



**Economic and Social
Council**

Distr.
GENERAL

ECE/TRANS/WP.15/AC.2/2008/9
12 November 2007

ENGLISH
Original: ENGLISH and FRENCH

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)*

Twelfth session
Geneva, 21-25 January 2008
Item 4 (a) of the provisional agenda

PROPOSALS FOR AMENDMENTS TO THE REGULATIONS ANNEXED TO ADN**

Work of the RID/ADR/ADN Joint Meeting

Note by the secretariat

1. In conformity with the objectives fixed by the Inland Transport Committee at its 68th session in 2006 in its programme of work for 2006-2010 (ECE/TRANS/166/Add.1, activity 02.7 (b)), the meeting of Experts is mandated to consider proposed amendments relating expressly to the Regulations annexed to the European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways and pertaining to administrative and technical questions concerning their implementation, in order to ensure the necessary updating of those provisions and the introduction of a uniform, harmonized and coherent system for the regulation of the national and international transport of dangerous goods by inland waterway throughout Europe.

2. The Joint Meeting is invited to consider amendment proposals adopted by the RID/ADR/ADN Joint Meeting at its sessions held in March 2006, September 2006, March 2007 and September 2007.

* This meeting is organized jointly by the Economic Commission for Europe and the Central Commission for the Navigation of the Rhine (CCNR).

** Distributed in German by the CCNR under the symbol CCNR/ZKR/ADN/WP.15/AC.2/2008/9.

PART 1

Chapter 1.1

1.1.3.1 (a) Add a new second sentence to read as follows:

“When these goods are flammable liquids carried in refillable receptacles filled by, or for, a private individual, the total quantity shall not exceed 60 litres per receptacle and 240 litres [per transport unit].”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/22/Rev.1 and INF.62, ECE/TRANS/WP.15/AC.1/108/Add.2)

1.1.3.2 (c) Amend the first sentence to read as follows: “gases of Groups A and O (according to 2.2.2.1), if the pressure of the gas in the receptacle or tank at a temperature of 20 °C does not exceed 200 kPa (2 bar) and if the gas is not a liquefied or a refrigerated liquefied gas .”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

1.1.3.4 In the heading, replace “in limited quantities” with “in limited or excepted quantities”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

1.1.3.4.2 Delete “packed in limited quantities”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/108/Add.2)

1.1.3.4.3 Insert a new paragraph 1.1.3.4.3 to read as follows:

“1.1.3.4.3 Certain dangerous goods may be subject to exemptions provided that the conditions of Chapter 3.5 are met.”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

Add a new section 1.1.3.7 to read as follows:

“1.1.3.7 Exemptions related to the carriage of lithium batteries

The provisions laid down in ADN do not apply to:

- (a) Lithium batteries installed in a means of transport/vehicle, performing a transport operation and destined for its propulsion or for the operation of any of its equipment;

- (b) Lithium batteries contained in an equipment for the operation of this equipment used or intended for the use during transport carriage (e.g. a laptop computer).”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/108/Add.2)

Chapter 1.2

1.2.1 In the definition of “*Container*”:

Add a new fifth indent to read as follows:

“- having an internal volume of not less than 1 m³, except for containers for the carriage of radioactive material.”.

Before “A swap body”, delete “(see also “*Closed container*”, “*Large container*”, “*Open container*”, “*Sheeted container*” and “*Small container*”)” and add a new paragraph to read “In addition:” followed by the existing definitions of “*Small container*”, “*Large container*”, “*Closed container*”, “*Open container*” and “*Sheeted container*”.

At the places where the definitions of “*Open container*”, “*Closed container*”, “*Large container*”, “*Sheeted container*” and “*Small container*” currently appear, add a reference to the definition of “*Container*” as follows:

“*Open container*”/“*Closed container*”/“*Large container*”/“*Sheeted container*”/“*Small container*”, see “*Container*”.

In the Note after the definition add “Nevertheless, a container may be used as a packaging for the carriage of radioactive material.”

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/32 + ECE/TRANS/WP.15/AC.1/108/Add.2)

In the definition of “*Large container*”, amend (a) to read as follows:

- “(a) a container which does not meet the definition of a small container;”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/32 + ECE/TRANS/WP.15/AC.1/108/Add.2)

Amend the definition of “*Small container*” to read as follows:

“Small container means a container which has either any overall outer dimension (length, width or height) less than 1.5 m, or an internal volume of not more than 3 m³.”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

Delete the note after the definitions of “*Package*”, “*Packaging*”, “*Large container*” and “*Small container*”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

In the definition of “*Packaging*”, amend the text before the parenthesis to read as follows:

“*Packaging* means one or more receptacles and any other components or materials necessary for the receptacles to perform their containment and other safety functions.”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

In the definition of “*Composite IBC with plastics inner receptacle*”, in the Note, insert “*material*” after “*Plastics*” and delete “, etc”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

In the definition for “aerosol or aerosol dispenser”, replace “6.2.4” with: “6.2.6”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/106/Add.2)

Insert the following new definitions in alphabetical order:

“*Animal material* means animal carcasses, animal body parts, or animal foodstuffs;”

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

[“*Applicant* means, in the case of conformity assessment, the manufacturer or its authorised representative in a Member State / Contracting Party. In the case of periodic testing and exceptional checks, “*applicant*” means the testing facility, the operator or their authorised representative in a Member State / Contracting Party;

NOTE: *Exceptionally a third party (for instance an operator in accordance with the definition of 1.2.1) may apply for the conformity assessment.*”]

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/106/Add.2)

“*Approval*

Multilateral approval, for the carriage of Class 7 material, means approval by the relevant competent authority of the country of origin of the design or shipment, as applicable, and by the competent authority of each country through or into which the consignment is to be carried. The term “through or into” specifically excludes “over”, i.e. the approval and notification requirements shall not apply to a country over which radioactive material is carried in an aircraft, provided that there is no scheduled stop in that country;

Unilateral approval, for the carriage of Class 7 material, means an approval of a design which is required to be given by the competent authority of the country of origin of the design only. If the country of origin is not a Contracting Party to ADN, the approval shall require validation by the competent authority of the first Contracting Party to ADN reached by the consignment (see 6.4.22.6 of ADR);”

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

“*Confinement system*, for the carriage of Class 7 material, means the assembly of fissile material and packaging components specified by the designer and agreed to by the competent authority as intended to preserve criticality safety;”

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

[“*Conformity Assessment* means the process of verifying the conformity of a product according to the provisions of sections 1.8.6 and 1.8.7 related to type approval, supervision of manufacture and initial inspection and testing;”]

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/106/Add.2)

“*Containment system*, for the carriage of Class 7 material, means the assembly of components of the packaging specified by the designer as intended to retain the radioactive material during carriage;”

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

“*Criticality safety index (CSI) assigned to a package, overpack or container containing fissile material*, for the carriage of Class 7 material, means a number which is used to provide control over the accumulation of packages, overpacks or containers containing fissile material;”

The acronym “CSI” used in the English version should not be translated and should appear unchanged in all linguistic versions. In the definition of 1.2.1, the acronym should appear after the corresponding term in alphabetical order, with an associated footnote reading as follows: “The acronym “CSI” stands for the English term “Criticality Safety Index”. ”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

“*Design*, for the carriage of Class 7 material, means the description of special form radioactive material, low dispersible radioactive material, package or packaging which enables such an item to be fully identified. The description may include specifications, engineering drawings, reports demonstrating compliance with regulatory requirements, and other relevant documentation;”

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

“*Exclusive use*, for the carriage of Class 7 material, means the sole use, by a single consignor, of a wagon/vehicle/conveyance or of a large container, in respect of which all initial, intermediate and final loading and unloading is carried out in accordance with the directions of the consignor or consignee;”

Consequential amendment:

In the note after the definition of “Full load”, delete “, see 2.2.7.2”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

“*Maximum normal operating pressure*, for the carriage of Class 7 material, means the maximum pressure above atmospheric pressure at mean sea-level that would develop in the containment system in a period of one year under the conditions of temperature and solar radiation corresponding to environmental conditions in the absence of venting, external cooling by an ancillary system, or operational controls during carriage;”

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

“*Radiation level*, for the carriage of Class 7 material, means the corresponding dose rate expressed in millisieverts per hour;”

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

“*Radioactive contents*, for the carriage of Class 7 material, mean the radioactive material together with any contaminated or activated solids, liquids, and gases within the packaging;”

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

“*Transport index (TI) assigned to a package, overpack or container, or to unpackaged LSA-I or SCO-I*, for the carriage of Class 7 material, means a number which is used to provide control over radiation exposure;”.

The acronym “TI” used in the English version should not be translated and should appear unchanged in all linguistic versions. In the definition of 1.2.1, the acronym should appear after the corresponding term in alphabetical order, with an associated footnote reading as follows: “The acronym “TI” stands for the English term “Transport Index”.”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

Chapter 1.3

- 1.3.1 Add a new Note 3 to read as follows:
“**NOTE 3:** For training with regard to Class 7, see also 1.7.2.7.”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1)

- Add a new Note to read as follows:
“**NOTE 4:** The training shall be effected before taking on responsibilities concerning the carriage of dangerous goods.”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1, INF.58 +
ECE/TRANS/WP.15/AC.1/108/Add.2)

- 1.3.2.4 Delete.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

Chapter 1.6

- 1.6.1 Add the following new transitional measures:

“1.6.1.11-12 (Reserved).”

- “1.6.1.13 Plates in accordance with the provisions of 5.3.2.2.1 and 5.3.2.2.2 applicable until 31 December 2008 may be used until 31 December 2009.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/106/Add.2)

- 1.6.1.14 IBCs manufactured before 1 January 2011 in accordance with the requirements in force up to 31 December 2010 and conforming to a design type which has not passed the vibration test of 6.5.6.13 of ADR may still be used.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

- 1.6.1.15 Amend to read as follows:

“1.6.1.15 IBCs manufactured, remanufactured or repaired before 1 January 2011 need not be marked with the maximum permitted stacking load in accordance with 6.5.2.2.2 of ADR. Such IBCs, not marked in accordance with 6.5.2.2.2 of ADR, may still be used after 31 December 2010 but must be marked in accordance with 6.5.2.2.2 of ADR if they are remanufactured or repaired after that date.”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/108/Add.2)

- 1.6.1.16 Animal material affected by pathogens included in Category B, other than those which would be assigned to Category A if they were in culture (see

2.2.62.1.12.2), may be carried in accordance with provisions determined by the competent authority until 31 December 2014.¹”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

1.6.1 Add a new sub-section 1.6.1.17 to read as follows:

“1.6.1.17 Substances of classes 1 to 9 other than those assigned to UN Nos. 3077 or 3082 to which the classification criteria of 2.2.9.1.10 have not been applied and which are not marked in accordance with 5.2.1.8 and 5.3.6 may still be carried until 31 December 2010 without application of the provisions concerning the carriage of environmentally hazardous substances.”.

(Ref. Doc.: INF.58+ ECE/TRANS/WP.15/AC.1/108/Add.2)

“1.6.1.18 The provisions of sections 3.4.9 to 3.4.12 need only be apply as from 1 January 2011.”.

(Ref. Doc ECE/TRANS/WP.15/AC.1/2007/60+ ECE/TRANS/WP.15/AC.1/108/Add.2)

1.6.2 Amend the heading to read: “Pressure receptacles and receptacles for class 2”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/104, annex 1)

Chapter 1.7

In the heading of the Chapter, replace “REQUIREMENTS” with “PROVISIONS”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

Amend the heading of 1.7.1 to read as follows: “**1.7.1 Scope and application**”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

1.7.1 Add the following new notes under the heading:

“**NOTE 1:** *In the event of accidents or incidents during the carriage of radioactive material, emergency provisions, as established by relevant national and/or international organizations, shall be observed to protect persons, property and the environment. Appropriate guidelines for such provisions are contained in “Planning and Preparing for Emergency Response to Transport Accidents Involving Radioactive Material”, Safety Standard Series No. TS-G-1.2 (ST-3), IAEA, Vienna (2002).*”

¹ Regulations for dead infected animals are contained e.g. in Regulation (EC) No. 1774/2002 of the European Parliament and of the Council of 3 October 2002 laying down health rules concerning animal by-products not intended for human consumption (Official Journal of the European Communities, No. L 273 of 10.10.2002, p. 1).

NOTE 2: *Emergency procedures shall take into account the formation of other dangerous substances that may result from the reaction between the contents of a consignment and the environment in the event of an accident.”.*

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

1.7.1.1 [Unchanged. The reference to TS-G-1.1 needs to be updated when the revised edition will be published by IAEA.]

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

1.7.1.4 Insert a new sub-section 1.7.1.4 to read as follows:

“1.7.1.4 The provisions laid down in ADN do not apply to the carriage of:

- (a) Radioactive material that is an integral part of the means of transport;
- (b) Radioactive material moved within an establishment which is subject to appropriate safety regulations in force in the establishment and where the movement does not involve public roads or railways;
- (c) Radioactive material implanted or incorporated into a person or live animal for diagnosis or treatment;
- (d) Radioactive material in consumer products which have received regulatory approval, following their sale to the end user;
- (e) Natural material and ores containing naturally occurring radionuclides which are either in their natural state, or have only been processed for purposes other than for extraction of the radionuclides, and which are not intended to be processed for use of these radionuclides provided the activity concentration of the material does not exceed 10 times the values specified in 2.2.7.2.2.1 (b), or calculated in accordance with 2.2.7.2.2.2 to 2.2.7.2.2.6;
- (f) Non-radioactive solid objects with radioactive substances present on any surfaces in quantities not in excess of the limit set out in the definition for “contamination” in 2.2.7.1.2.”.

Consequential amendment: *In 1.1.3.1, 1.1.3.4 and 1.8.3.2 replace “2.2.7.1.2” with “1.7.1.4”.*

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

Insert a new sub-section 1.7.1.5 to read as follows:

“1.7.1.5 *Specific provisions for the carriage of excepted packages*

Excepted packages as specified in 2.2.7.2.4.1 shall be subject only to the following provisions of Parts 5 to 7:

- (a) The applicable requirements in 5.1.2, 5.1.3.2, 5.1.4, 5.2.1.2, 5.2.1.7.1 to 5.2.1.7.3, 5.2.1.9, 5.4.1.1.1 (a), (g) and (h) [and 7.5.11 CV33 (5.2) of ADR];
- (b) The requirements for excepted packages specified in 6.4.4 of ADR; and
- (c) If the excepted package contains fissile material, one of the fissile exceptions provided by 2.2.7.2.3.5 shall apply and the requirement of 6.4.7.2 of ADR shall be met.

Excepted packages are subject to the relevant provisions of all other parts of ADN.”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

Consequential amendment: in Chapter 3.3, SP290, replace "2.2.7.9.1" by "1.7.1.5.1".

1.7.2.2 Amend to read as follows:

“1.7.2.2 Doses to persons shall be below the relevant dose limits. Protection and safety shall be optimized in order that the magnitude of individual doses, the number of persons exposed, and the likelihood of incurring exposure shall be kept as low as reasonably achievable, economic and social factors being taken into account within the restriction that the doses to individuals be subject to dose constraints. A structured and systematic approach shall be adopted and shall include consideration of the interfaces between carriage and other activities.”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

1.7.2.3 Amend to read as follows:

“1.7.2.3 The nature and extent of the measures to be employed in the programme shall be related to the magnitude and likelihood of radiation exposures. The programme shall incorporate the requirements in 1.7.2.2, 1.7.2.4 to 1.7.2.7. Programme documents shall be available, on request, for inspection by the relevant competent authority.”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

1.7.2.4 Add the following new note at the end (*Remainder unchanged*):

“NOTE: For occupational exposures arising from transport activities, where it is assessed that the effective dose is most unlikely to exceed 1mSv in a year, no special work patterns, detailed monitoring, dose assessment programmes or individual record keeping need be required.”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

1.7.2.5 Add a new sub-section to read as follows:

“1.7.2.5 Workers [(see 7.5.11, CW33/CV33 NOTE 3 of ADR)] shall receive appropriate training concerning radiation protection including the precautions to be observed in order to restrict their occupational exposure and the exposure of other persons who might be affected by their actions.”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

1.7.4.1 Delete “of radioactive material” after “consignments” and replace “the applicable requirements of ADN” with “the requirements of ADN applicable to radioactive material”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

Chapter 1.8

1.8.3.2 (a) Replace “and 3.4” with “, 3.4 and 3.5”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

Chapter 1.10

Table 1.10.5

In the table, for Class 3, in the entry for “Desensitized explosives”, in the fourth column (Tank (I)), replace “a” with “0”.

In the heading row, add a reference “c” to a footnote after “Tank (I)”. The footnote reads as follows: “A value indicated in this column is applicable only if carriage in tanks is authorized, in accordance with chapter 3.2, table A, column 10 or 12 of ADR. For substances that are not authorized for carriage in tanks, the instruction in this column is not relevant.”.

In the heading row, add a reference “d” to a footnote after “Bulk (kg)”. The footnote reads as follows: “A value indicated in this column is applicable only if carriage in bulk is authorized, in accordance with chapter 3.2, table A, column 10 or 17 of ADR. For substances that are not authorized for carriage in bulk, the instruction in this column is not relevant.”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/50 as amended,
ECE/TRANS/WP.15/AC.1/108/Add.2)

Table 1.10.5 Add a new fourth line for Class 1, Division 1.4, to read as follows:

Class	Division	Substance or article	Quantity		
			Tank (l) a	Bulk (kg) a	Packages (kg) 0
1	1.4	Explosives of UN Nos. 0104, 0237, 0255, 0267, 0289, 0361, 0365, 0366, 0440, 0441, 0455, 0456 and 0500			

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

Class 5.1, amend the second entry in the third column to read as follows:
“Perchlorates, ammonium nitrate, ammonium nitrate fertilisers and ammonium nitrate emulsions or suspensions or gels”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

PART 2

Chapter 2.1

2.1.3.5.5 Add a new paragraph 2.1.3.5.5 as follows:

“2.1.3.5.5 If the substance to be carried is a waste, with a composition that is not precisely known, its assignment to a UN number and packing group in accordance with 2.1.3.5.2 may be based on the consignor’s knowledge of the waste, including all available technical and safety data as requested by safety and environmental legislation in force*.

In case of doubt, the highest danger level shall be taken.

If however, on the basis of the knowledge of the composition of the waste and the physical and chemical properties of the identified components, it is possible to demonstrate that the properties of the waste do not correspond to the properties of the packing group I level, the waste may be classified by default in the most appropriate n.o.s. entry of packing group II.

* Such legislation is for instance the Commission Decision 2000/532/EC of 3 May 2000 replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste (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) and Council Decision 94/904/EC establishing a list of hazardous wastes pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous wastes (Official Journal of the European Communities No. L 226 of 6 September 2000, page 3).

This procedure may not be used for wastes containing substances mentioned in 2.1.3.5.3, substances of Class 4.3, substances of the case mentioned in 2.1.3.7 or substances which are not accepted for carriage in accordance with 2.2.x.2.”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/106/Add.2)

Chapter 2.2

2.2.1.1.7.5 In the table, against “Shell, spherical or cylindrical / preloaded mortar, shell in mortar”, insert new third entry as follows:

Specification	Classification
Colour shell: > 25% flash composition as loose powder and/or report effects	1.1G

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

Amend Note 2 to read as follows:

“NOTE 2: “Flash composition” in this table refers to pyrotechnic compositions in powder form or as pyrotechnic units as presented in the fireworks, that are used to produce an aural effect, or used as a bursting charge or lifting charge, unless the time taken for the pressure rise is demonstrated to be more than 8 ms for 0.5 g of pyrotechnic composition in Test Series 2(c)(i) “Time/pressure test” of the Manual of Tests and Criteria.”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

2.2.1.1.8 For “SIGNALS, SMOKE”, add “, 0507” at the end.
For “SIGNALS, DISTRESS, ship”, add “, 0505, 0506” at the end.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

2.2.2.3 In the table for Other articles containing gas under pressure, for Classification code 6F, add the following new entries:

- “3478 FUEL CELL CARTRIDGES, containing liquefied flammable gas or
- 3478 FUEL CELL CARTRIDGES CONTAINED IN EQUIPMENT, containing liquefied flammable gas or
- 3478 FUEL CELL CARTRIDGES PACKED WITH EQUIPMENT, containing liquefied flammable gas

- 3479 FUEL CELL CARTRIDGES, containing hydrogen in metal hydride or
- 3479 FUEL CELL CARTRIDGES CONTAINED IN EQUIPMENT, containing hydrogen in metal hydride or
- 3479 FUEL CELL CARTRIDGES PACKED WITH EQUIPMENT, containing hydrogen in metal hydride”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

2.2.3.1.5 At the beginning, replace “and non-corrosive” with “non-corrosive and non-environmentally hazardous”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

2.2.41.1.18 Replace “and 3380” with “, 3380 and 3474”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

2.2.41.3 Under “Solid desensitized explosive”, classification code D, for UN 3344, insert “(PENTAERYTHRITOL TETRANITRATE, PETN)” after “PENTAERYTHRITOL TETRANITRATE”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

2.2.43.2 Delete “solids, flammable, assigned to UN No. 3132, water-reactive” and “and water-reactive solids, self-heating, assigned to UN No. 3135”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/104, annex 1)

2.2.43.3 WF2 UN 3132 Delete “(not allowed, see 2.2.43.2)”.
WS UN 3135 Delete “(not allowed, see 2.2.43.2)”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/104, annex 1)

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

Organic peroxide		Column	Amendment
tert-AMYLPEROXY-3,5,5-TRIMETHYLHEXANOATE		Packing method	Replace “OP5” with “OP7”
		Number	Replace “3101” with “3105”
DICUMYL PEROXIDE (Concentration > 52-100)	(1 st row)	Inert solid	Delete “≤ 57”
DI-(2-ETHYLHEXYL) PEROXYDICARBONATE (Concentration ≤ 62 as a stable dispersion in water)	(3 rd row)	Number	Replace “3117” with “3119”
DI-(2-ETHYLHEXYL) PEROXYDICARBONATE (Concentration ≤ 52 as a stable dispersion in water)	(4 th row)	Delete	

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

Insert the following new entries:

Organic peroxide	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
tert-AMYL PEROXYNEODECANOATE	≤ 47	≥ 53				OP8	0	+ 10	3119	
tert-BUTYL PEROXY 3,5,5-TRIMETHYLHEXANOATE	≤ 42			≥ 58		OP7			3106	
CUMYL PEROXYNEODECANOATE	≤ 87	≥ 13				OP7	- 10	0	3115	
2,2-DI-(tert-AMYLPEROXY)-BUTANE	≤ 57	≥ 43				OP7			3105	
1,1-DI-(tert-BUTYLPEROXY)-CYCLOHEXANE	≤ 72		≥ 28			OP5			3103	30)
1,1-DI-(tert-BUTYLPEROXY)-CYCLOHEXANE + tert-BUTYL PEROXY-2-ETHYLHEXANOATE	≤ 43 + ≤ 16	≥ 41				OP 7			3105	
1,1-DI-(tert-BUTYLPEROXY)-3,3,5-TRIMETHYL-CYCLOHEXANE	≤ 90		≥ 10			OP5			3103	30)
DI-2,4-DICHLOROBENZOYL PEROXIDE	≤ 52 as a paste					OP8	+ 20	+ 25	3118	
3-HYDROXY-1,1-DIMETHYLBUTYL PEROXYNEODECANOATE	≤ 77	≥ 23				OP 7	- 5	+ 5	3115	
3-HYDROXY-1,1-DIMETHYLBUTYL PEROXYNEODECANOATE	≤ 52 as a stable dispersi on in water					OP 8	- 5	+ 5	3119	
3-HYDROXY-1,1-DIMETHYLBUTYL PEROXYNEODECANOATE	≤ 52	≥ 48				OP 8	- 5	+ 5	3117	
METHYL ISOPROPYL KETONE PEROXIDE(S)	See remark 31)	≥ 70				OP8			3109	31)
3,3,5,7,7-PENTAMETHYL-1,2,4-TRIOXEPANE	≤ 100					OP8			3107	

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

After the table, add the following new notes:

- “30) Diluent type B with boiling point > 130 °C.
31) Active oxygen ≤ 6.7%.”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

2.2.62.1.5.6 Renumber existing NOTE as NOTE 1.

In NOTE 1 (existing NOTE), add “*in the absence of any concern for infection (e.g. evaluation of vaccine induced immunity, diagnosis of autoimmune disease, etc.)*” after “*antibody detection in humans or animals*”.

Add a new NOTE 2 to read as follows:

“**NOTE 2:** *For air transport, packagings for specimens exempted under this paragraph shall meet the conditions in (a) to (c).*”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

2.2.62.1.11.2 Add at the end, before the notes: “For the assignment, international, regional or national waste catalogues may be taken into account.”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

2.2.62.1.12.2 Amend the first sentence to read as follows:

“Animal material affected by pathogens of Category A or by pathogens which would be assigned to Category A in cultures only, shall be assigned to UN 2814 or UN 2900 as appropriate. Animal material affected by pathogens of Category B, other than those which would be assigned to Category A if they were in cultures, shall be assigned to UN 3373.”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

Delete the second sentence.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

Amend Section 2.2.7 to read as follows and amend all references to renumbered paragraphs of section 2.2.7, as appropriate:

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

The acronyms “LSA” and “SCO” used in the English version should not be translated and should appear unchanged in all linguistic versions. In the definition of 2.2.7.1.3, the acronyms should appear after the corresponding term in alphabetical order, with an associated footnote reading as follows: “The acronym “LSA” stands for the English term “Low Specific Activity”.” / “The acronym “SCO” stands for the English term “Surface Contaminated Object”.”.

“2.2.7 Class 7 Radioactive material

2.2.7.1 Definitions

2.2.7.1.1 *Radioactive material* means any material containing radionuclides where both the activity concentration and the total activity in the consignment exceed the values specified in 2.2.7.2.2.1 to 2.2.7.2.2.6.

2.2.7.1.2 *Contamination*

Contamination means the presence of a radioactive substance on a surface in quantities in excess of 0.4 Bq/cm² for beta and gamma emitters and low toxicity alpha emitters, or 0.04 Bq/cm² for all other alpha emitters.

Non-fixed contamination means contamination that can be removed from a surface during routine conditions of carriage.

Fixed contamination means contamination other than non-fixed contamination.

2.2.7.1.3 *Definitions of specific terms*

A_1 and A_2

A_1 means the activity value of special form radioactive material which is listed in the Table in 2.2.7.2.2.1 or derived in 2.2.7.2.2.2 and is used to determine the activity limits for the requirements of ADN.

A_2 means the activity value of radioactive material, other than special form radioactive material, which is listed in the Table in 2.2.7.2.2.1 or derived in 2.2.7.2.2.2 and is used to determine the activity limits for the requirements of ADN.

Fissile material means uranium-233, uranium-235, plutonium-239, plutonium-241, or any combination of these radionuclides. Excepted from this definition is:

- (a) Natural uranium or depleted uranium which is unirradiated; and
- (b) Natural uranium or depleted uranium which has been irradiated in thermal reactors only.

Low dispersible radioactive material means either a solid radioactive material or a solid radioactive material in a sealed capsule, that has limited dispersibility and is not in powder form.

Low specific activity (LSA) material means radioactive material which by its nature has a limited specific activity, or radioactive material for which limits of estimated average specific activity apply. External shielding materials surrounding the LSA material shall not be considered in determining the estimated average specific activity.

Low toxicity alpha emitters are: natural uranium; depleted uranium; natural thorium; uranium-235 or uranium-238; thorium-232; thorium-228 and thorium-230 when contained in ores or physical and chemical concentrates; or alpha emitters with a half-life of less than 10 days.

Specific activity of a radionuclide means the activity per unit mass of that nuclide. The specific activity of a material shall mean the activity per unit mass of the material in which the radionuclides are essentially uniformly distributed.

Special form radioactive material means either:

- (a) An indispersible solid radioactive material; or
- (b) A sealed capsule containing radioactive material.

Surface contaminated object (SCO) means a solid object which is not itself radioactive but which has radioactive material distributed on its surfaces.

Unirradiated thorium means thorium containing not more than 10^{-7} g of uranium-233 per gram of thorium-232.

Unirradiated uranium means uranium containing not more than 2×10^3 Bq of plutonium per gram of uranium-235, not more than 9×10^6 Bq of fission products per gram of uranium-235 and not more than 5×10^{-3} g of uranium-236 per gram of uranium-235.

Uranium - natural, depleted, enriched means the following:

Natural uranium means uranium (which may be chemically separated) containing the naturally occurring distribution of uranium isotopes (approximately 99.28% uranium-238, and 0.72% uranium-235 by mass).

Depleted uranium means uranium containing a lesser mass percentage of uranium-235 than in natural uranium.

Enriched uranium means uranium containing a greater mass percentage of uranium-235 than 0.72%.

In all cases, a very small mass percentage of uranium-234 is present.

2.2.7.2 Classification

2.2.7.2.1 General provisions

- 2.2.7.2.1.1 Radioactive material shall be assigned to one of the UN number specified in Table 2.2.7.2.1.1 depending on the activity level of the radionuclides contained in a package, the fissile or non-fissile properties of these radionuclides, the type of package to be presented for carriage, and the nature or form of the contents of the

package, or special arrangements governing the carriage operation, in accordance with the provisions laid down in 2.2.7.2.2 to 2.2.7.2.5.

Table 2.2.7.2.1.1 Assignment of UN numbers

Excepted packages (1.7.1.5)	
UN 2908	RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - EMPTY PACKAGING
UN 2909	RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - ARTICLES MANUFACTURED FROM NATURAL URANIUM or DEPLETED URANIUM or NATURAL THORIUM
UN 2910	RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - LIMITED QUANTITY OF MATERIAL
UN 2911	RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - INSTRUMENTS or ARTICLES
Low specific activity radioactive material (2.2.7.2.3.1)	
UN 2912	RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-I), non-fissile or fissile-excepted
UN 3321	RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-II), non fissile or fissile-excepted
UN 3322	RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-III), non fissile or fissile-excepted
UN 3324	RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-II), FISSILE
UN 3325	RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY, (LSA-III), FISSILE
Surface contaminated objects (2.2.7.2.3.2)	
UN 2913	RADIOACTIVE MATERIAL, SURFACE CONTAMINATED OBJECTS (SCO-I or SCO-II), non-fissile or fissile-excepted
UN 3326	RADIOACTIVE MATERIAL, SURFACE CONTAMINATED OBJECTS (SCO-I or SCO-II), FISSILE
Type A packages (2.2.7.2.4.4)	
UN 2915	RADIOACTIVE MATERIAL, TYPE A PACKAGE, non-special form, non-fissile or fissile-excepted
UN 3327	RADIOACTIVE MATERIAL, TYPE A PACKAGE, FISSILE, non-special form
UN 3332	RADIOACTIVE MATERIAL, TYPE A PACKAGE, SPECIAL FORM, non fissile or fissile-excepted
UN 3333	RADIOACTIVE MATERIAL, TYPE A PACKAGE, SPECIAL FORM, FISSILE
Type B(U) packages (2.2.7.2.4.6)	
UN 2916	RADIOACTIVE MATERIAL, TYPE B(U) PACKAGE, non-fissile or fissile-excepted
UN 3328	RADIOACTIVE MATERIAL, TYPE B(U) PACKAGE, FISSILE
Type B(M) packages (2.2.7.2.4.6)	
UN 2917	RADIOACTIVE MATERIAL, TYPE B(M) PACKAGE, non-fissile or fissile-excepted
UN 3329	RADIOACTIVE MATERIAL, TYPE B(M) PACKAGE, FISSILE

Type C packages (2.2.7.2.4.6)	
UN 3323	RADIOACTIVE MATERIAL, TYPE C PACKAGE, non fissile or fissile-excepted
UN 3330	RADIOACTIVE MATERIAL, TYPE C PACKAGE, FISSILE
Special arrangement (2.2.7.2.5)	
UN 2919	RADIOACTIVE MATERIAL, TRANSPORTED UNDER SPECIAL ARRANGEMENT, non-fissile or fissile-excepted
UN 3331	RADIOACTIVE MATERIAL, TRANSPORTED UNDER SPECIAL ARRANGEMENT, FISSILE
Uranium hexafluoride (2.2.7.2.4.5)	
UN 2977	RADIOACTIVE MATERIAL, URANIUM HEXAFLUORIDE, FISSILE
UN 2978	RADIOACTIVE MATERIAL, URANIUM HEXAFLUORIDE, non-fissile or fissile-excepted

2.2.7.2.2 *Determination of activity level*

2.2.7.2.2.1 The following basic values for individual radionuclides are given in Table 2.2.7.2.2.1:

- (a) A_1 and A_2 in TBq;
- (b) Activity concentration for exempt material in Bq/g; and
- (c) Activity limits for exempt consignments in Bq.

Table 2.2.7.2.2.1: Basic radionuclides values for individual radionuclides

Insert here the Table of existing 2.2.7.2.2.1 with its footnotes (a) – (g).

2.2.7.2.2.2 For individual radionuclides which are not listed in Table 2.2.7.2.2.1 the determination of the basic radionuclide values referred to in 2.2.7.2.2.1 shall require multilateral approval. It is permissible to use an A_2 value calculated using a dose coefficient for the appropriate lung absorption type as recommended by the International Commission on Radiological Protection, if the chemical forms of each radionuclide under both normal and accident conditions of carriage are taken into consideration. Alternatively, the radionuclide values in Table 2.2.7.2.2.2 may be used without obtaining competent authority approval.

Table 2.2.7.2.2.2: Basic radionuclide values for unknown radionuclides or mixtures

Radioactive contents	A_1	A_2	Activity concentration for exempt material	Activity limit for exempt consignments
	(TBq)	(TBq)	(Bq/g)	(Bq)
Only beta or gamma emitting nuclides are known to be present	0.1	0.02	1×10^1	1×10^4
Alpha emitting nuclides but no neutron emitters are known to be present	0.2	9×10^{-5}	1×10^{-1}	1×10^3
Neutron emitting nuclides are known to be present or no relevant data are available	0.001	9×10^{-5}	1×10^{-1}	1×10^3

2.2.7.2.2.3 In the calculations of A_1 and A_2 for a radionuclide not in Table 2.2.7.2.2.1, a single radioactive decay chain in which the radionuclides are present in their naturally occurring proportions, and in which no daughter nuclide has a half-life either longer than 10 days or longer than that of the parent nuclide, shall be considered as a single radionuclide; and the activity to be taken into account and the A_1 or A_2 value to be applied shall be those corresponding to the parent nuclide of that chain. In the case of radioactive decay chains in which any daughter nuclide has a half-life either longer than 10 days or greater than that of the parent nuclide, the parent and such daughter nuclides shall be considered as mixtures of different nuclides.

2.2.7.2.2.4 For mixtures of radionuclides, the determination of the basic radionuclide values referred to in 2.2.7.2.2.1 may be determined as follows:

$$X_m = \frac{1}{\sum_i \frac{f(i)}{X(i)}}$$

where,

$f(i)$ is the fraction of activity or activity concentration of radionuclide i in the mixture;

$X(i)$ is the appropriate value of A_1 or A_2 , or the activity concentration for exempt material or the activity limit for an exempt consignment as appropriate for the radionuclide i ; and

X_m is the derived value of A_1 or A_2 , or the activity concentration for exempt material or the activity limit for an exempt consignment in the case of a mixture.

2.2.7.2.2.5 When the identity of each radionuclide is known but the individual activities of some of the radionuclides are not known, the radionuclides may be grouped and the lowest radionuclide value, as appropriate, for the radionuclides in each group may be used in applying the formulas in 2.2.7.2.2.4 and 2.2.7.2.4.4. Groups may be based on the total alpha activity and the total beta/gamma activity when these are known, using the lowest radionuclide values for the alpha emitters or beta/gamma emitters, respectively.

2.2.7.2.2.6 For individual radionuclides or for mixtures of radionuclides for which relevant data are not available, the values shown in Table 2.2.7.2.2.2 shall be used.

2.2.7.2.3 *Determination of other material characteristics*

2.2.7.2.3.1 Low specific activity (LSA) material

2.2.7.2.3.1.1 (Reserved)

2.2.7.2.3.1.2 LSA material shall be in one of three groups:

(a) LSA-I

- (i) uranium and thorium ores and concentrates of such ores, and other ores containing naturally occurring radionuclides which are intended to be processed for the use of these radionuclides;
- (ii) Natural uranium, depleted uranium, natural thorium or their compounds or mixtures, providing they are unirradiated and in solid or liquid form;
- (iii) radioactive material for which the A_2 value is unlimited, excluding material classified as fissile according to 2.2.7.2.3.5; or
- (iv) other radioactive material in which the activity is distributed throughout and the estimated average specific activity does not exceed 30 times the values for activity concentration specified in 2.2.7.2.2.1 to 2.2.7.2.2.6, excluding material classified as fissile according to 2.2.7.2.3.5;

(b) LSA-II

- (i) water with tritium concentration up to 0.8 TBq/l; or
- (ii) other material in which the activity is distributed throughout and the estimated average specific activity does not exceed 10^{-4} A_2/g for solids and gases, and 10^{-5} A_2/g for liquids;

(c) LSA-III - Solids (e.g. consolidated wastes, activated materials), excluding powders, in which:

- (i) the radioactive material is distributed throughout a solid or a collection of solid objects, or is essentially uniformly distributed in a solid compact binding agent (such as concrete, bitumen, ceramic, etc.);
- (ii) the radioactive material is relatively insoluble, or it is intrinsically contained in a relatively insoluble matrix, so that, even under loss of packaging, the loss of radioactive material per package by leaching when placed in water for seven days would not exceed $0.1 A_2$; and
- (iii) the estimated average specific activity of the solid, excluding any shielding material, does not exceed $2 \times 10^{-3} A_2/g$.

2.2.7.2.3.1.3 LSA-III material shall be a solid of such a nature that if the entire contents of a package were subjected to the test specified in 2.2.7.2.3.1.4 the activity in the water would not exceed $0.1 A_2$.

2.2.7.2.3.1.4 LSA-III material shall be tested as follows:

A solid material sample representing the entire contents of the package shall be immersed for 7 days in water at ambient temperature. The volume of water to be used in the test shall be sufficient to ensure that at the end of the 7 day test period the free volume of the unabsorbed and unreacted water remaining shall be at least 10% of the volume of the solid test sample itself. The water shall have an initial pH of 6-8 and a maximum conductivity of 1 mS/m at 20 °C. The total activity of the free volume of water shall be measured following the 7 day immersion of the test sample.

2.2.7.2.3.1.5 Demonstration of compliance with the performance standards in 2.2.7.2.3.1.4 shall be in accordance with 6.4.12.1 and 6.4.12.2 of ADR.

2.2.7.2.3.2 Surface contaminated object (SCO)

SCO is classified in one of two groups:

(a) SCO-I: A solid object on which:

- (i) the non-fixed contamination on the accessible surface averaged over 300 cm^2 (or the area of the surface if less than 300 cm^2) does not exceed 4 Bq/cm^2 for beta and gamma emitters and low toxicity alpha emitters, or 0.4 Bq/cm^2 for all other alpha emitters; and
- (ii) the fixed contamination on the accessible surface averaged over 300 cm^2 (or the area of the surface if less than 300 cm^2) does not exceed $4 \times 10^4 \text{ Bq/cm}^2$ for beta and gamma emitters and low toxicity alpha emitters, or $4 \times 10^3 \text{ Bq/cm}^2$ for all other alpha emitters; and

- (iii) the non-fixed contamination plus the fixed contamination on the inaccessible surface averaged over 300 cm^2 (or the area of the surface if less than 300 cm^2) does not exceed $4 \times 10^4 \text{ Bq/cm}^2$ for beta and gamma emitters and low toxicity alpha emitters, or $4 \times 10^3 \text{ Bq/cm}^2$ for all other alpha emitters;
- (b) SCO-II: A solid object on which either the fixed or non-fixed contamination on the surface exceeds the applicable limits specified for SCO-I in (a) above and on which:
 - (i) the non-fixed contamination on the accessible surface averaged over 300 cm^2 (or the area of the surface if less than 300 cm^2) does not exceed 400 Bq/cm^2 for beta and gamma emitters and low toxicity alpha emitters, or 40 Bq/cm^2 for all other alpha emitters; and
 - (ii) the fixed contamination on the accessible surface, averaged over 300 cm^2 (or the area of the surface if less than 300 cm^2) does not exceed $8 \times 10^5 \text{ Bq/cm}^2$ for beta and gamma emitters and low toxicity alpha emitters, or $8 \times 10^4 \text{ Bq/cm}^2$ for all other alpha emitters; and
 - (iii) the non-fixed contamination plus the fixed contamination on the inaccessible surface averaged over 300 cm^2 (or the area of the surface if less than 300 cm^2) does not exceed $8 \times 10^5 \text{ Bq/cm}^2$ for beta and gamma emitters and low toxicity alpha emitters, or $8 \times 10^4 \text{ Bq/cm}^2$ for all other alpha emitters.

2.2.7.2.3.3 Special form radioactive material

2.2.7.2.3.3.1 Special form radioactive material shall have at least one dimension not less than 5 mm. When a sealed capsule constitutes part of the special form radioactive material, the capsule shall be so manufactured that it can be opened only by destroying it. The design for special form radioactive material requires unilateral approval.

2.2.7.2.3.3.2 Special form radioactive material shall be of such a nature or shall be so designed that if it is subjected to the tests specified in 2.2.7.2.3.3.4 to 2.2.7.2.3.3.8, it shall meet the following requirements:

- (a) It would not break or shatter under the impact, percussion and bending tests 2.2.7.2.3.3.5 (a), (b), (c), 2.2.7.2.3.3.6 (a) as applicable;
- (b) It would not melt or disperse in the applicable heat test 2.2.7.2.3.3.5 (d) or 2.2.7.2.3.3.6 (b) as applicable; and
- (c) The activity in the water from the leaching tests specified in 2.2.7.2.3.3.7 and 2.2.7.2.3.3.8 would not exceed 2 kBq; or alternatively for sealed sources, the leakage rate for the volumetric leakage assessment test specified in ISO 9978:1992 "Radiation Protection - Sealed Radioactive

Sources - Leakage Test Methods”, would not exceed the applicable acceptance threshold acceptable to the competent authority.

2.2.7.2.3.3.3 Demonstration of compliance with the performance standards in 2.2.7.2.3.3.2 shall be in accordance with 6.4.12.1 and 6.4.12.2 of ADR.

2.2.7.2.3.3.4 Specimens that comprise or simulate special form radioactive material shall be subjected to the impact test, the percussion test, the bending test, and the heat test specified in 2.2.7.2.3.3.5 or alternative tests as authorized in 2.2.7.2.3.3.6. A different specimen may be used for each of the tests. Following each test, a leaching assessment or volumetric leakage test shall be performed on the specimen by a method no less sensitive than the methods given in 2.2.7.2.3.3.7 for indispersible solid material or 2.2.7.2.3.3.8 for encapsulated material.

2.2.7.2.3.3.5 The relevant test methods are:

- (a) Impact test: The specimen shall drop onto the target from a height of 9 m. The target shall be as defined in 6.4.14 of ADR;
- (b) Percussion test: The specimen shall be placed on a sheet of lead which is supported by a smooth solid surface and struck by the flat face of a mild steel bar so as to cause an impact equivalent to that resulting from a free drop of 1.4 kg through 1 m. The lower part of the bar shall be 25 mm in diameter with the edges rounded off to a radius of (3.0 ± 0.3) mm. The lead, of hardness number 3.5 to 4.5 on the Vickers scale and not more than 25 mm thick, shall cover an area greater than that covered by the specimen. A fresh surface of lead shall be used for each impact. The bar shall strike the specimen so as to cause maximum damage;
- (c) Bending test: The test shall apply only to long, slender sources with both a minimum length of 10 cm and a length to minimum width ratio of not less than 10. The specimen shall be rigidly clamped in a horizontal position so that one half of its length protrudes from the face of the clamp. The orientation of the specimen shall be such that the specimen will suffer maximum damage when its free end is struck by the flat face of a steel bar. The bar shall strike the specimen so as to cause an impact equivalent to that resulting from a free vertical drop of 1.4 kg through 1 m. The lower part of the bar shall be 25 mm in diameter with the edges rounded off to a radius of (3.0 ± 0.3) mm;
- (d) Heat test: The specimen shall be heated in air to a temperature of 800 °C and held at that temperature for a period of 10 minutes and shall then be allowed to cool.

2.2.7.2.3.3.6 Specimens that comprise or simulate radioactive material enclosed in a sealed capsule may be excepted from:

- (a) The tests prescribed in 2.2.7.2.3.3.5 (a) and (b) provided the mass of the special form radioactive material:
 - (i) is less than 200 g and they are alternatively subjected to the Class 4 impact test prescribed in ISO 2919:1999 “Radiation protection - Sealed radioactive sources - General requirements and classification”;
or
 - (ii) is less than 500 g and they are alternatively subjected to the Class 5 impact test prescribed in ISO 2919:1999 “Radiation protection - Sealed radioactive sources - General requirements and classification”;
and
- (b) The test prescribed in 2.2.7.2.3.3.5 (d) provided they are alternatively subjected to the Class 6 temperature test specified in ISO 2919:1999 “Radiation protection - Sealed radioactive sources - General requirements and classification”.

2.2.7.2.3.3.7 For specimens which comprise or simulate indispersible solid material, a leaching assessment shall be performed as follows:

- (a) The specimen shall be immersed for 7 days in water at ambient temperature. The volume of water to be used in the test shall be sufficient to ensure that at the end of the 7 day test period the free volume of the unabsorbed and unreacted water remaining shall be at least 10% of the volume of the solid test sample itself. The water shall have an initial pH of 6-8 and a maximum conductivity of 1 mS/m at 20 °C;
- (b) The water with specimen shall then be heated to a temperature of (50 ± 5) °C and maintained at this temperature for 4 hours;
- (c) The activity of the water shall then be determined;
- (d) The specimen shall then be kept for at least 7 days in still air at not less than 30 °C and relative humidity not less than 90%;
- (e) The specimen shall then be immersed in water of the same specification as in (a) above and the water with the specimen heated to (50 ± 5) °C and maintained at this temperature for 4 hours;
- (f) The activity of the water shall then be determined.

2.2.7.2.3.3.8 For specimens which comprise or simulate radioactive material enclosed in a sealed capsule, either a leaching assessment or a volumetric leakage assessment shall be performed as follows:

- (a) The leaching assessment shall consist of the following steps:
 - (i) the specimen shall be immersed in water at ambient temperature. The water shall have an initial pH of 6-8 with a maximum conductivity of 1 mS/m at 20 °C;
 - (ii) the water and specimen shall be heated to a temperature of (50 ± 5) °C and maintained at this temperature for 4 hours;
 - (iii) the activity of the water shall then be determined;
 - (iv) the specimen shall then be kept for at least 7 days in still air at not less than 30 °C and relative humidity of not less than 90%;
 - (v) the process in (i), (ii) and (iii) shall be repeated;
- (b) The alternative volumetric leakage assessment shall comprise any of the tests prescribed in ISO 9978:1992 “Radiation Protection - Sealed radioactive sources - Leakage test methods”, which are acceptable to the competent authority.

2.2.7.2.3.4 Low dispersible material

2.2.7.2.3.4.1 The design for low dispersible radioactive material shall require multilateral approval. Low dispersible radioactive material shall be such that the total amount of this radioactive material in a package shall meet the following requirements:

- (a) The radiation level at 3 m from the unshielded radioactive material does not exceed 10 mSv/h;
- (b) If subjected to the tests specified in 6.4.20.3 and 6.4.20.4 of ADR, the airborne release in gaseous and particulate forms of up to 100 µm aerodynamic equivalent diameter would not exceed 100 A₂. A separate specimen may be used for each test; and
- (c) If subjected to the test specified in 2.2.7.2.3.1.4 the activity in the water would not exceed 100 A₂. In the application of this test, the damaging effects of the tests specified in (b) above shall be taken into account.

2.2.7.2.3.4.2 Low dispersible material shall be tested as follows:

A specimen that comprises or simulates low dispersible radioactive material shall be subjected to the enhanced thermal test specified in 6.4.20.3 of ADR and the impact test specified in 6.4.20.4 of ADR. A different specimen may be used for each of the tests. Following each test, the specimen shall be subjected to the leach

test specified in 2.2.7.2.3.1.4. After each test it shall be determined if the applicable requirements of 2.2.7.2.3.4.1 have been met.

2.2.7.2.3.4.3 Demonstration of compliance with the performance standards in 2.2.7.2.3.4.1 and 2.2.7.2.3.4.2 shall be in accordance with 6.4.12.1 and 6.4.12.2 of ADR.

2.2.7.2.3.5 Fissile material

Packages containing fissile radionuclides shall be classified under the relevant entry of table 2.2.7.2.1.1 for fissile material unless one of the conditions (a) to (d) of this paragraph is met. Only one type of exception is allowed per consignment.

(a) A mass limit per consignment such that:

$$\frac{\text{mass of uranium - 235 (g)}}{X} + \frac{\text{mass of other fissile material (g)}}{Y} < 1$$

where X and Y are the mass limits defined in Table 2.2.7.2.3.5, provided that the smallest external dimension of each package is not less than 10 cm and that either:

- (i) each individual package contains not more than 15 g of fissile material; for unpackaged material, this quantity limitation shall apply to the consignment being carried in or on the wagon/vehicle/conveyance; or
- (ii) the fissile material is a homogeneous hydrogenous solution or mixture where the ratio of fissile nuclides to hydrogen is less than 5% by mass; or
- (iii) there are not more than 5 g of fissile material in any 10 litre volume of material.

Neither beryllium nor deuterium shall be present in quantities exceeding 1% of the applicable consignment mass limits provided in Table 2.2.7.2.3.5, except for deuterium in natural concentration in hydrogen.

- (b) Uranium enriched in uranium-235 to a maximum of 1% by mass, and with a total plutonium and uranium-233 content not exceeding 1% of the mass of uranium-235, provided that the fissile material is distributed essentially homogeneously throughout the material. In addition, if uranium-235 is present in metallic, oxide or carbide forms, it shall not form a lattice arrangement;
- (c) Liquid solutions of uranyl nitrate enriched in uranium-235 to a maximum of 2% by mass, with a total plutonium and uranium-233 content not exceeding 0.002% of the mass of uranium, and with a minimum nitrogen to uranium atomic ratio (N/U) of 2;

- (d) Packages containing, individually, a total plutonium mass not more than 1 kg, of which not more than 20% by mass may consist of plutonium-239, plutonium-241 or any combination of those radionuclides.

Table 2.2.7.2.3.5: Consignment mass limits for exceptions from the requirements for packages containing fissile material

Fissile material	Fissile material mass (g) mixed with substances having an average hydrogen density less than or equal to water	Fissile material mass (g) mixed with substances having an average hydrogen density greater than water
Uranium-235 (X)	400	290
Other fissile material (Y)	250	180

2.2.7.2.4 *Classification of packages or unpacked material*

The quantity of radioactive material in a package shall not exceed the relevant limits for the package type as specified below.

2.2.7.2.4.1 Classification as excepted package

2.2.7.2.4.1.1 Packages may be classified as excepted packages if:

- (a) They are empty packagings having contained radioactive material;
- (b) They contain instruments or articles in limited quantities;
- (c) They contain articles manufactured of natural uranium, depleted uranium or natural thorium; or
- (d) They contain radioactive material in limited quantities.

2.2.7.2.4.1.2 A package containing radioactive material may be classified as an excepted package provided that the radiation level at any point on its external surface does not exceed 5 μ Sv/h.

Table 2.2.7.2.4.1.2: Activity limits for excepted packages

Physical state of contents	Instruments or article		Materials Package limits ^a
	Item limits ^a	Package limits ^a	
(1)	(2)	(3)	(4)
Solids special form	$10^{-2} A_1$	A_1	$10^{-3} A_1$
other form	$10^{-2} A_2$	A_2	$10^{-3} A_2$
Liquids	$10^{-3} A_2$	$10^{-1} A_2$	$10^{-4} A_2$
Gases			

Physical state of contents	Instruments or article		Materials Package limits ^a
	Item limits ^a	Package limits ^a	
(1)	(2)	(3)	(4)
tritium	$2 \times 10^{-2} A_2$	$2 \times 10^{-1} A_2$	$2 \times 10^{-2} A_2$
special form	$10^{-3} A_1$	$10^{-2} A_1$	$10^{-3} A_1$
other forms	$10^{-3} A_2$	$10^{-2} A_2$	$10^{-3} A_2$

^a For mixtures of radionuclides, see 2.2.7.2.2.4 to 2.2.7.2.2.6.

2.2.7.2.4.1.3 Radioactive material which is enclosed in or is included as a component part of an instrument or other manufactured article may be classified under UN No. 2911 RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - INSTRUMENTS or ARTICLES provided that:

- (a) The radiation level at 10 cm from any point on the external surface of any unpackaged instrument or article is not greater than 0.1 mSv/h; and
- (b) Each instrument or manufactured article bears the marking "RADIOACTIVE" except:
 - (i) radioluminescent time-pieces or devices;
 - (ii) consumer products that either have received regulatory approval according to 1.7.1.4 (d) or do not individually exceed the activity limit for an exempt consignment in Table 2.2.7.2.2.1 (column 5), provided such products are carried in a package that bears the marking "RADIOACTIVE" on an internal surface in such a manner that warning of the presence of radioactive material is visible on opening the package; and
- (c) The active material is completely enclosed by non-active components (a device performing the sole function of containing radioactive material shall not be considered to be an instrument or manufactured article); and
- (d) The limits specified in columns 2 and 3 of Table 2.2.7.2.4.1.2 are met for each individual item and each package, respectively.

2.2.7.2.4.1.4 Radioactive material with an activity not exceeding the limit specified in column 4 of Table 2.2.7.2.4.1.2, may be classified under UN No. 2910 RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - LIMITED QUANTITY OF MATERIAL provided that:

- (a) The package retains its radioactive contents under routine conditions of carriage; and
- (b) The package bears the marking "RADIOACTIVE" on an internal surface in such a manner that a warning of the presence of radioactive material is visible on opening the package.

- 2.2.7.2.4.1.5 An empty packaging which had previously contained radioactive material with an activity not exceeding the limit specified in column 4 of Table 2.2.7.2.4.1.2 may be classified under UN No. 2908 RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - EMPTY PACKAGING, provided that:
- (a) It is in a well-maintained condition and securely closed;
 - (b) The outer surface of any uranium or thorium in its structure is covered with an inactive sheath made of metal or some other substantial material;
 - (c) The level of internal non-fixed contamination, when averaged over any 300 cm², does not exceed:
 - (i) 400 Bq/cm² for beta and gamma emitters and low toxicity alpha emitters; and
 - (ii) 40 Bq/cm² for all other alpha emitters; and
 - (d) Any labels which may have been displayed on it in conformity with 5.2.2.1.11.1 are no longer visible.
- 2.2.7.2.4.1.6 Articles manufactured of natural uranium, depleted uranium or natural thorium and articles in which the sole radioactive material is unirradiated natural uranium, unirradiated depleted uranium or unirradiated natural thorium may be classified under UN No. 2909 RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - ARTICLES MANUFACTURED FROM NATURAL URANIUM or DEPLETED URANIUM or NATURAL THORIUM, provided that the outer surface of the uranium or thorium is enclosed in an inactive sheath made of metal or some other substantial material.
- 2.2.7.2.4.2 Classification as Low specific activity (LSA) material
- Radioactive material may only be classified as LSA material if the conditions of 2.2.7.2.3.1 and 4.1.9.2 of ADR are met.
- 2.2.7.2.4.3 Classification as Surface contaminated object (SCO)
- Radioactive material may be classified as SCO if the conditions of 2.2.7.2.3.2.1 and 4.1.9.2 of ADR are met.
- 2.2.7.2.4.4 Classification as Type A package
- Packages containing radioactive material may be classified as Type A packages provided that the following conditions are met:
- Type A packages shall not contain activities greater than the following:

- (a) For special form radioactive material - A_1 ; or
- (b) For all other radioactive material - A_2 .

For mixtures of radionuclides whose identities and respective activities are known, the following condition shall apply to the radioactive contents of a Type A package:

$$\sum_i \frac{B(i)}{A_1(i)} + \sum_j \frac{C(j)}{A_2(j)} \leq 1$$

where $B(i)$ is the activity of radionuclide i as special form radioactive material;

$A_1(i)$ is the A_1 value for radionuclide i ;

$C(j)$ is the activity of radionuclide j as other than special form radioactive material; and

$A_2(j)$ is the A_2 value for radionuclide j .

2.2.7.2.4.5 Classification of Uranium hexafluoride

Uranium hexafluoride shall only be assigned to UN Nos. 2977 RADIOACTIVE MATERIAL, URANIUM HEXAFLUORIDE, FISSILE, or 2978 RADIOACTIVE MATERIAL, URANIUM HEXAFLUORIDE, non-fissile or fissile-excepted.

2.2.7.2.4.5.1 Packages containing uranium hexafluoride shall not contain:

- (a) A mass of uranium hexafluoride different from that authorized for the package design;
- (b) A mass of uranium hexafluoride greater than a value that would lead to an ullage smaller than 5% at the maximum temperature of the package as specified for the plant systems where the package shall be used; or
- (c) Uranium hexafluoride other than in solid form or at an internal pressure above atmospheric pressure when presented for carriage.

2.2.7.2.4.6 Classification as Type B(U), Type B(M) or Type C packages

2.2.7.2.4.6.1 Packages not otherwise classified in 2.2.7.2.4 (2.2.7.2.4.1 to 2.2.7.2.4.5) shall be classified in accordance with the competent authority approval certificate for the package issued by the country of origin of design.

2.2.7.2.4.6.2 A package may only be classified as a Type B(U) if it does not contain:

- (a) Activities greater than those authorized for the package design;
- (b) Radionuclides different from those authorized for the package design; or
- (c) Contents in a form, or a physical or chemical state different from those authorized for the package design;

as specified in the certificate of approval.

2.2.7.2.4.6.3 A package may only be classified as a Type B(M) if it does not contain:

- (a) Activities greater than those authorized for the package design;
- (b) Radionuclides different from those authorized for the package design; or
- (c) Contents in a form, or a physical or chemical state different from those authorized for the package design;

as specified in the certificate of approval.

2.2.7.2.4.6.4 A package may only be classified as a Type C if it does not contain:

- (a) Activities greater than those authorized for the package design;
- (b) Radionuclides different from those authorized for the package design; or
- (c) Contents in a form, or physical or chemical state different from those authorized for the package design;

as specified in the certificate of approval.

2.2.7.2.5 *Special arrangements*

Radioactive material shall be classified as transported under special arrangement when it is intended to be carried in accordance with 1.7.4.”.

2.2.8.1.6 (c) In the first sentence of the second indent, replace “corrosion rate on steel” with “corrosion rate on either steel” and insert “when tested on both materials” at the end.

(*Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2*)

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

“NOTE: Where an initial test on either steel or aluminium indicates the substance being tested is corrosive the follow up test on the other metal is not required.”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

2.2.9.1.7 Insert the following new first sentence: “The term “lithium battery” covers all cells and batteries containing lithium in any form.”.
At the beginning of the new second sentence, replace "Lithium cells and batteries" with "They".

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

2.2.9.1.15 Is amended to read as follows:

“When indicated in column 4 of Table A of Chapter 3.2, substances and articles of Class 9 are assigned to one of the following packing groups according to their degree of danger:

Packing group II:	substances presenting medium danger;
Packing group III:	substances presenting low danger.”

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/102, annex 2)

2.2.9.3 Under “Lithium batteries”, classification code M4:
At the end of the three existing entries, add “(including lithium alloy batteries)” and add the following new entries:
“3480 LITHIUM ION BATTERIES (including lithium ion polymer batteries)
3481 LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT (including lithium ion polymer batteries) or
3481 LITHIUM ION BATTERIES PACKED WITH EQUIPMENT (including lithium ion polymer batteries)”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

PART 3

Amend the heading to read as follows:

“PART 3 Dangerous goods list, special provisions and exemptions related to limited and excepted quantities”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

Chapter 3.2

3.2.1 Amend the explanatory text for Column 7 to read as follows:

“Column (7a) “Limited Quantities”

Contains an alphanumeric code with the following meaning:

- “LQ0” signifies that no exemption from the provisions of ADN exists for the dangerous goods packed in limited quantities;
- All the other alphanumeric codes starting with the letters “LQ” signify that the provisions of ADN are not applicable if the conditions indicated in Chapter 3.4 are fulfilled.

Column (7b) “Excepted Quantities”

Contains an alphanumeric code with the following meaning:

- “E0” signifies that no exemption from the provisions of ADN exists for the dangerous goods packed in excepted quantities;
- All the other alphanumeric codes starting with the letter “E” signify that the provisions of ADN are not applicable if the conditions indicated in Chapter 3.5 are fulfilled.”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

Table A

Renumber column (7) as (7a) and insert a new column (7b). Insert a common heading for both columns (7a) and (7b) as follows:

Limited and excepted quantities	
3.4.6 / 3.5.1.2	
(7a)	(7b)

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

Allocate codes E0 to E5 in column (7b) as indicated below, except for goods not subject to ADN and for goods the carriage of which is prohibited in ADN.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

Add E0 in column (7b) for:

- All goods of Classes 1, 5.2, 6.2 and 7;
- All goods of Class 2 for which only label 2.1 has been assigned in column (5);
- All goods of Class 2 for which label 2.3 (with or without other label) has been assigned in column (5);

- All goods of Class 2, for which labels 2.2+5.1 have been assigned in column (5) and UN Nos. 1044, 1950, 2037, 2857 and 3164;
- UN Nos. 1204, 2059, 3064, 3256, 3269, 3343, 3357, 3379 and 3473 in Class 3;
- All goods of Class 3, packing group I, for which labels 3+6.1, 3+8 or 3+6.1+8 have been assigned in column (5);
- All goods of Class 4.1, packing group I, and UN Nos. 2304, 2448, 2555, 2556, 2557, 2907, 3176 (packing groups II and III), 3221 to 3240, 3319 and 3344;
- All goods of Class 4.2, packing group I;
- All goods of Class 4.3, packing group I, and UN 3292;
- All goods of Class 5.1, packing group I, and UN Nos. 2426 and 3356;
- UN Nos. 1600, 1700, 2016, 2017, 2312 and 3250 of Class 6.1;
- All goods of Class 8, packing group I, and UN Nos. 1774, 2028, 2215 (MOLTEN), 2576, 2794, 2795, 2800, 2803, 2809 and 3028;
- UN Nos. 2990, 3072, 3090, 3091, 3245, 3257, 3258, 3268 and 3316 of Class 9.

Add E1 in column (7b) for:

- All goods for which only label 2.2 has been assigned in column (5) except for UN No.1043;
- All goods of Class 3, packing group III, for which only label No 3 has been assigned in column (5), except for UN Nos. 2059, 3256 and 3269;
- All goods of Class 3, packing group III, for which labels 3+6.1 or 3+8 have been assigned in column (5);
- All goods of Class 4.1, packing group III, except for UN Nos. 2304, 2448 and 3176;
- All goods of Class 4.2, packing group III;
- All goods of Class 4.3, packing group III;
- All goods of Class 5.1, packing group III;
- All goods of Class 6.1, packing group III;
- All goods of Class 8, packing group III, except for UN Nos. 2215 (MOLTEN), 2803 and 2809;
- All goods of Class 9, packing group III, except for UN Nos. 3257, 3258 and 3268.

Add E2 in column (7b) for:

- All goods of Class 3, packing group II, for which only label No 3 has been assigned in column (5), except for UN Nos. 1204, 2059, 3064, 3269 and 3357;
- All goods of Class 3, packing group II, for which labels 3+6.1, 3+6.1+8 or 3+8 have been assigned in column (5);
- All goods of Class 4.1, packing group II, except for UN Nos. 2555, 2556, 2557, 2907, 3176, 3319 and 3344;
- All goods of Class 4.2, packing group II;
- All goods of Class 4.3, packing group II, except for UN 3292;
- All goods of Class 5.1, packing group II, except for UN 3356;
- All goods of Class 8, packing group II, except for UN Nos. 1774, 2028 and 2576;
- All goods of Class 9, packing group II, except for UN Nos. 3090, 3091 and 3316.

Add E3 in column (7b) for all goods of Class 3, packing group I, for which only label No 3 has been assigned in column (5), except for UN Nos. 2059 and 3379.

Add E4 in column (7b) for all goods of Class 6.1, packing group II, except for UN Nos. 1600, 1700, 2016, 2017, 2312 and 3250.

Add E5 in column (7b) for all goods of Class 6.1, packing group I.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/104, annex)

Add special provision "274" wherever special provision 61 is mentioned in column (6), except for UN No. 3048.

[This modification concerns all packing groups for the following UN Nos.: 2588, 2757-2764, 2771, 2772, 2775-2784, 2786, 2787, 2902, 2903, 2991-2998, 3005, 3006, 3009-3021, 3024-3027, 3345-3352.]

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/106/Add.2)

For UN 1057, add in column (6): "654".

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/106/Add.2)

For UN Nos. 1170, 1987 and 1993, all packing groups, delete "330" in column (6).

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

For UN Nos. 1250 and 1305, replace "I" with "II" in column (5).

For UN Nos. 2913, 3321, 3322, 3324, 3325 and 3326, insert "336" in column (6).

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

For UN Nos. 2916, 2917, 3328 and 3329 insert "337" in column (6).

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

For UN Nos. 3077 and 3082, add "335 655" in column (6).

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

For UN Nos. 3269 and 3316, add "340" in column (6).

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

For UN 3357, replace "LQ4" with "LQ0" in column (7a)..

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

UN 0411 The amendment does not apply to the English version. In the French text, insert
 ", PENTHRITE" before ", PETN" in column (2).

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

UN 1017 In column (5), add "+5.1". In column (3b), replace "2TC" with "2TOC".

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

UN 1204 Insert "601" in column (6).

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/57+ ECE/TRANS/WP.15/AC.1/108/Add.2)

UN 1344 In column (2), add "(PICRIC ACID)" after "TRINITROPHENOL".

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

UN 1474 In column (6), add "332".

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

UN 1818 Replace "LQ22" with "LQ0" in column (7a),

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

UN 2031 For packing group II, in column (2), add "at least 65%, but" after "with", in column (5), add "+5.1".

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

UN 2814 For the third entry, replace "(animal carcasses only)" with "(animal material only)" in column (2).

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

UN 2900 For the third entry, replace "(animal carcasses and wastes only)" with "(animal material only)" in column (2).

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

UN 3048 Delete "61" in column (6).

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/106/Add.2)

UN 3090 In column (2), amend the name and description to read: "LITHIUM METAL BATTERIES (including lithium alloy batteries)".

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

UN 3091 In column (2), insert "METAL" after "LITHIUM" (twice) and "(including lithium alloy batteries)" after "WITH EQUIPMENT".

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

UN 3344 In column (2), add “(PENTAERYTHRITOL TETRANITRATE; PETN)” after “TETRANITRATE”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

UN 3468 In column (2), add at the end: “or HYDROGEN IN A METAL HYDRIDE STORAGE SYSTEM CONTAINED IN EQUIPMENT or HYDROGEN IN A METAL HYDRIDE STORAGE SYSTEM PACKED WITH EQUIPMENT”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

UN 3473 In column (2), replace “FUEL CELL CARTRIDGES” with “FUEL CELL CARTRIDGES or FUEL CELL CARTRIDGES CONTAINED IN EQUIPMENT or FUEL CELL CARTRIDGES PACKED WITH EQUIPMENT”.

Delete the existing entries for UN Nos. 3132 and 3135 (Ref. Doc.: ECE/TRANS/WP.15/AC.1/104, annex 1) and add the following new entries:

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9)	(10)	(11)	(12)	(13)
0505	SIGNALS, DISTRESS, ship	1	1.4G		1.4		LQ0	E0		PP		LO01 HA01 HA03 HA04 HA05 HA06	1	
0506	SIGNALS, DISTRESS, ship	1	1.4S		1.4		LQ0	E0		PP		LO01 HA01 HA03 HA04 HA05 HA06	0	
0507	SIGNALS, SMOKE	1	1.4S		1.4		LQ0	E0		PP		LO01 HA01 HA03 HA04 HA05 HA06	0	
0508	1-HYDROXY- BENZOTRIAZOLE, ANHYDROUS, dry or wetted with less than 20% water, by mass	1	1.3C		1		LQ0	E0		PP		LO01 HA01 HA03 HA04 HA05 HA06	3	
2031	NITRIC ACID, other than red fuming, with less than 65% nitric acid	8	C1	II	8		LQ22	E2	T	PP,EP			0	
3132	WATER-REACTIVE SOLID, FLAMMABLE, N.O.S.	4.3	WF2	I	4.3 + 4.1	274	LQ0	E0		PP,EX, A	VE01		1	
3132	WATER-REACTIVE SOLID, FLAMMABLE, N.O.S.	4.3	WF2	II	4.3 + 4.1	274	LQ11	E2		PP,EX, A	VE01		1	
3132	WATER-REACTIVE SOLID, FLAMMABLE, N.O.S.	4.3	WF2	III	4.3 + 4.1	274	LQ12	E1		PP,EX, A	VE01		0	
3135	WATER-REACTIVE SOLID, SELF-HEATING, N.O.S.	4.3	WS	I	4.3 + 4.2	274	LQ0	E0		PP,EX, A	VE01	HA08	0	
3135	WATER-REACTIVE SOLID, SELF-HEATING, N.O.S.	4.3	WS	II	4.3 + 4.2	274	LQ11	E2		PP,EX, A	VE01	HA08	0	
3135	WATER-REACTIVE SOLID, SELF-HEATING, N.O.S.	4.3	WS	III	4.3 + 4.2	274	LQ12	E1		PP,EX, A	VE01	HA08	0	
3373	BIOLOGICAL SUBSTANCE, CATEGORY B (animal material only)	6.2	I4		6.2	319	LQ0	E0		PP			0	

(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9)	(10)	(11)	(12)	(13)
3474	1-HYDROXY-BENZOTRIAZOLE, ANHYDROUS, WETTED with not less than 20% water, by mass	4.1	D	I	4.1		LQ0	E0		PP			1	
3475	ETHANOL AND GASOLINE MIXTURE or ETHANOL AND MOTOR SPIRIT MIXTURE or ETHANOL AND PETROL MIXTURE, with more than 10% ethanol	3	F1	II	3	333	LQ4	E2	T	PP,EX, A	VE01		1	
3476	FUEL CELL CARTRIDGES or FUEL CELL CARTRIDGES CONTAINED IN EQUIPMENT or FUEL CELL CARTRIDGES PACKED WITH EQUIPMENT, containing water-reactive substances	4.3	W3		4.3	328 334	LQ10 LQ11	E0		PP,EX, A	VE01	HA08	0	
3477	FUEL CELL CARTRIDGES or FUEL CELL CARTRIDGES CONTAINED IN EQUIPMENT or FUEL CELL CARTRIDGES PACKED WITH EQUIPMENT, containing corrosive substances	8	C11		8	328 334	LQ12 LQ13	E0		PP,EX,			0	
3478	FUEL CELL CARTRIDGES or FUEL CELL CARTRIDGES CONTAINED IN EQUIPMENT or FUEL CELL CARTRIDGES PACKED WITH EQUIPMENT, containing liquefied flammable gas	2	6F		2.1	328 338	LQ1	E0		PP,EX, A	VE01		1	

(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9)	(10)	(11)	(12)	(13)
3479	FUEL CELL CARTRIDGES or FUEL CELL CARTRIDGES CONTAINED IN EQUIPMENT or FUEL CELL CARTRIDGES PACKED WITH EQUIPMENT, containing hydrogen in metal hydride	2	6F		2.1	328 339	LQ1	E0		PP,EX, A	VE01		1	
3480	LITHIUM ION BATTERIES (including lithium ion polymer batteries)	9	M4	II	9	188 230 310 636	LQ0	E0		PP			0	
3481	LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT or LITHIUM ION BATTERIES PACKED WITH EQUIPMENT (including lithium ion polymer batteries)	9	M4	II	9	188 230 636	LQ0	E0		PP			0	

Consequential amendments

Table B (volume I)

- Replace “LITHIUM BATTERIES” with “LITHIUM METAL BATTERIES (including lithium alloy batteries)”.
- Replace “TRINITROPHENOL, WETTED with not less than 30% water by mass” with “TRINITROPHENOL (PICRIC ACID), WETTED with not less than 30% water by mass”.
- Replace “LITHIUM BATTERIES CONTAINED IN EQUIPMENT or LITHIUM BATTERIES PACKED WITH EQUIPMENT” with “LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT or LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT (including lithium alloy batteries)”.
- Replace “PENTAERYTHRITE TETRANITRATE MIXTURE, DESENSITIZED, SOLID, N.O.S. with more than 10% but not more than 20% PETN, by mass” with “PENTAERYTHRITE TETRANITRATE (PENTAERYTHRITOL TETRANITRATE; PETN) MIXTURE, DESENSITIZED, SOLID, N.O.S. with more than 10% but not more than 20% PETN, by mass”.
- Replace “HYDROGEN IN A METAL HYDRIDE STORAGE SYSTEM” with “HYDROGEN IN A METAL HYDRIDE STORAGE SYSTEM or HYDROGEN IN A METAL HYDRIDE STORAGE SYSTEM CONTAINED IN EQUIPMENT or HYDROGEN IN A METAL HYDRIDE STORAGE SYSTEM PACKED WITH EQUIPMENT”.
- Replace “FUEL CELL CARTRIDGES” with “FUEL CELL CARTRIDGES or FUEL CELL CARTRIDGES CONTAINED IN EQUIPMENT or FUEL CELL CARTRIDGES PACKED WITH EQUIPMENT”.

Add the following new entries:

SIGNALS, DISTRESS, ship
UN No. 0505 Class 1

SIGNALS, SMOKE
UN No. 0507 Class 1

1-HYDROXY-BENZOTRIAZOLE, ANHYDROUS, dry or wetted with less than 20% water, by mass UN No. 0508 Class 1

NITRIC ACID, other than red fuming, with less than 65% nitric acid
UN No. 2031 Class 8

WATER-REACTIVE SOLID, FLAMMABLE, N.O.S.

UN No. 3132 Class 4.3

WATER-REACTIVE SOLID, SELF-HEATING, N.O.S

UN No. 3135 Class 4.3

BIOLOGICAL SUBSTANCE, CATEGORY B

(animal material only)

UN No. 3373 Class 6.2

1-HYDROXYBENZOTRIAZOLE, ANHYDROUS, WETTED with not less than 20% water, by mass UN No. 3474 Class 4.1

ETHANOL AND GASOLINE MIXTURE or ETHANOL AND MOTOR SPIRIT MIXTURE or ETHANOL AND PETROL MIXTURE, with more than 10% ethanol

UN No. 3475 Class 3

FUEL CELL CARTRIDGES or FUEL CELL CARTRIDGES CONTAINED IN EQUIPMENT or FUEL CELL CARTRIDGES PACKED WITH EQUIPMENT, containing water-reactive substances UN No. 3476 Class 4.3

FUEL CELL CARTRIDGES or FUEL CELL CARTRIDGES CONTAINED IN EQUIPMENT or FUEL CELL CARTRIDGES PACKED WITH EQUIPMENT, containing corrosive substances UN No. 3477 Class 8

FUEL CELL CARTRIDGES or FUEL CELL CARTRIDGES CONTAINED IN EQUIPMENT or FUEL CELL CARTRIDGES PACKED WITH EQUIPMENT, containing liquefied flammable gas

UN No. 3478 Class 2

FUEL CELL CARTRIDGES or FUEL CELL CARTRIDGES CONTAINED IN EQUIPMENT or FUEL CELL CARTRIDGES PACKED WITH EQUIPMENT, containing hydrogen in metal hydride UN No. 3479 Class 2

LITHIUM ION BATTERIES (including lithium ion polymer batteries)

UN No. 3480 Class 9

LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT or LITHIUM ION BATTERIES PACKED WITH EQUIPMENT (including lithium ion polymer batteries)

UN No. 3481 Class 9

Table C (volume I)

Consequential amendments

No ONU 2031 For packing group II, in column (2), add "at least 65%, but" after "containing".

The Joint Meeting of Experts may wish to consider adding a new entry in Table C for UN 3475 ETHANOL AND GASOLINE MIXTURE or ETHANOL AND MOTOR SPIRIT MIXTURE or ETHANOL AND PETROL MIXTURE containing more than 10% ethanol.

Chapter 3.3

3.3.1 **SP188** At the beginning, replace “Lithium cells” with “Cells”.

In (a), replace “lithium equivalent content is not more than 1.5 g” with “Watt-hour rating is not more than 20 Wh”.

In (b), replace “aggregate lithium-equivalent content is not more than 8 g;” with “Watt-hour rating is not more than 100 Wh. Lithium ion batteries subject to this provision shall be marked with the Watt-hour rating on the outside case;”.

Replace (d) and (e) with the following new sub-paragraphs (d) to (i):

- “(d) Cells and batteries, except when installed in equipment, shall be packed in inner packagings that completely enclose the cell or battery. Cells and batteries shall be protected so as to prevent short circuits. This includes protection against contact with conductive materials within the same packaging that could lead to a short circuit. The inner packagings shall be packed in strong outer packagings which conform to the provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.5 of ADR;
- (e) Cells and batteries when installed in equipment shall be protected from damage and short circuit, and the equipment shall be equipped with an effective means of preventing accidental activation. When batteries are installed in equipment, the equipment shall be packed in strong outer packagings constructed of suitable material of adequate strength and design in relation to the packaging’s capacity and its intended use unless the battery is afforded equivalent protection by the equipment in which it is contained;
- (f) Except for packages containing no more than four cells installed in equipment or no more than two batteries installed in equipment, each package shall be marked with the following:
 - (i) an indication that the package contains “lithium metal” or “lithium ion” cells or batteries, as appropriate;
 - (ii) an indication that the package shall be handled with care and that a flammability hazard exists if the package is damaged;
 - (iii) an indication that special procedures shall be followed in the event the package is damaged, to include inspection and repacking if necessary; and

- (iv) a telephone number for additional information;
- (g) Each consignment of one or more packages marked in accordance with paragraph (f) shall be accompanied with a document including the following:
 - (i) an indication that the package contains “lithium metal” or “lithium ion” cells or batteries, as appropriate;
 - (ii) an indication that the package shall be handled with care and that a flammability hazard exists if the package is damaged;
 - (iii) an indication that special procedures shall be followed in the event the package is damaged, to include inspection and repacking if necessary; and
 - (iv) a telephone number for additional information;
- (h) Except when batteries are installed in equipment, each package shall be capable of withstanding a 1.2 m drop test in any orientation without damage to cells or batteries contained therein, without shifting of the contents so as to allow battery to battery (or cell to cell) contact and without release of contents; and
- (i) Except when batteries are installed in or packed with equipment, packages shall not exceed 30 kg gross mass.”.

In the last sentence, delete “, except in the case of a lithium ion cell the “lithium-equivalent content” in grams is calculated to be 0.3 times the rated capacity in ampere hours”.

Insert a new last paragraph to read as follows:

“Separate entries exist for lithium metal batteries and lithium ion batteries to facilitate the carriage of these batteries for specific modes of carriage and to enable the application of different emergency response actions.”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

SP198 Replace “and 3066” with “, 3066, 3469 and 3470”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

SP199 Replace “are considered insoluble. See ISO 3711:1990 “*Lead chromate pigments and lead chromate - molybdate pigments - Specifications and methods of test*”.” with “(see ISO 3711:1990 “*Lead chromate pigments and lead chromate-molybdate pigments – Specifications and methods of test*”) are considered insoluble and are not subject to the requirements of ADN unless they meet the criteria for inclusion in another class.”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

SP201 Add the following Note:

“NOTE: For waste lighters collected separately see Chapter 3.3, special provision 654.”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/106/Add.2)

SP236 In the last sentence, replace “Column 7” with “Column 7a”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

SP251 In the first paragraph, replace “Column (7)” with “Column 7a”

In the last paragraph, insert “for limited quantities” after “quantity limits” and replace “7” with “7a”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

SP289 Replace “Air bags or seat-belts” with “Air bag inflators, air bag modules or seat-belt pretensioners”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

SP290 Replace “2.2.7.9.1” with “1.7.1.5”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2
Consequential amendment to 1.7.1.5)

SP307 In (b) Insert “and/or mineral calcium sulphate” after “dolomite”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

SP310 At the beginning, replace “100 lithium cells” with “100 cells”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

SP328 Amend to read as follows:

“328 This entry applies to fuel cell cartridges including when contained in equipment or packed with equipment. Fuel cell cartridges installed in or integral to a fuel cell system are regarded as contained in equipment. Fuel cell cartridge means an article that stores fuel for discharge into the fuel cell through a valve(s) that controls the discharge of fuel into the fuel cell. Fuel cell cartridges, including when contained in equipment, shall be designed and constructed to prevent fuel leakage under normal conditions of carriage.

Fuel cell cartridge design types using liquids as fuels shall pass an internal pressure test at a pressure of 100 kPa (gauge) without leakage.

Except for fuel cell cartridges containing hydrogen in metal hydride which shall be in compliance with special provision 339, each fuel cell cartridge design type shall be shown to pass a 1.2 meter drop test onto an unyielding surface in the orientation most likely to result in failure of the containment system with no loss of contents. ”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

SP330 Amend to read as follows:

“**330** (Deleted)”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

SP636 Amend to read as follows:

- “**636** (a) Cells contained in equipment shall not be capable of being discharged during carriage to the extent that the open circuit voltage falls below 2 volts or two thirds of the voltage of the undischarged cell, whichever is the lower.
- (b) Used lithium cells and batteries with a gross mass of not more than 500 g each collected and presented for carriage for disposal between the consumer collecting point and the intermediate processing facility, together with other non-lithium cells or batteries, are not subject to the other provisions of ADN if they meet the following conditions:
- (i) The provisions of packing instruction P903b of ADR are complied with;
 - (ii) A quality assurance system is in place to ensure that the total amount of lithium cells or batteries in each wagon or large container/transport unit does not exceed 333 kg;
 - (iii) Packages shall bear the inscription: "USED LITHIUM CELLS".

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/106/Add.2)

SP654 Delete.

(Ref. Doc.: INF. 34+ ECE/TRANS/WP.14/AC.1/108/Add.2)

Add the following new special provisions:

- “332** Magnesium nitrate hexahydrate is not subject to the requirements of ADN.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

- 333** Ethanol and gasoline, motor spirit or petrol mixtures for use in spark-ignition engines (e.g. in automobiles, stationary engines and other engines) shall be assigned to this entry regardless of variations in volatility.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

- 334** A fuel cell cartridge may contain an activator provided it is fitted with two independent means of preventing unintended mixing with the fuel during carriage.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

- 335** Mixtures of solids which are not subject to the requirements of ADN and environmentally hazardous liquids or solids shall be classified as UN 3077 and may be carried under this entry provided there is no free liquid visible at the time the substance is loaded or at the time the packaging or vehicle, wagon or container is closed. Each vehicle, wagon or container shall be leakproof when used for carriage in bulk. Sealed packets and articles containing less than 10 ml of an environmentally hazardous liquid, absorbed into a solid material but with no free liquid in the packet or article, or containing less than 10 g of an environmentally hazardous solid, are not subject to the requirements of ADN. If free liquid is visible at the time the mixture is loaded or at the time the packaging or vehicle, wagon or container is closed, the mixture shall be classified as UN 3082.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

- 336** A single package of non-combustible solid LSA-II or LSA-III material, if carried by air, shall not contain an activity greater than 3 000 A₂.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

- 337** Type B(U) and Type B(M) packages, if carried by air, shall not contain activities greater than the following:

- (a) For low dispersible radioactive material: as authorized for the package design as specified in the certificate of approval;
- (b) For special form radioactive material: 3 000 A₁ or 100 000 A₂, whichever is the lower; or

- (c) For all other radioactive material: 3 000 A₂.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

- 338** Each fuel cell cartridge carried under this entry and designed to contain a liquefied flammable gas shall:
- (a) Be capable of withstanding, without leakage or bursting, a pressure of at least two times the equilibrium pressure of the contents at 55 °C;
 - (b) Not contain more than 200 ml of liquefied flammable gas with a vapour pressure not exceeding 1 000 kPa at 55 °C; and
 - (c) Pass the hot water bath test prescribed in 6.2.6.3.1 of Chapter 6.2 of ADR.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

- 339** Fuel cell cartridges containing hydrogen in a metal hydride carried under this entry shall have a water capacity less than or equal to 120 ml.

The pressure in the fuel cell cartridge shall not exceed 5 MPa at 55 °C. The design type shall withstand, without leaking or bursting, a pressure of twice the design pressure of the cartridge at 55 °C or 200 kPa more than the design pressure of the cartridge at 55 °C, whichever is greater. The pressure at which this test is conducted is referred to in the drop test and the hydrogen cycling test as the “minimum shell burst pressure”.

Fuel cell cartridges shall be filled in accordance with procedures provided by the manufacturer. The manufacturer shall provide the following information with each fuel cell cartridge:

- (a) Inspection procedures to be carried out before initial filling and before refilling of the fuel cell cartridge;
- (b) Safety precautions and potential hazards to be aware of;
- (c) Method for determining when the rated capacity has been achieved;
- (d) Minimum and maximum pressure range;
- (e) Minimum and maximum temperature range; and
- (f) Any other requirements to be met for initial filling and refilling including the type of equipment to be used for initial filling and refilling.

The fuel cell cartridges shall be designed and constructed to prevent fuel leakage under normal conditions of carriage. Each cartridge design type, including cartridges integral to a fuel cell, shall be subjected to and shall pass the following tests:

Drop test

A 1.8 metre drop test onto an unyielding surface in four different orientations:

- (a) Vertically, on the end containing the shut-off valve assembly;
- (b) Vertically, on the end opposite to the shut-off valve assembly;
- (c) Horizontally, onto a steel apex with a diameter of 38 mm, with the steel apex in the upward position; and
- (d) At a 45° angle on the end containing the shut-off valve assembly.

There shall be no leakage, determined by using a soap bubble solution or other equivalent means on all possible leak locations, when the cartridge is charged to its rated charging pressure. The fuel cell cartridge shall then be hydrostatically pressurized to destruction. The recorded burst pressure shall exceed 85% of the minimum shell burst pressure.

Fire test

A fuel cell cartridge filled to rated capacity with hydrogen shall be subjected to a fire engulfment test. The cartridge design, which may include a vent feature integral to it, is deemed to have passed the fire test if :

- (a) The internal pressure vents to zero gauge pressure without rupture of the cartridge; or
- (b) The cartridge withstands the fire for a minimum of 20 minutes without rupture.

Hydrogen cycling test

This test is intended to ensure that a fuel cell cartridge design stress limits are not exceeded during use.

The fuel cell cartridge shall be cycled from not more than 5% rated hydrogen capacity to not less than 95% rated hydrogen capacity and back to not more than 5% rated hydrogen capacity. The rated charging pressure

shall be used for charging and temperatures shall be held within the operating temperature range. The cycling shall be continued for at least 100 cycles.

Following the cycling test, the fuel cell cartridge shall be charged and the water volume displaced by the cartridge shall be measured. The cartridge design is deemed to have passed the hydrogen cycling test if the water volume displaced by the cycled cartridge does not exceed the water volume displaced by an uncycled cartridge charged to 95% rated capacity and pressurized to 75% of its minimum shell burst pressure.

Production leak test

Each fuel cell cartridge shall be tested for leaks at $15\text{ °C} \pm 5\text{ °C}$, while pressurized to its rated charging pressure. There shall be no leakage, determined by using a soap bubble solution or other equivalent means on all possible leak locations.

Each fuel cell cartridge shall be permanently marked with the following information:

- (a) The rated charging pressure in MPa;
- (b) The manufacturer's serial number of the fuel cell cartridges or unique identification number; and
- (c) The date of expiry based on the maximum service life (year in four digits; month in two digits).

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

- 340** Chemical kits, first aid kits and polyester resin kits containing dangerous substances in inner packagings which do not exceed the quantity limits for excepted quantities applicable to individual substances as specified in column 7b of Table A of Chapter 3.2, may be carried in accordance with Chapter 3.5. Class 5.2 substances, although not individually authorized as excepted quantities in column 7b of Table A of Chapter 3.2, are authorized in such kits and are assigned Code E2 (see 3.5.1.2).

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

- 341** Reserved.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

- 654** Waste lighters collected separately and consigned in accordance with 5.4.1.1.3 may be carried under this entry for the purposes of disposal. They need not be protected against inadvertent discharge provided that measures

are taken to prevent the dangerous build up of pressure and dangerous atmospheres.

Waste lighters, other than those leaking or severely deformed, shall be packed in accordance with packing instruction P003 of ADR. In addition the following provisions shall apply:

- only rigid packagings [of a maximum capacity of 60 litres] shall be used;
- the packagings shall be filled with water or any other appropriate protection material to avoid any ignition;
- under normal conditions of carriage all ignition devices of the lighters shall fully be covered by the protection material;
- the packagings shall be adequately vented to prevent the creation of flammable atmosphere and the build up of pressure;
- the packages shall only be carried in ventilated or open wagons/vehicles or containers.

Leaking or severely deformed lighters shall be carried in salvage packagings, provided appropriate measures are taken to ensure there is no dangerous build up of pressure.

NOTE: Special provision 201 and special packing provisions PP84 and RR5 of packing instruction P002 in 4.1.4.1 of ADR do not apply to waste lighters.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/106/Add.2)

- 655** Mixtures of solids which are not subject to the requirements of ADN and environmentally hazardous liquids or solids shall be classified as UN 3082 if free liquid is visible at the time the substance is loaded or at the time the packaging or vehicle, wagon or container is closed.”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

Chapter 3.4

Amend the heading of Chapter 3.4 to read as follows:

“CHAPTER 3.4 DANGEROUS GOODS PACKED IN LIMITED QUANTITIES”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

3.4.2, 3.4.3, 3.4.4, 3.4.5 Replace “Column (7)” with “Column (7a)”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

3.4.3 (b) Replace “6.2.1.2 and 6.2.4.1 to 6.2.4.3” with: “6.2.5.1 and 6.2.6.1 to 6.2.6.3”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/106/Add.2)

Add the following new section:

“3.4.8 The requirements

- (a) of 5.2.1.9 on the placement of orientation arrows on packages;
- (b) of 5.1.2.1 (b) on the placement of orientation arrows on overpacks; and
- (c) of 7.5.1.5 on the orientation of packages shall be applicable also to packages and overpacks transported in accordance with this chapter.”

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/2 and ECE/TRANS/WP.15/AC.1/108/Add.2)

Renumber 3.4.8 to 3.4.11 as 3.4.9 to 3.4.12 .

“3.4.9 Consignors of dangerous goods packed in limited quantities shall inform the carrier of the total gross mass of such goods to be consigned, in advance of carriage not involving maritime transport.

3.4.10 (a) [Transport units] with a maximum mass exceeding 12 tonnes carrying packages with dangerous goods in limited quantities shall be marked in accordance with 3.4.12 at the front and at the rear except when orange-coloured plate marking is displayed in accordance with 5.3.2.

(b) Containers carrying packages with dangerous goods in limited quantities shall be marked in accordance with 3.4.12 on all four sides except when orange-coloured plate marking is displayed in accordance with 5.3.2.

The carrying [transport unit] needs not be marked, except when the marking affixed to the containers is not visible from outside this carrying [transport unit]. In this latter case, the same marking shall be affixed at the front and at the rear of the [transport unit].

3.4.11 Markings specified in 3.4.9 may be dispensed with, if the total gross mass of the packages containing dangerous goods packed in limited quantities carried does not exceed 8 tonnes per transport unit.

3.4.12 The marking shall consist of "LTD QTY"²⁾ in black letters not less than 65 mm high on a white background at the front and the rear/on both sides.

Markings according to Chapter 3.4. of the IMDG Code are also acceptable.”

²⁾ *The letters "LTD QTY" are an abbreviation of the English words "Limited Quantity".*”

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/60, INF.59 as amended + ECE/TRANS/WP.15/AC.1/108/Add.2)

Chapter 3.5

Add a new Chapter 3.5 to read as follows:

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

“CHAPTER 3.5 DANGEROUS GOODS PACKED IN EXCEPTED QUANTITIES

3.5.1 Excepted quantities

3.5.1.1 Excepted quantities of dangerous goods of certain classes, other than articles, meeting the provisions of this Chapter are not subject to any other provisions of ADN except for:

- (a) The training requirements in Chapter 1.3;
- (b) The classification procedures and packing group criteria in Part 2;
- (c) The packaging requirements of 4.1.1.1, 4.1.1.2, 4.1.1.4 and 4.1.1.6 of ADR.

***NOTE:** In the case of radioactive material, the requirements for radioactive material in excepted packages in 1.7.1.5 apply.*

3.5.1.2 Dangerous goods which may be carried as excepted quantities in accordance with the provisions of this Chapter are shown in column 7b of Table A of Chapter 3.2 list by means of an alphanumeric code as follows:

Code	Maximum net quantity per inner packaging (in grams for solids and ml for liquids and gases)	Maximum net quantity per outer packaging (in grams for solids and ml for liquids and gases, or sum of grams and ml in the case of mixed packing)
E0	Not permitted as Excepted Quantity	
E1	30	1000
E2	30	500
E3	30	300
E4	1	500
E5	1	300

For gases, the volume indicated for inner packagings refers to the water capacity of the inner receptacle and the volume indicated for outer packagings refers to the combined water capacity of all inner packagings within a single outer packaging.

(Ref. Doc.: INF.34 + ECE/TRANS/WP.15/AC.1/108/Add.2)

3.5.1.3 Where dangerous goods in excepted quantities for which different codes are assigned are packaged together the total quantity per outer packaging shall be limited to that corresponding to the most restrictive code.

3.5.2 Packagings

Packagings used for the carriage of dangerous goods in excepted quantities shall be in compliance with the following:

- (a) There shall be an inner packaging and each inner packaging shall be constructed of plastic (with a minimum thickness of 0.2 mm when used for liquids), or of glass, porcelain, stoneware, earthenware or metal (see also 4.1.1.2 of ADR) and the closure of each inner packaging shall be held securely in place with wire, tape or other positive means; any receptacle having a neck with moulded screw threads shall have a leak proof threaded type cap. The closure shall be resistant to the contents;
- (b) Each inner packaging shall be securely packed in an intermediate packaging with cushioning material in such a way that, under normal conditions of carriage, they cannot break, be punctured or leak their contents. The intermediate packaging shall completely contain the contents in case of breakage or leakage, regardless of package orientation. For liquids, the intermediate packaging shall contain sufficient absorbent material to absorb the entire contents of the inner packaging. In such cases, 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;
- (c) The intermediate packaging shall be securely packed in a strong, rigid outer packaging (wooden, fibreboard or other equally strong material);
- (d) Each package type shall be in compliance with the provisions in 3.5.3;
- (e) Each package shall be of such a size that there is adequate space to apply all necessary markings; and
- (f) Overpacks may be used and may also contain packages of dangerous goods or goods not subject to the requirements of ADN.

3.5.3 Tests for packages

3.5.3.1 The complete package as prepared for carriage, with inner packagings filled to not less than 95% of their capacity for solids or 98% for liquids, shall be capable of withstanding, as demonstrated by testing which is appropriately documented, without breakage or leakage of any inner packaging and without significant reduction in effectiveness:

- (a) Drops onto a rigid, non-resilient flat and horizontal surface from a height of 1.8 m:
 - (i) Where the sample is in the shape of a box, it shall be dropped in each of the following orientations:
 - flat on the base;
 - flat on the top;
 - flat on the longest side;
 - flat on the shortest side;
 - on a corner;
 - (ii) Where the sample is in the shape of a drum, it shall be dropped in each of the following orientations:
 - diagonally on the top chime, with the centre of gravity directly above the point of impact;
 - diagonally on the base chime;
 - flat on the side;

NOTE: Each of the above drops may be performed on different but identical packages.

- (b) A force applied to the top surface for a duration of 24 hours, equivalent to the total weight of identical packages if stacked to a height of 3 m (including the drop sample).

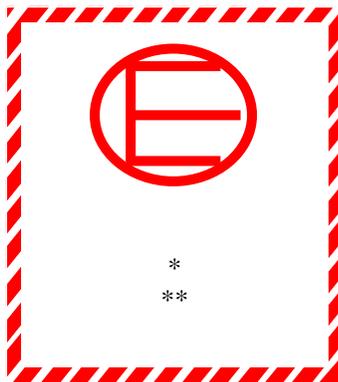
3.5.3.2 For the purposes of testing, the substances to be carried in the packaging may be replaced by other substances except where this would invalidate the results of the tests. For solids, when another substance is used, it must have the same physical characteristics (mass, grain size, etc.) as the substance to be carried. In the drop tests for liquids, when another substance is used, its relative density (specific gravity) and viscosity should be similar to those of the substance to be carried.

3.5.4 Marking of packages

3.5.4.1 Packages containing excepted quantities of dangerous goods prepared in accordance with this Chapter shall be durably and legibly marked with the mark shown in 3.5.4.2. The first or only label number indicated in column (5) of Table A of Chapter 3.2 for each of the dangerous goods contained in the package shall be

shown in the mark. Where the name of the consignor or consignee is not shown elsewhere on the package this information shall be included within the mark.

3.5.4.2 The dimensions of the mark shall be a minimum of 100 mm × 100 mm.



Excepted quantities mark

Hatching and symbol of the same colour, black or red,
on white or suitable contrasting background

* The first or only label number indicated in column (5) of Table A of Chapter 3.2 shall be shown in this location.

** The name of the consignor or of the consignee shall be shown in this location if not shown elsewhere on the package.

3.5.4.3 An overpack containing dangerous goods in excepted quantities shall display the markings required by 3.5.4.1, unless such markings on packages within the overpack are clearly visible.

3.5.5 **Maximum number of packages in any vehicle, wagon or container**

The number of packages in any vehicle, wagon or container shall not exceed 1 000.

3.5.6 **Documentation**

If a document or documents (such as a bill of lading, air waybill or CMR/CIM consignment note) accompanies(y) dangerous goods in excepted quantities, at least one of these documents shall include the statement “Dangerous Goods in Excepted Quantities” and indicate the number of packages.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/108/Add.2)

PART 5

Chapter 5.1

- 5.1.2.1 (a) In the first sentence, after (ii), replace "the markings" with "the UN numbers". In the second sentence, replace "the same marking" with "the same UN number".

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/28, alternative 2, ECE/TRANS/WP.15/AC.1/108/Add.2)

Add “, except as required in 5.2.2.1.11.” after “unless the markings and the labels representative of all dangerous goods contained in the overpack are visible”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

- 5.1.3.2 Replace “Tanks and IBCs” with “Packagings, including IBCs, and tanks”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

- 5.1.5.1 Delete. Renumber subsequent paragraphs 5.1.5.2 to 5.1.5.3.3 accordingly.

Consequential amendments:

Section 5.1.5 Amend all references to renumbered paragraphs, as appropriate.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

- 5.1.5.2.2 (current 5.1.5.3.2) Delete the second sentence.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

- 5.1.5.3 Insert a new sub-section to read as follows:

“5.1.5.3 *Determination of transport index (TI) and criticality safety index (CSI)*

- 5.1.5.3.1 The transport index (TI) for a package, overpack or container, or for unpackaged LSA-I or SCO-I, shall be the number derived in accordance with the following procedure:

- (a) Determine the maximum radiation level in units of millisieverts per hour (mSv/h) at a distance of 1 m from the external surfaces of the package, overpack, container, or unpackaged LSA-I and SCO-I. The value determined shall be multiplied by 100 and the resulting number is the transport index. For uranium and thorium ores and their concentrates, the maximum radiation level at any point 1 m from the external surface of the load may be taken as:

0.4 mSv/h	for ores and physical concentrates of uranium and thorium;
0.3 mSv/h	for chemical concentrates of thorium;
0.02 mSv/h	for chemical concentrates of uranium, other than uranium hexafluoride;

- (b) For tanks, containers and unpackaged LSA-I and SCO-I, the value determined in step (a) above shall be multiplied by the appropriate factor from Table 5.1.5.3.1;
- (c) The value obtained in steps (a) and (b) above shall be rounded up to the first decimal place (e.g. 1.13 becomes 1.2), except that a value of 0.05 or less may be considered as zero.

Table 5.1.5.3.1: Multiplication factors for tanks, containers and unpackaged LSA-I and SCO-I

Size of load ^a	Multiplication factor
size of load $\leq 1 \text{ m}^2$	1
$1 \text{ m}^2 < \text{size of load} \leq 5 \text{ m}^2$	2
$5 \text{ m}^2 < \text{size of load} \leq 20 \text{ m}^2$	3
$20 \text{ m}^2 < \text{size of load}$	10

^a *Largest cross-sectional area of the load being measured.*

- 5.1.5.3.2 The transport index for each overpack, container or conveyance shall be determined as either the sum of the TIs of all the packages contained, or by direct measurement of radiation level, except in the case of non-rigid overpacks for which the transport index shall be determined only as the sum of the TIs of all the packages.
- 5.1.5.3.3 The criticality safety index for each overpack or container shall be determined as the sum of the CSIs of all the packages contained. The same procedure shall be followed for determining the total sum of the CSIs in a consignment or aboard a conveyance.
- 5.1.5.3.4 Packages and overpacks shall be assigned to either category I-WHITE, II-YELLOW or III-YELLOW in accordance with the conditions specified in Table 5.1.5.3.4 and with the following requirements:
- (a) For a package or overpack, both the transport index and the surface radiation level conditions shall be taken into account in determining which is the appropriate category. Where the transport index satisfies the condition for one category but the surface radiation level satisfies the condition for a different category, the package or overpack shall be assigned to the higher category. For this purpose, category I-WHITE shall be regarded as the lowest category;

- (b) The transport index shall be determined following the procedures specified in 5.1.5.3.1 and 5.1.5.3.2;
- (c) If the surface radiation level is greater than 2 mSv/h, the package or overpack shall be carried under exclusive use and under the provisions of [7.5.1, CV33 (1.3) and (3.5) (a) of ADR], as appropriate;
- (d) A package carried under a special arrangement shall be assigned to category III-YELLOW except when otherwise specified in the competent authority approval certificate of the country of origin of design (see 2.2.7.2.4.6);
- (e) An overpack which contains packages carried under special arrangement shall be assigned to category III-YELLOW except when otherwise specified in the competent authority approval certificate of the country of origin of design (see 2.2.7.2.4.6).

Table 5.1.5.3.4: Categories of packages and overpacks

Conditions		
Transport index	Maximum radiation level at any point on external surface	Category
0 ^a	Not more than 0.005 mSv/h	I-WHITE
More than 0 but not more than 1 ^a	More than 0.005 mSv/h but not more than 0.5 mSv/h	II-YELLOW
More than 1 but not more than 10	More than 0.5 mSv/h but not more than 2 mSv/h	III-YELLOW
More than 10	More than 2 mSv/h but not more than 10 mSv/h	III-YELLOW ^b

^a *If the measured TI is not greater than 0.05, the value quoted may be zero in accordance with 5.1.5.3.1(c).*

^b *Shall also be carried under exclusive use.”.*

Consequential amendment:

In 3.2.1, description of Column (5), and in 5.2.2.1.11.1, replace “2.2.7.8.4” with “5.1.5.3.4”.

Chapter 5.2

- 5.2.1.6 In Note 1, replace “6.2.1.7” with “6.2.2.7”.
- In Note 2, replace “6.2.1.8” with “6.2.2.8”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/106/Add.2)

Add the following new paragraphs:

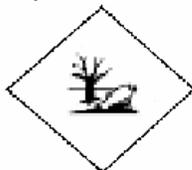
“5.2.1.8 *Special marking provisions for environmentally hazardous substances*

5.2.1.8.1 Packages containing environmentally hazardous substances meeting the criteria of 2.2.9.1.10.1 shall be durably marked with the environmentally hazardous substance mark shown in 5.2.1.8.3, with the exception of single packagings and combination packagings containing inner packagings with:

- contents of 5 l or less for liquids, or
- contents of 5 kg or less for solids.”

5.2.1.8.2 The environmentally hazardous substance mark shall be located adjacent to the markings required by 5.2.1.1. The requirements of 5.2.1.2 and 5.2.1.4 shall be met.

5.2.1.8.3 The environmentally hazardous substance mark shall be as shown below. The dimensions shall be 100 mm × 100 mm, except in the case of packages of such dimensions that they can only bear smaller marks.



Symbol (fish and tree): black on white or suitable contrasting background

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/51 + ECE/TRANS/WP.15/AC.1/108/Add.2)

5.2.1.9.2 (a) Delete “closed”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

5.2.2.1.11.1 In the first sentence, replace “Except as provided for large containers and tanks in accordance with 5.3.1.1.3” with “Except when enlarged labels are used in accordance with 5.3.1.1.3”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

5.2.2.1.11.2 (a) (i) Replace “2.2.7.7.2.1” with “2.2.7.2.2.1”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1, consequence to amendments to 2.2.7 + ECE/TRANS/WP.15/AC.1/108/Add.2)

5.2.2.1.11.2 (d) Replace “See 2.2.7.6.1.1 and 2.2.7.6.1.2” with “The number determined in accordance with 5.1.5.3.1 and 5.1.5.3.2”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

- 5.2.2.2.1 Add the following new second sentence:
“Corresponding models required for other modes of transport, with minor variations which do not affect the obvious meaning of the label, are also acceptable.”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/16 and INF.43 of the March 2007 session, ECE/TRANS/WP.15/AC.1/108/Add.2)

- 5.2.2.2.1.1 Replace “They have a line of the same colour as the symbol, 5 mm inside the edge and running parallel with it.” with “They shall have a line 5 mm inside the edge and running parallel with it. In the upper half of a label the line shall have the same colour as the symbol and in the lower half it shall have the same colour as the figure in the bottom corner.”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

- 5.2.2.2.1 Add the following new second sentence:
"Corresponding models required for other modes of transport, with minor variations which do not affect the obvious meaning of the label, are also acceptable."

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/108/Add.2)

- 5.2.2.2.1.2 Replace “ISO 7225:1994” with “ISO 7225:2005” and “ISO 7225” with “ISO 7225:2005”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/104, annex 1)

- 5.2.2.2.1.3 Amend to read as follows:
"5.2.2.2.1.3 With the exception of labels for Divisions 1.4, 1.5 and 1.6 of Class 1, the upper half of the label shall contain the pictorial symbol and the lower half shall contain:
(a) For Classes 1, 2, 3, 5.1, 5.2, 7, 8 and 9, the class number;
(b) For Classes 4.1, 4.2 and 4.3, the figure "4";
(c) For Classes 6.1 and 6.2, the figure "6".

The label may include text such as the UN number or words describing the hazard (e.g. “flammable”) in accordance with 5.2.2.2.1.5 provided the text does not obscure or detract from the other required label elements."

5.2.2.2.1.4 Amend to read as follows:

"5.2.2.2.1.4 In addition, except for Divisions 1.4, 1.5 and 1.6, labels for Class 1 shall show in the lower half, above the class number, the division number and the compatibility group letter for the substance or article. Labels for Divisions 1.4, 1.5 and 1.6 shall show in the upper half the division number, and in the lower half the class number and the compatibility group letter."

(Ref. Doc.: INF.34, ECE/TRANS/WP.15/AC.1/108/Add.2)

5.2.2.2.1.6 Insert a new-sub paragraph (c) to read as follows:

“(c) the Class 5.2 label, where the symbol may be shown in white; and”.

Consequential amendments:

5.2.2.2.1.6 (b) Delete “and”.

5.2.2.2.1.6 (c) Renumber as (d).

5.2.2.2.2 Under labels No. 2.1, replace “5.2.2.2.1.6 (c)” with “5.2.2.2.1.6 (d)”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

Chapter 5.3

5.3.1.1.6 Add a new 5.3.1.1.6 to read as follows:

“5.3.1.1.6 When the placarding is affixed to folding panels, they shall be designed and secured so that they cannot unfold or come loose from the holder during carriage (especially as a result of impacts or unintentional actions).”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/106/Add.2)

5.3.1.7.1 (a) Amend to read as follows:

“(a) Be not less than 250 mm by 250 mm and have a line 12.5 mm inside the edge and running parallel with it. In the upper half the line shall have the same colour as the symbol and in the lower half it shall have the same colour as the figure in the bottom corner;”.

5.3.2.1.5 Add a new Note to read as follows:

“**NOTE:** This paragraph needs not be applied to the marking with orange coloured plates of closed and sheeted wagons/vehicles, carrying tanks with a maximum capacity of 3 000 litres.”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/47, ECE/TRANS/WP.15/AC.1/108/Add.2)

5.3.2.1.6 At the beginning, replace “one substance” with “one dangerous substance and no non-dangerous substance”. At the end, insert “for that substance” after “UN number”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/27 as amended, ECE/TRANS/WP.15/AC.1/108/Add.2)

5.3.2.2.1 At the end of the first sub-paragraph, add “It shall remain affixed irrespective of the orientation of the wagon/vehicle”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/106/Add.2)

5.3.2.2.2 Add the following text at the end:
“Interchangeable numbers and letters on plates presenting the hazard identification number and the UN number shall remain in place during carriage and irrespective of the orientation of the [wagon or vehicle].”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/106/Add.2)

5.3.2.2.5 Add a new 5.3.2.2.5 to read as follows:

“5.3.2.2.5 When the orange-coloured plate is affixed to folding panels, they shall be designed and secured so that they cannot unfold or come loose from the holder during carriage (especially as a result of impacts or unintentional actions).”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/106/Add.2)

5.3.2.3.2 For identification number 423, add at the end of the description of the meaning: “, or flammable solid which reacts with water, emitting flammable gases or self-heating solid which reacts with water, emitting flammable gases”.

For identification number X423, amend the description of the meaning to read as follows: “solid which reacts dangerously with water, emitting flammable gases, or flammable solid which reacts dangerously with water, emitting flammable gases, or self-heating solid which reacts dangerously with water, emitting flammable gases”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/104, annex 1)

5.3.2.3.2 Insert after the heading “43”:

“X432 spontaneously flammable (pyrophoric) solid which reacts dangerously with water, emitting flammable gases.”

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/102, annex 2)

Add the following new sections to read as follows:

“5.3.5 (Reserved)

5.3.6 Environmentally hazardous substance mark

5.3.6.1 When a placard is required to be displayed in accordance with the provisions of section 5.3.1, large containers/containers, MEGCs, tank-containers, portable tanks, vehicles and wagons containing environmentally hazardous substances meeting the criteria of 2.2.9.1.10 shall be marked with the environmentally hazardous substance mark shown in 5.2.1.8.3, except that the minimum dimensions shall be 250 mm × 250 mm. The other provisions of section 5.3.1 concerning the display of placards shall apply mutatis mutandis to the display of the mark.”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/51, INF.57/Rev.1, ECE/TRANS/WP.15/AC.1/108/Add.2)

Chapter 5.4

5.4.1.1.1 (f) The existing Note becomes "Note 1". Add a new "Note 2" to read as follows:

“NOTE 2: For dangerous goods in machinery and or equipment specified in this Annex, the quantity indicated shall be the total quantity of dangerous goods contained therein in kilograms or litres as appropriate.”

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/24 as amended, ECE/TRANS/WP.15/AC.1/108/Add.2)

5.4.1.1.3 Add the following sentence at the end:

“If the provision for waste as set out in 2.1.3.5.5 is applied, the following shall be added to the proper shipping name:

“WASTE IN ACCORDANCE WITH 2.1.3.5.5” (e.g. “UN 3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S., 8, II, WASTE IN ACCORDANCE WITH 2.1.3.5.5”).

The technical name, as prescribed in Chapter 3.3, special provision 274, need not be added.”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/106/Add.2)

5.4.1.1.6.4 Add a new paragraph to read as follows:

“5.4.1.1.6.4 For the carriage of tank wagons, fixed tanks (tank vehicles), removable tanks, demountable tanks, battery-wagons, battery-vehicles, tank-containers and MEGCs

under the conditions of 4.3.2.4.4 of ADR, the following entry shall be included in the transport document: ‘Carriage in accordance with 4.3.2.4.4 of ADR’ or ‘Carriage in accordance with 4.3.2.4.4 of RID’ as appropriate.”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/104, annex 1)

5.4.1.1.11 Amend to read as follows:

“5.4.1.1.11 *Special provisions for the carriage of IBCs or portable tanks after the date of expiry of the last periodic test or inspection*

For carriage in accordance with 4.1.2.2 (b), 6.7.2.19.6 (b), 6.7.3.15.6 (b) or 6.7.4.14.6 (b) of ADR, a statement to this effect shall be included in the transport document, as follows: “Carriage in accordance with 4.1.2.2 (b) of ADR”, “Carriage in accordance with 6.7.2.19.6 (b) of ADR”, “Carriage in accordance with 6.7.3.15.6 (b) of ADR” or “Carriage in accordance with 6.7.4.14.6 (b) of ADR” as appropriate.”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

5.4.1.1.19 Add a new paragraph to read as follows:

“5.4.1.1.19 For the carriage of portable tanks under the conditions of 6.7.2.19.6 (b), 6.7.3.15.6 (b) or 6.7.4.14.6 (b) of ADR, reference to this exemption shall be mentioned in the transport document.”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/104, annex 1)

5.4.1.4.2 Amend footnote 2 to read as follows:

² If used, the relevant recommendations of the UNECE United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) may be consulted, in particular Recommendation No. 1 (United Nations Layout Key for Trade Documents) (ECE/TRADE/137, edition 81.3), UN Layout Key for Trade Documents - Guidelines for Applications (ECE/TRADE/270, edition 2002), Recommendation No. 11 (Documentary Aspects of the International Transport of Dangerous Goods) (ECE/TRADE/204, edition 96.1 – currently under revision) and Recommendation No. 22 (Layout Key for Standard Consignment Instructions) (ECE/TRADE/168, edition 1989). Refer also to the UN/CEFACT Summary of Trade Facilitation Recommendations (ECE/TRADE/346, edition 2006) and the United Nations Trade Data Elements Directory (UNTDDED) (ECE/TRADE/362, edition 2005).”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

5.4.2 In footnote 4, add the following new sentence at the end: “Facsimile signatures are acceptable where applicable laws and regulations recognize the legal validity of facsimile signatures.” and add:

“5.4.2.3 If the dangerous goods documentation is presented to the carrier by means of electronic data processing (EDP) or electronic data interchange (EDI) transmission techniques, the signature(s) may be replaced by the name(s) (in capitals) of the person authorized to sign.”

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

Chapter 5.5

5.5.2.2 Add “The marking, as required by this sub-section, shall remain on the wagon, vehicle, container or tank until the following provisions are met:

- (a) The fumigated wagon, vehicle, container or tank has been ventilated to remove harmful concentrations of fumigant gas; and
- (b) The fumigated goods or materials have been unloaded.”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)

5.5.2.3 In the Fumigation warning sign, insert “VENTILATED ON (date *)” before “DO NOT ENTER”.

(Ref. Doc.: ECE/TRANS/WP.15/AC.1/2007/30/Add.1 + ECE/TRANS/WP.15/AC.1/108/Add.2)
