Transportstyrelsens författningssamling

TRANSPORT STYRELSEN

Föreskrifter
om ändring i Transportstyrelsens föreskrifter
och allmänna råd (TSFS 2015:66) om transport
till sjöss av förpackat farligt gods (IMDG-koden);

beslutade den 4 december 2017.

Transportstyrelsen föreskriver med stöd av 4 kap. 8 § förordningen (1980:789) om åtgärder mot förorening från fartyg, 2 kap. 1 § och 3 kap. 2 och 4 §§ fartygssäkerhetsförordningen (2003:438) samt 15 § förordningen (2006:311) om transport av farligt gods
dels att 3 § ska ha följande lydelse,
dels att det ska införas en ny bilaga, bilaga 4, av följande lydelse,
samt beslutar följande allmänna råd.

3 § Som Transportstyrelsens föreskrifter ska gälla den internationella koden för transport av förpackat farligt gods (IMDG-koden) som antogs av den internationella sjöfartsorganisationen (IMO) den 24 maj 2002 genom resolution MSC.122(75), i den lydelse som framgår av resolutionerna MSC.328(90) antagen den 21 juni 2012, MSC.372(93) antagen den 22 maj 2014 och MSC.406(96) antagen den 13 maj 2016.

Resolutionernas engelska originaltexter finns i bilaga 1 och bilaga 2 till dessa föreskrifter. De senast antagna ändringarna framgår av bilaga 4.

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Denna författning träder i kraft den 1 januari 2018.

På Transportstyrelsens vägnar

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ANNEX 4

**DRAFT AMENDMENTS TO THE INTERNATIONAL MARITIME DANGEROUS GOODS (IMDG) CODE
(AMENDMENT 38-16)**

Table of Contents

1.5.3   In the heading for 1.5.3 replace "Quality assurance" by "Management system".

2.2.4   A new subtitle "2.2.4" is added with the following:

    "2.2.4   Gases not accepted for transport"

2.2.5   A new subtitle "2.2.5" is added with the following:

    "2.3.5   Substances not accepted for transport"

2.8.3   A new subtitle "2.8.3" is added with the following:

    "2.8.3   Substances not accepted for transport"

6.2.4   In the subtitle insert the word "flammable" after the word "liquefied"

6.4   The title for chapter 6.4 is replaced with the following:

    "**Provisions for the construction, testing and approval of packages for radioactive material and for the approval of such material**".

**PART 1
GENERAL PROVISIONS, DEFINITIONS AND TRAINING**

**Chapter 1.1
General provisions**

1.1.1   Application and implementation of the Code

1.1.1.6   Application of standards

1.1.1.6   Add the following new sentence at the end of the paragraph 1.1.1.6:

    "The requirements of the standard that do not conflict with the provisions of this Code shall be applied as specified, including the requirements of any other standard, or part of a standard, referenced within that standard as normative.".

1.1.1.9   Lamps containing dangerous goods

1.1.1.9.3   In the note delete "Lamps containing gases of class 2.2 are addressed in 2.2.2.6.4 and"

E&T 24/WP.1
Annex 4, page 2

Chapter 1.2
Definitions, units of measurement and abbreviations

1.2.1   Definitions

The following definitions are amended as indicated hereunder:

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

In the definition for *Design,* replace "2.7.3.5.6" with "2.7.2.3.5.6".

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

In the definition of "Liquids", at the end, after the words "(ADR)", replace the words ", as amended" by "*" with the following footnote:

"United Nations Publication: ECE/TRANS/225 (Sales No. E.14.VIII.1)"

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

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

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

The existing definition of "Tubes" is replaced by the following:

"*Tube* means a transportable pressure receptacle of seamless or composite construction having a water capacity exceeding 150 litres and of not more than 3000 litres."

1.2.1   Add the following new definitions in alphabetical order:

CTU Code means the IMO/ILO/UNECE Code of Practice for Packing of Cargo Transport Units (MSC.1/Circ.1497)*.

and at the end insert a footnote "*" with the following:

"*Further practical guidance and background information related to the CTU Code are available as informative material (MSC.1/Circ.1498). The CTU Code and the Informative   Material   may   be   found   at www.unece.org/trans/wp24/guidelinespackingctus/intro.html

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

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

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

1.2.3   List of abbreviations

The following abbreviation is amended as indicated:

Under the abbreviation of "CGA", between the brackets, amend the address to read as follows:

> "(CGA, 14501 George Carter Way, Suite 103, Chantilly, VA 20151, United States of America)".

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Chapter 1.3
Training

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1.3.1.5   Recommended training needs for shore-side personnel involved in the transport of dangerous goods under the IMDG Code

In the table, in line 4, in the column for "Specific training requirements" replace "Cargo securing requirements (as contained in the IMO/ILO/UNECE Guidelines)" by "Cargo securing requirements (as contained in the CTU Code)"
In the table, in line 11, in the column for "Specific training requirements" replace the in reference "IMO/ILO/UNECE Guidelines)" by "CTU Code".

1.3.1.7   Related Codes and publications which may be appropriate for function-specific training

In subparagraph ".6" replace the words "IMO/ILO/UNECE Guidelines for Packing of Cargo Transport Units (CTUs)" by "CTU Code".

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Chapter 1.5
General provisions concerning radioactive material

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1.5.1   Scope and application

1.5.1.1   In paragraph 1.5.1.1, the last sentence is replaced by the following:

> "Explanatory material can be found in "Advisory Material for the IAEA Regulations for the Safe Transport of Radioactive Material (2012 Edition)", IAEA Safety Standards Series No. SSG-26, IAEA, Vienna (2014)."

1.5.1.5.1 In subparagraph .1 after the reference "5.1.5.2.2" insert ", 5.1.5.2.3".

E&T 24/WP.1
Annex 4, page 4

PART 2
CLASSIFICATION

Chapter 2.0
Introduction

2.0.0   Responsibilities

2.0.0   The existing text under 2.0.0, is renumbered as 2.0.0.1.

2.0.0.2   A new paragraph 2.0.0.2 is added with the following:

> "2.0.0.2   A consignor who has identified, on the basis of test data, that a substance listed by name in column 2 of the Dangerous Goods List in chapter 3.2 meets classification criteria for a hazard class or division that is not identified in the list, may, with the approval of the competent authority, consign the substance:
>
> – Under the most appropriate generic or not otherwise specified (N.O.S.) entry reflecting all hazards; or
>
> – Under the same UN number and name but with additional hazard communication information as appropriate to reflect the additional subsidiary risk(s) (documentation, label, placard) provided that the primary hazard class remains unchanged and that any other transport conditions (e.g. limited quantity, packaging and tank provisions) that would normally apply to substances possessing such a combination of hazards are the same as those applicable to the substance listed.

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

and insert a footnote with the following:

> "*UNECE United Nations Economic Commission for Europe, Dangerous Goods and Special Cargoes Section, Transport Division. Palais des Nations, Bureau 418, CH-1211 Geneva 10, Switzerland. Tel: +41 22 917 24 56, Fax: +41 22 917 00 39. www.unece.org/trans/danger/danger.html

2.0.1   Classes, divisions, packing groups

2.0.1.1   Definitions

Under Class 4.1, after the words "self-reactive substances" replace the word "and" by "," and at the end add "and polymerizing substances".

2.0.2   UN numbers and proper shipping names

2.0.2.2   At the end of the first paragraph, add a new sentence to read as follows:

"The substances listed by name in column (2) of the Dangerous Goods List of chapter 3.2 shall be transported according to their classification in the list or under the conditions specified in 2.0.0.2.".

**Chapter 2.1
Class 1 – Explosives**

2.1.1.4   Hazard divisions

2.1.1.4   Under "Division 1.6" amend the paragraph before the Note to read as follows:

"This division comprises articles which predominantly contain extremely insensitive substances and which demonstrate a negligible probability of accidental initiation or propagation.".

2.1.2   Compatibility groups and classification codes

2.1.2.2   The description for Compatibility Group "N" is replaced by the following:

"Articles predominantly containing extremely insensitive substances".

2.1.3   Classification procedure

2.1.3.5   Assignment of fireworks to hazard divisions

2.1.3.5.1 The existing text of 2.1.3.5.1 is replaced by the following:

"2.1.3.5.1 Fireworks shall normally be assigned to hazard divisions 1.1, 1.2, 1.3, and 1.4 on the basis of test data derived from Test Series 6 of the Manual of Tests and Criteria. However:

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

.2   since the range of fireworks is very extensive and the availability of test facilities may be limited, assignment to hazard divisions may also be made in accordance with the procedure in 2.1.3.5.2.".

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

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

E&T 24/WP.1
Annex 4, page 6

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

Type	Includes: / Synonym:	Definition	Specification	Classification
Waterfall	cascades, showers	pyrotechnic fountain intended to produce a vertical cascade or curtain of sparks	containing a pyrotechnic substance which gives a positive result when tested in the HSL Flash composition test in Appendix 7 of the Manual of Tests and Criteria regardless of the results of Test Series 6 (see 2.1.3.5.1 .1)	1.1G
			containing a pyrotechnic substance which gives a negative result when tested in the HSL Flash composition test in Appendix 7 of the Manual of Tests and Criteria	1.3G

Add a new section 2.1.3.6 to read as follows:

"2.1.3.6   Classification documentation

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

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

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

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

.1   the name of the competent authority and the provisions in national legislation under which it is granted its authority;

.2   the modal or national regulations for which the classification document is applicable;

.3   confirmation that the classification has been approved, made or agreed in accordance with the United Nations Recommendations on the Transport of Dangerous Goods or the relevant modal regulations;

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

.5   the name under which the explosives will be placed onto the market or otherwise supplied for transport;

.6   the Proper Shipping Name, UN number, Class, Hazard Division and corresponding compatibility group of the explosives;

.7   where appropriate, the maximum net explosive mass of the package or article;

.8   the name, signature, stamp, seal or other identification of the person authorised by the competent authority to issue the classification document is clearly visible;

.9   where safety in transport or the hazard division is assessed as being dependent upon the packaging, the packaging mark or a description of the permitted:

-     Inner packagings
-     Intermediate packagings
-     Outer packagings

.10   the classification document states the part number, stock number or other identifying reference under which the explosives will be placed onto the market or otherwise supplied for transport;

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

.12   any additional information regarding the applicable packing instruction and special packing provisions where appropriate;

.13   the basis for assigning the classification, i.e. whether on the basis of test results, default for fireworks, analogy with classified explosive, by definition from the Dangerous Goods List etc.;

.14   any special conditions or limitations that the competent authority has identified as relevant to the safety for transport of the explosives, the communication of the hazard and international transport; and

.15   the expiry date of the classification document is given where the competent authority considers one to be appropriate.".

Chapter 2.2
Class 2 – Gases

2.2.1 Definitions and general provisions

2.2.1.3   After the words "refrigerated liquefied gases,", insert the words " adsorbed gases,".

2.2.4   Insert a new Section 2.2.4 to read as follows:

"**2.2.4   Gases not accepted for transport**

Chemically unstable gases of Class 2 shall not be accepted for transport unless the necessary precautions have been taken to prevent the possibility of a dangerous decomposition or polymerization under normal conditions of transport or unless transported in accordance with special packing provision (r) of packing instruction P200 (5) of 4.1.4.1, as applicable. For the precautions necessary to prevent polymerization, see special provision 386 of chapter 3.3. To this end particular care shall be taken to ensure that receptacles and tanks do not contain any substances liable to promote these reactions.".

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Chapter 2.3
Class 3 – Flammable liquids

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2.3.2   Assignment of packing group

2.3.2.2   Replace subparagraph ".1" with the following:

".1   The viscosity* and flash-point are in accordance with the following table:

Kinematic viscosity (extrapolated) v (at near-zero shear rate) mm^2/s at 23°C	Flow-time t in seconds	Jet diameter (mm)	Flash-point, closed-cup (°C)
$20 < v \leq 80$	$20 < t \leq 60$	4	above 17
$80 < v \leq 135$	$60 < t \leq 100$	4	above 10
$135 < v \leq 220$	$20 < t \leq 32$	6	above 5
$220 < v \leq 300$	$32 < t \leq 44$	6	above -1
$300 < v \leq 700$	$44 < t \leq 100$	6	above -5
$700 < v$	$100 < t$	6	No limit

".

and the corresponding footnote "*" is added with the following:

"*   *Viscosity determination: Where the substance concerned is non-Newtonian, or where a flow cup method of viscosity determination is otherwise unsuitable, a variable shear-rate viscometer shall be used to determine the dynamic viscosity coefficient of the substance, at 23 °C, at a number of shear rates. The values obtained are plotted against shear rate and then extrapolated to zero shear rate. The dynamic viscosity thus obtained, divided by the density, gives the apparent kinematic viscosity at near-zero shear rate.*".

2.3.2.5   Viscous liquids which:

2.3.2.5   Under the words "Viscous liquids which:" the existing second indent is replaced by the following two new indents:

"-   are not toxic or corrosive;"

-    are not environmentally hazardous or are environmentally hazardous transported in single or combination packagings containing a net quantity per single or inner packaging of 5 litres or less, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8;"

2.3.5   Insert a new section 2.3.5 with the following:

"2.3.5   Substances not accepted for transport

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

2.3.2.5.2   Subparagraph .2, replace "viscous substances" by "viscous liquids".

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Chapter 2.4
Class 4 – Flammable solids; substances liable to spontaneous combustion; substances which, in contact with water, emit flammable gases

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2.4.1   Definition and general provisions

2.4.1.1 In the paragraph for "Class 4.1", after the words "through friction; self-reactive substances (solids and liquids)", insert the words "and polymerizing substances".

2.4.1.2 Insert a new subparagraph .3 to read as follows:

".3   Polymerizing substances (Class 4.1);".

and the remaining subparagraphs ".3 to .6" are renumber as ".4 to .7" respectively.

2.4.1.2   In the last sentence after the subparagraphs, insert "and polymerizing substances" after "self-reactive substances".

2.4.2   Class 4.1 – Flammable solids, self-reactive substances and solid desensitized explosives

2.4.2   In the heading, replace "and" by "," and insert "and polymerizing substances" at the end.

2.4.2.1   General

2.4.2.1 In subparagraph .2, at the end delete the word "and"; at the end of subparagraph .3 replace "." by "; and" and a new subparagraph .4 add is added with the following:

".4   Polymerizing substances (see 2.4.2.5).".
Insert a new section 2.4.2.5 to read as follows:

"2.4.2.5   *Class 4.1 Polymerizing substances and mixtures (stabilized)*

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

E&T 24/WP.1
Annex 4, page 10

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

.2 They exhibit a heat of reaction of more than 300 J/g; and

.3 They do not meet any other criteria for inclusion in Classes 1 to 8.

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

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

.1 When offered for transport in a packaging or IBC, 50 °C or less in the packaging or IBC in which the substance is to be transported; or

.2 When offered for transport in a portable tank, 45 °C or less in the portable tank in which the substance is to be transported.".

2.4.4   Class 4.3 – Substances which, in contact with water, emit flammable gases

2.4.4.3.3   Replace "equal to or greater than 1 litre" by "greater than 1 litre".

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Chapter 2.5
Class 5 – Oxidizing substances and organic peroxides

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2.5.3   Class 5.2 – Organic peroxides

2.5.3.2   Classification of organic peroxides
2.5.3.2.4   In the table, amend the entries listed below as indicated:
"

Organic peroxide		Column	Amendment
DIBENZOYL PEROXIDE	(first row)	Concentration (%)	Replace: ">51 - 100" by ">52 - 100"
tert-BUTYL CUMYL PEROXIDE	(first row)	Number (Generic entry)	Replace: "3107" by "3109"
DICETYL PEROXYDICARBONATE	(first row)	Packing Method	Replace: "OP7" by "OP8"
DICETYL PEROXYDICARBONATE	(first row)	Number (Generic entry)	Replace: "3116" by "3120"
tert-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE	(first row)	Concentration (%)	Replace: ">32-100" by ">37-100"
tert-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE	(third row)	Concentration (%)	Replace: "≤ 32" by "≤37"
tert-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE	(third row)	Diluent type B (%)	Replace: "≥ 68" by "≥ 63"

"

Chapter 2.6
Class 6 – Toxic and infectious substances

2.6.2 Class 6.1 – Toxic substances

2.6.2.5   Insert a new 2.6.2.5 to read as follows:

"**2.6.2.5**   *Substances not accepted for transport*

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

Chapter 2.7
Class 7 – Radioactive material

2.7.2.4 Classification of packages or unpacked materials

2.7.2.4.1 Classification as expected package

2.7.2.4.1.3.2   Replace "marking "RADIOACTIVE"" by "mark "RADIOACTIVE"" wherever it appears.

2.7.2.4.1.4.2   Replace "marking "RADIOACTIVE"" by "mark "RADIOACTIVE"".

Chapter 2.8
Class 8 – Corrosive substances

2.7.2   **Classification**

2.7.2.1   General provisions

2.7.2.1.1   Replace "2.7.2.4.2 to 2.7.2.5" with "2.7.2.4 and 2.7.2.5".

2.7.2.3   Determination of other material characteristics

2.7.2.3.5 Fissile material

2.7.2.3.5.5 In subparagraph .5 delete "and".

2.7.2.3.3 Special form radioactive material

2.7.2.3.3.6.1   In subparagraph .2 after "more than 200 g but" insert "is".

Insert a new section 2.8.3 with the following:

"**2.8.3**   **Substances not accepted for transport**

Chemically unstable substances of Class 8 shall not be accepted for transport unless the necessary precautions have been taken to prevent the possibility of a dangerous decomposition or polymerization under normal conditions of transport. For the

E&T 24/WP.1
Annex 4, page 12

precautions necessary to prevent polymerization, see special provision 386 of Chapter 3.3. To this end particular care shall be taken to ensure that receptacles and tanks do not contain any substances liable to promote these reactions.".

Chapter 2.9
Miscellaneous dangerous substances and articles (class 9)
and environmentally hazardous substances

2.9.2   Assignment to class 9

2.9.2.2   *Substances and articles which, in the event of fire, may form dioxins:*

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

"3151 HALOGENATED MONOMETHYLDIPHENYLMETHANES, LIQUID or".

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

"3152 HALOGENATED MONOMETHYLDIPHENYLMETHANES, SOLID or".

The entry for 3509, under other substances, is amended to read as follows:

"3509   PACKAGINGS, DISCARDED, EMPTY, UNCLEANED†"

and its corresponding footnote remains unchanged.

Other substances or articles presenting a danger during transport, but not meeting the definitions of another class:

The following entries are deleted:

"3166 ENGINE, INTERNAL COMBUSTION or
3166 ENGINE, FUEL CELL, FLAMMABLE GAS POWERED or
3166 ENGINE, FUEL CELL, FLAMMABLE LIQUID POWERED or"

and the following new entries are added:

3530 ENGINE, INTERNAL COMBUSTION or
3530 MACHINERY, INTERNAL COMBUSTION".

2.9.3   Environmentally hazardous substances (aquatic environment)

2.9.3.2   Definitions and data requirements

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

PART 3
DANGEROUS GOODS LIST, SPECIAL PROVISIONS AND EXCEPTIONS

Chapter 3.1
General

3.1.2   Proper shipping names

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

3.1.2.6   In the introductory sentence, before subparagraphs .1 and .2, at the end, before the word "then:" insert the following:

"or the evolution of excessive heat, or when chemical stabilization is used in combination with temperature control,".

3.1.2.6.1 Replace existing subparagraph .1 with the following:

".1   For liquids and solids where the SAPT (measured without or with inhibitor, when chemical stabilization is applied) is less than or equal to that prescribed in 2.4.2.5.2, special provision 386 of chapter 3.3 and the provisions of 7.3.7 apply;".

Chapter 3.2
Dangerous Goods List

In the dangerous goods list, amend the following entries as follows:

0219	In column (16b), replace "SG 27" with "SG 31"
0285	in column (15) replace "S-Y" by "S-X"
1005 PG II	in column (6) add "379"
1006	in column (6) add "378"
1010	in column (6) add "386" and in column (16a) add "SW1"
1013	in column (6) add "378"
1046	in column (6) add "378"
1051 PG I	in column (6) add "386" and in column (16a) add "SW1"
1056	in column (6), add "378"
1060	in column (6), add "386" and in column (16a) add "SW1"
1065	in column (6) add "378"
1066	in column (6) add "378"
1956	in column (6) add "378"
1081	in column (6) add "386" and in column (16a) add "SW1"

E&T 24/WP.1
Annex 4, page 14

1082	in column (6), add "386" and in column (16a) add "SW1"
1085	in column (6) add "386" and in column (16a) add "SW1"
1086	in column (6) add "386" and in column (16a) add "SW1"
1087	in column (6) add "386" and in column (16a) add "SW1"
1092 PG I	in column (6) add "386" and in column (16a) add "SW1"
1093 PG I	in column (6) add "386", in column (16a) replace "Category E" with "Category D" and add "SW1"
1143 PG I	in column (6) add "386" and in column (16a) add "SW1"
1167 PG I	in column (6) add "386"
1183 PG I	in column (15) replace "F-G" by "<u>F-G</u>" and in column (16b), delete "SG 7".
1185 PG I	in column (6) add "386" and in column (16a) add "SW1"
1202 PG III	in column (6) delete "363"
1203 PG II	in column (6) delete "363"
1206 PG II	in column (14) replace "TP1" by "TP2"
1208 PG II	in column (4) insert "P" and in column (14) replace "TP1" by "TP2"
1218 PG I	in column (4) add "P", in column (6) add "386", in column (16a) replace "Category E" with "Category D" and add "SW1"
1223 PG III	in column (6) delete "363"
1242 PG I	in column (15) replace "F-G" by "<u>F-G</u>" and in column (16b), delete "SG 7".
1246 PG II	in column (6) add "386, in column (16a) replace Category B" with „Category C" and add "SW1"
1247 PG II	in column (6) add "386", in column (16a) replace Category B" with "Category C" and add "SW1"
1251 PG I	in column (6) add "386" and in column (16a) add "SW1"
1262 PG II	in column (14) replace "TP1" by "TP2"
1268 PGs I, II and III	in column (6) delete "363"
1272 PG III	in column (14) replace "TP1" by "TP2"

16

1295 PG I	in column (15) replace "F-G" by "<u>F-G</u>" and in column (16b), delete "SG 7".
1299 PG III	in column (14) replace "TP1" by "TP2"
1301 PG II	in column (6) add "386", in column (16a) replace "Category B" with "Category C" and add "SW1"
1302 PG I	in column (6) add "386" and in column (16a) add "SW1"
1303 PG I	in column (6) add "386", in column (16a) replace "Category E" by "Category D" and add "SW1"
1304 PG II	in column (6) add "386", in column (16a) replace "Category B" by "Category C" and add "SW1"
1309 PG II	in column (9) add "PP100" and in column (11) replace "B2" by "B21"
1309 PG III	in column (9) add "PP100" and "L3" and in column (11) replace "B3" by "B4"
1323 PG II	in column (9) add "PP100" and in column (11) replace "B2" by "B21"
1325 PG II	in column (6) delete "915" and in column (11) replace "B2" by "B21"
1325 PG III	in column (6) delete "915"
1326 PG II	in column (11) replace "B2" by "B21"
1333 PG II	in column (9) add "PP100", in column (11) replace "B2" by "B21" and in column (16b), delete "SG 7".
1345 PG II	in column (11) replace "B2" by "B21"
1352 PG II	in column (11) replace "B2" by "B21"
1358 PG II	in column (11) replace "B2" by "B21"
1360 PG I	in column (15) replace "F-G" by "<u>F-G</u>"
1369 PG II	in column (11) replace "B2" by "B21"
1374 PG II	in column (11) replace "B2" by "B21"
1374 PG III	in column (11) replace "B2" by "B21"
1376 PG III	in column (9) add "PP100" and "L3" and in column (11) replace "B3" by "B4"
1382 PG II	in column (11) replace "B2" by "B21"
1384 PG II	in column (11) replace "B2" by "B21"

E&T 24/WP.1
Annex 4, page 16

1385 PG II	in column (11) replace "B2" by "B21"
1389 PG I	in column (15) replace "F-G" by "<u>F-G</u>"
1390 PG II	in column (11) add "B4" and replace "B2" by "B21"
1391 PG I	in column (15) replace "F-G" by "<u>F-G</u>"
1392 PG I	in column (15) replace "F-G" by "<u>F-G</u>"
1393 PG II	in column (11) add "B4" and replace "B2" by "B21"
1394 PG II	in column (11) add "B4" and replace "B2" by "B21"
1395 PG II	in column (9) "PP31" and "PP40" and in column (11) replace "B2" by "B21"
1396 PG II	in column (9) add "PP31" and in column (11) add "B4" and replace "B2" by "B21"
1396 PG III	in column (9) add "PP31" and "PP40".
1397 PG I	in column (15) replace "F-G" by "<u>F-G</u>"
1398 PG III	in column (9) add "PP31" and "PP40".
1400 PG II	in column (11) add "B4" and replace "B2" by "B21"
1401 PG II	in column (11) add "B4" and replace "B2" by "B21"
1402 PG I	in column (13) delete "BK2" and in column (15) replace "F-G" by "<u>F-G</u>"
1402 PG II	in column (9) add "PP31" and in column (11) add "B4" and replace "B2" by "B21"; in column (13) delete "BK2"
1403 PG III	in column (9) add "PP31" and "PP40".
1404 PG I	in column (15) replace "F-G" by "<u>F-G</u>"
1405 PG II	in column (11) add "B4" and replace "B2" by "B21"
1407 PG I	in column (15) replace "F-G" by "<u>F-G</u>"
1408 PG III	in column (9) add "PP100"
1409 PG I	in column (15) replace "F-G" by "<u>F-G</u>"
1409 PG II	in column (9) add "PP31"
1410 PG I	in column (15) replace "F-G" by "<u>F-G</u>"
1411 PG I	in column (15) replace "F-G" by "<u>F-G</u>"

1413 PG I	in column (15) replace "F-G" by "F-G"
1414 PG I	in column (15) replace "F-G" by "F-G"
1415 PG I	in column (13) add "T9" and in column (14), add "TP7" and "TP33"
1417 PG II	in column (11) add "B4" and replace "B2" by "B21"
1418 PGII	in column (9) add "PP31" and in column (11) replace "B2" by "B21"
1418 PG III	in column (9) add "PP31"
1419 PG I	in column (15) replace "F-G" by "F-G"
1420 PG I	in column (15) replace "F-G" by "F-G"
1421 PG I	in column (15) replace "F-G" by "F-G"
1422 PG I	in column (15) replace "F-G" by "F-G"
1423 PG I	in column (15) replace "F-G" by "F-G"
1426 PG I	in column (15) replace "F-G" by "F-G"
1427 PG I	in column (15) replace "F-G" by "F-G"
1428 PG I	in column (15) replace "F-G" by "F-G"
1431	in column (11) replace "B2" by "B21"
1432 PG I	in column (15) replace "F-G" by "F-G"
1433 PG I	in column (15) replace "F-G" by "F-G"
1435 PG III	in column (9) add "PP100"
1436 PG I	in column (9) add "PP31" and in column (15) replace "F-G" by "F-G"
1436 PGII	in column (9) add "PP31" and in column (11) replace "B2" by "B21"
1436 PG III	in column (9) add "PP31"
1439 PG II	in column (11) replace "B2" by "B21" and in column (16b), replace with "SG 35" with "SG 75".
1442 PG II	in column (11) replace "B2" by "B21"
1445 PG II	in column (11) replace "B2" by "B21"
1446 PG II	in column (11) replace "B2" by "B21" and in column (13) delete "BK2"
1447 PG II	in column (11) replace "B2" by "B21"

E&T 24/WP.1
Annex 4, page 18

1448 PG II	in column (11) replace "B2" by "B21"
1449 PG II	in column (9) add "PP100" and in column (11) replace "B2" by "B21"
1450 PG II	in column (11) replace "B2" by "B21"
1452 PG II	in column (11) replace "B2" by "B21"
1453 PG II	in column (11) replace "B2" by "B21"
1455 PG II	in column (11) replace "B2" by "B21"
1456 PG II	in column (11) replace "B2" by "B21"
1457 PG II	in column (9) add "PP100" and in column (11) replace "B2" by "B21"
1458 PG II	in column (11) replace "B2" by "B21"
1459 PG II	in column (11) replace "B2" by "B21"
1461 PG II	in column (11) replace "B2" by "B21"
1462 PG II	in column (11) replace "B2" by "B21"
1463 PG II	in column (11) replace "B2" by "B21"
1469 PG II	in column (11) replace "B2" by "B21" and in column (13) delete "BK2"
1470 PG II	in column (11) replace "B2" by "B21"
1471 PG II	in column (11) replace "B2" by "B21"
1472 PG II	in column (9) add "PP100" and in column (11) replace "B2" by "B21"
1473 PG II	in column (11) replace "B2" by "B21"
1475 PG II	in column (11) replace "B2" by "B21"
1476 PG II	in column (9) add "PP100" and in column (11) replace "B2" by "B21"
1477 PG II	in column (11) replace "B2" by "B21"
1479 PG II	in column (11) replace "B2" by "B21"
1481 PG II	in column (11) replace "B2" by "B21"
1482 PG II	in column (11) replace "B2" by "B21"
1483 PG II	in column (9) add "PP100" and in column (11) replace "B2" by "B21"
1483 PG III	in column (9) add "PP100" and "L3" and in column (11) replace "B3" by "B4"

1484 PG II	in column (11) replace "B2" by "B21"
1485 PG II	in column (11) replace "B2" by "B21" and in column (13) delete "BK2"
1487 PG II	in column (11) replace "B2" by "B21"
1488 PG II	in column (11) replace "B2" by "B21"
1489 PG II	in column (11) replace "B2" by "B21"
1490 PG II	in column (11) replace "B2" by "B21"
1493 PG II	in column (11) replace "B2" by "B21"
1494 PG II	in column (11) replace "B2" by "B21"
1495 PG II	in column (11) replace "B2" by "B21"
1496 PG II	in column (11) replace "B2" by "B21"
1502 PG II	in column (11) replace "B2" by "B21"
1503 PG II	in column (11) replace "B2" by "B21"
1506 PG II	in column (11) replace "B2" by "B21"
1508 PG II	in column (11) replace "B2" by "B21"
1509 PG II	in column (9) add "PP100"
1512	In column (16a) replace "Category" by "-"
1513 PG II	in column (11) replace "B2" by "B21"
1514 PG II	in column (11) replace "B2" by "B21"
1515 PG II	in column (11) replace "B2" by "B21"
1516 PG II	in column (9) add "PP100" and in column (11) replace "B2" by "B21"
1544 PG II	in column (11) replace "B2" by "B21"
1545 PG II	in column (6) add "386" and in column (16a) add "SW1"
1546 PG II	in column (11) replace "B2" by "B21"
1554 PG II	in column (11) replace "B2" by "B21"
1555 PG II	in column (11) replace "B2" by "B21"
1557 PG II	in column (11) replace "B2" by "B21"
1558 PG II	in column (11) replace "B2" by "B21"

E&T 24/WP.1
Annex 4, page 20

1559 PG II	in column (11) replace "B2" by "B21"
1561 PG II	in column (11) replace "B2" by "B21"
1562 PG II	in column (11) replace "B2" by "B21"
1564 PG II	in column (11) replace "B2" by "B21"
1566 PG II	in column (11) replace "B2" by "B21"
1567 PG II	in column (9) add "PP100" and in column (11) replace "B2" by "B21"
1572 PG II	in column (11) replace "B2" by "B21"
1573 PG II	in column (11) replace "B2" by "B21"
1574 PG II	in column (11) replace "B2" by "B21"
1578 PG II	in column (11) replace "B2" by "B21"
1585 PG II	in column (11) replace "B2" by "B21"
1586 PG II	in column (11) replace "B2" by "B21"
1587 PG II	in column (11) replace "B2" by "B21"
1588 PG II	in column (11) replace "B2" by "B21"
1589	in column (6) add "386" and in column (16a) add "SW1
1596 PG II	in column (11) replace "B2" by "B21"
1598 PG II	in column (11) replace "B2" by "B21"
1601 PG II	in column (11) replace "B2" by "B21"
1606 PG II	in column (11) replace "B2" by "B21"
1607 PG II	in column (11) replace "B2" by "B21"
1608 PG II	in column (11) replace "B2" by "B21"
1614 PG I	in column (6) add "386"
1617 PG II	in column (11) replace "B2" by "B21"
1618 PG II	in column (11) replace "B2" by "B21"
1620 PG II	in column (11) replace "B2" by "B21"
1621 PG II	in column (11) replace "B2" by "B21"

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1622 PG II	in column (11) replace "B2" by "B21"
1623 PG II	in column (11) replace "B2" by "B21"
1624 PG II	in column (11) replace "B2" by "B21"
1625 PG II	in column (11) replace "B2" by "B21"
1627 PG II	in column (11) replace "B2" by "B21"
1629 PG II	in column (11) replace "B2" by "B21"
1630 PG II	in column (11) replace "B2" by "B21"
1631 PG II	in column (11) replace "B2" by "B21"
1634 PG II	in column (11) replace "B2" by "B21"
1636 PG II	in column (11) replace "B2" by "B21"
1637 PG II	in column (11) replace "B2" by "B21"
1638 PG II	in column (11) replace "B2" by "B21"
1639 PG II	in column (11) replace "B2" by "B21"
1640 PG II	in column (11) replace "B2" by "B21"
1641 PG II	in column (11) replace "B2" by "B21"
1642 PG II	in column (11) replace "B2" by "B21"
1643 PG II	in column (11) replace "B2" by "B21"
1644 PG II	in column (11) replace "B2" by "B21"
1645 PG II	in column (11) replace "B2" by "B21"
1646 PG II	in column (11) replace "B2" by "B21"
1650 PG II	in column (11) replace "B2" by "B21"
1651 PG II	in column (11) replace "B2" by "B21"
1652 PG II	in column (11) replace "B2" by "B21"
1653 PG II	in column (11) replace "B2" by "B21"
1655 PG II	in column (11) replace "B2" by "B21"
1657 PG II	in column (11) replace "B2" by "B21"

E&T 24/WP.1
Annex 4, page 22

1659 PG II	in column (11) replace "B2" by "B21"
1661 PG II	in column (11) replace "B2" by "B21"
1671 PG II	in column (11) replace "B2" by "B21"
1674 PG II	in column (11) replace "B2" by "B21"
1677 PG II	in column (11) replace "B2" by "B21"
1678 PG II	in column (11) replace "B2" by "B21"
1679 PG II	in column (11) replace "B2" by "B21"
1683 PG II	in column (11) replace "B2" by "B21"
1684 PG II	in column (11) replace "B2" by "B21"
1685 PG II	in column (11) replace "B2" by "B21"
1687 PG II	in column (11) replace "B2" by "B21"
1688 PG II	in column (11) replace "B2" by "B21"
1691 PG II	in column (11) replace "B2" by "B21"
1697 PG II	in column (11) replace "B2" by "B21"
1707 PG II	in column (11) replace "B2" by "B21"
1712 PG II	in column (11) replace "B2" by "B21"
1714 PG I	in column (15) replace "F-G" by "<u>F-G</u>"
1724 PG II	in column (6) add "386" and in column (16a) add "SW1"
1725 PG II	in column (11) replace "B2" by "B21"
1726 PG II	in column (11) replace "B2" by "B21"
1727 PG II	in column (11) replace "B2" by "B21"
1729 PG II	in column (11) replace "B2" by "B21"
1733 PG II	in column (11) replace "B2" by "B21"
1740 PG II	in column (11) replace "B2" by "B21"
1751 PG II	in column (11) replace "B2" by "B21"
1756 PG II	in column (11) replace "B2" by "B21"

1759 PG II	in column (11) replace "B2" by "B21"
1770 PG II	in column (11) replace "B2" by "B21"
1791 PG II and III	in column (4) insert "P"
1792 PG II	in column (11) replace "B2" by "B21"
1794 PG II	in column (11) replace "B2" by "B21"
1806 PG II	in column (11) replace "B2" by "B21"
1807 PG II	in column (11) replace "B2" by "B21"
1811 PG II	in column (11) replace "B2" by "B21"
1813 PG II	in column (11) replace "B2" by "B21"
1823 PG II	in column (11) replace "B2" by "B21"
1825 PG II	in column (11) replace "B2" by "B21"
1826 PG I and II	In column (15) replace "S-Q" by "S-B"
1829 PG II	in column (6) add "386" and in column (16a) add "SW1"
1839 PG II	in column (11) replace "B2" by "B21"
1840 PG III	in column (14) replace "TP1" by "TP2"
1843 PG II	in column (11) replace "B2" by "B21"
1847 PG II	in column (11) replace "B2" by "B21"
1849 PG II	in column (11) replace "B2" by "B21"
1860	in column (6) add "386" and in column (16a) add "SW1"
1863 PGs I, II and III	in column (6) delete "363"
1868 PG II	in column (11) replace "B2" by "B21"
1869 PG III	in column (9) add "PP100" and "L3" and in column (11) replace "B3" by "B4"
1870 PG I	in column (15) replace "F-G" by "F-G"
1885 PG II	in column (11) replace "B2" by "B21"
1894 PG II	in column (11) replace "B2" by "B21"

E&T 24/WP.1
Annex 4, page 24

1895 PG II	in column (11) replace "B2" by "B21"
1917 PG II	in column (6) add "386", in column (16a) replace "Category B" with „Category C" and add "SW1"
1919 PG II	in column (6) add "386", in column (16a) replace "Category B" with „Category C" and add "SW1"
1920 PG III	in column (14) replace "TP1" by "TP2"
1921 PG I	in column (6) add "386", in column (16a) replace "Category B" with „Category D"" and add "SW1"
1923 PG II	in column (11) replace "B2" by "B21"
1928 PG I	in column (15) replace "F-G" by "<u>F-G</u>"
1929 PG II	in column (11) replace "B2" by "B21"
1932 PG III	in column (9) add "L4" and in column (11) replace "B3" by "B4"
1939 PG II	in column (11) replace "B2" by "B21"
1950	in column (6) add "381" and in column (8), replace "LP02" by "LP200"
1956	in column (6) add "378"
1966	in column (14) delete "TP23"
1991 PG I	in column (6) add "386" and in column (16a) add "SW1"
2000 PG III	in column (6) add "383"
2008 PG I	In column (16a) insert "H1" and in column (16b) insert "SG26"
2008 PGII	in column (11) replace "B2" by "B21"
2008 PG III	in column (9) add "L4" and in column (11) replace "B3" by "B4"
2009 PG III	in column (9) add "L4"
2010 PG I	in column (15) replace "F-G" by "<u>F-G</u>"
2011 PG I	in column (15) replace "F-G" by "<u>F-G</u>"
2012 PG I	in column (15) replace "F-G" by "<u>F-G</u>"
2013 PG I	in column (15) replace "F-G" by "<u>F-G</u>"
2018 PG II	in column (11) replace "B2" by "B21"
2025 PG II	in column (11) replace "B2" by "B21"
2026 PG II	in column (11) replace "B2" by "B21"

2027 PG II	in column (11) replace "B2" by "B21"
2033 PG II	in column (11) replace "B2" by "B21"
2036	in column (6) add "378"
2055 PG III	in column (6) add "386", in column (16a) replace "Category A" with "Category C" and add "SW1"
2057 PG II and III	in column (4) add "P" and in column (14) replace "TP1" by "TP2"
2200	in column (6) add "386", and in column (16a) add "SW1"
2210 PG III	in column (9) add "PP100"
2211 PG III	in column (6) replace "207" by "382" and in column (13) delete "BK2"
2212 PG II	in column (11) replace "B2" by "B21"
2213 PG III	in column (6) insert "223"
2218 PG II	in column (6) add "386"
2227 PG III	in column (6) add "386", in column (16a) replace "Category A" with "Category C" and add "SW1"
2241 PG II	in column (14) replace "TP1" by "TP2"
2250 PG II	in column (11) replace "B2" by "B21"
2251 PG II	in column (6) add "386" and in column (16a) add "SW1"
2257 PG I	in column (15) replace "F-G" by "<u>F-G</u>"
2261 PG II	in column (11) replace "B2" by "B21"
2277 PG II	in column (6) add "386", in column (16a) replace "Category B" with „Category C" and add "SW1"
2283 PG III	in column (6) add "386", in column (16a) replace "Category A" with "Category C" and add "SW1"
2294 PG III	in column (4) add "P" and in column (14) replace "TP1" by "TP2"
2296 PG II	in column (4) add "P" and in column (14) replace "TP1" by "TP2"
2305 PG II	in column (11) replace "B2" by "B21"
2318 PG II	in column (11) replace "B2" by "B21"
2325 PG III	in column (14) replace "TP1" by "TP2"
2348 PG III	in column (6) add "386", in column (16a) replace "Category A" with "Category C" and add "SW1"

E&T 24/WP.1
Annex 4, page 26

2352 PG II	in column (6) add "386", in column (16a) replace "Category B" with „Category C" and add "SW1"
2368 PG III	in column (14) replace "TP1" by "TP2"
2383 PG II	in column (6) add "386"
2396 PG II	in column (6) add "386", in column (16a) replace "Category E" with Category D" and in column (16a) add "SW1"
2430 PG II	in column (11) replace "B2" by "B21"
2439 PG II	in column (11) replace "B2" by "B21"
2452	in column (6) add "386" and in column (16a) add "SW1"
2463 PG I	in column (15) replace "F-G" by "<u>F-G</u>"
2464 PG II	in column (11) replace "B2" by "B21"
2465 PG II	in column (11) replace "B2" by "B21"
2468 PG II	in column (11) replace "B2" by "B21"
2506 PG II	in column (11) replace "B2" by "B21"
2509 PG II	in column (11) replace "B2" by "B21"
2521 PG I	in column (6) add "386" and in column (16a) add "SW1"
2527 PG III	in column (6) add "386", in column (16a) replace "Category A" with "Category C" and add "SW1"
2531 PG II	in column (6) add "386", and in column (16a) add "SW1"
2545 PGII	in column (11) replace "B2" by "B21"
2545 PG III	in column (9) add "L4" and in column (11) replace "B3" by "B4"
2546 PGII	in column (11) replace "B2" by "B21"
2546 PG III	in column (9) add "L4" and in column (11) replace "B3" by "B4"
2567 PG II	in column (11) replace "B2" by "B21"
2570 PG II	in column (11) replace "B2" by "B21"
2573 PG II	in column (11) replace "B2" by "B21"
2583 PG II	in column (11) replace "B2" by "B21"
2587 PG II	in column (11) replace "B2" by "B21"
2588 PG II	in column (11) replace "B2" by "B21"

2590 PG III	in column (11) replace "B2" by "B21"
2607 PG III	in column (6) add "386", in column (16a) replace "Category A" with "Category C" and add "SW1"
2618 PG III	in column (6) add "386", in column (16a) replace "Category A" with "Category C" and add "SW1"
2624 PG II	in column (11) add "B4" and replace "B2" by "B21"
2627 PG II	in column (11) replace "B2" by "B21"
2645 PG II	in column (11) replace "B2" by "B21"
2647 PG II	in column (11) replace "B2" by "B21"
2649 PG II	in column (11) replace "B2" by "B21"
2653 PG II	In column (16a) insert "SW 1".
2657 PG II	in column (11) replace "B2" by "B21"
2670 PG II	in column (11) replace "B2" by "B21"
2671 PG II	in column (11) replace "B2" by "B21"
2672 PG III	in column (14) replace "TP1" by "TP2"
2673 PG II	in column (11) replace "B2" by "B21"
2678 PG II	in column (11) replace "B2" by "B21"
2680 PG II	in column (11) replace "B2" by "B21"
2682 PG II	in column (11) replace "B2" by "B21"
2691 PG II	in column (11) replace "B2" by "B21"
2709 PG III	in column (14) replace "TP1" by "TP2"
2719 PG II	in column (11) replace "B2" by "B21"
2721 PG II	in column (11) replace "B2" by "B21"
2723 PG II	in column (11) replace "B2" by "B21"
2727 PG II	in column (11) replace "B2" by "B21"
2741 PG II	in column (11) replace "B2" by "B21"
2757 PG II	in column (11) replace "B2" by "B21"
2759 PG II	in column (11) replace "B2" by "B21"

E&T 24/WP.1
Annex 4, page 28

2761 PG II	in column (11) replace "B2" by "B21"
2763 PG II	in column (11) replace "B2" by "B21"
2771 PG II	in column (11) replace "B2" by "B21"
2775 PG II	in column (11) replace "B2" by "B21"
2777 PG II	in column (11) replace "B2" by "B21"
2779 PG II	in column (11) replace "B2" by "B21"
2781 PG II	in column (11) replace "B2" by "B21"
2783 PG II	in column (11) replace "B2" by "B21"
2786 PG II	in column (11) replace "B2" by "B21"
2793 PG III	in column (9) add "PP100" and "L3" and in column (11) replace "B3" by "B4"
2811 PG II	in column (11) replace "B2" by "B21"
2813 PG I	in column (9) delete "PP83" and in column (15) replace "F-G" by "<u>F-G</u>"
2813 PG II	in column (9) delete "PP83" and in column (11) add "B4" and) replace "B2" by "B21"
2813 PG III	in column (9) delete "PP83"
2815 PG III	in column (4) insert "6.1", in column (16a) replace "Category A" by "Category B", in column (16a) insert "SW2" and in column (17) insert at the end "Toxic if swallowed, by skin contact or by inhalation."
2823 PG III	in column (11) replace "B2" by "B21"
2830 PG II	in column (11) add "B4" and replace "B2" by "B21"
2838 PG II	in column (6) add "386", in column (16a) replace "Category B" with "Category C" and add "SW1"
2850 PG III	in column (14) replace "TP1" by "TP2"
2858 PG III	in column (9) add "PP100"
2859 PG II	in column (11) replace "B2" by "B21"
2861 PG II	in column (11) replace "B2" by "B21"
2863 PG II	in column (11) replace "B2" by "B21"
2864 PG II	in column (11) replace "B2" by "B21"
2869 PG II	in column (11) replace "B2" by "B21"
2870 PG I	in column (15) replace "F-G" by "<u>F-G</u>"

2878 PG III	in column (9) add "PP100" and "L3" and in column (11) replace "B3" by "B4"
2881 PGII	in column (11) replace "B2" by "B21"
2881 PG III	in column (9) add "L4" and in column (11) replace "B3" by "B4"
2907 PG II	in column (11) replace "B2" by "B21"
2912	in column (16a) add "SW21"
2921 PG II	in column (11) replace "B2" by "B21"
2923 PG II	in column (11) replace "B2" by "B21"
2925 PG II	in column (6) delete "915" and in column (11) replace "B2" by "B21"
2925 PG III	in column (6) delete "915"
2926 PG II	in column (6) delete "915" and in column (11) replace "B2" by "B21"
2926 PG III	in column (6) delete "915"
2928 PG II	in column (11) replace "B2" by "B21"
2930 PG II	in column (11) replace "B2" by "B21"
2931 PG II	in column (11) replace "B2" by "B21"
2940 PG II	in column (11) replace "B2" by "B21"
2949 PG II	in column (11) replace "B2" by "B21"
2950 PG III	in column (9) add"PP100"
2965 PG I	in column (15) replace "F-G" by "<u>F-G</u>" and in column (16b), delete "SG 7".
2968 PG III	in column (9) add "PP100"
2969 PG II	in column (11) replace "B2" by "B21"
2977	in column (4) replace "8" by "6.1/8", in column (16a) replace "Category A" by "Category B" and add "SW2"
2978	in column (4) replace "8" by "6.1/8", in column (16a) replace "Category A" by "Category B" and add "SW2"
2983 PG I	in column (8) replace "P200" by "P001" and in column (16a) add "SW1"
2988 PG I	in column (15) replace "F-G" by "<u>F-G</u>" and in column (16b), delete "SG 7".
2989 PG II	in column (11) replace "B2" by "B21"
3022 PG II	in column (6) add "386", in column (16a) replace "Category B" with "Category C" and add "SW1"

E&T 24/WP.1
Annex 4, page 30

3027 PG II	in column (11) replace "B2" by "B21"
3073 PG II	in column (6) add "386", in column (16a) add "SW1"
3078 PG II	in column (11) add "B4" and replace "B2" by "B21"
3079 PG I	in column (6) add "386", in column (16a) add "SW1"
3084 PG II	in column (11) replace "B2" by "B21"
3085 PG II	in column (11) replace "B2" by "B21"
3086 PG II	in column (11) replace "B2" by "B21"
3087 PG II	in column (11) replace "B2" by "B21"
3088 PG II	in column (11) replace "B2" by "B21"
3089 PG II and III	in column (9) add "PP100" and in column (11) replace "B2" by "B21"
3090	in column (6), insert "384" and in column (8), insert "P910"
3091	in column (6) insert "310" and "384" and in column (8), insert "P910"
3095 PG II	in column (11) replace "B2" by "B21"
3096 PG II	in column (9) add "PP100" and in column (11) replace "B2" by "B21"
3124 PG II	in column (11) replace "B2" by "B21"
3125 PG II	in column (9) add "PP100" and in column (11) replace "B2" by "B21"
3126 PG II	in column (11) replace "B2" by "B21"
3128 PG II	in column (11) replace "B2" by "B21"
3129 PG I	in column (15) replace "F-G" by "<u>F-G</u>"
3130 PG I	in column (15) replace "F-G" by "<u>F-G</u>"
3131 PG I	in column (9) add "PP31" and in column (15) replace "F-G" by "<u>F-G</u>"
3131 PGII	in column (9) add "PP31" and in column (11) replace "B2" by "B21"
3131 PG III	in column (9) add "PP31"
3132 PG I	in column (9) add "PP31" and in column (15) replace "F-G" by "<u>F-G</u>"
3132 PGs II and III	in column (9) add "PP31"

3134 PG I	in column (9) add "PP31" and in column (15) replace "F-G" by "<u>F-G</u>"
3134 PGII	in column (9) add "PP31" and in column (11) replace "B2" by "B21"
3134 PG III	in column (9) add "PP31"
3135 PG I	in column (9) add "PP31" and in column (15) replace "F-G" by "<u>F-G</u>"
3135 PG II	in column (9) add "PP31" and in column (11) replace "B2" by "B21"
3135 PG III	in column (9) add "PP31"
3143 PG II	in column (11) replace "B2" by "B21"
3146 PG II	in column (11) replace "B2" by "B21"
3147 PG II	in column (11) replace "B2" by "B21"
3148 PG I	in column (15) replace "F-G" by "<u>F-G</u>"
3151 PG II	in column (2) replace the proper shipping name by: "POLYHALOGENATED BIPHENYLS, LIQUID or HALOGENATED MONOMETHYLDIPHENYLMETHANES, LIQUID or POLYHALOGENATED TERPHENYLS, LIQUID"
3152 PG II	in column (2) replace the proper shipping name by: "POLYHALOGENATED BIPHENYLS, SOLID or HALOGENATED MONOMETHYLDIPHENYLMETHANES, SOLID or POLYHALOGENATED TERPHENYLS, SOLID"; in column (11) replace "B2" by "B21"; and in column (17) after the words "This entry" include the word "also"
3155 PG II	in column (11) replace "B2" by "B21"
3166	in column (2) replace the proper shipping name by: "VEHICLE, FLAMMABLE GAS POWERED or VEHICLE, FLAMMABLE LIQUID POWERED or VEHICLE, FUEL CELL, FLAMMABLE GAS POWERED or VEHICLE, FUEL CELL, FLAMMABLE LIQUID POWERED" in column (6) insert "380" and "385" and delete "970"; in column (17) replace the existing first sentence by "Types of articles transported under this entry include, but are not limited to motor vehicles, hybrid vehicles, fuel cell powered vehicles, motorcycles and boats."
3170 PG II	in column (11) add "B4" and replace "B2" by "B21"
3171	in column (6) insert "971"
3175 PG II	in column (11) replace "B2" by "B21"
3178 PG II	in column (6) delete "915" and in column (11) replace "B2" by "B21"
3179 PG II	in column (6) delete "915" and in column (11) replace "B2" by "B21"
3180 PG II	in column (6) delete "915" and in column (11) replace "B2" by "B21"

3181 PG II	in column (11) replace "B2" by "B21"
3189 PGII	in column (11) replace "B2" by "B21"
3189 PG III	in column (9) add "L4" and in column (11) replace "B3" by "B4"
3190 PG II	in column (11) replace "B2" by "B21"
3191 PG II	in column (11) replace "B2" by "B21"
3192 PG II	in column (11) replace "B2" by "B21"
3205 PG II	in column (11) replace "B2" by "B21"
3206 PG II	in column (11) replace "B2" by "B21"
3208 PG I	in column (15) replace "F-G" by "<u>F-G</u>"
3208 PG II	in column (11) add "B4" and replace "B2" by "B21"
3209 PG I	in column (15) replace "F-G" by "<u>F-G</u>"
3209 PGII	in column (11) replace "B2" by "B21"
3212 PG II	in column (11) replace "B2" by "B21"
3247 PG II	in column (11) replace "B2" by "B21"
3251 PG III	in column (16a) insert "SW2"
3259 PG II	in column (11) replace "B2" by "B21"
3260 PG II	in column (11) replace "B2" by "B21"
3261 PG II	in column (11) replace "B2" by "B21"
3262 PG II	in column (11) replace "B2" by "B21"
3263 PG II	in column (11) replace "B2" by "B21"
3269 PG II	in column (2) add the following text at the end of the description ", liquid base material", in column (17) delete ", packaging group II"
3269 PG III	in column (2) add the following text at the end of the description ", liquid base material"
3283 PG II	in column (11) replace "B2" by "B21"
3284 PG II	in column (11) replace "B2" by "B21"
3285 PG II	in column (11) replace "B2" by "B21"
3288 PG II	in column (11) replace "B2" by "B21"

3290 PG II	in column (11) replace "B2" by "B21"
3313 PG II	in column (11) replace "B2" by "B21"
3314 PG III	in column (13) delete "BK2"
3316 PG II	In column (2) insert "CHEMICAL KIT or FIRST AID KIT"
3321	in column (16a) add "SW21"
3322	in column (16a) replace "SW20" by "SW21"
3324	in column (16a) add "SW21"
3325	in column (16a) add "SW21"
3332	in column (6) replace "326" by "317"
3341 PG II	in column (11) replace "B2" by "B21"
3342 PG II	in column (11) replace "B2" by "B21"
3345 PG II	in column (11) replace "B2" by "B21"
3349 PG II	in column (11) replace "B2" by "B21"
3378 PG II	in column (11) replace "B2" by "B21"
3395 PG I	in column (9) add "PP31" and in column (15) replace "F-G" by "<u>F-G</u>"
3395 PG II and III	in column (9), add "PP31"
3396 PG I	in column (9) add "PP31" and in column (15) replace "F-G" by "<u>F-G</u>"
3396 PG II and III	in column (9), add "PP31"
3397 PG I	in column (9) add "PP31" and in column (15) replace "F-G" by "<u>F-G</u>"
3397 PG II and III	in column (9), add "PP31"
3398 PG I	in column (15) replace "F-G" by "<u>F-G</u>"
3399 PG I	in column (15) replace "F-G" by "<u>F-G</u>"
3401 PG I	in column (15) replace "F-G" by "<u>F-G</u>"
3402 PG I	in column (15) replace "F-G" by "<u>F-G</u>"
3404 PG I	in column (15) replace "F-G" by "<u>F-G</u>"

E&T 24/WP.1
Annex 4, page 34

3417 PG II	in column (11) replace "B2" by "B21"
3419 PG II	in column (11) replace "B2" by "B21"
3420 PG II	in column (11) replace "B2" by "B21"
3423 PG II	in column (11) replace "B2" by "B21"
3425 PG II	in column (11) replace "B2" by "B21"
3428 PG II	in column (11) replace "B2" by "B21"
3431 PG II	in column (11) replace "B2" by "B21"
3432 PG II	in column (11) replace "B2" by "B21" and in column (17) after the words "This entry" include the word "also"
3436 PG II	in column (11) replace "B2" by "B21"
3437 PG II	in column (11) replace "B2" by "B21"
3439 PG II	in column (11) replace "B2" by "B21"
3441 PG II	in column (11) replace "B2" by "B21"
3442 PG II	in column (11) replace "B2" by "B21"
3443 PG II	in column (11) replace "B2" by "B21"
3444 PG II	in column (11) replace "B2" by "B21"
3445 PG II	in column (11) replace "B2" by "B21"
3446 PG II	in column (11) replace "B2" by "B21"
3447 PG II	in column (11) replace "B2" by "B21"
3448 PG II	in column (11) replace "B2" by "B21"
3451 PG II	in column (11) replace "B2" by "B21"
3452 PG II	in column (11) replace "B2" by "B21"
3454 PG II	in column (11) replace "B2" by "B21"
3455 PG II	in column (11) replace "B2" by "B21"
3456 PG II	in column (11) replace "B2" by "B21"
3462 PG II	in column (11) replace "B2" by "B21"
3464 PG II	in column (11) replace "B2" by "B21"

3465 PG II	in column (11) replace "B2" by "B21"
3466 PG II	in column (11) replace "B2" by "B21"
3467 PG II	in column (11) replace "B2" by "B21"
3475 PG II	in column (6) delete "363"
3480	in column (6) insert "384" and in column (8), insert "P910"
3481	in column (6) insert "310" and "384" and in column (8), insert "P910"
3490	In column (16b), delete "SG 7"
3491	In column (16b), delete "SG 7"
3497 PG II	in column (11) replace "B2" by "B21"
3507 PG I	in column (3) replace "8" by "6.1", in column (4) replace "7" by "7/8" and in column (8) replace "P805" by "P603"
3508	In column (15) replace "-" with "F-A, S-I"
3509	In column (2), replace the name by "PACKAGINGS, DISCARDED, EMPTY, UNCLEANED"
3516	in column (6) add "379"

3.2.1 Dangerous Goods List

Add the following entries:

(1)	(2)	(3)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16a)	(16b)	(17)
0510	ROCKET MOTORS	1.4C	-	-	-	0	E0	P130 LP101	PP67 L1	-	-	-	-	-	F-B, S-X	Category 02 SW1	-	See glossary of terms in Appendix B.
3527	POLYESTER RESIN KIT, solid base material	4.1	-	II	236 340	5kg	E0	P412	-	-	-	-	-	-	F-A, S-G	Category B	-	Polyester resin kits consist of two components: a base material (flammable solid) and an activator (organic peroxide), each separately packed in an inner packaging.
3527	POLYESTER RESIN KIT, solid base material	4.1	-	III	236 340	5kg	E0	P412	-	-	-	-	-	-	F-A, S-G	Category B	-	See entry above.
3528	ENGINE, INTERNAL COMBUSTION, FLAMMABLE LIQUID POWERED or ENGINE, FUEL CELL, FLAMMABLE LIQUID POWERED or MACHINERY, INTERNAL COMBUSTION, FLAMMABLE LIQUID POWERED or MACHINERY, FUEL CELL, FLAMMABLE LIQUID POWERED	3	-	-	363 972	0	E0	P005	-	-	-	-	-	-	F-E, S-E	Category E SW29	-	Types of articles transported under this entry include engines or machinery, powered by fuels classified as dangerous goods via internal combustion systems or fuel cells (e.g. combustion engines, generators, compressors, turbines, heating units, etc.).
3529	ENGINE, INTERNAL COMBUSTION, FLAMMABLE GAS POWERED or ENGINE, FUEL CELL, FLAMMABLE GAS POWERED or MACHINERY, INTERNAL COMBUSTION, FLAMMABLE GAS POWERED or MACHINERY, FUEL CELL, FLAMMABLE GAS POWERED	2.1	-	-	363 972	0	E0	P005	-	-	-	-	-	-	F-D, S-U	Category E	-	See entry above.

(1)	(2)	(3)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16a)	(16b)	(17)
3530	ENGINE, INTERNAL COMBUSTION or MACHINERY, INTERNAL COMBUSTION	9	P	-	363 972	0	E0	P005	-	-	-	-	-	-	F-A, S-F	Category A	-	See entry above.
3531	POLYMERIZING SUBSTANCE, SOLID, STABILIZED N.O.S.	4.1	-	III	274 386	0	E0	P002	PP92	IBC07	B18	-	T7	TP4 TP6 TP33	F-J, S-G	Category D SW1	SG35 SG36	Polymerizes at elevated temperatures or in a fire. Burns vigorously. Insoluble in water. Contact with alkalis or acids may cause dangerous polymerization. The products of combustion or self-accelerating polymerization may be toxic by inhalation.
3532	POLYMERIZING SUBSTANCE, LIQUID, STABILIZED, N.O.S.	4.1	-	III	274 386	0	E0	P001	PP93	IBC03	B19	-	T7	TP4 TP6	F-J, S-G	Category D SW1	SG35 SG36	Polymerizes at elevated temperatures or in a fire. Burns vigorously. Immiscible with water. Contact with alkalis or acids may cause dangerous polymerization. The products of combustion or self-accelerating polymerization may be toxic by inhalation.
3533	POLYMERIZING SUBSTANCE, SOLID, TEMPERATURE CONTROLLED, N.O.S.	4.1	-	III	274 386	0	E0	P002	PP92	IBC07	B18	-	T7	TP4 TP6 TP33	F-F, S-K	Category D SW1 SW3	SG35 SG36	Polymerizes at temperatures higher than the self-accelerating polymerization temperature or in a fire. Burns vigorously. Insoluble in water. Contact with alkalis or acids may cause dangerous polymerization. The products of combustion or self-accelerating polymerization may be toxic by inhalation. Control and emergency temperatures can be found in the transport document as required in 5.4.1.5.5. The temperature must be checked regularly.
3534	POLYMERIZING SUBSTANCE, LIQUID, TEMPERATURE CONTROLLED, N.O.S.	4.1	-	III	274 386	0	E0	P001	PP93	IBC03	B19	-	T7	TP4 TP6	F-F, S-K	Category D SW1 SW3	SG35 SG36	Polymerizes at temperatures higher than the self-accelerating polymerization temperature or in a fire. Burns vigorously. Immiscible with water. Contact with alkalis or acids may cause dangerous polymerization. The products of combustion or self-accelerating polymerization may be toxic by inhalation. Control and emergency temperatures can be found in the transport document as required in 5.4.1.5.5. The temperature must be checked regularly.

Chapter 3.3
Special provisions applicable to certain substances, materials or articles

3.3.1   In the introductory paragraph, at the end replace ":" by "." and add a new second sentence with the following:

"Where a special provision includes a requirement for package marking, the provisions of 5.2.1.2.1 to .4 shall be met. If the required mark is in the form of specific wording indicated in quotation marks, such as "Damaged Lithium Batteries", the size of the mark shall be at least 12 mm, unless otherwise indicated in the special provision or elsewhere in this Code.".

SP 188   Amend subparagraph ".6" to read as follows:

".6   Each package shall be marked with the appropriate lithium battery mark, as illustrated in 5.2.1.10;

Note: The provisions concerning marking in special provision 188 of amendment 37-14 of the Code may continue to be applied until 31 December 2018.

This requirement does not apply to:

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

.2   packages containing no more than four cells or two batteries installed in equipment, where there are not more than two packages in the consignment.".

Subparagraph ".7" is deleted;

Subparagraphs ".8" and ".9" are renumbered as ".7" and ".8" respectively;

and the following new paragraph is added at the end:

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

SP 204   At the end, add a new paragraph with the following:

"Articles containing smoke-producing substance(s) toxic by inhalation according to the criteria for Class 6.1 shall be labelled with a "TOXIC" subsidiary risk label (Model No 6.1, see 5.2.2.2.2), except that those manufactured before 31 December 2016 may be transported until 1 January 2019 without a "TOXIC" subsidiary label.".

SP 207   Delete the words "Polymeric beads and".

SP 225   After the second sentence after the words "of manufacture", insert the following **Note**:

"**Note:**   "Provisions applied in the country of manufacture" means the provisions applicable in the country of manufacture or those applicable in the country of use.".

SP 225 At the end, insert the following **Note**:

"**Note**:   Pressure receptacles which contain gases for use in the above-mentioned extinguishers or for use in stationary fire-fighting installations shall meet the requirements in chapter 6.2 and all requirements applicable to the relevant dangerous goods when these pressure receptacles are transported separately.".

SP 236 Replace existing text with the following:

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

SP 240 In the second paragraph, replace the words "Examples of such vehicles are electrically-powered cars, motorcycles, scooters, three- and four-wheeled vehicles or motorcycles, e-bikes, wheel-chairs, lawn tractors, boats and aircraft." by the following:

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

and at the end, insert the following new paragraph:

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

SP 244 At the end, add the following paragraph:

"Before loading, these by-products shall be cooled to ambient temperature, unless they have been calcined to remove moisture. Cargo transport units containing bulk loads shall be adequately ventilated and protected against ingress of water throughout the journey.".

SP 310 Replace existing text with the following:

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

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

E&T 24/WP.1
Annex 4, page 40

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

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

SP 312   Replace the existing first sentence to read:

"Vehicles powered by a fuel cell engine shall be consigned under the entries UN No. 3166 VEHICLE, FUEL CELL, FLAMMABLE GAS POWERED or UN No. 3166 VEHICLE, FUEL CELL, FLAMMABLE LIQUID POWERED, as appropriate."

SP 317   Amend to read as follows:

""Fissile-excepted" applies only to those fissile materials and packages containing fissile material which are excepted in accordance with 2.7.2.3.5".

SP 327   In the second sentence, after the words "protected against" insert "movement and".

SP 327   In the third sentence, replace "LP02" by "LP200".

SP 361   Replace existing subparagraph ".5" to read as follows:

".5   Capacitors manufactured after 31 December 2013, shall be marked with the energy storage capacity in Wh.".

SP 363   Replace existing text with the following:

"363   .1   This entry applies to engines or machinery, powered by fuels classified as dangerous goods via internal combustion systems or fuel cells (e.g. combustion engines, generators, compressors, turbines, heating units, etc.), except those which are assigned under UN 3166 or UN 3363.

.2   Engines or machinery which are empty of liquid or gaseous fuels and which do not contain other dangerous goods, are not subject to this Code.

Note 1: An engine or machinery is considered to be empty of liquid fuel when the liquid fuel tank has been drained and the engine or machinery cannot be operated due to a lack of fuel. Engine or machinery components such as fuel lines, fuel filters and injectors do not need to be cleaned, drained or purged to be considered empty of liquid fuels. In addition, the liquid fuel tank does not need to be cleaned or purged.
Note 2: An engine or machinery is considered to be empty of gaseous fuels when the gaseous fuel tanks are empty of liquid (for liquefied gases), the positive pressure in the tanks does not exceed 2 bar and the fuel shut-off or isolation valve is closed and secured.

.3   Engines and machinery containing fuels meeting the classification criteria of Class 3, shall be consigned under the entries UN No. 3528

ENGINE, INTERNAL COMBUSTION, FLAMMABLE LIQUID POWERED or UN 3528 ENGINE, FUEL CELL, FLAMMABLE LIQUID POWERED or UN 3528 MACHINERY, INTERNAL COMBUSTION, FLAMMABLE LIQUID POWERED or UN 3528 MACHINERY, FUEL CELL, FLAMMABLE LIQUID POWERED, as appropriate.

.4   Engines and machinery containing fuels meeting the classification criteria of Class 2.1, shall be consigned under the entries UN 3529 ENGINE, INTERNAL COMBUSTION, FLAMMABLE GAS POWERED or UN 3529 ENGINE, FUEL CELL, FLAMMABLE GAS POWERED or UN 3529 MACHINERY, INTERNAL COMBUSTION, FLAMMABLE GAS POWERED or UN 3529 MACHINERY, FUEL CELL, FLAMMABLE GAS POWERED, as appropriate.
Engines and machinery powered by both a flammable gas and a flammable liquid shall be consigned under the appropriate UN 3529 entry.

.5   Engines and machinery containing liquid fuels meeting the classification criteria of 2.9.3 for environmentally hazardous substances and not meeting the classification criteria of any other Class or Division, shall be consigned under the entries UN 3530 ENGINE, INTERNAL COMBUSTION or UN 3530 MACHINERY, INTERNAL COMBUSTION, as appropriate.

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

.7   The engines or machinery are not subject to any other provisions of this Code, except for special provision 972, Part 7 and column 16a and 16b in the dangerous goods list, if the following conditions are met:

    .1   the engine or machinery, including the means of containment containing dangerous goods, shall be in compliance with the construction requirements specified by the competent authority;

    .2   any valves or openings (e.g. venting devices) shall be closed during transport;

    .3   the engines or machinery shall be oriented to prevent inadvertent leakage of dangerous goods and secured by means capable of restraining the engines or machinery to prevent any movement during transport which would change the orientation or cause them to be damaged;

E&T 24/WP.1
Annex 4, page 42

.4   for UN 3528 and UN 3530:
- where the engine or machinery contains more than 60 L of liquid fuel and has a capacity of not more than 450 L, the labelling requirements of 5.2.2 shall apply.
- where the engine or machinery contains more than 60 L of liquid fuel and has a capacity of more than 450 L but not more than 3,000 L, it shall be labelled on two opposing sides in accordance with 5.2.2.
- where the engine or machinery contains more than 60 L of liquid fuel and has a capacity of more than 3,000 L, it shall be placarded on two opposing sides in accordance with 5.3.1.1.2;
- For UN 3530, in addition the marking requirements of 5.2.1.6 apply.

.5   for UN 3529:

- where the fuel tank of the engine or machinery has a water capacity of not more than 450 L, the labelling requirements of 5.2.2 shall apply.
- where the fuel tank of the engine or machinery has a water capacity of more than 450 L but not more than 1,000 L, it shall be labelled on two opposing sides in accordance with 5.2.2.
- where the fuel tank of the engine or machinery has a water capacity of more than 1,000 L, it shall be placarded on two opposing sides in accordance with 5.3.1.1.2;

.6   A transport document in accordance with 5.4 is required and shall contain the following additional statement "Transport in accordance with special provision 363"."

SP 369   Amend the first paragraph to read as follows:

"In accordance with 2.0.3.5, this radioactive material in an excepted package possessing toxic and corrosive properties is classified in Class 6.1 with radioactive material and corrosivity subsidiary risks.".

and replace the existing third paragraph with the following:

"In addition to the provisions applicable to the transport of Class 6.1 substances with a corrosivity subsidiary risk, the provisions of 5.1.3.2, 5.1.5.2.2, 5.1.5.4.1.2, 7.1.4.5.9, 7.1.4.5.10, 7.1.4.5.12, and 7.8.4.1 to 7.8.4.6 shall apply.".

SP 370   In the second indent, replace the words "that is not too sensitive for acceptance into Class 1" by "that gives a positive result".

SP 372   Replace the existing subparagraph ".3" with the following:

".3   Capacitors manufactured after 31 December 2015, shall be marked with the energy storage capacity in Wh.".

SP 373 In subparagraphs ".2.1" and ".3.2", after "absorbent" insert the words "or adsorbent" and after "absorb" insert the words "or adsorb".

and in subparagraph .3 replace the reference to "paragraph (a)" with "paragraph .1" and in the last sentence replace "Nuclear radiation detectors" with "Neutron radiation detectors".

SP 915 Is deleted.

SP 943 Insert the word "label" after "subsidiary risk".

SP 958 After the words "This entry" include the word "also".

SP 961 The existing text is replaced by the following:

"961   Vehicles are not subject to the provisions of this Code if any of the following conditions are met:

.1   vehicles are stowed on the vehicle, special category and ro-ro spaces or on the weather deck of a ro-ro ship or a cargo space designated by the Administration (flag State) in accordance with SOLAS 74, chapter II-2, regulation 20 as specifically designed and approved for the carriage of vehicles, and there are no signs of leakage from the battery, engine, fuel cell, compressed gas cylinder or accumulator, or fuel tank when applicable. When packed in a cargo transport unit the exception does not apply to container cargo spaces of a ro-ro ship.
In addition, for vehicles powered solely by lithium batteries and hybrid electric vehicles powered by both an internal combustion engine and lithium metal or ion batteries, the lithium batteries shall meet the provisions of 2.9.4, except that 2.9.4.1 does not apply when pre-production prototype batteries or batteries of a small production run, consisting of not more than 100 batteries, are installed in the vehicle and the vehicle is manufactured and approved according to the provisions applied in the country of manufacture or country of use. Where a lithium battery installed in a vehicle is damaged or defective, the battery shall be removed.

.2   vehicles powered by a flammable liquid fuel with a flashpoint of 38°C or above, there are no leaks in any portion of the fuel system, the fuel tank(s) contains 450 L of fuel or less and installed batteries are protected from short-circuit;

.3   vehicles powered by a flammable liquid fuel with a flashpoint less than 38°C, the fuel tank(s) are empty and installed batteries are protected from short circuit. Vehicles are considered to be empty of flammable liquid fuel when the fuel tank has been drained and the vehicles cannot be operated due to a lack of fuel. Engine components such as fuel lines, fuel filters and injectors do not need to be cleaned, drained or purged to be considered empty. The fuel tank does not need to be cleaned or purged;

.4 vehicles powered by a flammable gas (liquefied or compressed), the fuel tank(s) are empty and the positive pressure in the tank does not exceed 2 bar, the fuel shut-off or isolation valve is closed and secured, and installed batteries are protected from short circuit;

.5 vehicles solely powered by a wet or dry electric storage battery or a sodium battery, and the battery is protected from short circuit."

SP 962 Replace existing text with the following:

"962 Vehicles, not meeting the conditions of special provision 961 shall be assigned to class 9 and shall meet the following requirements:

.1 vehicles shall not show signs of leakage from batteries, engines, fuel cells, compressed gas cylinders or accumulators, or fuel tank(s) when applicable;

.2 for flammable liquid powered vehicles the fuel tank(s) containing the flammable liquid shall not be more than one fourth full and in any case the flammable liquid shall not exceed 250 L unless otherwise approved by the competent authority;

.3 for flammable gas powered vehicles, the fuel shut-off valve of the fuel tank(s) shall be securely closed;

.4 installed batteries shall be protected from damage, short circuit, and accidental activation during transport. Lithium batteries shall meet the provisions of 2.9.4, except that 2.9.4.1 does not apply when pre-production prototype batteries or batteries of a small production run, consisting of not more than 100 batteries, are installed in the vehicle and the vehicle is manufactured and approved according to the provisions applied in the country of manufacture or country of use. Where a lithium battery installed in a vehicle is damaged or defective, the battery shall be removed and transported according to SP 376, unless otherwise approved by the competent Authority.

The provisions of this Code relevant to marking, labelling, placarding and marine pollutants shall not apply."

SP 970 Is deleted.

Add the following new special provisions:

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

.1 The working pressure in each receptacle does not exceed 50 bar;

.2 The receptacle capacity does not exceed 12 litres;

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

.4   Each receptacle is manufactured from material which will not fragment upon rupture;

.5   Each detector is manufactured under a registered quality assurance programme;
Note: ISO 9001:2008 may be used for this purpose.

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

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

Radiation detectors, including detectors in radiation detection systems, are not subject to any other requirements of this Code if the detectors meet the requirements in .1 to .6 above and the capacity of detector receptacles does not exceed 50 ml."

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

.1   The adsorption or absorption presents the following properties:

.1   the pressure at a temperature of 20°C in the receptacle is less than 0.6 bar;

.2   the pressure at a temperature of 35°C in the receptacle is less than 1 bar;

.3   the pressure at a temperature of 85°C in the receptacle is less than 12 bar.

.2   The adsorbent or absorbent material shall not have dangerous properties listed in Classes 1 to 8;

.3   The maximum contents of a receptacle shall be 10 kg of ammonia; and

.4   Receptacles containing adsorbed or absorbed ammonia shall meet the following conditions:

.1   receptacles shall be made of a material compatible with ammonia as specified in ISO 11114-1:2012;

.2   receptacles and their means of closure shall be hermetically sealed and able to contain the generated ammonia;

.3   each receptacle shall be able to withstand the pressure generated at 85 °C with a volumetric expansion no greater than 0.1%;

.4   each receptacle shall be fitted with a device that allows for gas evacuation once pressure exceeds 15 bar without violent rupture, explosion or projection; and

.5   each receptacle shall be able to withstand a pressure of 20 bar without leakage when the pressure relief device is deactivated.

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

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

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

"380   If a vehicle is powered by a flammable liquid and a flammable gas internal combustion engine, it shall be assigned to UN 3166 VEHICLE, FLAMMABLE GAS POWERED."

"381   Large packagings conforming to the packing group III performance level used in accordance with packing instruction LP02 of 4.1.4.3, as prescribed in the IMDG Code (amendment 37-14), may be used until 31 December 2022."

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

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

"384   The label to be used is Model No 9A, see 5.2.2.2.2.

Note: The Class 9 label (Model No 9) may continue to be used until 31 December 2018."

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

Hybrid electric vehicles powered by both an internal combustion engine and wet batteries, sodium batteries, lithium metal batteries or lithium ion batteries, transported with the batteries installed shall be consigned under this entry. Vehicles powered by wet batteries, sodium batteries, lithium metal batteries or lithium ion batteries, transported with the batteries installed, shall be consigned under the entry UN No. 3171 BATTERY-POWERED VEHICLE (see special provision 240).

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

Dangerous goods such as batteries, air bags, fire extinguishers, compressed gas accumulators, safety devices and other integral components of the vehicle that are necessary for the operation of the vehicle or for the safety of its operator or passengers, shall be securely installed in the vehicle and are not otherwise subject to this Code.

"386   When substances are stabilized by temperature control, the provisions of 7.3.7 apply. When chemical stabilization is employed, the person offering the packaging, IBC or tank for transport shall ensure that the level of stabilization is sufficient to prevent the substance in the packaging, IBC or tank from dangerous polymerization at a bulk mean temperature of 50°C, or, in the case of a portable tank, 45°C. Where chemical stabilization becomes ineffective at lower temperatures within the anticipated duration of transport, temperature control is required. In making this determination factors to be taken into consideration include, but are not limited to, the capacity and geometry of the packaging, IBC or tank and the effect of any insulation present, the temperature of the substance when offered for transport, the duration of the journey and the ambient temperature conditions typically encountered in the journey (considering also the season of year), the effectiveness and other properties of the stabilizer employed, applicable operational controls imposed by regulation (e.g. requirements to protect from sources of heat, including other cargo transported at a temperature above ambient) and any other relevant factors."

"971   Battery powered equipment may only be transported provided that the battery shows no sign of leakage and is protected from short-circuit. In this case, no other provisions of this Code apply.".

"972   Lithium batteries shall meet the provisions of 2.9.4, except that 2.9.4.1 does not apply when pre-production prototype batteries or batteries of a small production run, consisting of not more than 100 batteries, are installed in the engine or machinery. Where a lithium battery installed in an engine or machinery is damaged or defective, the battery shall be removed.".

Chapter 3.4
Dangerous goods packed in limited quantities

3.4.4   Segregation

3.4.4.2 Replace "column 16" with "column 16b".

3.4.5   Marking and placarding

3.4.5.1 Replace "marking" by "mark" wherever it appears (5 times) and the Note at the end is deleted.

3.4.5.2   Replace "marking" by "mark" wherever it appears (5 times) and the Note at the end is deleted.

3.4.5.3. Multimodal recognition of marks

3.4.5.3.1 Replace "marking" by "mark" wherever it appears (2 times) and in the second line replace "markings" by "marks".

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

E&T 24/WP.1
Annex 4, page 48

3.4.5.4   Replace "marking" by "mark" and "markings" by "marks" (twice)" and after the words "in the overpack are visible." insert the following new sentence:

"The lettering of the "OVERPACK" mark shall be at least 12 mm high.".

3.4.5.5 Placarding and marking of cargo transport units

3.4.5.5.4   In the first sentence replace the word "marking" by "mark".

Chapter 3.5
Dangerous goods packed in excepted quantities

3.5.2 Packagings

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

3.5.2.1.5   Replace "markings" by "marks".

3.5.4   Marking of packages

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

3.5.4.3   Replace existing text under 3.5.4.3 including the Note with the following:

"When packages containing dangerous goods packed in excepted quantities are placed in an overpack or in a unit load, the overpack or the unit load shall be marked with the mark required by this chapter unless the marks representative of all dangerous goods in the overpack or the unit load are visible. In addition, an overpack shall be marked with the word "OVERPACK" unless marks representative of all dangerous goods, as required by this chapter, in the overpack are visible. The lettering of the "OVERPACK" mark shall be at least 12 mm high. The other provisions of 5.1.2.1 apply only if other dangerous goods which are not packed in excepted quantities are contained in the overpack or in a unit load and only in relation to these other dangerous goods.".

PART 4
PACKING AND TANK PROVISIONS

Chapter 4.1
Use of packagings, including intermediate bulk containers (IBCs)
and large packagings

4.1.1   General provisions for the packing of dangerous goods in packagings, including IBCs and large packagings

4.1.1.3   Replace the reference "6.5.4" by "6.5.6".

4.1.1.5   In the second sentence, replace "markings" by "marks" and the reference "5.2.1.7" is replaced by "5.2.1.7.1".

4.1.1.12   Replace the existing introductory sentence to read as follows:

"Every packaging as specified in chapter 6.1 intended to contain liquids shall successfully undergo a suitable leakproofness test. This test is part of a quality assurance programme as stipulated in 6.1.1.3 which shows the capability of meeting the appropriate test level indicated in 6.1.5.4.4".

4.1.1.18   Amend the heading to read as follows: "**Use of salvage packagings and large salvage packagings**".

4.1.1.18.1   In the first sentence, insert "and 6.6.5.1.9" after "6.1.5.1.11" and replace the second sentence with the following:

"This does not prevent the use of a larger size packaging or large packaging of appropriate type and performance level and under the conditions of 4.1.1.18.2 and 4.1.1.18.3.".

4.1.1.18.4   The paragraph is deleted.

4.1.1.19.1   In the Note, replace "markings" by "marks".

4.1.1.19.2   Add a second sentence to read as follows:

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

4.1.2   Additional general provisions for the use of IBCs

4.1.2.4   At the end, before the subparagraphs, replace "marking" by "mark".

4.1.4   List of packing instructions

4.1.4.1   Packing instructions concerning the use of packagings (except IBCs and large packagings)

4.1.4.1   For packing instruction P001, a new special packing provision "PP93" is added with the following:

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

4.1.4.1   For packing instruction P002, new special packing provisions "PP92" and "PP 100" are added as follows:

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

E&T 24/WP.1
Annex 4, page 50

"PP100 For UN numbers 1309, 1323, 1333, 1376, 1435, 1449, 1457, 1472, 1476, 1483, 1509, 1516, 1567, 1869, 2210, 2858, 2878, 2968, 3089, 3096 and 3125, flexible, fibreboard or wooden packagings shall be sift-proof and water-resistant or shall be fitted with a sift-proof and water-resistant liner"

4.1.4.1   For packing instruction P003, new special packing provision "PP 100" is added as follows

"PP 100 For UN Nos. 1408 and 2793 flexible, fibreboard or wooden packagings shall be sift-proof and water-resistant or shall be fitted with a sift-proof and water-resistant liner.".

4.1.4.1   In packing instructions P112 (c) and P114 (b) for special packing provision PP48, add a new last sentence to read as follows:

"Packagings of other material with a small amount of metal, for example metal closures or other metal fittings such as those mentioned in 6.1.4, are not considered metal packagings.".

4.1.4.1   In packing instruction P130 for special packing provision PP67 replace "and 0502" by ", 0502 and 0510".

4.1.4.1   In packing instruction P137 for special packing provision PP70, replace "the package marked THIS SIDE UP" by "the package shall be marked in accordance with 5.2.1.7.1".

4.1.4.1   In packing instruction P200 (2), amend to read as follows:

"(2)   The following three tables cover compressed gases (Table 1), liquefied and dissolved gases (Table 2) and substances not in Class 2 (Table 3). They provide:

(a)   The UN number, name and description, and classification of the substance;

(b)   The LC_{50} for toxic substances;

(c)   The types of pressure receptacles authorised for the substance, shown by the letter "X";

(d)   The maximum test period for periodic inspection of the pressure receptacles.

Note: For pressure receptacles which make use of composite materials, the maximum test period shall be 5 years. The test period may be extended to that specified in Tables 1 and 2 (i.e. up to 10 years), if approved by the competent authority of the country of use.

(e)   The minimum test pressure of the pressure receptacles;

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

(g)   Special packing provisions that are specific to a substance."

4.1.4.1   In packing instruction P200 (3) insert a new subparagraph (e) to read as follows:

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

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

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

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

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

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

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

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

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

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

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

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

E&T 24/WP.1
Annex 4, page 52

4.1.4.1   In packing instruction P200 insert a new paragraph (4) to read as follows:

"(4)   The filling of pressure receptacles shall be carried out by qualified staff using appropriate equipment and procedures.
The procedures should include checks of:

-   The conformity of receptacles and accessories with the provisions of this Code;
-   Their compatibility with the product to be transported;
-   The absence of damage which might affect safety;
-   Compliance with the degree or pressure of filling, as appropriate;
-   Marks and identification.

These requirements are deemed to be met if the following standards are applied:

ISO 10691: 2004	Gas cylinders – Refillable welded steel cylinders for liquefied petroleum gas (LPG) – Procedures for checking before, during and after filling.
ISO 11372: 2011	Gas cylinders – Acetylene cylinders – Filling conditions and filling inspection
ISO 11755: 2005	Gas cylinders – Cylinder bundles for compressed and liquefied gases (excluding acetylene) – Inspection at time of filling
ISO 13088: 2011	Gas cylinders – Acetylene cylinder bundles – Filling conditions and filling inspection
ISO 24431: 2006	Gas cylinders – Cylinders for compressed and liquefied gases (excluding acetylene) – Inspection at time of filling

".

4.1.4.1   In packing instruction P200 renumber existing paragraph "(4)" as "(5)" and amend this paragraph as follows:

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

in special provision u, replace "ISO 7866:1999" by "ISO 7866:2012 + Cor 1:2014".

4.1.4.1   In packing instruction P200, in table 2 for UN 1058, in the columns for "Test pressure bar" and "Filling ratio", delete the words "Test pressure = 1.5 x working pressure" and in the column for "special packing provisions" insert "z".

4.1.4.1   In packing instruction P200, table 3, at the end, delete the entry for UN No. 2983.

4.1.4.1   In packing instruction P205 (6) replace "markings" by "mark".

4.1.4.1   In packing instruction P206 paragraph (3), at the end the following text is added:
"For liquids charged with a compressed gas both components – the liquid phase and the compressed gas – have to be taken into consideration in the calculation of the internal pressure in the pressure receptacle. When experimental data is not available, the following steps shall be carried out:

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

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

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

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

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

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

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

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

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

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

4.1.4.1 In packing instruction P208 (1), amend to read as follows:

"(1)   The following packagings are authorized provided the general packing requirements of 4.1.6.1 are met:

(a)   Cylinders constructed as specified in 6.2.2 and in accordance with ISO 11513:2011 or ISO 9809-1:2010; and

(b)   Cylinders constructed before 1 January 2016 in accordance with 6.2.3 and a specification approved by the competent authorities of the countries of transport and use.".

4.1.4.1 In packing instruction P208, in the heading of Table 1 replace "name and description" with "proper shipping name".

4.1.4.1   In packing provision P403, under special packing provision PP 31, the following UN numbers are inserted: 1436, 3131, 3132, 3134, 3135, 3395, 3396 and 3397; delete "(PG I)" after 1402, 1418 and 2013 and delete special packing provision "PP83" and insert "PP83   *Deleted*"

4.1.4.1 In packing instruction P406 for special packing provision PP48, add a new last sentence to read as follows:

"Packagings of other material with a small amount of metal, for example metal closures or other metal fittings such as those mentioned in 6.1.4, are not considered metal packagings.".

E&T 24/WP.1
Annex 4, page 54

4.1.4.1   In packing instruction P410, under special packing provision PP 31, the following UN numbers are inserted: 1395, 1396, 1398, 1402, 1409, 1418, 1436, 3131, 3132, 3134, 3135, 3395, 3396, 3397 3397 and delete "(PG II)" after 3170. Under special packing provision PP 40 the following UN numbers are inserted: 1395, 1398 and 1403. The following new special packing provision is inserted as follows:

> "PP 100   For UN 2950 flexible, fibreboard or wooden packagings shall be sift-proof and water-resistant or shall be fitted with a sift-proof and water-resistant liner." Delete special packing provision "PP83"

and insert "PP83   *Deleted*"

4.1.4.1 Packing instruction P502, amend special packing provision PP28 to read as follows:

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

4.1.4.1 In packing instruction P650 (10), replace "markings" by "marks".

4.1.4.1 Packing instruction "P805" is renumbered as "P603" and relocated accordingly.

4.1.4.1 Packing instruction P906 (1), amend to read as follows:

> "For liquids and solids containing or contaminated with PCBs, polyhalogenated biphenyls, polyhalogenated terphenyls or halogenated monomethyldiphenylmethanes: Packagings in accordance with P001 or P002, as appropriate."

4.1.4.1 In packing instruction P906 (2) (b), amend the end of the first sentence to read as follows:

> "PCBs, polyhalogenated biphenyls, polyhalogenated terphenyls or halogenated monomethyldiphenylmethanes present in them.".

P908   In the introductory sentence, after the words "This instruction applies to", insert the words "damaged or defective lithium ion cells and batteries and damaged or defective lithium metal cells and batteries, including those contained in equipment, of"

the second sentence, is amended to read as follows:

> "The following packagings are authorized provided the general provisions for 4.1.1 and 4.1.3 are met:"

and in subparagraph (1) replace the words "Each cell or battery or equipment containing" by "Each damaged or defective cell or battery or equipment containing"
4.1.4.1 In packing instruction P909 (3), amend the beginning of the last sentence to read: "Equipment may also be…" Remainder unchanged.

Add the following new packing instructions:

P005	**PACKING INSTRUCTION**	P005

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

P412	**PACKING INSTRUCTION**	P412

This instruction applies to UN No. 3527
The following combination packagings are authorized, provided that the general provisions of 4.1.1 and 4.1.3 are met:

(1)   Outer packagings:
        Drums (1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G);
        Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2)
        Jerricans (3A1, 3A2, 3B1, 3B2, 3H1, 3H2);

(2)   Inner packagings:
    (a) The activator (organic peroxide) shall have a maximum quantity of 125 ml per inner packaging if liquid, and 500 g per inner packaging if solid.
    (b) The base material and the activator shall be each separately packed in inner packagings.

The components may be placed in the same outer packaging provided that they will not interact dangerously in the event of a leakage.
Packagings shall conform to the packing group II or III performance level according to the criteria for Class 4.1 applied to the base material.

P910	PACKING INSTRUCTION	P910

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

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

(1) For cells and batteries, including when packed with equipment:

Drums (1A2, 1B2, 1N2, 1H2, 1D, 1G);
Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2);
Jerricans (3A2, 3B2, 3H2).

Packagings shall conform to the packing group II performance level and shall meet the following requirements:

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

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

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

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

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

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

(2) For cells and batteries contained in equipment:

Drums (1A2, 1B2, 1N2, 1H2, 1D, 1G);
Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2);
Jerricans (3A2, 3B2, 3H2).

Packagings shall conform to the packing group II performance level and shall meet the following requirements:

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

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

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

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

P910	PACKING INSTRUCTION	P910
(3)	The equipment or the batteries may be transported unpackaged under conditions specified by the competent authority. Additional conditions that may be considered in the approval process include, but are not limited to:	

    (a) The equipment or the battery shall be strong enough to withstand the shocks and loadings normally encountered during transport, including transshipment between cargo transport units and between cargo transport units and warehouses as well as any removal from a pallet for subsequent manual or mechanical handling; and

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

Additional requirements

The cells and batteries shall be protected against short circuit;

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

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

4.1.4.2 Packing instructions concerning the use of IBCs

4.1.4.2 In packing instruction IBC03, add a new special packing provision "B19" to read as follows:

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

4.1.4.2 In packing instruction IBC 04, add special packing provision "B4" to read as follows:

"B 4 Flexible, fibreboard or wooden IBCs shall be sift-proof and water-resistant or shall be fitted with a sift-proof and water-resistant liner.".

4.1.4.2 In packing instruction IBC 05 replace "B2" by "B21".

4.1.4.2 In packing instruction IBC 06, add special packing provision "B4" to read as follows:

"B 4 Flexible, fibreboard or wooden IBCs shall be sift-proof and water-resistant or shall be fitted with a sift-proof and water-resistant liner.".

and replace "B2" by "B21" and reorder the special packing provisions accordingly.

4.1.4.2 In packing instruction IBC07**,** add a new special packing provision "B18" as follows:

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

and replace "B2" by "B21" and reorder the special packing provisions accordingly.

4.1.4.2 In packing instruction IBC 08 replace "B2" by "B21" and reorder the special packing provisions accordingly.

E&T 24/WP.1
Annex 4, page 58

4.1.4.2   In packing instruction IBC520, add the following new entries:

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

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

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

4.1.4.3 Packing instructions concerning the use of large packagings

4.1.4.3   In LP02 replace special packing instruction L2 by "L2   *Deleted*" and add the new special large-packing provisions "L3" and "L4" as follows:

> "L3   For UN Nos.1309, 1376, 1483, 1869, 2793, 2858 and 2878, flexible or fibre inner packagings shall be sift-proof and water-resistant or shall be fitted with a sift-proof and water-resistant liner."

> "L4   For UN Nos.1932, 2008, 2009, 2545, 2546, 2881 and 3189 flexible or fibre inner packagings shall be hermetically sealed.".

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

4.1.4.3   In LP904, the existing introductory sentence is replaced by "This instruction applies to single damaged or defective batteries for UN 3090, 3091, 3480, and 3481, including those contained in equipment."

and in subparagraph (1) replace the words "Each cell or battery or equipment containing" by "Each damaged or defective cell or battery or equipment containing"

4.1.4.3   Add the following new packing instruction:

LP200   ***PACKING INSTRUCTION***   ***LP200***
This instruction applies to UN No. 1950.

The following large packagings are authorized for aerosols, provided that the general provisions of 4.1.1 and 4.1.3 are met:
Rigid large packagings conforming to the packing group II performance level, made of:
          steel (50A);
          aluminium (50B);
          metal other than steel or aluminium (50N);
          rigid plastics (50H);
          natural wood (50C);
          plywood (50D);
          reconstituted wood (50F);
          rigid fibreboard (50G).

Special packing provision: **L2**   The large packagings shall be designed and constructed to prevent dangerous movement of the aerosols and inadvertent discharge during normal conditions of transport. For waste aerosols transported in accordance with special provision 327, the large packagings shall have a means of retaining any free liquid that might escape during transport, e.g. absorbent material. The large packagings shall be adequately ventilated to prevent the creation of a flammable atmosphere and the build-up of pressure.

4.1.6   Special packing provisions for goods of class 2

4.1.6.1.2   Replace the reference "ISO 11114-2:2000" by "ISO 11114-2:2013".

4.1.6.1.8   In the penultimate paragraph, after "annex A of ISO 10297:2006", insert "or annex A of ISO 10297:2014".

4.1.6.1.12.3   Replace "markings" by "marks".

4.1.6.1.13.4   Replace "markings" by "marks".

4.1.8   Special packing provisions for infectious substances of category A (Class 6.2, UN Nos. 2814 and 2900)

4.1.8.4   Replace "marking" by "mark".

Chapter 4.2
Use of portable tanks and multiple-element gas containers (MEGCs)

4.2.0   Transitional provisions

4.2.0.1   In the first paragraph, at the end, replace "DSC/Circ.12………." by "CCC.1/Circ.3 *Revised guidance on the continued use of existing IMO type portable tanks and road tank vehicles for the transport of dangerous goods*"

and the definition for IMO type 5 tank is replaced with the following:

"*IMO type 5 tank* means a portable tank fitted with pressure-relief devices which is used for non-refrigerated liquefied gases of Class 2.".

4.2.0.3   At the end, add the following new paragraph:

"IMO portable tanks manufactured before 1 January 2003 shall be marked with an indication of the portable tank instruction for which it meets the minimum test pressure, minimum shell thickness, pressure relief requirements and bottom opening requirements as shown in 4.2.5.2.6 as required in 6.7.2.20.2, 6.7.3.16.2 and 6.7.4.15.2. These portable tanks need not be marked with the portable tank instruction until the next periodic inspection and test.".

4.2.1   General provisions for the use of portable tanks for the transport of substances of class 1 and classes 3 to 9

4.2.1.13 Additional provisions applicable to the transport of class 5.2 substances and class 4.1 self-reactive substances in portable tanks

4.2.1.13.14   Replace "marking" by "mark".

4.2.4   General provisions for the use of multiple-element gas containers (ME GCs)

4.2.4.5   Filling

4.2.4.5.6.3   Replace "markings" by "marks".

4.2.4.6   Filled MEGCs shall not be offered for transport;

4.2.4.6.4   Replace "markings" by "marks".

4.2.5   Portable tank instructions and special provisions

4.2.5.3   Portable tank special provisions

4.2.5.3   Delete TP23 and insert "TP23 [Reserved]".

**Chapter 4.3
Use of bulk containers**

4.3.1   General provisions

4.3.1.16.2   In the last sentence, insert "or the ingress of water" after "foreign substances".

**PART 5
CONSIGNMENT PROCEDURES**

**Chapter 5.1
General provisions**

5.1.2   Use of overpacks and unit loads

5.1.2.1   The existing Note at the end is deleted.

5.1.2.2   In the third sentence, replace "marking" by "mark".

5.1.2.3   Replace "markings" by "marks" (twice) and replace the reference "5.2.1.7" by "5.2.1.7.1".

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Chapter 5.2
Marking and labelling of packages including IBCs

</div>

5.2.1   Marking of packages including IBCs

5.2.1.1   The second sentence is replaced by the following:

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

and replace "marking" by "mark" wherever it appears (twice).

5.2.1.2   In the introductory sentence and subparagraph .4, replace "markings" by "marks".

5.2.1.3   In the second sentence replace "marking" by "mark" and the Note is deleted.

5.2.1.5.1   In the second sentence replace "markings" by "marks".

5.2.1.5.7   Replace "marking" by "mark".

5.2.1.6.2   Replace "markings" by "marks".

5.2.1.6.3   In the paragraph after the figure, replace "marking" by "mark" (twice); Note 2 is deleted and "Note 1" becomes "Note".
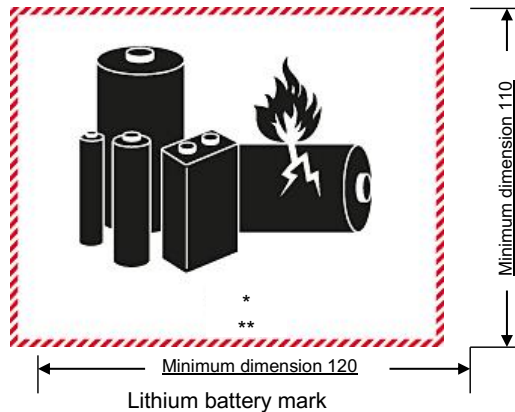
5.2.1.7   Insert a new heading "**5.2.1.7 Orientation arrows**". The reference in the existing text in 5.2.1.7" is replaced by ""5.2.1.7.2". The existing "5.2.1.7" is renumbered as "5.2.1.7.1" and the remaining paragraphs are renumbered accordingly.

5.2.1.10 Add a new paragraph 5.2.1.10 to read as follows:

> **"5.2.1.10   Lithium battery mark**
>
> 5.2.1.10.1   Packages containing lithium cells or batteries prepared in accordance with special provision 188 shall be marked as shown in Figure below.
>
> 5.2.1.10.2   The mark shall indicate the UN number, preceded by the letters "UN", i.e. 'UN 3090' for lithium metal cells or batteries or 'UN 3480' for lithium ion cells or batteries. Where the lithium cells or batteries are contained in, or packed with, equipment, the UN number preceded by the letters "UN", i.e. 'UN 3091' or 'UN 3481' as appropriate shall be indicated. Where a package contains lithium cells or batteries assigned to different UN numbers, all applicable UN numbers shall be indicated on one or more marks.

E&T 24/WP.1
Annex 4, page 62

Lithium battery mark

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

5.2.2　Labelling of packages including IBCs

5.2.2.1　Replace "markings" by "marks".

5.2.2.1.6.1 Replace "marking" by "mark".

5.2.2.1.6.2　Replace "marking" by "mark".

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

5.2.2.2.1.1　In the text under the figure, in note **, after "text/number" and before "/letters", insert "/symbol".

5.2.2.2.1.1.3　Delete the Note.

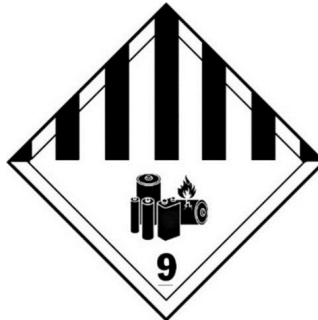5.2.2.2.1.2　At the end, add a new Note to read as follows:

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

5.2.2.2.1.3　In the second sentence, after "the hazard class (e.g. "flammable")" insert "or for label No. 9A the symbol".

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

5.2.2.2.2   Under "CLASS 9 Miscellaneous dangerous substances and articles, including environmentally hazardous substances", after the generic Class 9 label, add the following:

"

(No.9A)
Symbol (seven vertical black stripes in upper half; battery group, one broken and emitting flame in lower half): black;
Background: white;
Figure "9" underlined in bottom corner".

Chapter 5.3
Placarding and marking of cargo transport units

5.3.1   Placarding

5.3.1.1 Placarding provisions

5.3.1.1.2   At the end, insert a new paragraph with the following:

"For dangerous goods of class 9 the placard shall correspond to the label model No.9 as in 5.2.2.2.2; label model No. 9A shall not be used for placarding purposes.".

5.3.1.1.4 Placarding requirements

5.3.1.1.4.1   In subparagraph .1 replace "less" by "not more" and in subparagraph .3, at the end, after "relevant compartments" replace "; and" with the following:

"If all compartments are required to display the same placards, these placards need to be displayed only once along each side of the cargo transport unit; and".

5.3.1.1.5 Special provisions for class 7

5.3.1.1.5.1   Replace the words "in figure 5.3.1" with "in the figure under 5.3.1.2.2".

5.3.2   Marking of cargo transport units

5.3.2.0 Display of proper shipping name

5.3.2.0.2   Replace "less" by "not more".

E&T 24/WP.1
Annex 4, page 64

5.3.2.1 Display of UN numbers

5.3.2.1.2   In subparagraph .2, insert a new second sentence with the following:

"For portable tanks with a capacity of not more than 3,000 litres, the UN number may be displayed on an orange rectangular panel of appropriately reduced size on the external surface of the tank in characters not less than 25 mm high.".

5.3.2.2 Elevated temperature substances

5.3.2.2   The heading is amended to read as follows:

"Elevated temperature substance mark"

5.3.2.2.1   In the paragraph under the figure, replace "marking" by "mark"; replace "less" by "not more" and the Note is deleted.

5.3.2.3 Marine pollutant mark

5.3.2.3.2   Replace "less" by "not more".

**Chapter 5.4
Documentation**

5.4.1   Dangerous goods transport information

5.4.1.5 Information required in addition to the dangerous goods description

5.4.1.5.5 Self-reactive substances and organic peroxides

5.4.1.5.5   Replace existing heading with the following:

"Self-reactive substances, polymerizing substances and organic peroxides"

5.4.1.5.5 In the introductory text, after the words "self-reactive substances" insert "and polymerizing substances"

5.4.1.5.16   Insert a new sub section 5.4.1.5.16 to read as follows:

"5.4.1.5.16   Classification where new data is available (see 2.0.0.2)

For transport in accordance with 2.0.0.2, a statement to this effect shall be included in the transport document, as follows "Classified in accordance with 2.0.0.2"."

5.4.1.5.17   Insert a new sub section 5.4.1.5.17 to read as follows:

"5.4.1.5.17   Transport of UN Nos. 3528, 3529 and 3530

For transport of UN Nos. 3528, 3529 and 3530, the transport document shall contain the following additional statement "Transport in accordance with special provision 363"."

5.4.2   Container/vehicle parking certificate

5.4.2.1.4   The footnote referencing "IMO/ILO/UNECE Guidelines……" is replaced by "See CTU Code"

**Chapter 5.5
Special provisions**

5.5.2   Special provisions applicable to fumigated cargo transport units (UN 3359)

5.5.2.3   Marking and placarding

5.5.2.3.2   In the paragraph after the figure, replace "marking" by "mark" (twice); the Note is deleted and the following new paragraph is added at the end:

> "The method of marking shall be such that this information will still be identifiable on cargo transport units surviving at least three months' immersion in the sea. In considering suitable marking methods, account shall be taken of the ease with which the surface of the cargo transport unit can be marked."

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

5.5.3.4   Marking of packages containing a coolant or conditioner

5.5.3.4.2 Replace "markings" by "marks".

5.5.3.6   Marking of cargo transport units

5.5.3.6.2 In the last paragraph before the Note, replace "marking" by "mark"; The Note is deleted and the following new paragraph is added at the end:

> "The method of marking shall be such that this information will still be identifiable on cargo transport units surviving at least three months' immersion in the sea. In considering suitable marking methods, account shall be taken of the ease with which the surface of the cargo transport unit can be marked."

5.5.3.7   Documentation

5.5.3.7.1 Replace the words "containing or have contained" by "containing or having contained".

**PART 6
CONSTRUCTION AND TESTING OF PACKAGINGS, INTERMEDIATE BULK CONTAINERS (IBCs), LARGE PACKAGINGS, PORTABLE TANKS, MULTIPLE -ELEMENT GAS CONTAINERS (ME GCs) AND ROAD TANK VEHICLES**

**Chapter 6.1
Provisions for the construction and testing of packagings
(other than for class 6.2 substances)**

E&T 24/WP.1
Annex 4, page 66

6.1.1   Applicability and general provisions
6.1.1.2   General provisions

6.1.1.2.2   Amend the introductory sentence to read as follows:

"Every packaging intended to contain liquids shall successfully undergo a suitable leakproofness test. This test is part of a quality assurance programme as stipulated in 6.1.1.3 which shows the capability of meeting the appropriate test level indicated in 6.1.5.4.4:".

6.1.3   Marking

6.1.3   In Note 1, amend the beginning to read as follows:

"The marks indicate that the packaging which bears them correspond to…".

in the second sentence of Note 1, replace "mark does" by "marks do";

in Note 2, replace "marking is" by "marks are" (twice)

and in Note 3, replace "marking does" by "marks do". In the second sentence, replace "marking" by "mark".
6.1.3.1   In the first paragraph, replace "markings" by "marks" (twice). In the heading of subparagraphs and in (e), replace "marking" by "marks". In the figure note in (e), replace "marking" by "mark".

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

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

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

6.1.3.5   Replace "markings" by "marks".

6.1.3.6   Replace "mark prescribed" by "marks prescribed".

6.1.3.7   At the beginning, replace "Marking" by "Marks" and "element of the marking" by "mark". In the second paragraph, amend the end to read as follows:

"…still enable the other marks required in 6.1.3.1 to be correctly identified."

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

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

6.1.3.10 Examples of markings for NEW packagings

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

6.1.3.11 Examples of markings for RECONDITIONED packagings

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

6.1.3.12 Examples of markings for SALVAGE packagings

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

6.1.5 Test provisions for packagings

6.1.5.1 Performance and frequency of tests

6.1.5.1.6 In the Note, replace "assembling" by "using". Add a new last sentence to read as follows:

> "These conditions do not limit the use of inner packagings when applying 6.1.5.1.7."

6.1.5.5.4   In the third sentence, replace "marking" by "mark".

<div align="center">

Chapter 6.2
Provisions for the construction and testing of pressure receptacles, aerosol dispensers, small receptacles containing gas (gas cartridges) and fuel cell cartridges containing liquefied flammable gas

</div>

6.2.1   General provisions

6.2.1.1 Design and construction

6.2.1.1.2   Replace "those that are marked with a UN certification marking" by "those that bear "UN" certification marks".

6.2.1.1.9 Additional requirements for the construction of pressure receptacle for acetylene

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

6.2.1.5 Initial inspection and test

6.2.1.5.1.7   Amend the text before the Note to read as follows:

> ".7   a hydraulic pressure test. Pressure receptacles shall meet the acceptance criteria specified in the design and construction technical standard or technical code;"

6.2.1.5.1.9   Replace "markings" by "marks".

6.2.1.6 Periodic inspection and test

6.2.1.6.1.1   Replace "markings" by "marks".

6.2.2   Provisions for UN pressure receptacles

6.2.2.1 Design, construction and initial inspection and test

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

E&T 24/WP.1
Annex 4, page 68

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

6.2.2.1.1   In the table, for ISO 7866:1999, in the column "Applicable for manufacture", replace "Until further notice" with "Until 31 December 2020".

After the entry for ISO 7866:1999, insert a new entry to read as follows:

ISO ISO 7866: 2012+ Cor 1:2014	Gas cylinders – Refillable seamless aluminium alloy gas cylinders – Design, construction and testing *NOTE: Aluminium alloy 6351A or equivalent shall not be used.*	Until further notice

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

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

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

6.2.2.1.1   Amend Note 2 to read as follows:

"**Note 2**:   Composite cylinders with a design life longer than 15 years shall not be filled after 15 years from the date of manufacture, unless the design has successfully passed a service life test programme. The programme shall be part

of the initial design type approval and shall specify inspections and tests to demonstrate that cylinders manufactured accordingly remain safe to the end of their design life. The service life test programme and the results shall be approved by the competent authority of the country of approval that is responsible for the initial approval of the cylinder design. The service life of a composite cylinder shall not be extended beyond its initial approved design life."

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

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

6.2.2.1.2   Add the following NOTES after the table:

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

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

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

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

E&T 24/WP.1
Annex 4, page 70

6.2.2.2 Materials

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

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

6.2.2.3 Service equipment

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

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

ISO 10297:2014	Gas cylinders – Cylinder valves – Specification and type testing	Until further notice

6.2.2.4 Periodic inspection and test

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

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

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

6.2.2.5 Conformity assessment system and approval for manufacture of pressure receptacles

6.2.2.5.2 General requirements

Competent authority

6.2.2.5.2.1 Replace "marking" by "marks".

6.2.2.5.5 Production inspection and certification

6.2.2.5.5   In the fourth paragraph, second sentence, replace "marking" by "marks". In the third sentence, replace "certification marking" by "certification marks".

6.2.2.6 Approval system for periodic inspection and testing of pressure receptacles

6.2.2.6.2 General provisions
Competent authority

6.2.2.6.2.1 Before the reference "(see 6.2.2.7)", replace "marking" by "mark".

6.2.2.6.5 Periodic inspection and test and certification

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

6.2.2.7 Marking of refillable UN pressure receptacles

6.2.2.7.4   Insert the following new subparagraphs and note at the end:

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

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

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

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

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

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

6.2.2.8 Marking of non-refillable UN pressure receptacles

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

6.2.2.9   Marking of UN metal hydride storage systems

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

6.2.2.10 Marking of bundles of cylinders

6.2.2.10 Amend the heading to read as follows: "Marking of UN bundles of cylinders".

6.2.4   Provisions for aerosol dispensers, small receptacles containing gas (gas cartridges) and fuel cell cartridges containing liquefied gas

6.2.4   The title is amended to read as follows:

"6.2.4   Provisions for aerosol dispensers, small receptacles containing gas (gas cartridges) and fuel cell cartridges containing liquefied flammable gas."

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Chapter 6.3
Provisions for the construction and testing of packagings
for class 6.2 infectious substances of category A

</div>

6.3.4 Marking

6.3.4   In Note 1, amend the beginning to read as follows:

"*The marks indicate that the packaging which bears them correspond to…*".

in Note 2, replace "marking is" by "marks are";
and in Note 3, replace "marking does" by "marks do".

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

6.3.4.2 (g) Replace "marking" by "mark".

6.3.4.3   At the beginning, replace "Marking" by "Marks" and "element of the marking" by "mark". In the second paragraph, amend the end to read as follows:

"…still enable the marks required in 6.3.4.1 to be correctly identified.".

6.3.5.1.6.7   Replace "markings" by "marks".

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Chapter 6.4
Provisions for the construction, testing and approval
of packages and radioactive material

</div>

6.4   The title for chapter 6.4 the title is replaced by the following:

"**Provisions for the construction, testing and approval of packages for radioactive material and for the approval of such material**".

6.4.2   General provisions

6.4.23   Applications for approval and approvals for radioactive material transport

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

6.4.24   Transitional measures for class 7

6.4.24.1 Replace "shall meet these Regulations in full" with "shall meet the provisions of this Code in full".

6.4.24.4 Delete "6.4.24.4" in the line of the heading.

Chapter 6.5
Provisions for the construction and testing
of intermediate bulk containers (IBCs)

6.5.2 Marking

6.5.2.1 Primary marking

6.5.2.1.1   In the first paragraph, replace "markings" by "marks".

6.5.2.1.1.1 At the end of the existing text, insert a new sentence with the following:

"For metal IBCs on which the mark is stamped or embossed, the capital letters "UN" may be applied instead of the symbol"

6.5.2.1.1   Amend the text after subparagraph .8 to read as follows:

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

Each mark applied in accordance with .1 to .8 and with 6.5.2.2 shall be clearly separated, e.g. by a slash or space, so as to be easily identifiable."

6.5.2.1.2   In the heading, replace "markings" by "marking".

6.5.2.2   Additional marking

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

6.5.2.2.3   Replace "markings" by "marks".

6.5.2.2.4   Amend the beginning of the first sentence to read as follows:

"Inner receptacles that are of composite IBC design type shall be identified by the application of the marks…",

the rest of the paragraph remain unchanged.

in the first paragraph, third sentence, replace "marking" by "marks". In the second paragraph, replace "marking" by "marks" and "marking" by "mark".

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

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

and in the second paragraph, in the second sentence replace "primary marking" by "marking"

6.5.2.3 Conformity to design type

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

6.5.2.4 Marking of remanufactured composite IBCs (31HZ1)

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

6.5.4   Testing, certification and inspection

6.5.4.4 Inspection and testing

6.5.4.4.1.1.1   Replace "marking" by "marks".

6.5.4.4.2   Amend the introductory sentence to read as follows:

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

6.5.4.5 Repaired IBCs

6.5.4.5.3   Replace "marking" by "marks".

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Chapter 6.6
Provisions for the construction and testing of large packagings

</div>

6.6.3   Marking

6.6.3.1 Primary marking

6.6.3.1   In the first paragraph, replace "markings" by "marks"; in subparagraph (a), at the end add the following sentence:

"For metal large packagings on which the marks are stamped or embossed, the capital letters "UN" may apply instead of the symbol."

In the sentences after the subparagraphs, replace "marking" by "mark", "element of the marking" by "mark" and delete the Note.

6.6.3.2 Examples of the marking

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

6.6.3.3   In the Note, replace the words "all IBC's manufactured" by "all large packagings manufactured".

Chapter 6.7
Provisions for the design, construction, inspection and testing of portable tanks
and multiple-element gas containers (MEGCs)

6.7.2   Provisions for the design, construction, inspection and testing of portable tanks intended for the transport of substances of class 1 and classes 3 to 9

6.7.2.19 Inspection and testing

6.7.2.19.8.1 Add a new last sentence to read as follows:

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

6.7.2.19.8.7   Replace "markings" by "marks".

6.7.2.20 Marking

6.7.2.20.1   In the figure, amend the heading to read "Example of a plate for marking".

6.7.3   Provisions for the design, construction, inspection and testing of portable tanks intended for the transport of non-refrigerated liquefied gases of class 2

6.7.3.15 Inspection and testing

6.7.3.15.8.1 Add a new last sentence to read as follows:
"The wall thickness shall be verified by appropriate measurement if this inspection indicates a reduction of wall thickness;"

6.7.3.15.8.6 Replace "markings" by "marks".

6.7.3.16 Marking

6.7.3.16.1   In the figure, amend the heading to read "Example of a plate for marking".

6.7.4   Provisions for the design, construction, inspection and testing of portable tanks intended for the transport of refrigerated liquefied gases of class 2

6.7.4.14 Inspection and testing

6.7.4.14.9.5   Replace "markings" by "marks".

6.7.4.15 Marking

6.7.4.15.1   In the figure, amend the heading to read "Example of a plate for marking".

6.7.5   Provisions for the design, construction, inspection and testing of multiple-element gas containers (ME GCs) intended for the transport of non-refrigerated gases

6.7.5.2   General design and construction provisions

6.7.5.2.4.1   Replace "ISO 11114-2:2000" with "ISO 11114-2:2013".

E&T 24/WP.1
Annex 4, page 76

6.7.5.12 Inspection and testing

6.7.5.12.6.5   Replace "markings" by "marks".

6.7.5.13 Marking

6.7.5.13.1   In the figure, amend the heading to read "Example of a plate for marking".

Chapter 6.9
Provisions for the design, construction, inspection
and testing of bulk containers

6.9.5 Requirements for the design, construction, inspection and testing of flexible bulk containers BK3

6.9.5.5 Marking

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

PART 7
PROVISIONS CONCERNING TRANSPORT OPERATIONS

Chapter 7.1
General stowage provisions

7.1.2   Definitions

The existing introductory Note is renumbered as "Note 1" and insert a new Note 2 with the following:

"**Note 2**:   Cargo holds cannot be interpreted as closed cargo transport units".

7.1.5   Stowage Codes

In the table insert a new stowage code with the following:
"

SW29	For engines or machinery containing fuels with flash point equal or greater than 23°C, stowage Category A

"

Chapter 7.2
General segregation provisions

7.2.6 Special segregation provisions and exemptions

7.2.6.3   Insert a new table 7.2.6.3.3 as follows:

"Table 7.2.6.3.3

UN	Proper Shipping Name	Class	Subsidiary Risk(s)	Packing group
3391	ORGANOMETALLIC SUBSTANCE, SOLID, PYROPHORIC	4.2		I
3392	ORGANOMETALLIC SUBSTANCE, LIQUID, PYROPHORIC	4.2		I
3393	ORGANOMETALLIC SUBSTANCE, SOLID, PYROPHORIC, WATER-REACTIVE	4.2	4.3	I
3394	ORGANOMETALLIC SUBSTANCE, LIQUID, PYROPHORIC, WATER-REACTIVE	4.2	4.3	I
3395	ORGANOMETALLIC SUBSTANCE, SOLID, WATER-REACTIVE	4.3		I, II, III
3396	ORGANOMETALLIC SUBSTANCE, SOLID, WATER REACTIVE, FLAMMABLE	4.3	4.1	I, II, III
3397	ORGANOMETALLIC SUBSTANCE, SOLID, WATER REACTIVE, SELF-HEATING	4.3	4.2	I, II, III
3398	ORGANOMETALLIC SUBSTANCE, LIQUID, WATER REACTIVE	4.3		I, II, III
3399	ORGANOMETALLIC SUBSTANCE, LIQUID, WATER REACTIVE, FLAMMABLE	4.3	3	I, II, III
3400	ORGANOMETALLIC SUBSTANCE, SOLID , SELF-HEATING	4.2		II, III

"

7.2.8 Segregation codes

7.2.8   In the description of SG 1 after the words "subsidiary risk" insert the word "label".

Chapter 7.3
Consigning operations concerning the packing and use
of cargo transport units (CTUs) and related provisions

7.3.3   Packing of cargo transport units

7.3.3   Amend the corresponding footnote "See CTU Code".

7.3.3.10   Replace "markings" by "marks".

7.3.3.13   Replace "markings" by "marks".

7.3.3.14 In the paragraph replace "referenced guidelines" by "CTU Code" and the corresponding footnote is deleted.

7.3.7.5 Special provisions applicable to the transport of substances stabilized by temperature control (other than self-reactive substances and organic peroxides)

7.3.7.5.1   Replace the existing text with the following:

"7.3.7.5.1 These provisions apply to the transport of substances for which:

.1   The proper shipping name as indicated in column 2 of the Dangerous Goods List of chapter 3.2 or according to 3.1.2.6 contains the word "STABILIZED"; and

.2   The SADT or the SAPT* determined for the substance (with or without chemical stabilization) as offered for transport is:

.1   50°C or less for packagings and IBCs; or
.2   45°C or less for portable tanks."

and insert the corresponding footnote with the following:

"* *The self-accelerating polymerization temperature (SAPT) shall be determined in accordance with the Manual of Tests and Criteria. The SADT tests in Section 28, Series H as appropriate may be equally applied to determine a self-accelerating polymerization temperature.*".

7.3.7.5.2   At the end of the existing sentence add the following:

", except that the term "SADT" as used in these paragraphs is understood to include also "SAPT" when the substance concerned reacts by polymerization".

7.3.7.5.4   The paragraph is deleted.

7.3.7.5.5   The paragraph is renumbered as "7.3.7.5.4"

**Chapter 7.5
Stowage and segregation on ro-ro ships**

Under the heading, in the "Note", the reference for "MSC/Circ.1/Circ.1440" is replaced by "MSC.1/Circ.1440"

**Chapter 7.6
Stowage and segregation on general cargo ships**

7.6.3 Segregation provisions

7.6.3.5 Segregation between bulk materials possessing chemical hazards and dangerous goods in packaged form

7.6.3.5.2   In the Segregation table, in the row for "Substances which in contact with water emit flammable gases 4.3," versus column 2.1, replace "1" by "2".

**Chapter 7.9
Exemptions, approvals and certificates**

7.9.3   Replace the contact information for Belgium with the following:

Antwerp office
Federale Overheidsdienst Mobiliteit en Vervoer
Directoraat-generaal Maritiem Vervoer
Scheepvaartcontrole

Posthoflei 3
B-2000 Antwerpen (Berchem)
BELGIUM
Telephone: +32 3 229 0030
Fax: +32 3 229 0031
Email: HAZMAT.MAR@mobilit.fgov.be

Ostend office
Federale Overheidsdienst Mobiliteit en Vervoer
Directoraat-generaal Maritiem Vervoer
Scheepvaartcontrole
Natiënkaai 5
B-8400 Oostende
BELGIUM
Telephone: +32 59 56 1450
Fax: +32 59 56 1474
Email:
HAZMAT.MAR@mobilit.fgov.be

7.9.3   In the contact information for Germany replace "Ref-G24@bmvbs.bund.de" with "Ref-G24@bmvi.bund.de" .

7.9.3   Replace the contact information for Republic of Korea with the following:

Marine Industry and Technology Division
Marine Safety Bureau
Ministry of Ocean and Fisheries (MOF)
Government Complex Sejong, 5-Dong, 94,
Dasom 2-Ro, Sejong-City,
339-012, Republic of Korea
TEL: +82 44 200 5836
FAX: +82 44 200 5849

APPENDICES

Appendix A
List of generic and N.O.S. proper shipping names

In the table for "Class 2" in the column for Proper shipping name, the new entries for ADSORBED GAS are relocated according to the sequence of the subsidiary risks.

Add the following new entries in appendix A under the appropriate class in the specific entries section:

Class or Division	Subsidiary Risk	UN No	Proper Shipping Name
4.1	-	3531	POLYMERIZING SUBSTANCE, SOLID, STABILIZED N.O.S.
4.1	-	3532	POLYMERIZING SUBSTANCE, LIQUID, STABILIZED, N.O.S.
4.1	-	3533	POLYMERIZING SUBSTANCE, SOLID, TEMPERATURE CONTROLLED, N.O.S.
4.1	-	3534	POLYMERIZING SUBSTANCE, LIQUID, TEMPERATURE CONTROLLED, N.O.S.

E&T 24/WP.1
Annex 4, page 80

<div align="center">INDEX</div>

Alphabetic index

Amend the following entries as indicated:

In the entry for CALCIUM HYPOCHLORITE, DRY, CORROSIVE with more than 39% available chlorine (8,8% available oxygen) (UN 3485), insert "P" in the column for MP.

In the entry for ENGINE, FUEL CELL, FLAMMABLE GAS POWERED, in the column for Class replace "9" by "2.1" and in the column for "UN No." replace 3166 by "3529"

in the entry for ENGINE, FUEL CELL, FLAMMABLE LIQUID POWERED, in the column for class replace "9" by " 3 " and in the column for "UN No." replace "3166" by "3528"

In the entry for ENGINE, INTERNAL COMBUSTION, in the column for "UN No." replace 3166 by "3530"

In the entry for "HEXANES", in the column for "MP", insert "P"

In the entry for "HYPOCHLORITE SOLUTION", in the column for "MP", insert "P"

In the entry for "ISOPRENE, STABILIZED", in the column for "MP", insert "P"

The entry for Mercurous chloride, see" (UN 3077), is deleted.

In the entry for "Mercurous chloride, see" (UN 2025), insert "P" in the column for MP.

In the entry for "*N*-METHYLANILINE", in the column for "MP", insert "P"

In the entry for "METHYLCYCLOHEXANE", in the column for "MP", insert "P"

The entry for "PACKAGING DISCARTED, EMPTY, UNCLEANED" is replaced by "PACKAGINGS, DISCARDED, EMPTY, UNCLEANED"

In the entry for "POLYESTER RESIN KIT" amend the columns "Class" and "UN No." to read as follows:

In the entry for POLYESTER RESIN KIT, in the column for "Substance, material or article", insert at the end ", liquid base material".

In the entry for "TRIPROPYLENE", in the column for "MP", insert "P"

Add the following new entries in alphabetical order:

Substance, material or article	MP	Class	UN No
ENGINE, INTERNAL COMBUSTION, FLAMMABLE GAS POWERED	-	2.1	3529
ENGINE, INTERNAL COMBUSTION, FLAMMABLE LIQUID POWERED	-	3	3528
HALOGENATED MONOMETHYLDIPHENYLMETHANES, LIQUID	P	9	3151
HALOGENATED MONOMETHYLDIPHENYLMETHANES, SOLID	P	9	3152
MACHINERY, FUEL CELL, FLAMMABLE GAS POWERED	-	2.1	3529
MACHINERY, FUEL CELL, FLAMMABLE LIQUID POWERED	-	3	3528
MACHINERY, INTERNAL COMBUSTION	P	9	3530
MACHINERY, INTERNAL COMBUSTION, FLAMMABLE GAS POWERED	-	2.1	3529
MACHINERY, INTERNAL COMBUSTION, FLAMMABLE LIQUID POWERED	-	3	3528
POLYESTER RESIN KIT, solid base material	-	4.1	3527
POLYMERIZING SUBSTANCE, LIQUID, STABILIZED, N.O.S.	-	4.1	3532
POLYMERIZING SUBSTANCE, LIQUID, TEMPERATURE CONTROLLED, N.O.S.	-	4.1	3534
POLYMERIZING SUBSTANCE, SOLID, STABILIZED N.O.S	-	4.1	3531
POLYMERIZING SUBSTANCE, SOLID, TEMPERATURE CONTROLLED, N.O.S.	-	4.1	3533
ROCKET MOTORS	-	1.4C	0510
Table Tennis Balls, see	-	4.1	2000

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