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**Economic Commission for Europe**

Inland Transport Committee

Working Party on the Transport of Dangerous Goods

Joint Meeting of Experts on the Regulations annexed to the  
European Agreement concerning the International Carriage  
of Dangerous Goods by Inland Waterways (ADN)  
(ADN Safety Committee)

**Twentieth session**

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Item 4 (a) of the provisional agenda

**Work of the RID/ADR/AND Joint Meeting**

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30 November 2011

**ENGLISH**

**Amendments adopted by the RID/ADR/ADN Joint Meeting  
at its September 2011 session**

**Note by the secretariat**

The secretariat reproduces hereafter for endorsement by the ADN Safety Committee the draft amendments to ADN adopted by the RID/ADR/ADN Joint Meeting at its September 2011 session: ECE/TRANS/WP.15/AC.1/124/Add.1 and ECE/TRANS/WP.15/AC.1/2011/30/Add.1.

The following draft amendments have been extracted from Informal document INF.8 which was adopted by the Working Party on the Transport of Dangerous Goods (WP.15) at its 91<sup>st</sup> session (8-11 November 2011).

Revisions to the draft amendments and new amendments adopted by WP.15 at its 91<sup>st</sup> session for entry into force on 1 January 2013 as reflected in annex I of the report of the session (ECE/TRANS/WP.15/212) are highlighted in yellow in the present document.

## Part 1

### Chapter 1.1

Insert the following new sub-sections:

"1.1.3.8 (Reserved)

**1.1.3.9 Exemptions related to dangerous goods used as a coolant or conditioner during carriage**

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

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

Insert a new section 1.1.5 to read as follows:

**1.1.5 Application of standards**

Where the application of a standard is required and there is any conflict between the standard and the provisions of ADN, the provisions of ADN take precedence."

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

### Chapter 1.2

1.2.1 The amendments to the definition for "Box" and for "Bag" do not apply to the English text.

(Reference document: ECE/TRANS/WP.15/AC.1/124/Add.1)

1.2.1 In the definition of "battery-vehicle", in the first sentence, replace "to a transport unit" by "to this vehicle".

(Reference document: ECE/TRANS/WP.15/212, annex 1)

1.2.1 In the definition for "Bulk container", replace "'Bulk containers" means containment systems" with "'Bulk container" means a containment system". Replace "Bulk containers are" with "A bulk container is". In the second indent, replace "modes of carriage" with "means of transport".

(Reference document: ECE/TRANS/WP.15/AC.1/124/Add.1)

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

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

1.2.1 In the NOTE to the definition for "Cargo transport unit", replace "of Chapter 5.5" with "of 5.5.2".

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

1.2.1 In the definition for "Collective entry", replace "well defined" with "defined".

(Reference document: ECE/TRANS/WP.15/AC.1/124/Add.1)

1.2.1 In the definition for "Combination packaging", replace "for transport purposes" with "for carriage purposes".

(Reference document: ECE/TRANS/WP.15/AC.1/124/Add.1)

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

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

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

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

1.2.1 In the definition of "Maximum permissible gross mass", in (a), amend the text in parentheses to read "for IBCs".

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

1.2.1 Delete the definition of "Maximum permissible load".

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

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

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

1.2.1 In the definition for "Salvage packaging", replace "or leaking" with "leaking or non-conforming".

(Reference document: ECE/TRANS/WP.15/AC.1/124/Add.1)

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

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

1.2.1 Add the following new definitions:

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

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

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

## Chapter 1.3

1.3.1 NOTE 1: Amend the end of the note to read "see 1.8.3 instead of this section".

NOTE 2: Amend the end of the note to read: "see Chapter 8.2 instead of this section".

NOTE 4: Delete

(Reference document: ECE/TRANS/WP.15/212, annex 1)

## Chapter 1.6

1.6.1.1 Replace "2011" and "2010" by "2013" and "2012".

*(Reference document: ECE/TRANS/WP.15/212, annex 1)*

1.6.1 Add the following new transitional measures:

"1.6.1.21-23 *(Reserved)*

1.6.1.24 Lithium cells and batteries manufactured before 1 January 2014 which had been tested in accordance with the requirements applicable until 31 December 2012 but which had not been tested in accordance with the requirements applicable as from 1 January 2013, and appliances containing such lithium cells or batteries, may continue to be carried if all the other applicable requirements are fulfilled."

*(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1, consequential amendments to amendments to 2.2.9.1.7)*

"1.6.1.25 Packages 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 31 December 2013, and, for cylinders of 60 litres water capacity or less, until the next periodic inspection but no later than 30 June 2018."

*(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1, consequential amendment to 5.2.1.1 + ECE/TRANS/WP.15/AC.1/124/Add.1)*

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

*(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1, consequential amendment to 6.6.3.1 and 6.6.3.3)*

"1.6.1.27 Means of containment integral to equipment or machinery containing liquid fuels of UN Nos. 1202, 1203, 1223, 1268, 1863 and 3475 constructed before 1 July 2013, which do not conform to the requirements of special provision 363 of chapter 3.3 4.1.3.3 (e) (±) applicable as from 1 January 2013, may still be used."

*(Reference document: ECE/TRANS/WP.15/AC.1/124/Add.1)*

## Chapter 1.8

1.8.3.3 Amend the fourth indent of the second paragraph to read:

"-the proper training of the undertaking's employees, including on the changes to the regulations, and the maintenance of records of such training;

*(Reference document: ECE/TRANS/WP.15/212, annex 1)*

## Chapter 1.10

1.10.3.1 Amend to read as follows:

**"1.10.3.1 Definition of high consequence dangerous goods**

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

1.10.3.1.2 High consequence dangerous goods in classes other than Class 7 are those listed in Table 1.10.3.1.2 below and carried in quantities greater than those indicated therein.

*[Insert existing Table 1.10.5 renumbered 1.10.3.1.2, but without the entry for Class 7.]*

1.10.3.1.3 For dangerous goods of Class 7, high consequence radioactive material is that with an activity equal to or greater than a transport security threshold of 3 000 A<sub>2</sub> per single package (see also 2.2.7.2.2.1) except for the following radionuclides where the transport security threshold is given in Table 1.10.3.1.3 below.

Table 1.10.3.1.3

**Transport security thresholds for specific radionuclides**

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

<i>Element</i>	<i>Radionuclide</i>	<i>Transport security threshold (TBq)</i>
Ytterbium	Yb-169	3

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

This calculation can be made with the formula:

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

Where:

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

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

1.10.3.1.5 When radioactive material possess subsidiary risks of other classes, the criteria of table 1.10.3.1.2 shall also be taken into account (see also 1.7.5)

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

1.10.3.2.1 and 1.10.3.3 (twice) Replace "high consequence dangerous goods (see Table 1.10.5)" with "high consequence dangerous goods (see Table 1.10.3.1.2) or high consequence radioactive material (see 1.10.3.1.3)".

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1, consequential amendments to amendments to 1.10.3.1)

1.10.4 After "and 0500" insert "and except for UN Nos. 2910 and 2911 if the activity level exceeds the  $A_2$  value". Add the following new sentence at the end "In addition the provisions of this Chapter do not apply to the carriage of UN No. 2912 RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-I) and UN No. 2913 RADIOACTIVE MATERIAL, SURFACE CONTAMINATED OBJECTS (SCO-I)".

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

1.10.5 Delete. Renumber 1.10.6 as 1.10.5.

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1, consequential amendments to amendments to 1.10.3.1)

1.10.6 (Renumbered 1.10.5) In footnote 2, delete the last sentence ("See also "Guidance and Considerations for the Implementation of INFCIRC/225/Rev.4, the Physical Protection of Nuclear Material and Nuclear Facilities, IAEA-TECDOC-967/Rev.1").

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1, consequential amendments to amendments to 1.10.3.1)

## Part 2

### Chapter 2.1

2.1.3.3 In the first sentence, add "meeting the classification criteria of ADN" after "A solution or mixture".

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

2.1.3.5 Add "meeting the classification criteria of ADN and" after "solutions or mixtures".

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

2.1.3.8 Amend to read as follows:

"2.1.3.8 Substances of classes 1 to 6.2, 8 and 9, other than those assigned to UN Nos. 3077 and 3082, meeting the criteria of 2.2.9.1.10 are additionally to their hazards of classes 1 to 6.2, 8 and 9 considered to be environmentally hazardous substances. Other substances meeting the criteria of no other class, but those of 2.2.9.1.10 are to be assigned to UN Nos. 3077 and 3082 as appropriate. "

(Reference document: ECE/TRANS/WP.15/AC.1/124/Add.1)

## Chapter 2.2

2.2.1.1.3 Replace "2.2.1.1.8" with "2.2.1.4".

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1, consequential amendment to renumbering of 2.2.1.1.8)

2.2.1.1.5 For Division 1.6, delete "detonating".

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

2.2.1.1.6 In the description for compatibility group N, delete "detonating".

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

2.2.1.1.8 Transfer the text of 2.2.1.1.8 in a new sub-section 2.2.1.4 with the following modifications:

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

Add a new definition for "CARTRIDGES FOR TOOLS, BLANK" to read as follows:

"CARTRIDGES FOR TOOLS, BLANK: UN No. 0014

Article, used in tools, consisting of a closed cartridge case with a centre or rim fire primer with or without a charge of smokeless or black powder but with no projectile."

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1 + ECE/TRANS/WP.15/AC.1/124/Add.1)

Add a new 2.2.1.1.8 to read as follows:

"2.2.1.1.8 *Exclusion from Class 1*

2.2.1.1.8.1 An article or a substance may be excluded from Class 1 by virtue of test results and the Class 1 definition with the approval of the competent authority of any AND 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.

2.2.1.1.8.2 With the approval of the competent authority in accordance with 2.2.1.1.8.1, an article may be excluded from Class 1 when three unpackaged articles, each individually activated by its own means of initiation or ignition or external means to function in the designed mode, meet the following test criteria:

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

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

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

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

(d) No flash or flame capable of igniting a material such as a sheet of 80 ± 10 g/m<sup>2</sup> paper in contact with the article; and

(e) No production of smoke, fumes or dust in such quantities that the visibility in a one cubic metre chamber equipped with appropriately sized blow out panels is reduced more than 50% as measured by a calibrated light (lux) meter or radiometer located one metre from a constant light source located at the midpoint on opposite walls. The general guidance on Optical Density Testing in ISO 5659-1 and the general guidance on the Photometric System described in Section 7.5 in ISO 5659-2 may be used or similar optical density measurement methods designed to accomplish the same purpose may also be employed. A suitable hood cover surrounding the back and sides of the light meter shall be used to minimize effects of scattered or leaking light not emitted directly from the source.

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

*NOTE 2: The competent authority referred to in 2.2.1.1.8.1 may require testing in packaged form if it is determined that, as packaged for carriage, the article may pose a greater risk."*

*(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1 + ECE/TRANS/WP.15/AC.1/124/Add.1)*

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

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

*(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1 Consequential amendments for chemicals under pressure after the new entries for Table A in Chapter 3.2 + ECE/TRANS/WP.15/AC.1/124/Add.1)*

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

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

*(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1 Consequential amendments for chemicals under pressure after the new entries for Table A in Chapter 3.2)*

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

*(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1 Consequential amendments for chemicals under pressure after the new entries for Table A in Chapter 3.2)*

2.2.2.1.5 Under "Flammable gases", replace "ISO 10156:1996" with "ISO 10156:2010".

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

2.2.2.1.5 Under "Oxidizing gases", replace "ISO 10156:1996 or ISO 10156-2:2005" with "ISO 10156:2010".

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

2.2.2.1.6, first Note Replace "or of pyrophoric gases according to packing instruction P200" with "and gases identified as "Considered as pyrophoric" by table note c of Table 2 of packing instruction P200 of ADR".

(Reference document: ECE/TRANS/WP.15/AC.1/124/Add.1)

Add a new 2.2.2.1.7 to read as follows:

"2.2.2.1.7 *Chemicals under pressure*

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

- A asphyxiant;
- F flammable;
- T toxic;
- C corrosive;
- FC flammable, corrosive;
- TF toxic, flammable.

The classification depends on the hazard characteristics of the components in the different states:

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

**NOTE 1:** *Gases, which meet the definition of toxic gases or of oxidizing gases according to 2.2.2.1.5 or gases identified as "Considered as pyrophoric" by table note c of Table 2 of packing instruction P200 in 4.1.4.1 of ADR, shall not be used as a propellant in chemicals under pressure.*

**NOTE 2:** *Chemicals under pressure with contents meeting the criteria for packing group I for toxicity or corrosivity or with contents meeting both the criteria for packing group II or III for toxicity and for packing group II or III for corrosivity shall not be accepted for carriage under these UN numbers.*

**NOTE 3:** *Chemicals under pressure with components meeting the properties of Class 1; liquid desensitized explosives of Class 3; self-reactive substances and solid desensitized explosives of Class 4.1; Class 4.2; Class 4.3; Class 5.1; Class 5.2; Class 6.2; or Class 7, shall not be used for carriage under these UN numbers.*

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

The following criteria shall apply:

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

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

(i) A flammable liquid is a liquid having a flashpoint of not more than 93 °C;

(ii) A flammable solid is a solid which meets the criteria in 2.2.41.1 ;

(iii) A flammable gas is a gas which meets the criteria in 2.2.2.1.5 ;

(c) Assignment to group T shall apply when the contents, other than the propellant, are classified as Class 6.1, packing groups II or III;

(d) Assignment to group C shall apply when the contents, other than the propellant, meet the criteria for Class 8, packing groups II or III;

(e) When the criteria for two groups amongst groups F, T, and C are met, assignment to groups FC or TF shall apply, as relevant."

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1 Consequential amendments for chemicals under pressure after the new entries for Table A in Chapter 3.2 + ECE/TRANS/WP.15/AC.1/124/Add.1)

2.2.2.3 Add the following new table at the end:

Chemicals under pressure		
Classification code	UN No.	Name of the substance or article
8A	3500	CHEMICAL UNDER PRESSURE, N.O.S.
8F	3501	CHEMICAL UNDER PRESSURE, FLAMMABLE, N.O.S.
8T	3502	CHEMICAL UNDER PRESSURE, TOXIC, N.O.S.
8C	3503	CHEMICAL UNDER PRESSURE, CORROSIVE, N.O.S.
8TF	3504	CHEMICAL UNDER PRESSURE, FLAMMABLE, TOXIC, N.O.S.
8FC	3505	CHEMICAL UNDER PRESSURE, FLAMMABLE, CORROSIVE, N.O.S

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1 Consequential amendments for chemicals under pressure after the new entries for Table A in Chapter 3.2)

2.2.3.1.1, Note 1 At the beginning, delete ", non toxic and non corrosive, ".

(Reference document: ECE/TRANS/WP.15/AC.1/124/Add.1)

2.2.3.1.1, Note 2 Add "including synthetically manufactured products" after "heating oil (light)".

(Reference document: ECE/TRANS/WP.15/210, annex II)

2.2.3.1.2 Replace "F Flammable liquids, without subsidiary risk:" with "F Flammable liquids, without subsidiary risk and articles containing such substances:" and add the following new entry under this heading:

"F3 Articles containing flammable liquids".

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

2.2.3.3 Amend "Flammable liquids" to read "Flammable liquids and articles containing such substances".

In the list of collective entries, for Flammable liquids without subsidiary risk F, insert a new entry to read:

articles	F3	3269 POLYESTER RESIN KIT 3473 FUEL CELL CARTRIDGES or 3473 FUEL CELL CARTRIDGES CONTAINED IN EQUIPMENT or 3473 FUEL CELL CARTRIDGES PACKED WITH EQUIPMENT
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For F1, delete the entry for UN No. 3269 POLYESTER RESIN KIT.

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

2.2.51.3 Replace "Oxidizing substances" with "Oxidizing substances and articles containing such substances".

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

Organic peroxide		Column	Amendment
DIISOPROPYL PEROXYDICARBONATE	(last row)	Concentration	Replace " $\leq 28$ " with " $\leq 32$ "
DIISOPROPYL PEROXYDICARBONATE	(last row)	Diluent type A	Replace " $\geq 72$ " with " $\geq 68$ "
DI-(3,5,5-TRIMETHYLHEXANOYL) PEROXIDE (concentration > 38-82)	(first row)	Concentration	Replace "> 38-82" with "> 52-82"

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

2.2.52.4 Insert the following new entries:

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

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

2.2.62.1.5.3 Add the following new Note at the end:

**"NOTE:** Medical equipment which has been drained of free liquid is deemed to meet the requirements of this paragraph and is not subject to the provisions of ADN."

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1 + ECE/TRANS/WP.15/AC.1/124/Add.1)

Add a new paragraph 2.2.62.1.5.7 to read as follows:

"2.2.62.1.5.7 Except for:

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

medical devices or equipment potentially contaminated with or containing infectious substances which are being carried for disinfection, cleaning, sterilization, repair, or equipment evaluation are not subject to provisions of ADN other than those of this paragraph if packed in packagings designed and constructed in such a way that, under normal conditions of carriage, they cannot break, be punctured or leak their contents. Packagings shall be designed to meet the construction requirements listed in 6.1.4 or 6.6.5.

These packagings shall meet the general packing requirements of 4.1.1.1 and 4.1.1.2 and be capable of retaining the medical devices and equipment when dropped from a height of 1.2 m.

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

*(Replaces the amendment to 2.2.62.1.5 in ECE/TRANS/WP.15/210)*

*(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)*

2.2.8.1.2 Replace "C1-C10 Corrosive substances without subsidiary risk:" with "C1-C11 Corrosive substances without subsidiary risk and articles containing such substances:" and transfer the entry for C11 under this heading.

Amend the heading for CT to read "Corrosive substances, toxic and articles containing such substances".

Under this heading, insert a new subdivision CT3 to read as follows:

"CT3 Articles".

*(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1 Consequential amendment for UN No. 3506 after the new entries for Table A in Chapter 3.2)*

2.2.8.1.6 Add the following table at the end:

"Table 2.2.8.1.6

**Table summarizing the criteria in 2.2.8.1.6**

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

".

*(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)*

2.2.8.3 Amend the headings of the tables as follows:

Replace "Corrosive substances without subsidiary risk" with "Corrosive substances without subsidiary risk and articles containing such substances".

Replace "Corrosive substances with subsidiary risk(s)" with "Corrosive substances with subsidiary risk(s) and articles containing such substances".

In the first table, for Articles, C11, insert the following new entries:

1774	FIRE EXTINGUISHER CHARGES, corrosive liquid
2028	BOMBS, SMOKE, NON-EXPLOSIVE with corrosive liquid, without initiating device
3477	FUEL CELL CARTRIDGES containing corrosive substances, or
3477	FUEL CELL CARTRIDGES CONTAINED IN EQUIPMENT, containing corrosive substances, or
3477	FUEL CELL CARTRIDGES PACKED WITH EQUIPMENT, containing corrosive substances

In the second table, for CT, insert a new entry to read:

articles \_\_\_\_\_ CT3 3506 MERCURY CONTAINED IN MANUFACTURED ARTICLES

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1 Consequential amendment for UN No. 3506 after the new entries for Table A in Chapter 3.2)

2.2.9.1.7 Amend to read as follows:

"Lithium batteries

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

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

**NOTE:** Batteries shall be of a design type proved to meet the testing requirements of the *Manual of test and criteria, part III, sub-section 38.3, irrespective of whether the cells of which they are composed are of a tested design type.*

(b) Each cell and battery incorporates a safety venting device or is designed to preclude a violent rupture under normal conditions of carriage;

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

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

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

- (i) A description of the organizational structure and responsibilities of personnel with regard to design and product quality;
- (ii) The relevant inspection and test, quality control, quality assurance, and process operation instructions that will be used;
- (iii) Process controls that should include relevant activities to prevent and detect internal short circuit failure during manufacture of cells;

- (iv) Quality records, such as inspection reports, test data, calibration data and certificates. Test data shall be kept and made available to the competent authority upon request;
- (v) Management reviews to ensure the effective operation of the quality management programme;
- (vi) A process for control of documents and their revision;
- (vii) A means for control of cells or batteries that are not conforming to the type tested as mentioned in (a) above;
- (viii) Training programmes and qualification procedures for relevant personnel; and
- (ix) Procedures to ensure that there is no damage to the final product.

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

Lithium batteries are not subject to the provisions of ADN if they meet the requirements of special provision 188 of Chapter 3.3.

**NOTE:** *The entry UN 3171 Battery-powered vehicle or UN 3171 Battery-powered equipment only applies to vehicles powered by wet batteries, sodium batteries, lithium metal batteries or lithium ion batteries and equipment powered by wet batteries or sodium batteries transported with these batteries installed.*

*For the purpose of this UN number, 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, e-bikes, wheel-chairs, lawn tractors, boats and aircraft.*

*Examples of equipment are lawnmowers, cleaning machines or model boats and model aircraft. Equipment powered by lithium metal batteries or lithium ion batteries shall be consigned under the entries UN 3091 LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT or UN 3091 LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT or UN 3481 LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT or UN 3481 LITHIUM ION BATTERIES PACKED WITH EQUIPMENT, as appropriate.*

*Hybrid electric vehicles powered by both an internal combustion engine and wet batteries, sodium batteries, lithium metal batteries or lithium ion batteries, transported with the battery(ies) installed shall be classified under the entries UN 3166 vehicle, flammable gas powered or UN 3166 vehicle, flammable liquid powered, as appropriate. Vehicles which contain a fuel cell shall be classified under the entries UN 3166 vehicle, fuel cell, flammable gas powered or UN 3166 vehicle, fuel cell, flammable liquid powered, as appropriate."*

*(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)*

2.2.9.1.14 Add the following new entry in the list before the Note:

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

In the Note, after "3171 battery-powered equipment (wet battery)" insert "(see also the NOTE at the end of 2.2.9.1.7)".

*(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)*

2.2.9.1.14 In the Note, after "UN No. 1845 carbon dioxide, solid (dry ice)", insert a reference "18" to a footnote. The footnote reads as follows: "For UN No. 1845 carbon dioxide, solid (dry ice) used as a coolant, see 5.5.3".

*(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1, consequential amendment to 5.5.3)*

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

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

*(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)*

## Part 3

### Chapter 3.1

3.1.3.2 In the first sentence, add "meeting the classification criteria of ADN" after "A solution or mixture".

*(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)*

3.1.3.3 Add "meeting the classification criteria of ADN" after "A solution or mixture".

*(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)*

### Chapter 3.2

#### 3.2.1, Table A

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

*(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)*

For UN No. 0014, in column (2), after "CARTRIDGES, SMALL ARMS, BLANK", insert "or CARTRIDGES FOR TOOLS, BLANK".

*(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)*

For UN No. 0144, insert "358" and delete "500" in column (6).

*(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)*

For UN No. 1006 and 1046, in column (6), add "653".

*(Reference document: ECE/TRANS/WP.15/AC.1/124/Add.1)*

For UN Nos. 1011, 1049, 1075, 1954, 1965, 1969, 1971 and 1978, insert "660" in column (6).

*(Reference document: ECE/TRANS/WP.15/AC.1/124/Add.1)*

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

*(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)*

Delete the entries for Packing Group I for UN Nos. 1169, 1197, 1266, 1286 and 1287.

*(Reference document: ECE/TRANS/WP.15/AC.1/124/Add.1)*

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

*(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)*

For UN No. 1792:

Add ", SOLID" at the end of the name in column (2).

In column (3b), replace "C1" with "C2".

In column (7a), replace "1 L" with "1 kg"

*(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1 + ECE/TRANS/WP.15/AC.1/124/Add.1)*

For UN No. 1845, after "NOT SUBJECT TO ADN" add "- When used as a coolant, see 5.5.3".

*(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1, consequential amendment to 5.5.3)*

For UN No. 2381:

Insert "+6.1" in column (5).

Amend the classification code in column (3b) to read "FT1".

*(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1 + ECE/TRANS/WP.15/AC.1/124/Add.1)*

For UN No. 2590: In column (7a), replace "0" with "5 kg".

*(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)*

For UN No. 2809:

Insert "+6.1" in column (5) and "365" in column (6). Delete "599" in column (6).

Amend the classification code in column (3b) to read "CT1".

*(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)*

For UN No. 3064, insert "359" in column (6).

*(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)*

For UN Nos. 3090, 3091, 3480 and 3481, delete "656" in column (6).

*(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1, consequential amendment to Chapter 3.3, SP188)*

For UN Nos. 3091 and 3481, insert "360" in column (6).

*(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)*

For UN No. 3171, after "NOT SUBJECT TO ADN" insert ", see also special provision 240 in Chapter 3.3".

*(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1 + ECE/TRANS/WP.15/AC.1/124/Add.1, consequential amendment to Chapter 3.3, SP240)*

For UN Nos. 3175 and 3243, insert "601" in column (6).

(Reference documents: ECE/TRANS/WP.15/AC.1/122, Annex II)

For UN Nos. 3269 (twice) and 3473, in column (3b) replace "F1" with "F3".

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1, consequential amendment to 2.2.3.3)

For UN Nos. 3381 to 3390 and 3488 to 3491, replace "with an inhalation toxicity" with "with an LC<sub>50</sub>" in column (2) and amend the list of collective entries in 2.2.61.3 accordingly.

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

Delete the entries for UN Nos. 3492 and 3493 and amend the list of collective entries in 2.2.61.3 accordingly.

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

For the following entries, amend the name and description in column (2) as indicated below and amend the list of collective entries in 2.2.61.3 accordingly:

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

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

### Chapter 3.3

#### 3.3.1

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

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

**SP188 (c)** Amend to read as follows:

"(c) Each cell or battery meets the provisions of 2.2.9.1.7 (a) and (e);".

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

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

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1 + ECE/TRANS/WP.15/AC.1/124/Add.1)

**SP230** Amend to read as follows:

"**230** Lithium cells and batteries may be carried under this entry if they meet the provisions of 2.2.9.1.7."

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

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

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

**SP272** In the text in parentheses, at the end, add "or UN No. 0150 as appropriate".

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

**SP280** Replace "pressure vessel" with "pressure receptacle".

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

**SP289** Replace "installed in conveyances or in completed conveyance components" with "installed in vehicles, wagons, vessels or aircraft or in completed components".

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

**SP296 (e)** Insert "or liquefied" after "compressed".

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

**SP296** Add the following new paragraph at the end:

"Life-saving appliances packed in strong rigid outer packagings with a total maximum gross mass of 40 kg, containing no dangerous goods other than compressed or liquefied gases of Class 2, group A or group O, in receptacles with a capacity not exceeding 120 ml, installed solely for the purpose of the activation of the appliance, are not subject to the requirements of ADN."

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

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

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

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

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

**SP328** Add the following new paragraph at the end:

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

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

**SP338** Amend paragraph (b) to read as follows:

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

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

**SP356** Amend the first sentence to read as follows: "Metal hydride storage systems installed in vehicles, wagons, vessels or aircraft or in completed components or intended to be installed in vehicles, wagons, vessels or aircraft shall be approved by the competent authority of the country of manufacture<sup>1</sup> before acceptance for carriage."

The text of footnote 1 is unchanged.

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

Replace "358-499 (Reserved)" with "367-499 (Reserved)".

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

**SP500** Amend to read "500 (Deleted)".

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1, consequential amendment to Chapter 3.3, SP358)

**SP 593** At the end add "except as specified in 5.5.3".

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1, consequential amendment to 5.5.3)

**SP599** Amend to read "599 (Deleted)".

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1, consequential amendment to Chapter 3.3, SP366)

**SP 653** Amend the first sentence to read as follows:

"653 The carriage of this gas in cylinders having a test pressure capacity product of maximum 15.2 MPa.litre (152 bar.litre) is not subject to the other provisions of ADN if the following conditions are met: "

(Reference document: ECE/TRANS/WP.15/AC.1/124/Add.1)

**SP 653** Amend the beginning of the fifth indent to read as follows:

"Each package is clearly and durably marked with "UN 1006" for argon compressed, "UN 1013" for carbon dioxide, "UN 1046" for helium compressed or "UN 1066" for nitrogen, compressed..."

(Reference document: ECE/TRANS/WP.15/AC.1/124/Add.1)

**SP 656** Amend to read "656 (Deleted)".

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1, consequential amendment to Chapter 3.3, SP 188)

### 3.3.1

Add the following new special provisions:

"**123** (Reserved)".

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

"**240** See the last NOTE in 2.2.9.1.7."

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1 + ECE/TRANS/WP.15/AC.1/124/Add.1)

"**358** Nitroglycerin solution in alcohol with more than 1% but not more than 5% nitroglycerin may be classified in Class 3 and assigned to UN 3064 provided all the requirements of packing instruction P300 of 4.1.4.1 are complied with."

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

"**359** Nitroglycerin solution in alcohol with more than 1% but not more than 5% nitroglycerin shall be classified in Class 1 and assigned to UN 0144 if not all the requirements of packing instruction P300 of 4.1.4.1 are complied with."

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

"**360** Vehicles only powered by lithium metal batteries or lithium ion batteries shall be classified under the entry UN 3171 battery-powered vehicle."

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

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

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

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

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

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

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

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

Capacitors containing an electrolyte not meeting the classification criteria of any class of dangerous goods, including when installed in equipment, are not subject to other provisions of ADN.

Capacitors containing an electrolyte meeting the classification criteria of any class of dangerous goods, with an energy storage capacity of 10 Wh or less are not subject to other provisions of ADN when they are capable of withstanding a 1.2 metre drop test unpackaged on an unyielding surface without loss of contents.

Capacitors containing an electrolyte meeting the classification criteria of any class of dangerous goods that are not installed in equipment and with an energy storage capacity of more than 10 Wh are subject to ADN.

Capacitors installed in equipment and containing an electrolyte meeting the classification criteria of any class of dangerous goods, are not subject to other provisions of ADN provided the equipment is packaged in a strong outer packaging constructed of suitable material and of adequate strength and design, in relation to the packaging's intended use and in such a manner as to prevent accidental functioning of capacitors during carriage. Large robust equipment containing capacitors may be offered for carriage

unpacked or on pallets when capacitors are afforded equivalent protection by the equipment in which they are contained.

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

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

"362 (Reserved)".

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

"363 This entry also applies to liquid fuels, other than those exempted according to paragraphs (a) or (b) of 1.1.3.3, above the quantity specified in column (7a) of Table A of Chapter 3.2, in means of containment integral to equipment or machinery (e.g. generators, compressors, heating units, etc) as part of their original design type. They are not subject to other provisions of ADN if they meet the following:

- (a) The means of containment are in compliance with the construction requirements of the competent authority of the country of manufacture\*;
- (b) Any valves or openings (e.g. venting devices) in the means of containment containing dangerous goods are closed during carriage;
- (c) The machinery or equipment is loaded in an orientation to prevent inadvertent leakage of dangerous goods and secured by means capable of restraining the machinery or equipment to prevent any movement during carriage which would change the orientation or cause it to be damaged;
- (d) Where the means of containment has a capacity of more than 60 litres but not more than 450 litres, the machinery or equipment is labelled on one external side in accordance with 5.2.2 and where the capacity is greater than 450 litres but not more than 1 500 litres the machinery or equipment is labelled on all four external sides in accordance with 5.2.2; and
- (e) Where the means of containment has a capacity greater than 1 500 litres, the machinery or equipment is placarded on all four external sides in accordance with 5.3.1.1.1, the requirement of 5.4.1 applies and the transport document includes the following additional statement: "Carriage in accordance with Special Provision 363

Deleted: are

(Reference document: ECE/TRANS/WP.15/2011/CRP.4/Add.1 + texte du 1.1.3.3 de ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

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

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

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

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

\* 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).

"**366** Manufactured instruments and articles containing not more than 1 kg of mercury are not subject to ADN."

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

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

**NOTE:** See also 2.2.2.1.7."

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

"**660** For the carriage of fuel gas containment systems designed to be fitted in motor vehicles containing this gas the provisions of sub-section 4.1.4.1, Chapter 5.2, Chapter 5.4 and Chapter 6.2 of ADR need not be applied, provided the following conditions are met:

(a) The fuel gas containment systems meet the requirements of ECE Regulation No. 67 Revision 2 as amended<sup>4</sup>, ECE Regulation No. 110 Revision 1 as amended<sup>5</sup> or ECE Regulation No. 115 as amended<sup>6</sup> or Regulation No. 79/2009<sup>7</sup> in combination with Regulation No. 406/2010<sup>8</sup>, as applicable.

(b) The fuel gas containment systems shall be leakproof and shall not exhibit any signs of external damage which may affect their safety.

**NOTE 1:** Criteria may be found in standard ISO 11623:2002 *Transportable gas cylinders – Periodic inspection and testing of composite gas cylinders (or ISO DIS 19078 Gas cylinders - Inspection of the cylinder installation, and requalification of high pressure cylinders for the on-board storage of natural gas as a fuel for automotive vehicles)*.

**NOTE 2:** If the fuel gas containment systems are not leakproof or overfilled or if they exhibit damage that could affect their safety, they shall only be carried in salvage pressure receptacles in conformity with ADN.

(c) If the fuel gas containment system is equipped with two valves or more integrated in line, two valves shall be so closed as to be gastight under normal conditions of carriage. If only one valve exists or only one valve works properly all openings with the exception of the opening of the pressure relief device shall be so closed as to be gastight under normal conditions of carriage.

<sup>4</sup> ECE Regulation No. 67 (Uniform provisions concerning: I. Approval of specific equipment of motor vehicles using liquefied petroleum gases in their propulsion system; II. Approval of a vehicle fitted with specific equipment for the use of liquefied petroleum gases in its propulsion system with regard to the installation of such equipment).

<sup>5</sup> ECE Regulation No. 110 (Uniform provisions concerning: I. Specific components of motor vehicles using compressed natural gas (CNG) in their propulsion system; II. vehicles with regard to the installation of specific components of an approved type for the use of compressed natural gas (cng) in their propulsion system).

<sup>6</sup> ECE Regulation No. 115 (Uniform provisions concerning the approval of: I. Specific LPG (liquefied petroleum gases) retrofit systems to be installed in motor vehicles for the use of LPG in their propulsion system; II. Specific CNG (compressed natural gas) retrofit systems to be installed in motor vehicles for the use of CNG in their propulsion system).

<sup>7</sup> Regulation (EC) No 79/2009 of the European Parliament and of the Council of 14 January 2009 on type-approval of hydrogen-powered motor vehicles, and amending Directive 2007/46/EC.

<sup>8</sup> Commission Regulation (EU) No 406/2010 of 26 April 2010 implementing Regulation (EC) No 79/2009 of the European Parliament and of the Council on type-approval of hydrogen-powered motor vehicles.

- (d) Fuel gas containment systems shall be carried in such a way as to prevent obstruction of the pressure relief device or any damage to the valves and any other pressurised part of the fuel gas containment systems and unintentional release of the gas under normal conditions of carriage. The fuel gas containment system shall be secured so as to prevent slipping, rolling or vertical movement.
- (e) Fuel gas containment systems shall satisfy the provisions of 4.1.6.8 (a), (b), (c), (d) or (e) of ADR.
- (f) The marking and labelling provisions of Chapter 5.2 shall be met, unless fuel gas containment systems are consigned in a handling device. If so, the markings and danger labels shall be affixed to the handling device.
- (g) Documentation

Every consignment that is carried in accordance with this special provision shall be accompanied by a transport document, containing at least the following information:

- (i) the UN number of the gas contained in the fuel gas containment systems, preceded by the letters "UN";
- (ii) the proper shipping name of the gas;
- (iii) the label model number;
- (iv) the number of fuel gas containment systems;
- (v) in the case of liquefied gases the net mass in kg of the gas of each fuel gas containment system and in the case of compressed gases the nominal capacity in litres of each fuel gas containment system followed by the nominal working pressure;
- (vi) the names and the addresses of the consignor and the consignee.

(i) to (v) shall appear according to one of the following examples:

Example 1: UN 1971 natural gas, compressed, 2.1, 1 fuel gas containment system of 50 l in total, 200 bar

Example 2: UN 1965 hydrocarbon gas mixture, liquefied, n.o.s., 2.1, 3 fuel gas containment systems, each of 15 kg net mass of gas

**NOTE:** All other provisions of ADN shall be applied. "

(Reference document: ECE/TRANS/WP.15/AC.1/124/Add.1)

## Chapter 3.4

3.4.2 Amend to read as follows:

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

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

3.4.3 Add the following text at the beginning: "Except for articles of Division 1.4, Compatibility Group S..."

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

3.4.13 (a) Amend to read as follows:

"(a) Transport units with a maximum mass exceeding 12 tonnes carrying packages with dangerous goods in limited quantities shall be marked in accordance with 3.4.15 at the front and at the rear except when the transport unit contains other dangerous goods for which orange-coloured plate marking in accordance with 5.3.2 is required. In this latter case, the transport unit may display the required orange-coloured plate marking only, or both the orange-coloured plate marking in accordance with 5.3.2 and the marking in accordance with 3.4.15. "

*(Reference document: ECE/TRANS/WP.15/AC.1/124/Add.1)*

3.4.13 (b) Amend to read as follows:

"(b) Containers carrying dangerous goods in limited quantities, on transport units with a maximum mass exceeding 12 tonnes, shall be marked in accordance with 3.4.15 on all four sides except when the container contains other dangerous goods for which placarding in accordance with 5.3.1 is required. In this latter case, the container may display the required placards only, or both the placards in accordance with 5.3.1 and the marking in accordance with 3.4.15."

*(Reference document: ECE/TRANS/WP.15/AC.1/124/Add.1)*

## **Chapter 3.5**

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

"3.5.1.4 Excepted quantities of dangerous goods assigned to codes E1, E2, E4 and E5 with a maximum net quantity of dangerous goods per inner packaging limited to 1 ml for liquids and gases and 1 g for solids and a maximum net quantity of dangerous goods per outer packaging which does not exceed 100 g for solids or 100 ml for liquids and gases are only subject to:

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

(b) The provisions of 3.5.3."

*(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)*

## **Part 5**

### **Chapter 5.2**

5.2.1.1 Insert the following new second sentence: " The UN number and the letters "UN" shall be at least 12 mm high, except for packages of 30 litres capacity or less or of 30 kg maximum net mass and for cylinders of 60 litres water capacity or less, when they shall be at least 6 mm in height and except for packages of 5 litres or 5 kg or less when they shall be of an appropriate size."

*(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1 + ECE/TRANS/WP.15/AC.1/124/Add.1)*

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

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

5.2.1.8.3 Add the following new note at the end:

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

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

5.2.1.9.2 Amend to read as follows:

"5.2.1.9.2 Orientation arrows are not required on:

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

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

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

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

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

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

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

5.2.2.1.2:

In the first paragraph, add "and the environmentally hazardous substance mark when appropriate" after "specified in this section". In the second paragraph, add "and the environmentally hazardous substance mark (see 5.2.1.8.3)" before "may overlap to the extent".

(Reference document: ECE/TRANS/WP.15/210, annex II)

## Chapter 5.3

5.3.1.7.3 Add the following sentence at the end:

"If these labels are not visible from outside the carrying vehicle, placards according to 5.3.1.7.1 shall also be affixed to both sides and at the rear of the vehicle."

(Reference document: ECE/TRANS/WP.15/AC.1/124/Add.1)

5.3.2.1.1:

Add the following new paragraph at the end:

"If a trailer containing dangerous goods is detached from its motor vehicle during carriage of dangerous goods, an orange-coloured plate shall remain affixed to the rear of the trailer."

(Reference document: ECE/TRANS/WP.15/210)

5.3.2.3.2 Insert the following new lines:

"28 gas, corrosive"

"238 gas, flammable corrosive"

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1 Consequential amendments for chemicals under pressure after the new entries for Table A in Chapter 3.2)

## Chapter 5.4

5.4.1.1.5 Amend to read as follows:

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

When dangerous goods are carried in a salvage packaging or salvage pressure receptacle, the words "**SALVAGE PACKAGING**" or "**SALVAGE PRESSURE RECEPTACLE**" shall be added after the description of the goods in the transport document."

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)

5.4.1.1.18 In the first sub-paragraph after "ENVIRONMENTALLY HAZARDOUS", insert: "or "MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS"".

In the second sub-paragraph, delete: "instead of "ENVIRONMENTALLY HAZARDOUS"".

(Reference documents: ECE/TRANS/WP.15/AC.1/122, Annex II + ECE/TRANS/WP.15/AC.1/124/Add.1)

5.4.2 In footnote 5:

5.4.2.3 For "dangerous goods documentation" read "container/vehicle packing certificate".

5.4.2.4 For "dangerous goods transport information" read "container/vehicle packing certificate".

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1 + correction)

## Chapter 5.5

Add the following new section:

(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1 + ECE/TRANS/WP.15/AC.1/124/Add.1)

**5.5.3 Special provisions applicable to packages and vehicles and containers containing substances presenting a risk of asphyxiation when used for cooling or conditioning purposes (such as dry ice (UN 1845) or nitrogen, refrigerated liquid (UN 1977) or argon, refrigerated liquid (UN 1951))**

### 5.5.3.1 *Scope*

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

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

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

**5.5.3.2 General**

5.5.3.2.1 Vehicles and containers containing substances used for cooling or conditioning purposes (other than fumigation) during carriage are not subject to any provisions of ADN other than those of this section.

5.5.3.2.2 When dangerous goods are loaded in cooled or conditioned vehicles and containers any provisions of ADN relevant to these dangerous goods apply in addition to the provisions of this section.

5.5.3.2.3 *(Reserved)*

5.5.3.2.4 Persons engaged in the handling or carriage of cooled or conditioned vehicles and containers shall be trained commensurate with their responsibilities.

**5.5.3.3 Packages containing a coolant or conditioner**

5.5.3.3.1 Packaged dangerous goods requiring cooling or conditioning assigned to packing instructions P203, P620, P650, P800, P901 or P904 of 4.1.4.1 of ADR shall meet the appropriate requirements of that packing instruction.

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

5.5.3.3.3 Packages containing a coolant or conditioner shall be carried in well ventilated vehicles and containers.

**5.5.3.4 Marking of packages containing a coolant or conditioner**

5.5.3.4.1 Packages containing dangerous goods used for cooling or conditioning shall be marked with the name indicated in Column (2) of Table A of Chapter 3.2 of these dangerous goods followed by the words "AS COOLANT" or "AS CONDITIONER" as appropriate in an official language of the country of origin and also, if that language is not English, French or German, in English, French or German, unless agreements concluded between the countries concerned in the transport operation provide otherwise.

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

**5.5.3.5 Vehicles and containers containing unpackaged dry ice**

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

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

**5.5.3.6 Marking of vehicles and containers**

5.5.3.6.1 Vehicles and containers containing dangerous goods used for cooling or conditioning shall be marked with a warning mark, as specified in 5.5.3.6.2 affixed at each access point in a location where it will be easily seen by persons opening or entering the

vehicle or container. This mark shall remain on the vehicle or container until the following provisions are met:

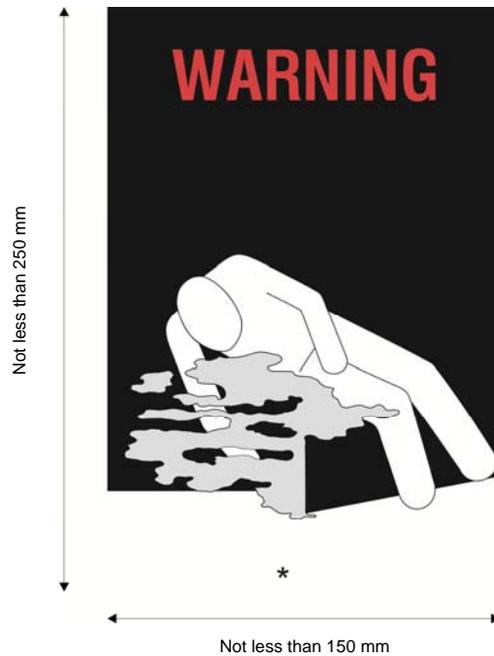
- (a) The vehicle or container has been ventilated to remove harmful concentrations of coolant or conditioner; and
- (b) The cooled or conditioned goods have been unloaded.

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

- (a) The word "WARNING" in red or white with lettering not less than 25 mm high in an official language of the country of origin and also, if that language is not English, French or German, in English, French or German, unless agreements concluded between the countries concerned in the transport operation provide otherwise; and
- (b) The name indicated in Column (2) of Table A of Chapter 3.2 followed by the words "AS COOLANT" or "AS CONDITIONER" as appropriate, shown below the symbol in black letters on a white background with lettering not less than 25 mm high in an official language of the country of origin and also, if that language is not English, French or German, in English, French or German, unless agreements concluded between the countries concerned in the transport operation provide otherwise.

For example: CARBON DIOXIDE, SOLID, AS COOLANT.

An illustration of this mark is given below.



\* insert the name indicated in Column (2) of Table A of Chapter 3.2 followed by the words "AS COOLANT" or "AS CONDITIONER" as appropriate.

### 5.5.3.7 Documentation

5.5.3.7.1 Documents (such as a bill of lading, cargo manifest or CMR/CIM consignment note) associated with the carriage of vehicles or containers that have been cooled or conditioned and have not been completely ventilated before carriage shall include the following information:

- (a) The UN number preceded by the letters "UN"; and
- (b) The name indicated in Column (2) of Table A of Chapter 3.2 followed by the words "AS COOLANT" or "AS CONDITIONER" as appropriate in an official language of the country of origin and also, if that language is not English, French or German, in English, French or German, unless agreements, if any, concluded between the countries concerned in the transport operation provide otherwise.

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

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

*(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1 + ECE/TRANS/WP.15/AC.1/124/Add.1)*

## Part 7

### Chapter 7.1

7.1.1.18 In the heading and in the text, insert "bulk containers," after "large packagings,".

*(Reference document: ECE/TRANS/WP.15/AC.1/2011/30/Add.1)*

7.1.4.14.1.4 Insert "and overpacks" after "packages".

*(Document de référence : ECE/TRANS/WP.15/AC.1/2011/29)*