2 Add a new penultimate sentence to read as follows:

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

Chapter 5.4

5.4.1.1.1 (c) Insert a new third indent as follows:

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

Amend the beginning of the new fourth indent (former third indent) to read:

"for other substances and articles:".

5.4.1.1.6.2.1 Amend last paragraph to read as follows:

"In addition, in such a case

- (a) if the dangerous goods last loaded are goods of Class 2, the information prescribed in 5.4.1.1.1 (c) may be replaced by the number of the class "2".
- (b) if the dangerous goods last loaded are goods of Classes 3, 4.1, 4.2, 4.3, 5.1, 5.2, 6.1, 8 or 9, the information of the goods last loaded, as described in 5.4.1.1.1 (c) may be replaced by the words "WITH RESIDUES OF [...]" followed by the class(es) and subsidiary risk(s) corresponding to the different residues, in the class numbering order.

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

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

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

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

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

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

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

Renumber existing 5.4.1.1.20 as 5.4.1.1.22.

5.4.1.2.2(c) Amend to read as follows:

"(c) (Reserved)".

- 5.4.1.2.2 (d) Ament to read as follows:
- "(d) In the case of tank-containers carrying refrigerated liquefied gases the consignor shall enter in the transport document the date (or time) by which the actual holding time will be exceeded.

"End of holding time: (DD/MM/YYYY)".".

- 5.4.1.2.3 In the heading, after "self-reactive substances" insert "and polymerizing substances".
- 5.4.1.2.3.1 After "self-reactive substances" insert "or polymerizing substances". In the text in parenthesis, after "see 2.2.41.1.17;" insert "for polymerizing substance see 2.2.41.1.21".
- 5.4.3.4 On page 3 of the instructions in writing, in the line for danger label model No. 9, insert the new danger label model No. 9A next to label No. 9".
- 5.4.3.4 Amend the text of Note 2 on page 3 of the model of Instructions in writing as follows: replace "above" by "in column (3) of the table".

Chapter 5.5

- 5.5.2.3.2 In the paragraph after figure 5.5.2.3.2, replace "marking" by "mark" (twice).
- 5.5.3.1.1 Amend to read as follows:
- "5.5.3.1.1 This section is not applicable to substances which may be used for cooling or conditioning purposes when carried as a consignment of dangerous goods, except for the carriage of dry ice (UN No. 1845). When they are carried as a consignment, these substances shall be carried under the relevant entry of Table A of Chapter 3.2 in accordance with the associated conditions of carriage.

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

- 5.5.3.1.5 Amend the end to read as follows:
- "...duration of the journey, the types of containment to be used and the gas concentration limits given in the note to 5.5.3.3.3.".
- 5.5.3.3.3 Amend to read as follows:
- "5.5.3.3.3 Packages containing a coolant or conditioner shall be carried in well ventilated vehicles, wagons and containers. Marking according to 5.5.3.6 is not required in this case.

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

- the load compartment is insulated, refrigerated or mechanically refrigerated equipment, for example as defined in the Agreement on the International Carriage of Perishable Foodstuffs and on the Special Equipment to be Used for such Carriage (ATP) where this requirement is fulfilled;
- for vehicles, gas exchange between the load compartment and the driver's cabin is prevented.

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

5.5.3.4.2 Replace "markings" by "marks".

- 5.5.3.6.1 Amend to read as follows:
- "5.5.3.6.1 Vehicles, wagons and containers containing dangerous goods used for cooling or conditioning purposes that are not well ventilated shall be marked with a warning mark, as specified in 5.5.3.6.2, affixed at each access point in a location where it will be easily seen by persons opening or entering the vehicle, wagon or container. This mark shall remain on the vehicle, wagon or container until the following provisions are met:
 - (a) The vehicle, wagon or container has been well ventilated to remove harmful concentrations of coolant or conditioner; and
 - (b) The cooled or conditioned goods have been unloaded.

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

- 5.5.3.6.2 The amendment does not apply to the English text.
- 5.5.3.6.2 In the paragraph following the caption of figure 5.5.3.6.2, replace "marking" by "mark".

Chapter 7.1

7.1.1.18 In the heading, insert "in bulk containers," after "containers,".

In the text, insert "bulk containers," after "containers,".

- 7.1.2.19.1, second paragraph In the list of paragraphs, insert "1.16.1.1, 1.16.1.2, 1.16.1.3," at the beginning and delete "8.1.8, 8.1.9,".
- 7.1.3.51.4 Amend to read as follows:
- "7.1.3.51.4 The electrical installations in the holds shall be kept switched off and protected against unintentional connection.

This provision does not apply to permanently installed cables passing through the holds, to movable cables connecting containers, stowed according to 7.1.4.4.4, and to apparatus of a certified safe type.".

- 7.1.4 Insert a new paragraph 7.1.4.4.4 to read as follows:
- "7.1.4.4.4 The electrical equipment fitted to the outside of a closed container may be connected with removable electrical cables in accordance with the provisions of 9.1.0.56 and be put into operation provided that:
- (a) Such electrical equipment is of a certified safe type; or
- (b) Such electrical equipment is not of a certified safe type but is separated sufficiently from other containers containing substances of:
 - Class 2 for which a label No. 2.1 is required in column (5) of Table A of Chapter 3.2;
 - Class 3, packing group I or II;
 - Class 4.3;
 - Class 6.1; packing group I or II, with an additional hazard of Class 4.3;
 - Class 8, packing group I, with an additional hazard of Class 3; and

• Class 8, packing group I or II, with an additional hazard of Class 4.3.

This condition is deemed to be met if no container containing the above-mentioned substances is stowed within an area of cylindrical form with a radius of 2.4 m around the electrical equipment and an unlimited vertical extension.

This condition does not apply if containers with electrical equipment which is not of a certified safe type and containers containing the above-mentioned substances are stowed in separate holds.

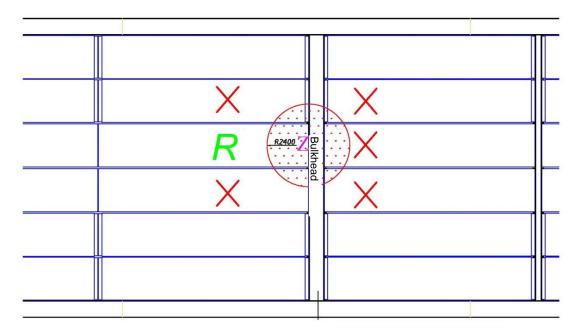
Examples of stowage and segregation of containers

Legend

- R Container (e.g. reefer) with electrical equipment which is not of a certified safe type.
- Z Electrical equipment which is not of a certified safe type.
- X Container not allowed when containing dangerous substances for which sufficient separation is required.

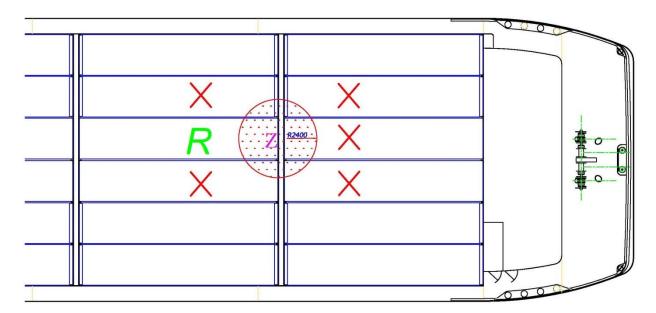
Top **1.** view

On deck

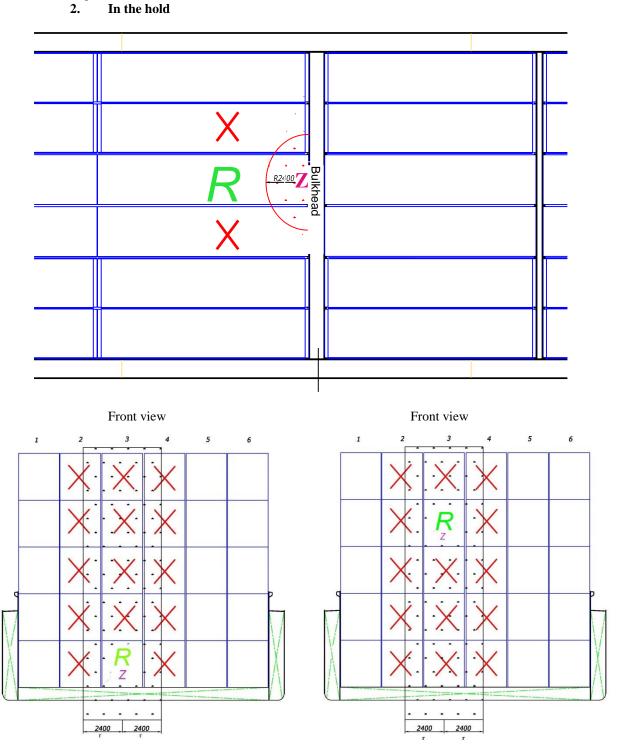


Top view

2. In the hold



Top



7.1.4 Insert a new 7.1.4.4.5 to read as follows:

"7.1.4.4.5 The electrical equipment fitted to an open container may not be connected with removable electrical cables in accordance with the provisions of 9.1.0.56 nor be put into operation unless it is of a certified safe type or the container is placed in a hold which does not contain containers with substances referred to in 7.1.4.4.4 (b)."

- 7.1.4.9 At the end, insert the following Note: "*NOTE*: For transhipment to means of transport of another mode see 7.1.4.7.1.".
- 7.1.4.14.1.1 Add the following sentence at the end:
- "Flexible bulk containers shall be stowed in such way that there are no void spaces between them in the hold. If the flexible bulk containers do not completely fill the hold, adequate measures shall be taken to avoid shifting of cargo.".
- 7.1.4.14.1.2 Add the following sentence at the end:
- "Flexible bulk containers may be stacked on each other in holds provided that the stacking height does not exceed three high. When flexible bulk containers are fitted with venting devices, the stowage of the flexible bulk containers shall not impede their function.".
- 7.1.4.14.7.1.3 After "driver of the vehicle embarked" insert ", persons who are on board for duty reasons".

Chapter 7.2

- 7.2.2.19.3 In the list of paragraphs, insert "1.16.1.1, 1.16.1.2, 1.16.1.3," at the beginning and delete "8.1.8, 8.1.9,".
- 7.2.4.9 Amend the beginning to read: "Partial or complete cargo transfer into another vessel without permission...". Remainder unchanged.
- 7.2.4.9 At the end, insert the following Note: "*NOTE*: For transhipment to means of transport of another mode see 7.2.4.7.1.".
- 7.2.4.16.9 (b) Replace "vapour pipe" by "venting piping".
- 7.2.4.16.17 In the first paragraph, insert "recognized" before "classification society".
- 7.2.4.77 Amend the heading in column 4 of the table to read as follows:
- "3 packing group III (UN No. 1202: second and third entries in table C), 4.1".

Chapter 8.1

- 8.1.2.1 (a) Amend to read as follows:
- "(a) The vessel's certificate of approval referred to in 1.16.1.1 or the vessel's provisional certificate of approval referred to in 1.16.1.3 and the annex referred to in 1.16.1.4;"
- 8.1.2.2 (c) In the third indent, insert "recognized" before "classification society".
- 8.1.2.3 (e) Amend to read as follows:
- "(e) The certificate of class issued by the recognized classification society prescribed in 9.3.1.8.1, 9.3.2.8.1 or 9.3.3.8.1;".
- 8.1.2.6, second sentence Insert the following text before "in his possession": "and the annex covered by 1.16.1.4".
- 8.1.8 and 8.1.9 Delete and replace by "(*Deleted*)".

Chapter 8.2

- 8.2.1.4 Modify the beginning of the first sentence to read as follows:
- "After five years, the certificate shall be renewed by the competent authority or by a body recognized by it if the expert furnishes proof of ...".
- 8.2.1.6 Modify the beginning of the first sentence to read as follows:
- "After five years, the certificate shall be renewed by the competent authority or by a body recognized by it if the expert on the carriage of gases furnishes proof that ...".
- 8.2.1.8 Modify the beginning of the first sentence to read as follows:
- "After five years, the certificate shall be renewed by the competent authority or by a body recognized by it if the expert on the carriage of chemicals furnishes proof that ...".
- 8.2.2.1, 8.2.2.3.4, 8.2.2.5, 8.2.2.6.6, 8.2.2.8 Replace "refresher and advanced course" by "refresher course".
- 8.2.2.6.3 (e) Amend to read as follows:
- "(e) detailed plan for final tests, including, if necessary, the infrastructure and organisation of electronic examinations in accordance with 8.2.2.7.1.7, if these are to be carried out."
- 8.2.2.7.0 Amend the second indent to read as follows:
- "- Specifications of the form of the examinations the examining body is proposing, including, if necessary, the infrastructure and organisation of electronic examinations in accordance with 8.2.2.7.1.7, if these are to be carried out."
- 8.2.2.7.1.5 Delete the last sentence.
- 8.2.2.7.1 Insert a new 8.2.2.7.1.6 and 8.2.2.7.1.7 to read as follows:
- "8.2.2.7.1.6 The competent authority or an examining body designated by the competent authority shall invigilate every examination. Any manipulation and deception shall be ruled out as far as possible. Authentication of candidates shall be ensured.

The use in the written test of documentation other than the texts of regulations on dangerous goods, CEVNI and related police regulations, is not permitted. Non-programmable pocket calculators are authorized for use during specialization courses and shall be supplied by the competent authority or by the examining body designated by the competent authority.

Examination documents (questions and answers) shall be recorded and kept as a print-out or electronically as a file.

- 8.2.2.7.1.7 Written examinations may be performed, in whole or in part, as electronic examinations, where the answers are recorded and evaluated using electronic data processing (EDP) processes, provided the following conditions are met:
- (a) The hardware and software shall be checked and accepted by the competent authority or by the examining body designated by the competent authority.
- (b) Electronic media may be used only if provided by the competent authority or by the examining body designated by the competent authority.
- (c) Proper technical functioning shall be ensured. Arrangements as to whether and how the examination can be continued shall be made in the case of a failure of the devices and applications. No aids shall be available on the input devices (e.g. electronic

search function); the electronic data processing equipment provided shall not allow the candidates to communicate with any other device during the examination.

- (d) There shall be no means of a candidate introducing further data to the electronic media provided; the candidate may only answer the questions posed.
- (e) The final inputs of each candidate shall be logged. The determination of the results shall be transparent.".
- 8.2.2.7.2.5, third paragraph In the one to last sentence, replace "subject" by "part". Amend the last sentence to read as follows: "If the candidate obtains 44 but does not achieve 20 in one part, the part in question may be resat once.".
- 8.2.2.7.2.5, fourth paragraph Amend to read as follows: "The provisions of 8.2.2.7.1.6 and 8.2.2.7.1.7 shall apply by analogy.".
- 8.2.2.7.3.2 Delete the last sentence.
- 8.2.2.7.3.3 Amend the beginning to read: "The provisions of 8.2.2.7.1.2, 8.2.2.7.1.3, 8.2.2.1.7.6 and 8.2.2.1.7.7 shall apply to the administration...". Remainder unchanged.
- 8.2.2.8 After the title, number the text as 8.2.2.8.1.

Add a new paragraph 8.2.2.8.2 to read as follows:

"8.2.2.8.2 Contracting Parties shall provide the UNECE secretariat with an example of the national model for any certificate intended for issue in accordance with this section, along with examples of models for certificates which are still valid. A Contracting Party may additionally provide explanatory notes. The UNECE secretariat shall make the information received available to all Contracting Parties."

Chapter 8.3

- 8.3.1.1 Amend the beginning to read: "Unless otherwise provided for in Part 7, ...".
- 8.3.1.1 (c) Replace "official reasons" by "duty reasons".

Chapter 8.6

- 8.6.1.3 Amend item 10 of the Model for a certificate of approval for tank vessels to read as follows:
- "10. Loading/unloading rate:m³/h¹) or see instructions on loading and unloading 1.".
- 8.6.1.4 Amend item 10 of the Model for a provisional certificate of approval for tank vessels as follows:
- "10. Loading/unloading rate:m³/h¹) or see instructions on loading and unloading¹).".
- 8.6.1.3 and 8.6.1.4 On page 3, insert a row for "inerting facilities" after "cargo refrigeration installation".
- 8.6.1.3 and 8.6.1.4, page 3 of the models Amend the entry for "Opening pressure of the high-velocity vent valve in kPa" to read as follows:

[&]quot;Opening pressure of the high-velocity vent valve/safety valve in kPa".

8.6.3, question 4 Amend to read as follows:

"Have suitable means in accordance with 7.2.4.77 been provided for leaving the vessel, including in cases of emergency?".

Chapter 9.1

Insert a new 9.1.0.1 to read as follows:

"9.1.0.1 Vessel record

NOTE: For the purpose of this paragraph, the term "owner" has the same meaning as in 1.16.0.

The vessel record shall be retained by the owner who shall be able to provide this documentation at the request of the competent authority and the recognized classification society.

The vessel record shall be maintained and updated throughout the life of the vessel and shall be retained for 6 months after the vessel is taken out of service.

Should a change of owner occur during the life of the vessel the vessel record shall be transferred to the new owner.

Copies of the vessel record or all necessary documents shall be made available on request to the competent authority for the issuance of the certificate of approval and for the recognized classification society or inspection body for first inspection, periodic inspection, special inspection or exceptional checks.".

Replace "9.1.0.1 – 9.1.0.10 (Reserved)" by "9.1.0.2 – 9.1.0.10 (Reserved)".

9.1.0.40.2.4 a) In the second sentence, replace "the reinforcements it incorporates" by "their fittings".

9.1.0.40.2.7 (a) Insert "or, if there are no such requirements, to those of a recognized classification society" at the end.

9.1.0.40.2.7 (a) and (c) Amendments do not apply to the English text.

Chapter 9.2

9.2.0.91.2 In the last sentence, replace "class certificate" by "certificate of class".

Chapter 9.3

9.3.X.1 Insert a new paragraph to read as follows:

"9.3.x.1 Vessel record

NOTE: For the purpose of this paragraph, the term "owner" has the same meaning as in 1.16.0.

The vessel record shall be retained by the owner who shall be able to provide this documentation at the request of the competent authority and the recognized classification society.

The vessel record shall be maintained and updated throughout the life of the vessel and shall be retained for 6 months after the vessel is taken out of service.

Should a change of owner occur during the life of the vessel the vessel record shall be transferred to the new owner.

Copies of the vessel record or all necessary documents shall be made available on request to the competent authority for the issuance of the certificate of approval and for the recognized classification society or inspection body for first inspection, periodic inspection, special inspection or exceptional checks.".

Replace "9.3.1.1 – 9.3.1.7 (Reserved)" by "9.3.1.2 – 9.3.1.7 (Reserved)".

Replace "9.3.2.1 – 9.3.2.7 (Reserved)" by "9.3.2.2 – 9.3.2.7 (Reserved)".

Replace "9.3.3.1 – 9.3.3.7 (*Reserved*)" by "9.3.3.2 – 9.3.3.7 (*Reserved*)".

9.3.x.8.1 Amend as follows:

In the first paragraph, delete "in accordance with the rules established by that classification society".

In the second paragraph, add a new last sentence to read: "This shall be confirmed by an appropriate certificate issued by the recognized classification society (certificate of class).".

Delete the third paragraph.

In the last paragraph, insert "recognized" before "classification society".

9.3.1.8.1 Insert a new third paragraph to read as follows:

"The certificate of class shall confirm that the vessel is in conformity with its own additionally applicable rules and regulations that are relevant for the intended use of the vessel.".

- 9.3.1.11.3 (a) After "from the accommodation" insert ", engine rooms".
- 9.3.x.13.3, fourth paragraph In the first sentence, replace "relevant" by "recognized".
- 9.3.x.13 Add a new paragraph to read as follows:
- "9.3.x.13.4 Floatability after damage shall be proved for the most unfavourable loading condition. For this purpose, calculated proof of sufficient stability shall be established for critical intermediate stages of flooding and for the final stage of flooding."
- 9.3.1.14 Renumber existing paragraph as 9.3.1.14.1. Add two new paragraphs to read as follows:
- "9.3.1.14.2 For vessels with cargo tanks of more than 0.70 B in width, proof shall be furnished that the following stability requirements have been complied with:
- (a) In the positive area of the righting lever curve up to immersion of the first non-watertight opening there shall be a righting lever (GZ) of not less than 0.10 m;
- (b) The surface of the positive area of the righting lever curve up to immersion of the first non-watertight opening and in any event up to an angle of heel $< 27^{\circ}$ shall not be less than 0.024 m.rad;
- (c) The metacentric height (GM) shall be not less than 0.10 m.

These conditions shall be met bearing in mind the influence of all free surfaces in tanks for all stages of loading and unloading.

9.3.1.14.3 The most stringent requirement of 9.3.1.14.1 and 9.3.1.14.2 is applicable to the vessel.".

9.3.x.15.2 Add a new first paragraph to read as follows:

"For the intermediate stage of flooding the following criteria have to be fulfilled:

$$GZ >= 0.03m$$

Range of positive GZ: 5°.".

- 9.3.1.25 Insert "9.3.1.25.9 (Reserved)".
- 9.3 Insert a new 9.3.X.25.10 to read as follows:
- "9.3.x.25.10 Compressed air generated outside the cargo area or wheelhouse can be used in the cargo area subject to the installation of a spring-loaded non-return valve to ensure that no gases can escape from the cargo area through the compressed air system into accommodation or service spaces outside the cargo area."
- 9.3.x.40.1, second indent In the second paragraph, insert "or wheelhouse" after "cargo area".
- 9.3.1.40.2.4 a), 9.3.2.40.2.4 a) and 9.3.3.40.2.4 a) In the second sentence, replace "the reinforcements it incorporates" by "their fittings".
- 9.3.1.40.2.7 (a) and (c), 9.3.2.40.2.7 (a) and (c) and 9.3.3.40.2.7 (a) and (c) Amendments do not apply to the English text.
- 9.3.1.40.2.7 (a), 9.3.2.40.2.7 (a) and 9.3.3.40.2.7 (a) Insert "or, if there are no such requirements, to those of a recognized classification society" at the end.
- 9.3.x.52.1 (b) Add the following text at the end:
- "The following equipment may be installed only in double-hull spaces and double bottoms if used for ballasting:
- Permanently fixed submerged pumps with temperature monitoring, of the certified safe type.".
- 9.3.x.52.1 (c), third indent Insert "with temperature monitoring" after "ballast pumps".
- 9.3.2.11.2 (a) and 9.3.2.11.3 (a) Replace "engine room" by "engine rooms".
- 9.3.2.11.2 (e), fifth indent Amendments do not apply to the English text.
- 9.3.2.25.9 and 9.3.3.25.9, paragraph 4 Amendments do not apply to the English text.
- 9.3.2.25.9 and 9.3.3.25.9 In the last paragraph, replace "loading and unloading pressure" by "loading and unloading flows".
- 9.3.3.8.1 In the second paragraph, replace "vessel's class" by "vessel's highest class"

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