

**Committee of Experts on the Transport of Dangerous Goods
and on the Globally Harmonized System of Classification
and Labelling of Chemicals**

Sub-Committee of Experts on the Transport of Dangerous Goods

14 June 2013

Forty-third session

Geneva, 24–28 June 2013

Item 9 of the provisional agenda

Global harmonization of transport of dangerous goods regulations with the Model Regulations

**Report of the Editorial and Technical Group of the IMO
Sub-Committee on Dangerous Goods, Solid Cargoes and
Containers (DSC 18/7/1)**

Note by the secretariat

The secretariat reproduces hereafter the report of the Editorial and Technical Group (E and T Group) of the IMO Sub-Committee on Dangerous Goods, Solid Cargoes and Containers which met from 22 to 26 April 2013 under the chairmanship of Mrs. Gudula Schwan (Germany).

SUB-COMMITTEE ON DANGEROUS
GOODS, SOLID CARGOES AND
CONTAINERS
18th session
Agenda item 7

DSC 18/7/1
8 May 2013
Original: ENGLISH

**DEVELOPMENT OF AMENDMENTS TO THE IMDG CODE AND SUPPLEMENTS,
INCLUDING HARMONIZATION WITH THE UNITED NATIONS
RECOMMENDATIONS ON THE TRANSPORT OF DANGEROUS GOODS**

Report of the Editorial and Technical Group

Note by the Secretariat

SUMMARY

<i>Executive summary:</i>	This document contains the report of the Editorial and Technical Group at its nineteenth session
<i>Strategic direction:</i>	5.2
<i>High-level action:</i>	5.2.3
<i>Planned output:</i>	5.2.3.4
<i>Action to be taken:</i>	Paragraph 6.1
<i>Related document:</i>	IMDG Code (MSC.328(90))

1 GENERAL

INTRODUCTION

1.1 The Editorial and Technical Group of the Sub-Committee on Dangerous Goods, Solid Cargoes and Containers met from 22 to 26 April 2013 under the chairmanship of Mrs. Gudula Schwan (Germany).

1.2 The group was attended by delegations from the following Member Governments:

ARGENTINA
BELGIUM
BRAZIL
CHINA
DENMARK
FINLAND
FRANCE
GERMANY

IRAN (ISLAMIC REPUBLIC OF)
JAPAN
MARSHALL ISLANDS
NETHERLANDS
NIGERIA
NORWAY
REPUBLIC OF KOREA
SPAIN

SWEDEN
SWITZERLAND
TURKEY

UNITED KINGDOM
UNITED STATES

1.3 The meeting was also attended by observers from the following non-governmental organizations in consultative status:

INTERNATIONAL CHAMBER OF SHIPPING (ICS)
EUROPEAN CHEMICAL INDUSTRY COUNCIL (CEFIC)
DANGEROUS GOODS ADVISORY COUNCIL (DGAC)
WORLD NUCLEAR TRANSPORT INSTITUTE (WNTI)
INTERNATIONAL VESSEL OPERATORS DANGEROUS GOODS ASSOCIATION,
INC. (IVODGA)
INTERNATIONAL PAINT AND PRINTING INK COUNCIL (IPPIC)

ADOPTION OF THE AGENDA

1.4 Noting that the provisional agenda contained in document E&T 19/1 was based on the instructions of DSC 17, the group adopted the agenda.

1.5 The list of participants is contained in document E&T 19/INF.1.

2 PREPARATION OF DRAFT NOTE VERBALE (EDITORIAL CORRECTIONS) TO THE IMDG CODE (AMENDMENT 36-12)

GENERAL

2.1 The group noted that certain editorial errors in the English text regarding the amendment 36-12 to the IMDG Code have been identified since the adoption of resolution MSC.328(90).

EDITORIAL CORRECTIONS

2.2 On the basis of document E&T 19/2 (Germany), the group prepared editorial corrections to the IMDG Code (amendment 36-12), as set out in annex 1, and requested the Secretariat to prepare a draft note verbale for consideration by the Sub-Committee.

2.3 The group also requested the Secretariat to verify that the printed, e-reader and electronic publications are also corrected accordingly.

3 PREPARATION OF DRAFT AMENDMENT 37-14 TO THE IMDG CODE

HARMONIZATION WITH THE AMENDMENTS TO THE UN RECOMMENDATIONS ON THE TRANSPORT OF DANGEROUS GOODS, EIGHTEENTH REVISED EDITION

3.1 The group considered document E&T 19/3/1 (Secretariat), containing the amendments to the seventeenth revised edition of the Recommendations on the Transport of Dangerous Goods, Model Regulations (18th revised edition) and Manual of Tests and Criteria, which were adopted by the UN Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals at its sixth session held in Geneva on 14 December 2012.

3.2 For this purpose, the Report of the UN Committee of Experts (ST/SG/AC.10/C.3/84) was also used. The outcome of main issues and actions taken thereon by the group are contained in paragraphs 3.3 to 3.9 below.

Requirements for the transport of small quantities of environmentally hazardous substances

3.3 The group considered document E&T 19/3/2 (United States), proposing consequential amendments to the requirements for the transport of small quantities of environmentally hazardous substances, in relation to SP 375. Some delegations supported the proposal, while other delegations expressed concerns on lack of documentation for exempted substances. The delegation of the United States offered to informally work on this matter with interested delegations and prepare a revised proposal for consideration at DSC 18.

3.4 Subsequently, the group decided to put square brackets around the proposed amendments to provisions 5.2.1.6.1 and SP 375, as contained in annex 2, for consideration by the Sub-Committee, noting that further amendments may be necessary pending the outcome of discussions at DSC 18.

Lithium Batteries and Nickel Metal Hydride Batteries for Disposal or Recycling

3.5 In regard to UN 3091, the group considered document E&T 19/3/4 (DGAC), proposing a limited exception for small, consumer-type lithium batteries transported in the new SP 377 and, to accommodate the transport mixed battery shipments that may include nickel metal hydride batteries, proposing an amendment to existing SP 963 of the IMDG Code.

3.6 The group also considered document E&T 19/3/6 (China), providing comments on the transport of waste lithium batteries for disposal or recycling and proposing that, for maritime mode (IMDG Code), the new provisions for waste lithium batteries transported for disposal or recycling should be only applied for short sea transport since the application of this requirement to ocean voyage should be further considered after more experience is obtained in the future.

3.7 Having noted that the proposal in document E&T 19/3/4 was not supported and that the proposal in document E&T 19/3/6 was generally supported, the group incorporated, in the draft amendment, the provisions on lithium batteries for disposal and the stowage "Category C" for batteries and cells transported in accordance with SP 377, if not transported on short international voyage, as contained in annex 2.

Transport of packaging waste with residues of dangerous goods

3.8 In regard to new UN 3509, the group considered document E&T 19/3/7 (China), proposing that, for maritime mode (IMDG Code), the requirement for transport of packaging waste with residues of dangerous goods should only be applied for short sea transport, and that application of this requirement to ocean voyage should be further considered after more experience is obtained in the future.

3.9 The group noted that the new UN 3509 was included in the UN Model Regulations in order to enable the joint meeting to establish transport conditions for European land transport. Thus, the UN Model Regulations, 18th edition, do not contain appropriate transport conditions for multimodal transport. The group agreed that the new entry UN 3509 should not be used for the maritime mode and included a new Special Provision 968 in the draft amendment, as contained in annex 2.

INCORPORATION OF PROPOSALS AGREED IN PRINCIPLE AT DSC 17

3.10 Noting that DSC 17 had agreed, in principle, to proposals contained in documents DSC 17/3 (annexes 7 and 8), DSC 17/3/7 and DSC 17/3/12, which consequently were referred to E&T 19 for consideration and inclusion in the draft amendment 37-14, the group took decision as shown in paragraphs 3.11 to 3.15.

Marine pollutants

3.11 The group considered document DSC 17/3/7 (Germany), proposing the harmonization with other modes of transport with respect to the exclusion of class 7 material from Marine Pollutants/Environmentally Hazardous Substances requirements. The group recalled that DSC 17 had generally agreed to proposal 1 in the document and instructed E&T 19 to further consider the matter.

3.12 As instructed, the group, based on document DSC 17/3/7, prepared draft amendments to paragraph 2.0.1.2.1 and note 2 of chapter 2.9 and a new paragraph 2.10.3.2, as contained in annex 2.

3.13 During the deliberation, the group noted that the issue of "articles" was forwarded to the UN TDG Sub-Committee to provide clarification.

3.14 In this connection, the group also agreed to the following consequential amendments to MARPOL Annex III and recommended the Sub-Committee, if agreed, to submit the proposal to MEPC for consideration.

"The first sentence of the appendix to Annex III of MARPOL is amended to read (insertion of underlined parts):

"For the purpose of this Annex, substances other than radioactive material* identified by any one of the following criteria are harmful substances**.

* Refer to class 7 of the IMDG Code.

** The criteria is based on those developed by the United Nations Globally Harmonized system of Classification and Labelling of Chemicals (GHS), as amended. For definitions of acronyms or terms used in this appendix, refer to the relevant paragraphs of the IMDG Code."

3.15 The group considered, in the context of marine pollutants, the draft text of a new SP for assignment to UN 3077 and UN 3082, which was contained in document DSC 17/3 (annex 8), and agreed to the new SP 969 and draft text on provisions 2.10.2.4 and 3.2.1, as contained in annex 2.

Transport provisions for UN 3166 and UN 3171

3.16 The group considered document DSC 17/3/12 (Belgium, France, Germany, United Kingdom, United States, DGAC and IVODGA), proposing amendments to Special Provisions (SPs) 961 and 962, in relation to the provisions for the transport of UN 3166 and UN 3171, which recently entered into force under amendment 35-10.

3.17 The group agreed on amendments to SP 961 and 962 and to the new special provision to differentiate UN 3166 from other UN entries, in particular from UN 3363 or those for fuels, as contained in annex 2. The group agreed that UN 3166 should apply to internal combustion engines with or without fuel tank attached, as well as to machinery containing a

combustion engine, provided that requirements in Special Provisions 961 and 962 are met. Furthermore the group agreed that a declaration of consignment under UN 3166 and UN 3171 as marine pollutant is not necessary.

3.18 The group agreed that a differentiation between UN 3166 and other entries as well as the decision not to apply the criteria for marine pollutants to UN 3166 and 3171 may have multimodal impact and should be brought to the attention of the TDG Sub-Committee.

3.19 In this regard, the group noted that FP 56, having considered document FP 56/9/12 (IACS) seeking clarification of the relationship between the requirements of the IMDG Code and SOLAS chapter II-2 for the carriage of vehicles in spaces other than those identified in Special Provision 961, had sought advice on the safety aspects of the carriage of vehicles in those spaces from E&T 19 (DSC 18/7). Since SPs 961 and 962 have been extensively modified, the group recommended the Sub-Committee, if agreed, to forward the draft amendments of SPs 961 and 962 to the FP Sub-Committee.

3.20 The group also considered document E&T 19/3/3 (DGAC), commenting on the applicability of SP 363 to UN 3166 and noted that the matter would be forwarded to the UN TDG Sub-Committee.

Reorganization of Column (16) of the dangerous goods list (DGL)

3.21 Regarding the reorganization of Column (16) of the dangerous goods list, as contained in annex 7 (option 2) of document DSC 17/3 (United Kingdom), the group considered document E&T 19/3/5 (United Kingdom), proposing the reorganization (i.e. an initial draft of the reorganization is provided in annex 1 containing the new intended codes to be input in new columns 16(a) and 16(b); and the meaning of such codes is given in annex 2).

3.22 The group generally agreed to the proposal and requested the Secretariat to issue a document that shows examples on reorganization to DSC 18 and a document that contains complete dangerous goods list to E&T 20 for finalization.

CONSIDERATION OF PROPOSALS REFERRED TO E&T 19 BY DSC 17

3.23 The group addressed various matters contained in documents DSC 17/3/1, DSC 17/3/2, DSC 17/3/6, DSC 17/3/8, DSC 17/3/9, DSC 17/3/10, DSC 17/3/11, 17/3/13, DSC 17/11 DSC 17/11/1 and DSC 17/3/16, referred from DSC 17 for further consideration, the outcome of which are described in the following paragraphs.

Marine pollutants

3.24 The group considered document DSC 17/3/1 (IPPIC), proposing abbreviation MP/EH for "MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS". The observer from IPPIC suggested to use the term Aquatic Pollutant or AP, regardless of their original proposal.

3.25 Following lengthy discussion on the proposed term and abbreviation, the group, taking into account that majority of the group preferred the term Aquatic Pollutant, supported the use of single term for all modes of transport, preferably Aquatic Pollutant.

3.26 The Group, noting that the issue relates to multi modal transport, agreed to invite the UN TDG Sub-Committee to consider the matter and invited delegates to inform the Joint Meeting (ADR/RID/ADN) of the outcome on the discussion and to request their opinion on

the use of a common single term (Aquatic Pollutant) that could be suitable at least for documentation purposes.

PP1 loads on roll-on/roll-off ships

3.27 The group, having considered document DSC 17/3/2 (IPPIC), proposing to remove the requirement for the use of closed cargo transport units for shipment of loads in accordance with PP1 on roll-on/roll-off ships, agreed to amend PP1, as contained in annex 2.

Portable tanks

3.28 The group considered document DSC 17/3/6 (CEFIC), proposing to remove obstacles to the proper placarding and marking of portable tanks having a capacity of less than 3,785 litres (1,000 gallons). Having noted that similar provision is already being used by land transport, referring to portable tanks having a capacity of less than 3,000 litres, agreed to the draft amendments to chapter 5.3 (provisions 5.3.1.1.4.1, 5.3.2.0.2, 5.3.2.2.1 and 5.3.2.3.2) of the IMDG Code, as contained in annex 2.

3.29 The group, noting that the problem is a multimodal issue, agreed to invite the UN TDG Sub-Committee to consider the proposal.

Assignment of the EmS for spillage to UN 3422

3.30 The group considered document DSC 17/3/8 (Germany), proposing to amend the EmS Guidelines for potassium fluoride solution (UN 3422) from "S-B" to "S-A".

3.31 The group agreed to the amendments to the EmS Guidelines, which are included in the IMDG supplement, and also agreed to the amendments to the related Dangerous Goods List, as contained in annexes 3 and 2, respectively (see also paragraph 4.1 of this report).

Illustrations of labels, placards and marks on packages and CTUs

3.32 The group considered document DSC 17/3/9 (Republic of Korea), proposing the inclusion of illustrations of labels, placards and marks on packages and CTUs to chapters 5.2 and 5.3 of the IMDG Code or in its Supplement for the convenience of industries.

3.33 While the group did not support the inclusion within the IMDG Code or in its supplement, the delegation of the Republic of Korea was invited, to further consider how to proceed with the matter (e.g. issuing a DSC circular), in consultation with interested Member States and international organizations.

Special Provision 919

3.34 The group, having considered document DSC 17/3/10 (Italy), proposing to delete SP 919 related to the transportation of UREA NITRATE WETTED (UN 1357) as a Class 4.1 substance in column 6 of the Dangerous Goods List for UN 1357 and to delete SP 919 in chapter 3.3, agreed to the proposal, as contained in annex 2.

Classification of mixtures with marine pollutants

3.35 The group considered document DSC 17/3/11 (Germany), seeking clarification on how to apply the provisions in 2.0.2.5 of the IMDG Code to mixtures containing marine pollutants.

3.36 After a long discussion on the different options, the group came to the following conclusions when the mixture contains components which are not listed by name and of which the only hazard is to the environment:

- the application of 2.0.2.5 does not lead to a classification under an n.o.s. entry; and
- information on the marine pollutant and a technical name is required.

Thus the classification under UN number of the predominant substance with the additional information on marine pollutant ingredient is the appropriate classification (see example UN 1263 in 3.1.2.9.2). In this context, the group invited delegations to bring the issue to the attention of the joint meeting (ADR/RID/ADN) for consideration.

Non-declared and misdeclared dangerous goods

3.37 The group considered document DSC 17/3/13 (ICS and BIMCO), addressing the issue of non-declaration, incorrect declaration and misdeclaration of dangerous goods by consignors.

3.38 The group agreed that the proposal in general could have some difficulties for the implementations of the various points. In this context, the group recalled provision 1.1.1.8 on Notification of infringements which is included in the Code and emphasize the importance for communication of inspection authorities. Also the group noted that MSC.1/Circ.1442 on Inspection programmes for cargo transport units carrying dangerous goods deals with the issue of misdeclaration of dangerous goods.

Proposals regarding water-reactive materials

3.39 With regard to documents DSC 17/11, DSC 17/11/1 and DSC 17/INF.6 (Germany), related to stowage of water-reactive materials, which propose amendments to the IMDG Code concerning packing, stowage and segregation requirements and the EmS Guide relating to the fire schedules and schedule F-G, the group noted that MSC 91 had agreed that the DSC Sub-Committee should further consider the proposals in detail, which were forwarded to the E&T Group.

3.40 The group also considered document E&T 19/3 (CEFIC), commenting on the above documents, in particular regarding the applicability of the proposal for water reactive materials packaged in metal packagings, metal cylinders, metal IBCs and tanks and the segregation requirements proposed, and proposing some modifications thereon.

3.41 Regarding proposal 1 (New provisions on packing a container) in document DSC 17/11, the group, following discussion particularly on exemption on metal IBCs and on the term "dry condition", taking into account documents DSC 17/11 and E&T 19/3, agreed to the draft term "keep as dry as reasonably practicable" to all substances assigned the requirements with F-G in Column (15) and insert appropriate text in 7.3.3.2, as contained in annex 2.

3.42 Regarding proposal 2 (Amendments to the packaging provisions), the group agreed for packagings to option 1 in document DSC 17/11, adding UN numbers to special packing provisions PP31 and PP40 and drafting a new special packing provision PP100. The group also agreed to the proposed amendments for IBCs and large packagings including new large packaging provisions L3 and L4, as included in annex 2.

3.43 The Group, noting the above amendments relate to multimodal transport, agreed to invite the UN TDG Sub-Committee to consider the matter.

3.44 The group agreed to proposal 3 (Amendments to the stowage categories) in document DSC 17/11 and draft amendments to the stowage categories for relevant substances, as contained in annex 2.

3.45 Regarding proposal 4 (Amendments to the stowage and segregation provisions) in document DSC 17/11, the group, after lengthy discussion on strengthening of segregation distance, taking into account documents DSC 17/11 and E&T 19/3, noted that the proposed amendments address the emergency procedures which could be addressed by the amendment to the segregation table in 7.2.4 together with further text on the distance from goods of class 2.1 and 3 and agreed to the amendments as contained in annex 2. The group, noting that those amendments have major impact on the stowage and segregation as well as the consideration of emergency procedures for the assignment of segregation levels is a new aspect, agreed to put the draft amendments in square brackets.

3.46 With regard to the proposed amendments to the EmS Guidelines (DSC 17/11/1), the group, generally supporting them, agreed draft amendments to the Guidelines, as contained in annex 3. The group finally requested the Secretariat to refer this draft amendments to FP 57 for its consideration.

Counterfeit Refrigerant

3.47 The group, having considered document DSC 17/13/6 (United States and ICHCA), reporting incidents involving the use of counterfeit refrigerant and proposing amendments to the IMDG Code, agreed to amendments to provision 7.3.7.2.4, as contained in annex 2.

Harmonizing the labels, marks and signs

3.48 The group, noting that specimen labels for classes 2.1, 2.3, 3, 4.1, 4.2, 4.3, 5.1, 5.2, 6.1, 6.2 and 8 show some differences on their symbols compared to those used in the UN Recommendations, agreed to harmonize the labels and placard illustrations. In this regard, the group requested the Secretariat to take action accordingly. Finally, the group agreed to include a note to 5.2.2.2.2 allowing to minor variations, as contained in annex 2.

Issues to be forwarded to the UN TDG Sub-Committee

3.49 In addition to the matters contained above in paragraphs 3.18, 3.26, 3.29 and 3.43, the group identified the following issues during the consideration of harmonization with the UN Model regulations (18th edition) that should be brought to the attention of the UN TDG Sub-Committee:

- the definition of large salvage packaging might need to be reviewed regarding consistency with the definition of salvage packaging;
- the proposed amendments to provision 1.5.2.2 were not incorporated as they were deemed not necessary;
- amendment to PSN of UN 1082 requires consequential amendments in P200 table 2, this was included in draft amendment 37-14 to the IMDG Code;
- incorporation of editorial amendments to P505, P805;

- some specimen labels show some differences on their symbols compared to those used in the UN Recommendations, IMO Secretariat is requested to use the format used by UNECE and a note to 5.2.2.2.2 allowing to minor variations has been included in draft amendment 37-14;
- SP 172 for UN 2977 and UN 2978 were deleted in order to harmonize with UN;
- the word "comprise" was replaced with the word "includes" in the new text of SP 225; and
- transitional provisions were included in SP 361 and SP 372.

Draft amendment 37-14

3.50 Subsequently, the group prepared draft amendment 37-14 to the IMDG Code, as set out in annex 2.

4 PREPARATION OF DRAFT AMENDMENTS TO IMDG CODE SUPPLEMENTS

4.1 The group also prepared draft amendments to the EmS Guidelines (MSC/Circ.1025, as amended by MSC.1/Circ.1025/Add.1, MSC.1/Circ.1262, MSC.1/Circ.1360 and MSC.1/Circ.1438), as set out in annex 3.

5 ANY OTHER BUSINESS

Safety of old IMO type portable tanks

5.1 Regarding guidance on the continued use of existing IMO type portable tanks and road tank vehicles for the transport of dangerous goods (DSC/Circ.12), the group considered document DSC 17/3/3 (Spain), proposing amendments to chapter 4.2 of the IMDG Code to improve the safety of old IMO type portable tanks following the detection of irregularities during inspection and testing of the tanks.

5.2 The group took note that the issue of portable tanks will be presented by Spain at the next session of UN TDG Sub-Committee. Should the amendments be taken into consideration at that Sub-Committee, then the results would be presented to DSC 18 for further consideration. With regard to DSC/Circ.12, the group invited Member States and other organizations to present documents to DSC 18 on this matter.

Methyl bromide as a disinfecting agent in cotton

5.3 The delegation of the Islamic Republic of Iran requested to defer the consideration on document DSC 17/3/5 (Islamic Republic of Iran) to the next session.

IMO/ILO/UNECE Guidelines for Packing of Cargo Transport Units

5.4 The group considered document E&T 19/5 (Secretariat) containing information on the outcome of the revision of the IMO/ILO/UNECE Guidelines for Packing of Cargo Transport Units. The group expressed its concerns on the volume of the draft CTU Code to be considered at DSC 18. The group recommended the Secretariat for its consideration in order to establish a working group to deal with this draft code at DSC 18.

5.5 The group also recommended that, after the draft CTU Code had been submitted to IMO by UNECE, Member States and other international organizations be invited to submit their comments for consideration at DSC 18.

6 ACTION REQUESTED OF THE SUB-COMMITTEE

6.1 The Sub-Committee is invited to approve the report in general and, in particular, to:

- .1 approve, in principle, the draft editorial corrections, instructing E&T 20 to finalize it, and request the Secretariat to issue the note verbale before amendment 36-12 enters into force on 1 January 2014 (paragraphs 2.1 and 2.2 and annex 1);
- .2 request the Secretariat to verify that the printed and electronic publications are also corrected accordingly (paragraph 2.3);
- .3 agree to the draft amendments to MARPOL Annex III, for submission to MEPC 66 (paragraph 3.14);
- .4 note the deliberations of the group with regard to the relationship between the requirements of the IMDG Code and SOLAS chapter II-2 for the carriage of vehicles in spaces other than those identified in Special Provision 961, and forward the draft amendments for SP 961 and SP 962 to FP 57 for its consideration (paragraph 3.19);
- .5 endorse the group's recommendation on reorganization of Column (16) of the dangerous goods list and instruct E&T 20 to finalize it (paragraph 3.22);
- .6 endorse the group's recommendation on classification of mixtures with marine pollutants (paragraph 3.36);
- .7 note the group's view on non-declared and misdeclared dangerous goods (paragraph 3.38);
- .8 with regard to water-reactive materials, endorse the recommendation of the group to refer the draft amendments to the EmS Guidelines to FP 57 for advice (paragraph 3.46 and annex 3);
- .9 endorse the group's recommendation to harmonize the symbols with those in the UN Recommendations and request the Secretariat to take action accordingly (paragraph 3.48);
- .10 note that the group invited the UN TDG Sub-Committee to consider several issues (paragraph 3.49);
- .11 approve, in principle, the draft amendment 37-14 of the IMDG Code, in particular taking into account part in square brackets, and instruct E&T 20 to finalize them (paragraphs 3.1 to 3.50 and annex 2);
- .12 approve, in principle, draft amendments to the EmS Guidelines and instruct E&T 20 to finalize them (paragraph 4.1 and annex 3);

- .13 note the discussion of the group on the safety of old IMO type portable tanks and that Member States and international organizations have been invited to submit relevant documents to DSC 18 with regard to possible revision to DSC/Circ.12 (paragraphs 5.1 and 5.2);
- .14 note the concerns of the group regarding the volume of the draft CTU Code to be considered at DSC 18 and endorse the group's recommendation that a working group on this matter be established at that session (paragraphs 5.4 and 5.5); and
- .15 approve the report in general.

ANNEX 1

DRAFT EDITORIAL CORRECTIONS TO THE ENGLISH VERSION OF THE IMDG CODE AMENDMENT 36-12 ADOPTED BY RESOLUTION MSC.328(90)

PART 2 CLASSIFICATION

Chapter 2.0 – Introduction

2.0.5 Transport of wastes

2.0.5.4 Classification of wastes

In 2.0.5.4.6, insert "with the addition of the word WASTE" after UN 3077.

Chapter 2.5 – Class 5 – Oxidizing substances and organic peroxides

2.5.3 Class 5.2 – Organic peroxides

2.5.3.2 Classification of organic peroxides

2.5.3.2.4 List of currently assigned organic peroxides in packagings

In 2.5.3.2.4 in the table for entry UN 3106, replace "[3R-3R,5aS,6S,8aS,9R,10R,12S,12aR**)]-DECAHYDRO-10-METHOXY-3,6,9-TRIMETHYL-3,12-EPOXY-12H-PYRANO[4,3-j]-1,2-BENZODIOXEPIN)" with "[3R-(3R,5aS,6S,8aS,9R,10R,12S,12aR**)]-DECAHYDRO-10-METHOXY-3,6,9-TRIMETHYL-3,12-EPOXY-12H-PYRANO[4,3-j]-1,2-BENZODIOXEPIN)"

Chapter 2.6 – Class 6 – Toxic and infectious substances

2.6.3 Class 6.2 – Infectious substances

2.6.3.2 Classification of infectious substances

In 2.6.3.2.3.7, replace "6.6.5" with "6.6.4".

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

In 2.9.3.2.6b, replace "BOD₅/COD" with "BOD₅/COD".

PART 3 DANGEROUS GOODS LIST, SPECIAL PROVISIONS AND EXCEPTIONS

Chapter 3.1 – General

3.2.1 Structure of the Dangerous Goods List

In the text for column 14, in the last lines replace "specified in both columns 12 and 13" with "specified in column 13".

Dangerous Goods List

In the heading for column (15), the reference "7.3" is replaced with "7.8".*

In the heading for column (16), the reference "7.1, 7.2" is replaced with "7.1 to 7.7".*

In the Dangerous Goods List, amend the following entries as indicated:

UN No.	Amendment
1386	In column (16) replace "7.6.2.7.2" with "7.6.2.7.3" (twice)
*2794	In column (16) delete ""Separated from" acids."
*2795	In column (16) add ""Separated from" acids."
*3378 PG II	In column (6) delete "967"

* Amendment only applies to the printed version.

Chapter 3.4 – Dangerous goods packed in limited quantities

3.4.4 Segregation

In 3.4.4.2, after the existing sentence, add the following sentence:

"However articles of division 1.4, compatibility group S shall not be stowed in the same compartment or hold, or cargo transport unit with dangerous goods of class 1 of compatibility groups A and L."

Appendix B – Glossary of terms

In the glossary, amend the following terms as indicated:

In **Cartridges for Weapons**: replace "name and description" with "proper shipping name".

In **Explosive, deflagrating**: replace "A substance which reacts by detonation rather than deflagration when initiated and used in its normal manner." with "A substance, e.g. propellant, which reacts by deflagration rather than detonation when ignited and used in its normal manner."

and insert a new term "Explosive, detonating" as follows:

"Explosive, detonating: a substance which reacts by detonation rather than deflagration when initiated and used in its normal manner."

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

4.1.4 List of packing instructions

In P903(4), delete "When active, these devices shall meet defined standards for electromagnetic radiation to ensure that the operation of the device does not interfere with aircraft systems."

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

4.2.3 General provisions for the use of portable tanks for the transport of refrigerated liquefied gases of class 2

In 4.2.3.2, replace "columns 12 and 14" with "column 14".

4.2.5 Portable tank instructions and special provisions

4.2.5.2 Portable tank instructions

4.2.5.2.6 Portable tank instructions

In T50 in the heading of the table, replace "Maximum filling density (kg/l)" with "Filling ratio (kg/l)".

PART 5 CONSIGNMENT PROCEDURES

Chapter 5.2 – Marking and labelling of packages including IBCs

5.2.1 Marking of packages including IBCs

5.2.1.6 Special marking provisions for marine pollutants

In 5.2.1.6.3, at the end in the Note, replace "environmentally hazardous substance mark" with "marine pollutant mark".

Chapter 5.3 – Placarding and marking of cargo transport units

5.3.2 Marking of cargo transport units

In 5.3.2.0.1.1, replace "tank transport units" with "tank cargo transport units".

Chapter 7.2 – General segregation provisions

In 7.2 annex, examples in d.3, replace "UN 1333" with "UN 1133".

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

After the existing 7.3.3.2, insert "7.3.3.3 (reserved)".

7.3.7 Cargo transport units under temperature control

7.3.7.2 General provisions

In the footnote for 7.3.7.2.1, replace "the latest version of the United Nations Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria" with "the Manual of Tests and Criteria".

Chapter 7.4 – Stowage and segregation on containerships

7.4.3 Segregation requirements

7.4.3.2 Table of segregation of containers on board containerships with closed cargo holds

In the table in 7.4.3.2, in the column for "closed versus closed, under deck", insert reference "***" to footnote in the box for One bulkhead and minimum horizontal distance of 24 m.

Index

In the alphabetical index, amend the following entries as indicated:

ACETON SOLUTIONS: is deleted.

Desmediphan: replace "Desmediphan" with "Desmedipham".

In the entry for "3,6,9-TRIETHYL-3,6,9-TRIMETHYL-1,4,7-TRIPEROXONATE (concentration ≤ 17%, with diluent Type A, with inert solid), the column for Substance, material or article is replaced with "3,6,9-triethyl-3,6,9-trimethyl-1,4,7-triperoxonane (concentration ≤ 17%, with diluent Type A, with inert solid)".

Replace the existing entry for "([3R-3R,5aS,6S,8aS,9R,10R,12S,12aR**])-DECAHYDRO-10-METHOXY-3,6,9-TRIMETHYL-3,12-EPOXY-12H-PYRANO[4,3-j]-1,2-BENZODIOXEPIN)" with "([3R-(3R,5aS,6S,8aS,9R,10R,12S,12aR**))-DECAHYDRO-10-METHOXY-3,6,9-TRIMETHYL-3,12-EPOXY-12H-PYRANO[4,3-j]-1,2-BENZODIOXEPIN) (concentration ≤ 100%)".

Insert the following new entries:

"

Substance, material or article	MP	Class	UN No.
PAINT RELATED MATERIAL, CORROSIVE, FLAMMABLE (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base)	-	8	3470
PAINT RELATED MATERIAL, FLAMMABLE, CORROSIVE (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base)	-	3	3469
RUBBER SHODDY powdered or granulated, not exceeding 840 microns and rubber content exceeding 45%	-	4.1	1345
1,1,3,3-Tetramethylbutyl peroxy-pivalate (concentration ≤ 77%, with diluent Type A), see	-	5.2	3115

"

ANNEX 2

DRAFT AMENDMENT 37-14 TO THE IMDG CODE

Table of Contents

Insert a new subsection as "**5.1.5.5 Specific provisions for the consignment of fissile material**".

Insert a new section as "**6.2.2.10 Marking of bundles of cylinders**".

PART 1 GENERAL PROVISIONS, DEFINITIONS AND TRAINING

Chapter 1.1 – General provisions

1.1.1 Application and implementation of the Code

1.1.1.9 Insert a new paragraph 1.1.1.9 to read as follows:

"1.1.1.9 *Lamps containing dangerous goods*

The following lamps are not subject to this Code provided that they do not contain radioactive material and do not contain mercury in quantities above those specified in special provision 366 of Chapter 3.3:

- .1 Lamps that are collected directly from individuals and households when transported to a collection or recycling facility;
- .2 Lamps each containing not more than 1 g of dangerous goods and packaged so that there is not more than 30 g of dangerous goods per package, provided that:
 - (i) the lamps are certified to a manufacturer's quality management system;

Note: The application of ISO 9001:2008 may be considered acceptable for this purpose.

and

- (ii) each lamp is either individually packed in inner packagings, separated by dividers, or surrounded with cushioning material to protect the lamps and packed into strong outer packagings meeting the general provisions of 4.1.1.1 and capable of passing a 1.2 m drop test.
- .3 Used, damaged or defective lamps each containing not more than 1 g of dangerous goods with not more than 30 g of dangerous goods per package when transported from a collection or recycling facility. The lamps shall be packed in strong outer packagings

sufficient for preventing release of the contents under normal conditions of transport meeting the general provisions of 4.1.1.1 and that are capable of passing a drop test of not less than 1.2 m.

Note: lamps containing gases of class 2.2. are addressed in 2.2.2.6.4 and lamps containing radioactive material are addressed in 2.7.2.2.2.2."

Chapter 1.2 – Definitions, units of measurement and abbreviations

1.2.1 Definitions

In all the definitions, whenever the term "for the transport of Class 7 material" is used, replace it with "for the transport of radioactive material".

Amend the following definitions as indicated:

Design: in the first sentence, insert "fissile material excepted under 2.7.3.5.6 after "the description of".

Exclusive use: replace "and unloading is carried" with "and unloading and shipment are carried" and insert ", where so required by the provisions of this Code;" after "consignee".

Freight container: replace the last two sentences with the following:

"In addition: Small freight container means a freight container that has an internal volume of not more than 3 m³. Large freight container means a freight container that has an internal volume of more than 3 m³."

GHS: in the reference for GHS, replace Rev.4 with "Rev.5"

Manual of Test and Criteria, add at the end "and Amend.2".

Multiple-element gas container: replace "and bundles" with "or bundles".

Radiation level: amend the end of the definition to read: "millisieverts per hour or microsieverts per hour;"

Add the following new definitions in alphabetical order:

"*Large salvage packaging* means a special packaging which:

- .1 is designed for mechanical handling; and
- .2 exceeds 400 kg net mass or 450 litres capacity but has a volume of not more than 3 m³;

into which damaged, defective or leaking dangerous goods packages, or dangerous goods that have spilled or leaked are placed for purposes of transport for recovery or disposal;"

"*Management system*, for the transport of radioactive material, means a set of interrelated or interacting elements (system) for establishing policies and objectives and enabling the objectives to be achieved in an efficient and effective manner;"

"*Neutron radiation detector* is a device that detects neutron radiation. In such a device, a gas may be contained in a hermetically sealed electron tube transducer that converts neutron radiation into a measureable electric signal;"

"*Radiation detection system* is an apparatus that contains radiation detectors as components;"

Chapter 1.5 – General provisions concerning class 7

Replace the title with "GENERAL PROVISIONS CONCERNING RADIOACTIVE MATERIAL".

1.5.1 Scope and application

1.5.1.1 Amend the second and third sentences to read:

"These provisions are based on the IAEA "Regulations for the Safe Transport of Radioactive material, 2012 Edition, IAEA Safety Standards Series No. SSR-6, IAEA, Vienna (2012)". Explanatory material can be found in "Advisory material for the IAEA Regulations for the Safe Transport of Radioactive Material, IAEA Safety Standards Series No. TS-G-1.1 (Rev.2), IAEA, Vienna (2012)"."

1.5.1.2 In the second sentence of the last paragraph replace "imposing requirements" with "imposing conditions".

1.5.1.4 Amend the first sentence to read: "The provisions of this code do not apply to any of the following:" and insert a new sub-paragraph .4 to read as follows:

"4 Radioactive material in or on a person who is to be transported for medical treatment because the person has been subject to accidental or deliberate intake of radioactive material or to contamination;"

and renumber current subparagraphs .4 to .6 accordingly:

and replace new subparagraph .6 (former .5) with the following:

"6 Natural material and ores containing naturally occurring radionuclides (which may have been processed), provided the activity concentration of the material does not exceed 10 times the values specified in Table 2.7.2.2.1, or calculated in accordance with 2.7.2.2.2.1 and 2.7.2.2.3 to 2.7.2.2.6. For natural materials and ores containing naturally occurring radionuclides that are not in secular equilibrium the calculation of the activity concentration shall be performed in accordance with 2.7.2.2.4;"

1.5.1.5 Specific provisions for the transport of excepted packages

1.5.1.5.1 Amend to read as follows:

"1.5.1.5.1 Excepted packages which may contain radioactive material in limited quantities, instruments, manufactured articles and empty packagings as specified in 2.7.2.4.1 shall be subject only to the following provisions of parts 5 to 7:

.1 The applicable provisions specified in 5.1.1.2, 5.1.3.2, 5.1.5.2.2, 5.1.5.4, 5.2.1.7, [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;] and

.2 The requirements for excepted packages specified in 6.4.4,

except when the radioactive material possesses other hazardous properties and has to be classified in a class other than Class 7 in accordance with special provision 290 or 369 of Chapter 3.3, where the provisions listed in .1 and .2 above apply only as relevant and in addition to those relating to the main class or division."

1.5.1.5.2 Insert a new second sentence to read as follows:

"If the excepted package contains fissile material, one of the fissile exceptions provided by 2.7.2.3.5 shall apply and the requirements of [5.1.5.5] shall be met."

1.5.2 Radiation protection programme

1.5.2.4 Amend the end of the introductory sentence to read "that the effective dose either:" and insert "or" at the end of sub paragraph .1.

1.5.3 Quality assurance

1.5.3 Amend to read as follows:

"1.5.3 Management system

1.5.3.1 A management system based on international, national or other standards acceptable to the competent authority shall be established and implemented for all activities within the scope of this Code, as identified in 1.5.1.3, to ensure compliance with the relevant provisions of this Code. Certification that the design specification has been fully implemented shall be available to the competent authority. The manufacturer, consignor or user shall be prepared:

.1 to provide facilities for inspection during manufacture and use; and

.2 to demonstrate compliance with this Code to the competent authority.

Where competent authority approval is required, such approval shall take into account and be contingent upon the adequacy of the management system."

1.5.4 Special arrangement

1.5.4.2 Replace "Class 7" with "radioactive material", twice.

1.5.6 Non-compliance

1.5.6.1 In the introductory sentence, delete "a" before "non-compliance". In .1 amend the introductory sentence to read:

"The consignor, consignee, carrier and any organization involved during transport, who may be affected, as appropriate, shall be informed of the non-compliance:"

and in .2(iv), delete "and" at the end of the sentence.

PART 2 CLASSIFICATION

Chapter 2.0 – Introduction

2.0.1 Classes, divisions, packing groups

2.0.1.2 Marine pollutants

2.0.1.2.1 Amend paragraph 2.0.1.2.1 to read as follows:

"Many of the substances assigned to classes 1 to 6.2, 8 and 9 are deemed as being *marine pollutants* (see chapter 2.10)."

2.0.1.3 Add the following new paragraph at the end:

"Articles are not assigned to packing groups. For packing purposes any requirement for a specific packaging performance level is set out in the applicable packing instruction."

2.0.3 Classification of substances, mixtures and solutions with multiple hazards (precedence of hazard characteristics)

2.0.3.5 Amend the last sentence to read as follows:

"For radioactive material in excepted packages, except for UN 3507, URANIUM HEXAFLUORIDE, RADIOACTIVE MATERIAL, EXCEPTED PACKAGE, special provision 290 of Chapter 3.3 applies."

Chapter 2.1 – Class 1 – Explosives

2.1.0 Introductory notes (these notes are not mandatory)

Amend Note 2 in 2.1.3.5.5 to read as follows:

"NOTE 2: "Flash composition" in this table refers to pyrotechnic substances in powder form or as pyrotechnic units as presented in the firework that are used to produce an aural effect or used as a bursting charge, or propellant charge unless the time taken for the pressure rise is demonstrated to be more than 6 ms for 0.5 g of pyrotechnic substance in the HSL Flash Composition Test in appendix 7 of the Manual of Tests and Criteria."

Chapter 2.2 – Class 2 – Gases

2.2.1 Definitions and general provisions

2.2.1.2 Add a new indent .5 to read as follows:

".5 *Adsorbed gas* – a gas which when packaged for transport is adsorbed onto a solid porous material resulting in an internal receptacle pressure of less than 101.3 kPa at 20°C and less than 300 kPa at 50°C."

Chapter 2.3 – Class 3 – Flammable liquids

2.3.2 Assignment of packing group

2.3.2.2 and 2.3.2.3 Replace existing paragraphs with the following:

"2.3.2.2 Viscous flammable liquids such as paints, enamels, lacquers, varnishes, adhesives and polishes having a flash point of less than 23°C may be placed in packing group III in conformity with the procedures prescribed in the Manual of Tests and Criteria, Part III, sub-section 32.3, provided that:

- .1 The viscosity expressed as the flowtime in seconds and flash point are in accordance with the following table:

<i>Flow-time t in seconds</i>	<i>Jet diameter (mm)</i>	<i>Flash point, closed-cup (°C)</i>
$20 < t \leq 60$	4	above 17
$60 < t \leq 100$	4	above 10
$20 < t \leq 32$	6	above 5
$32 < t \leq 44$	6	above -1
$44 < t \leq 100$	6	above -5
$100 < t$	6	no limit

- .2 Less than 3% of the clear solvent layer separates in the solvent separation test;
- .3 The mixture or any separated solvent does not meet the criteria for Class 6.1 or Class 8;
- .4 The substances are packed in receptacles of not more than 30-litre capacity.

2.3.2.3 *Reserved.*"

2.3.2.5 At the beginning, replace "Viscous substances" with "Viscous liquids". Amend the fourth indent to read as follows:

"- are packed in receptacles of not more than 30-litre capacity".

Chapter 2.5 – Class 5 – Oxidizing substances and organic peroxides

2.5.1 Definitions and general provisions

2.5.2 Class 5.1 – Oxidizing substances

2.5.2.2 Oxidizing solids

2.5.2.2.1 Classification of solid substances of class 5.1

2.5.2.2.1.1 Amend to read as follows:

"2.5.2.2.1.1 Tests are performed to measure the potential for the solid substance to increase the burning rate or burning intensity of a combustible substance when the two are thoroughly mixed. The procedure is given in the Manual of Tests and Criteria, Part III, sub-section 34.4.1 (test O.1) or alternatively, in sub-section 34.4.3 (test O.3). Tests are conducted on the substance to be evaluated mixed with dry fibrous cellulose in mixing ratios of 1:1 and 4:1, by mass, of sample to cellulose. The burning characteristics of the mixtures are compared:

- .1 in the test O.1, with the standard 3:7 mixture, by mass, of potassium bromate to cellulose. If the burning time is equal to or less than this standard mixture, the burning times shall be compared with those from the packing group I or II reference standards, 3:2 and 2:3 ratios, by mass, of potassium bromate to cellulose respectively; or
- .2 in the test O.3, with the standard 1:2 mixture, by mass, of calcium peroxide to cellulose. If the burning rate is equal to or greater than this standard mixture, the burning rates shall be compared with those from the packing group I or II reference standards 3:1 and 1:1 ratios, by mass, of calcium peroxide to cellulose, respectively."

2.5.2.2.1.2 Amend to read as follows:

"2.5.2.2.1.2 The classification test results are assessed on the basis of:

- .1 the comparison of the mean burning time (for the test O.1) or burning rate (for the test O.3) with those of the reference mixtures; and
- .2 whether the mixture of substance and cellulose ignites and burns."

2.5.2.2.1.3 Amend to read as follows:

"2.5.2.2.1.3 A solid substance is classified in Class 5.1 if the 4:1 or 1:1 sample-to-cellulose ratio (by mass) tested, exhibits:

- .1 in the test O.1, a mean burning time equal to or less than the mean burning time of a 3:7 mixture (by mass) of potassium bromate and cellulose ; or
- .2 in the test O.3, a mean burning rate equal to or greater than the mean burning rate of a 1:2 mixture (by mass) of calcium peroxide and cellulose."

2.5.2.2.2 *Assignment of packing groups*

2.5.2.2.2 Amend to read as follows:

"2.5.2.2.2 Assignment of packing groups

Solid oxidizing substances are assigned to a packing group according to one of the test procedures in the Manual of Tests and Criteria, Part III, sub-section 34.4.1 (test O.1) or sub-section 34.4.3 (test O.3), in accordance with the following criteria:

.1 Test O.1:

- (i) Packing group I: any substance which, in the 4:1 or 1:1 sample-to-cellulose ratio (by mass) tested, exhibits a mean burning time less than the mean burning time of a 3:2 mixture, by mass, of potassium bromate and cellulose;
- (ii) Packing group II: any substance which, in the 4:1 or 1:1 sample-to-cellulose ratio (by mass) tested, exhibits a mean burning time equal to or less than the mean burning time of a 2:3 mixture (by mass) of potassium bromate and cellulose, and the criteria for packing group I are not met;
- (iii) Packing group III: any substance which, in the 4:1 or 1:1 sample-to-cellulose ratio (by mass) tested, exhibits a mean burning time equal to or less than the mean burning time of a 3:7 mixture (by mass) of potassium bromate and cellulose, and the criteria for packing groups I and II are not met;
- (iv) Not Class 5.1: any substance which, in both the 4:1 and 1:1 sample-to-cellulose ratio (by mass) tested, does not ignite and burn, or exhibits mean burning times greater than that of a 3:7 mixture (by mass) of potassium bromate and cellulose.

.2 Test O.3:

- (i) Packing group I: any substance which, in the 4:1 or 1:1 sample-to-cellulose ratio (by mass) tested, exhibits a mean burning rate greater than the mean burning rate of a 3:1 mixture (by mass) of calcium peroxide and cellulose;
- (ii) Packing group II: any substance which, in the 4:1 or 1:1 sample-to-cellulose ratio (by mass) tested, exhibits a mean burning rate equal to or greater than the mean burning rate of a 1:1 mixture (by mass) of calcium peroxide and cellulose, and the criteria for packing group I are not met;
- (iii) Packing group III: any substance which, in the 4:1 or 1:1 sample-to-cellulose ratio (by mass) tested, exhibits a mean burning rate equal to or greater than the mean burning rate of a 1:2 mixture (by mass) of calcium peroxide and cellulose, and the criteria for packing groups I and II are not met;

- (iv) Not Class 5.1: any substance which, in both the 4:1 and 1:1 sample-to-cellulose ratio (by mass) tested, does not ignite and burn, or exhibits a mean burning rate less than the mean burning rate of a 1:2 mixture (by mass) of calcium peroxide and cellulose."

Chapter 2.6 – Class 6 – Toxic and infectious substances

2.6.3 Class 6.2 – Infectious substances

2.6.3.2.3 Exemptions

2.6.3.2.3.5 Amend to read as follows:

"2.6.3.2.3.5 Dried blood spots, collected by applying a drop of blood onto absorbent material, are not subject to the provisions of this Code."

and insert two new paragraphs 2.6.3.2.3.6 and 2.6.3.2.3.7 to read as follows and renumber existing paragraphs accordingly:

"2.6.3.2.3.6 Faecal occult blood screening samples are not subject to the provisions of this Code.

2.6.3.2.3.7 Blood or blood components which have been collected for the purposes of transfusion or for the preparation of blood products to be used for transfusion or transplantation and any tissues or organs intended for use in transplantation as well as samples drawn in connection with such purposes are not subject to the provisions of this Code."

Chapter 2.7 – Class 7 – Radioactive material

2.7.1.3 Definitions of specific terms

2.7.1.3 Amend the definitions hereafter as follows:

Fissile nuclides: Amend the end of the introductory text before sub-paragraph .1 to read: "of fissile material are the following:".

In subparagraph .1, delete "and".

Insert the following new subparagraphs and text:

- "3 material with fissile nuclides less than a total of 0.25 g;
- .4 any combination of .1, .2 and/or .3.

These exclusions are only valid if there is no other material with fissile nuclides in the package or in the consignment if shipped unpackaged."

Surface contaminated object: at the end, replace "surfaces" with "surface".

2.7.2 Classification

2.7.2.1 General provisions

2.7.2.1.1 Amend to read as follows:

"Radioactive material shall be assigned to one of the UN numbers specified in Table 2.7.2.1.1, in accordance with 2.7.2.4.2 to 2.7.2.5, taking into account the material characteristics determined in 2.7.2.3."

Table 2.7.2.1.1 – Assignment of UN Numbers

2.7.2.1.1 Amend the table as follows:

Table 2.7.2.1.1 Add a new heading row to read:

UN Nos.	Proper shipping name and description
---------	--------------------------------------

For UN Nos. 2912, 3321, 3322, 2913, 2915, 3332, 2916, 2917, 3323, 2919 and 2978, insert a reference to a new note "b" after "fissile-excepted".

Under the headings "Excepted packages" and "Uranium hexafluoride" add the following new entry :

"UN 3507 URANIUM HEXAFLUORIDE, RADIOACTIVE MATERIAL, EXCEPTED PACKAGE less than 0.1 kg per package, non-fissile or fissile-excepted^{b,c}"

Add the following table notes "a", "b" and "c" after the table:

^a *The proper shipping name is found in the column "proper shipping name and description" and is restricted to that part shown in capital letters. In the cases of UN Nos. 2909, 2911, 2913 and 3326, where alternative proper shipping names are separated by the word "or" only the relevant proper shipping name shall be used.*

^b *The term "fissile-excepted" refers only to material excepted under 2.7.2.3.5.*

^c *For UN No. 3507, see also special provision 369 in Chapter 3.3."*

2.7.2.2 Determination of activity level

2.7.2.2.1 In .2, insert "limits" after "concentration".

Table 2.7.2.2.1 In the heading of column 4 insert "limit" after "concentration". In (a) after the table, in the introductory sentence, replace "from daughter radionuclides" with "from their progeny".

2.7.2.2.2 Amend the text before the Table to read as follows:

"2.7.2.2.2 For individual radionuclides:

- .1 Which are not listed in Table 2.7.2.2.1 the determination of the basic radionuclide values referred to in 2.7.2.2.1 shall require multilateral approval. For these radionuclides, activity concentration limits for exempt material and activity limits for exempt consignments shall be calculated in accordance with the principles established in the International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources, Safety Series No.115, IAEA, Vienna (1996). It is permissible to use an A_2 value calculated using a dose coefficient for the appropriate lung absorption type as recommended by the International Commission on Radiological Protection, if the chemical forms of each radionuclide under both normal and accident conditions of transport are taken into consideration. Alternatively, the radionuclide values in Table 2.7.2.2.2 may be used without obtaining competent authority approval;
- .2 In instruments or articles in which the radioactive material is enclosed or is included as a component part of the instrument or other manufactured article and which meet 2.7.2.4.1.3.3, alternative basic radionuclide values to those in Table 2.7.2.2.1 for the activity limit for an exempt consignment are permitted and shall require multilateral approval. Such alternative activity limits for an exempt consignment shall be calculated in accordance with the principles set out in the International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources, Safety Series No.115, IAEA, Vienna (1996)."

Table 2.7.2.2.2 – Basic radionuclide values for unknown radionuclides or mixtures

In the table for 2.7.2.2.2, in the heading of the fourth column, insert "limit" after "concentration".

2.7.2.2.4 In the introductory sentence delete "the determination of" and in the legend for X(i) and X_m replace "concentration" with "concentration limit".

2.7.2.3 Determination of other material characteristics

2.7.2.3.1 Low specific activity (LSA) material

2.7.2.3.1.2.1 In subparagraph "(i)", delete "which are intended to be processed for the use of these radionuclides".

2.7.2.3.1.2.1 Subparagraph "(iii)" to read:

- "(iii) radioactive material for which the A_2 value is unlimited. Fissile material may be included only if excepted under 2.7.2.3.5;".

2.7.2.3.1.2.1 (iv), replace ", excluding fissile material not excepted under 2.7.2.3.5" with ". Fissile material may be included only if excepted under 2.7.2.3.5".

2.7.2.3.1.2.2 In subparagraph "(i)", delete "or".

2.7.2.3.1.2.3 In the introductory sentence, replace "meeting the requirements" with "that meet the requirements".

2.7.2.3.1.2.3 In subparagraph "(i)" replace "bitumen, ceramic, etc." with "bitumen and ceramic".

2.7.2.3.2 *Surface contaminated object (SCO)*

2.7.2.3.2.1 Delete "and" at the end of sub-paragraph "(ii)".

2.7.2.3.2.2 Delete "and" at the end of sub-paragraph "(ii)".

2.7.2.3.3 *Special form radioactive material*

2.7.2.3.3.6.1 Amend subparagraph ".1" to read as follows:

".1 The tests prescribed in 2.7.2.3.3.5.1 and 2.7.2.3.3.5.2 provided that the specimens are alternatively subjected to the impact test prescribed in ISO 2919:2012: "Radiation Protection - Sealed Radioactive Sources - General requirements and classification":

- (i) The Class 4 impact test if the mass of the special form radioactive material is less than 200 g; and
- (ii) The Class 5 impact test if the mass of the special form radioactive material is more than 200 g but less than 500 g;".

2.7.2.3.3.6.2 Replace the reference "ISO 2919:1999" with "ISO 2919:2012".

2.7.2.3.3.8.2 Replace "which are acceptable" with "provided that they are acceptable".

2.7.2.3 **Determination of other material characteristics**

2.7.2.3.5 **Fissile material**

2.7.2.3.5 Amend the first paragraph to read as follows:

"Fissile material and packages containing fissile material shall be classified under the relevant entry as "FISSILE" in accordance with Table 2.7.2.1.1 unless excepted by one of the provisions of subparagraphs .1 to .6 below and transported subject to the requirements of [5.1.5.5]. All provisions apply only to material in packages that meets the requirements of 6.4.7.2 unless unpackaged material is specifically allowed in the provision."

2.7.2.3.5 *Fissile material*

2.7.2.3.5 Delete current sub-paragraphs ".1" and ".4". Current ".2" and ".3" are renumbered as ".1" and ".2" respectively.

2.7.2.3.5 Insert the following new sub-paragraphs ".3 to .6":

- ".3 Uranium with a maximum uranium enrichment of 5% by mass uranium-235 provided:
 - (i) there is no more than 3.5 g of uranium-235 per package;
 - (ii) the total plutonium and uranium-233 content does not exceed 1% of the mass of uranium-235 per package;
 - (iii) Transport of the package is subject to the consignment limit provided in [5.1.5.5.3];
- .4 Fissile nuclides with a total mass not greater than 2.0 g per package provided the package is transported subject to the consignment limit provided in [5.1.5.5.4];
- .5 Fissile nuclides with a total mass not greater than 45 g either packaged or unpackaged subject to limits provided in [5.1.5.5.5]; and
- .6 A fissile material that meets the requirements of [5.1.5.5.2], 2.7.2.3.6 and 5.1.5.2.1."

Table 2.7.2.3.5 – Consignment mass limits for exceptions from the requirements for packages containing fissile material

Table 2.7.2.3.5 is deleted.

Insert a new paragraph 2.7.2.3.6 to read as follows:

"2.7.2.3.6 A fissile material excepted from classification as "FISSILE" under 2.7.2.3.5.6 shall be subcritical without the need for accumulation control under the following conditions:

- .1 The conditions of 6.4.11.1 (a);
- .2 The conditions consistent with the assessment provisions stated in 6.4.11.12 (b) and 6.4.11.13 (b) for packages; and
- .3 The conditions specified in 6.4.11.11 (a), if transported by air."

2.7.2.4 Classification of packages or unpacked material

2.7.2.4.1 Classification as excepted package

2.7.2.4.1.1 Amend to read as follows:

"2.7.2.4.1.1 A package may be classified as an excepted package if it meets one of the following conditions:

- .1 It is an empty package having contained radioactive material;

- .2 It contains instruments or articles not exceeding the activity limits specified in columns (2) and (3) of Table 2.7.2.4.1.2;
- .3 It contains articles manufactured of natural uranium, depleted uranium or natural thorium;
- .4 It contains radioactive material not exceeding the activity limits specified in column (4) of Table 2.7.2.4.1.2; or
- .5 It contains less than 0.1 kg of uranium hexafluoride not exceeding the activity limits specified in column (4) of Table 2.7.2.4.1.2."

2.7.2.4.1.3 In the introductory sentence replace "only if" with "provided that".

2.7.2.4.1.3.2 Replace "except" with "on its external surface except for the following:"

and amend (ii) to read as follows:

- "(ii) consumer products that either have received regulatory approval in accordance with 1.5.1.4.5 or do not individually exceed the activity limit for an exempt consignment in Table 2.7.2.2.1 (column 5), provided such products are transported in a package that bears the marking "RADIOACTIVE" on its internal surface in such a manner that a warning of the presence of radioactive material is visible on opening the package; and"

and insert a new subparagraph "(iii)" under ".2" to read as follows:

- "(iii) Other instruments or articles too small to bear the marking "RADIOACTIVE", provided that they are transported in a package that bears the marking "RADIOACTIVE" on its internal surface in such a manner that a warning of the presence of radioactive material is visible on opening the package;"

2.7.2.4.1.4.2 Amend to read as follows:

- ".2 The package bears the marking "RADIOACTIVE" on either:
 - (i) An internal surface in such a manner that a warning of the presence of radioactive material is visible on opening the package; or
 - (ii) The outside of the package, where it is impractical to mark an internal surface."

Insert a new 2.7.2.4.1.5 to read as follows:

"2.7.2.4.1.5 Uranium hexafluoride not exceeding the limits specified in Column 4 of Table 2.7.2.4.1.2 may be classified under UN 3507 URANIUM HEXAFLUORIDE, RADIOACTIVE MATERIAL, EXCEPTED PACKAGE, less than 0.1 kg per package, non-fissile or fissile-excepted provided that:

- .1 The mass of uranium hexafluoride in the package is less than 0.1 kg; and
- .2 The conditions of 2.7.2.4.5.1 and 2.7.2.4.1.4.1 and 2.7.2.4.1.4.2 are met."

and existing paragraph 2.7.2.4.1.5 is renumbered as "2.7.2.4.1.7".

2.7.2.4.1.6 Replace "only if" with "provided that".

2.7.2.4.1.7 (former 2.7.2.4.1.5) In the introductory sentence replace "only if" with "provided that".

2.7.2.4.4 *Classification as Type A package*

2.7.2.4.4 In the sentence before the subparagraphs, replace "activities greater than the following:" with "activities greater than either of the following:".

2.7.2.4.4.1 Delete "or".

2.7.2.4.4 In the legend for the formula where "C(j)", delete "and".

2.7.2.4.5 *Classification of uranium hexafluoride*

2.7.2.4.5 Amend to read as follows:

"2.7.2.4.5 *Classification of uranium hexafluoride*

2.7.2.4.5.1 Uranium hexafluoride shall only be assigned to:

- .1 UN No.2977, RADIOACTIVE MATERIAL, URANIUM HEXAFLUORIDE, FISSILE;
- .2 UN No.2978, RADIOACTIVE MATERIAL, URANIUM HEXAFLUORIDE, non-fissile or fissile-excepted; or
- .3 UN No.3507, URANIUM HEXAFLUORIDE, RADIOACTIVE MATERIAL, EXCEPTED PACKAGE less than 0.1 kg per package, non-fissile or fissile-excepted.

2.7.2.4.5.2 The contents of a package containing uranium hexafluoride shall comply with the following requirements:

- .1 For UN Nos. 2977 and 2978, the mass of uranium hexafluoride shall not be different from that allowed for the package design, and for UN 3507, the mass of uranium hexafluoride shall be less than 0.1 kg;
- .2 The mass of uranium hexafluoride shall not be greater than a value that would lead to an ullage smaller than 5% at the maximum temperature of the package as specified for the plant systems where the package shall be used; and

- .3 The uranium hexafluoride shall be in solid form and the internal pressure shall not be above atmospheric pressure when presented for transport."

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

2.7.2.4.6.1 Replace "competent authority approval certificate" with "competent authority certificate of approval".

2.7.2.4.6.2 Amend to read:

"2.7.2.4.6.2 The contents of a Type B(U), Type B(M) or Type C package shall be as specified in the certificate of approval".

2.7.2.4.6.3 is deleted.

2.7.2.4.6.4 is deleted.

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

Amend "Note 2" to read as follows:

"Although the environmentally hazardous substances (aquatic environment) criteria apply to all hazard classes, **except for class 7** (see paragraphs 2.10.2.3, 2.10.2.5 and 2.10.3.2), the criteria have been included in this chapter."

2.9.2 Assignment to class 9

2.9.2.2 Under "Substances which, on inhalation as fine dust, may endanger health", replace all three entries by:

"2212 ASBESTOS, AMPHIBOLE (amosite, tremolite, actinolite, anthophyllite, crocidolite)

2590 ASBESTOS, CHRYSOTILE".

and under this heading replace "Electric double layer capacitors" with "Capacitors"

replace the existing entry with the following two entries:

"3499 CAPACITOR, ELECTRIC DOUBLE LAYER (with an energy storage capacity greater than 0.3Wh)

3508 CAPACITOR, ASYMMETRIC (with an energy storage capacity greater than 0.3Wh)."

Under "Life-saving appliances", replace the three entries for UN No.3268 by:

"3268 SAFETY DEVICES, electrically initiated".

For "Other substances or articles presenting a danger during transport, but not meeting the definitions of another class", add the following new entry:

"*3509 PACKAGING DISCARDED, EMPTY, UNCLEANED"

(footnote is already in the Code *May not be used on sea transport ... see page 121)

2.9.4 Lithium batteries

2.9.4.1 Replace the second sentence with the following:

"Cells and batteries manufactured according to a type meeting the requirements of sub-section 38.3 of the Manual of Tests and Criteria, Revision 3, Amendment 1 or any subsequent revision and amendment applicable at the date of the type testing may continue to be transported, unless otherwise provided in this Code.

Cell and battery types only meeting the requirements of the Manual of Tests and Criteria, Revision 3, are no longer valid. However, cells and batteries manufactured in conformity with such types before 1 July 2003 may continue to be transported if all other applicable requirements are fulfilled."

and amend the note to read as follows:

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

Chapter 2.10 – Marine Pollutants

2.10.2 General provisions

2.10.2.4 Amend to read as follows:

"2.10.2.4 Column 4 of the Dangerous Goods List also provides information on marine pollutants using the symbol **P** for single entries. The absence of the symbol **P** or the presence of a "-" in that column does not preclude the application of 2.10.3."

2.10.3 Classification

2.10.3.2 Add a new paragraph "2.10.3.2" to read as follows:

"2.10.3.2 The classification criteria of 2.9.3 are not applicable to substances or materials of class 7."

PART 3 DANGEROUS GOODS LIST, SPECIAL PROVISIONS AND EXCEMPTIONS

Chapter 3.2 – Dangerous Goods List

3.2.1 Structure of the dangerous goods list

3.2.1 The following sentence is added at the end of column 4: "The absence of the symbol **P** or the presence of a "-" in that column does not preclude the application of 2.10.3."

Dangerous Goods List

Amend the following entries as follows:

0082	in column (9), delete "PP65".
0241	in column (9), delete "PP65".
0331	in column (9), delete "PP65".
0332	in column (9), delete "PP65".
0222	Amend column (2) to read "AMMONIUM NITRATE". In column (6) insert "370". In column (10) insert "IBC100"; In column (11), insert "B2, B3, B17".
0503	In column (2), amend name to read: "SAFETY DEVICES, PYROTECHNIC".
1043	in colum (7b) amend the code to read "E0".
1044	in column (9), insert "PP91".
1051 PG I	in colum (7b) amend the code to read "E0".
1082	in column (2), add "(REFRIGERANT GAS R 1113)" at the end.
1089 PG I	in colum (7b) amend the code to read "E0".
1183 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1210	in column (6), insert "367".
1228 PG II	in colum (7b) amend the code to read "E0".
1242 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1259 PG I	in colum (7b) amend the code to read "E0".
1261 PG II	in colum (7b) amend the code to read "E0".
1263	in column (6), insert "367".
1278 PG II	in colum (7b) amend the code to read "E0".

1295 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1308 PG I	in column (7b) amend the code to read "E0".
1309 PG II	in column (9) insert "PP100"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1309 PG III	in column (9) insert "PP100" and "L3"; in column (11) replace "B3" with "B4"; in column (16) insert "keep as dry as reasonably practicable".
1323	in column (9) insert "PP100"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1331 PG III	in column (7b) amend the code to read "E0".
1333 PG II	in column (9) insert "PP100", in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1339 PG II	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1340 PG II	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1343 PG II	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1357	in column (6) delete "919"

1358 PG II	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1360 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1361 PG II and PG III	in column (7b) amend the code to read "E0".
1363 PG III	in column (7b) amend the code to read "E0".
1364 PG III	in column (7b) amend the code to read "E0".
1365 PG III	in column (7b) amend the code to read "E0".
1373 PG III	in column (7b) amend the code to read "E0".
1376 PG III	in column (7b) amend the code to read "E0"; in column (9) insert "PP100" and "L3"; in column (11) replace "B3" with "B4"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1378 PG II	in column (7b) amend the code to read "E0".
1379 PG III	in column (7b) amend the code to read "E0".
1380 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1383 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1386 PG III	in column (7b) amend the code to read "E0".

1389 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1390 PG II	in column (11) insert "B4"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1391 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1392 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1393 PG II	in column (11) insert "B4"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1394 PG II	in column (11) insert "B4"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1395 PG II	In column (9) insert "PP31" and "PP40"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1396 PG II	In column (9) insert "PP31"; in column (11) insert "B4"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]

1396 PG III	In column (9) insert "PP31" and "PP40"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1397 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1398 PG III	In column (9) insert "PP31" and "PP40"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1400 PG II	in column (11) insert "B4"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1401 PG II	in column (11) insert "B4"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1402 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1402 PG II	In column (9) insert "PP31"; in column (11) insert "B4"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]

1403 PG III	<p>In column (9) insert "PP31" and "PP40";</p> <p>in column (16) insert "keep as dry as reasonably practicable";</p> <p>[in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]</p>
1404 PG I	<p>in column (16) insert "keep as dry as reasonably practicable";</p> <p>[in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]</p>
1405 PG II	<p>in column (11) insert "B4";</p> <p>in column (16) insert "keep as dry as reasonably practicable";</p> <p>[in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]</p>
1405 PG III	<p>in column (16) insert "keep as dry as reasonably practicable";</p> <p>[in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]</p>
1407 PG I	<p>in column (11) insert "B4";</p> <p>in column (16) insert "keep as dry as reasonably practicable";</p> <p>[in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]</p>
1408 PG III	<p>in column (9) insert "PP100";</p> <p>in column (16) insert "keep as dry as reasonably practicable";</p> <p>[in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]</p>
1409 PG I	<p>in column (16) insert "keep as dry as reasonably practicable";</p> <p>[in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]</p>
1409 PG II	<p>In column (9) insert "PP31";</p> <p>in column (16) insert "keep as dry as reasonably practicable";</p> <p>[in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]</p>

1410 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1411 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1413 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1414 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1415 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1417 PG II	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1418 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1418 PG II and PG III	In column (9) insert "PP31"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]

1419 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1420 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1421 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1422 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1423 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1426 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1427 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1428 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1432 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]

1433 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]."
1435 PG III	In column (9) insert "PP100"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1436 PG I, and PG III	In column (9) insert "PP31"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1436 PG II	in column (9) insert "PP31" and "PP100"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1449 PG II	in column (9) insert "PP100"; [in column (16) replace "Category A" with "Category C"]; in column (16) insert "keep as dry as reasonably practicable".
1457 PG II	in column (9) insert "PP100"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) replace "Category A" with "Category C"]; [in column (16)] insert " In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1472 PG II	in column (9) insert "PP100"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) replace "Category A" with "Category C"]; [in column (16)] insert " In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1476 PG II	in column (9) insert "PP100"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) replace "Category A" with "Category C"]; [in column (16)] insert " In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]

1483 PG II	in column (9) insert "PP100"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) replace "Category A" with "Category C"]; [in column (16)" insert " In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1483 PG III	in column (9) insert "PP100" and "L3"; in column (11) replace "B3" with "B4"; in column (16) insert "keep as dry as reasonably practicable".
1491 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) replace "Category B" with "Category C"]; [in column (16)" insert " In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1504 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) replace "Category B" with "Category C"]; [in column (16)" insert " In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1509 PG II	in column (9) insert "PP100"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) replace "Category A" with "Category C"]; [in column (16)" insert " In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1516 PG II	in column (9) insert "PP100"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) replace "Category A" with "Category C"]; [in column (16)" insert " In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1545 PG II	in colum (7b) amend the code to read "E0".
1560 PG I	in colum (7b) amend the code to read "E0".
1567 PG II	in column (9) insert "PP100"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16)" insert " In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1569 PG II	in colum (7b) amend the code to read "E0".

1583 all packing groups	in colum (7b) amend the code to read "E0".
1603 PG II	in colum (7b) amend the code to read "E0".
1613 PG I	in colum (7b) amend the code to read "E0".
1614 PG I	in colum (7b) amend the code to read "E0".
1649 PG I	in colum (7b) amend the code to read "E0".
1672 PG I	in colum (7b) amend the code to read "E0".
1693 PG I and PG II	in colum (7b) amend the code to read "E0".
1694 PG I	in colum (7b) amend the code to read "E0".
1697 PG II	in colum (7b) amend the code to read "E0".
1698 PG I	in colum (7b) amend the code to read "E0".
1699 PG I	in colum (7b) amend the code to read "E0".
1700	in column (5), delete the packing group.
1701 PG II	in colum (7b) amend the code to read "E0".
1714 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1722 PG I	in colum (7b) amend the code to read "E0".
1732 PG II	in colum (7b) amend the code to read "E0".
1792 PG II	in colum (7b) amend the code to read "E0".
1796 PG II	in colum (7b) amend the code to read "E0".
1802 PG II	in colum (7b) amend the code to read "E0".
1806 PG II	in colum (7b) amend the code to read "E0".
1808 PG II	in colum (7b) amend the code to read "E0".
1826 PG II	in colum (7b) amend the code to read "E0".
1832 PG II	in colum (7b) amend the code to read "E0".

1837 PG II	in colum (7b) amend the code to read "E0".
1854 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1855 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1868 PG II	in colum (7b) amend the code to read "E0".
1869 PG II	in column (9) insert "PP100"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1869 PG III	in column (9) insert "PP100" and "L3"; in column (11) replace "B3" with "B4"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1870 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1889 PG I	in colum (7b) amend the code to read "E0".
1906 PG II	in colum (7b) amend the code to read "E0".
1928 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1932 PG III	in colum (7b) amend the code to read "E0"; in column (9) insert "L4"; in column (11) replace "B3" with "B4"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
1939 PG II	in colum (7b) amend the code to read "E0".
1942	Amend column (2) to read "AMMONIUM NITRATE with not more than 0.2% combustible substances, including any organic substance calculated as carbon, to the exclusion of any other added substance".

2002 PG III	in colum (7b) amend the code to read "E0".
2004 PG II	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
2006 PG III	in colum (7b) amend the code to read "E0".
2008 PG II	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
2008 PG III	in column (9) insert "L4"; in column (11) replace "B3" with "B4"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
2009 PG III	in column (9) insert "L4"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
2010 PG I	in column (9) insert "PP100"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
2011 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
2012 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]

2013 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) after "Category E" insert " to D"]; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
2016	in column (5), delete the packing group.
2017	in column (5), delete the packing group.
2030 PG II	in column (7b) amend the code to read "E0".
2073	in column (7b) amend the code to read "E0".
2210 PG III	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
2212 PG II	in column (2) amend the name to read "ASBESTOS, AMPHIBOLE (amosite, tremolite, actinolite, anthophyllite, crocidolite)", in column (6) insert "274" and in column (7b) amend the code to read "E0". In column (17) set the existing text in square brackets.
2217 PG III	in column (7b) amend the code to read "E0".
2249 PG I	in column (7b) amend the code to read "E0".
2254 PG III	in column (7b) amend the code to read "E0".
2257 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
2290	In column (17) set the existing text in square brackets.
2295 PG I	in column (7b) amend the code to read "E0".
2363 PG I	in column (7b) amend the code to read "E0".
2381 PG II	in column (7b) amend the code to read "E0".
2404 PG II	in column (7b) amend the code to read "E0".
2438 PG I	in column (7b) amend the code to read "E0".

2441 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
2442 PG II	in colum (7b) amend the code to read "E0".
2443 PG II	in colum (7b) amend the code to read "E0".
2463 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
2466 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16)" insert " In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
2545 PG I and PG II	in column (16) insert "keep as dry as reasonably practicable". [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
2545 PG III	in column (9) insert "L4"; in column (11) replace "B3" with "B4"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
2546 PG I and PG II	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
2546 PG III	in column (9) insert "L4"; in column (11) replace "B3" with "B4"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]

2547 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16)" insert " In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
2558 PG I	in colum (7b) amend the code to read "E0".
2590	in column (2) amend the name to read "ASBESTOS, CHRYSOTILE".
2624 PG II	in column (11) insert "B4"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
2626 PG II	in colum (7b) amend the code to read "E0".
2691 PG II	in colum (7b) amend the code to read "E0".
2740 PG I	in colum (7b) amend the code to read "E0".
2743 PG II	in colum (7b) amend the code to read "E0".
2749 PG I	in colum (7b) amend the code to read "E0".
2793 PG III	in column (9) insert "PP100" and "L3"; in column (11) replace "B3" with "B4"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
2794	in column (16) delete ""Separated from" acids." (Amendment applies to the printed version only)
2795	in column (16) add ""Separated from" acids." (Amendment applies to the printed version only)
2798 PG II	in colum (7b) amend the code to read "E0".
2799 PG II	in colum (7b) amend the code to read "E0".
2805 PG II	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]

2813 PG I, and PG III	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
2813 PG II	in column (11) insert "B4"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
2826 PG II	in column (7b) amend the code to read "E0".
2830 PG II	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
2835 PG II	in column (7b) amend the code to read "E0". in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
2844 PG III	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
2845 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
2846 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
2858 PG III	in column (9) insert "PP100" and "L3"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]

2870 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
2878 PG III	in column (9) insert "PP100" and "L3"; in column (11) replace "B3" with "B4"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
2881 PG II	in column (7b) amend the code to read "E0".
2881 PG I and PG II	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
2881 PG III	in column (9) insert "L4"; in column (11) replace "B3" with "B4"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
2910	in column (6) delete "325" and insert "368"
2950 PG III	in column (9) insert "PP100"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
2956 PG III	in column (7b) amend the code to read "E0".
2965 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
2968 PG III	in column (9) insert "PP100"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]

2977	in column (6) delete special provision "172".
2978	in column (6) delete special provision "172".
2988	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert "'Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3048 PG I	in colum (7b) amend the code to read "E0".
3066	in column (6), insert "367".
3077	[in column (6), insert "375"] and "969".
3078 PG II	in column (9) insert "PP100"; in column (11) insert "B4"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert "'Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3082	[in column (6), insert "375"] and "969".
3089 PGIII	in column (10) replace "IBC 06" by "IBC 08" and in column (11) insert "B2 and B4".
3089 PG II and PG III	in column (9) insert "PP100"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert "'Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3090	in column (5), delete the packing group; in column (6) insert "376" and "377"; in column (8) insert "P908, P909" and "LP903"; in column (9) insert "P908 LP904"; in column (16) insert "For batteries transported in accordance with SP 376 or SP 377 Category C, unless transported on a short international voyage".
3091	in column (5), delete the packing group, in column (6) insert "376" and "377", in column (8) insert "P908, P909" and "LP903" and in column (9) insert "P908 LP904". In column (16) insert "For batteries transported in accordance with SP 376 or SP 377 Category C, unless transported on a short international voyage".
3094 PG I and PG II	in column (16) insert "keep as dry as reasonably practicable"; [in column (16)" insert " In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3096 PG I and PG II	in column (9) insert "PP100"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16)" insert " In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]

3097 PG II and PG III	in colum (7b) amend the code to read "E0".
3100 PG II	in colum (7b) amend the code to read "E0".
3121 PG I and PG II	in column (16) insert "keep as dry as reasonably practicable"; [in column (16)" insert " In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3121 PG II	in colum (7b) amend the code to read "E0".
3122 PG I	in colum (7b) amend the code to read "E0".
3123 PG I and PG II	in column (16) insert "keep as dry as reasonably practicable"; [in column (16)" insert " In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3123 PG I	in colum (7b) amend the code to read "E0".
3125 PG I	in column (9) insert "PP099" and "PP100"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16)" insert " In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3125 PG II	in column (16) insert "keep as dry as reasonably practicable"; [in column (16)" insert " In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3127 PG II and PG III	in colum (7b) amend the code to read "E0".
3129 PG I, PG II and PG III	in column (16) insert "keep as dry as reasonably practicable"; [in column (16)" insert " In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3129 PG II	in colum (7b) amend the code to read "E0".
3130 PG I, PG II and PG III	in column (16) insert "keep as dry as reasonably practicable"; [in column (16)" insert " In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]

3130 PG II	in colum (7b) amend the code to read "E0".
3131 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3131 PG II and PG III	In column (9) insert "PP31"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3132 PG I	in column (16) insert "keep as dry as reasonably practicable".
3132 PG II and PG III	In column (9) insert "PP31"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3133 PG II and PG III	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3133 PG II and PG III	in colum (7b) amend the code to read "E0".
3134 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3134 PG II and PG III	In column (9) insert "PP31"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3135 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]

3135 PG II and PG III	In column (9) insert "PP31"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3137 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16)" insert " In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3146	[in column (16)" insert " In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3148 PG I, PG II and PG III	in column (16) insert "keep as dry as reasonably practicable".
3164	in column (6), insert "371".
3166	in column (6) insert "SP 970".
3170 PG II and PG III	in column (11) insert "B4"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3171	in column (6) insert "SP 970".
3189 PG II	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3189 PG III	in column (9) insert "L4"; in column (11) replace "B3" with "B4"; in column (16) insert "keep as dry as reasonably practicable".
3194 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]

3200 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3208 PG I and PG III	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3208 PG II	in column (7b) amend the code to read "E0"; in column (11) insert "B4"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3209 PG I, PG II and PG III	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3242 PG II	in column (7b) amend the code to read "E0".
3251 PG III	in column (7b) amend the code to read "E0".
3268	in column (2), amend the name to read: "SAFETY DEVICES, electrically initiated" and in column (5), delete the packing group.
3292	in column (5), delete the packing group; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3292 PG II	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3294 PG I	in column (7b) amend the code to read "E0".
3315 PG I	in column (7b) amend the code to read "E0".
3316	delete the existing entry (note: the replacement for this entry is shown in the table for new entries)

3336 PG I	in column (7b) amend the code to read "E0".
3356	in column (5), delete the packing group.
3375	In column (8), replace "P099" by "P505"; in Column (10) replace "IBC99" by "IBC02" and in column (11), insert "B16".
3378 PG II	In column (6) delete "967". (Amendment applies to the printed version only)
3385 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16)" insert " In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3386 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16)" insert " In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3391 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3392 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3393	in column (14) Insert "TP41".
3393 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3394	in column (14) Insert "TP41"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3394 PG I	in column (16) insert "keep as dry as reasonably practicable".

3395 all packing groups	in column (14) Insert "TP41"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3395 PG II and PG III	In column (9) insert "PP31".
3396 all packing groups	in column (14) Insert "TP41"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3396 PG II and PG III	In column (9) insert "PP31".
3397 all packing groups	in column (14) Insert "TP41"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16) insert ""Separated from" goods of classes 2.1 and 3." and "In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3397 PG II and PG III	In column (9) insert "PP31".
3398 all packing groups	in column (14) Insert "TP41"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16)" insert " In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3399 all packing groups	in column (14) Insert "TP41"; in column (16) insert "keep as dry as reasonably practicable"; [in column (16)" insert " In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3401 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16)" insert " In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]

3402 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16)" insert " In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3403 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16)" insert " In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3404 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16)" insert " In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3416 PG II	in column (7b) amend the code to read "E0".
3422	In column (15) replace "S-B" with "S-A".
3448 PG I and PG II	in colum (7b) amend the code to read "E0".
3450 PG I	in colum (7b) amend the code to read "E0".
3469	in column (6), insert "367".
3470	in column (6), insert "367".
3476	in column (16) insert "keep as dry as reasonably practicable"; [in column (16)" insert " In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3480	in column (5), delete the packing group; in column (6) insert "376" and "377"; in column (8) insert "P908, P909" and "LP903"; in column (9) insert "P908 LP904". In column (16) insert "For batteries transported in accordance with SP 376 or SP 377 Category C, unless transported on a short international voyage".
3481	in column (5), delete the packing group; in column (6) insert "376" and "377"; in column (8) insert "P908, P909" and "LP903"; in column (9) insert "P908 LP904"; in column (16) insert "For batteries transported in accordance with SP 376 or SP 377 Category C, unless transported on a short international voyage".

3482 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16)" insert " In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3483 PG I	in colum (7b) amend the code to read "E0"
3490 PG I	in column (16) insert "keep as dry as reasonably practicable"; [in column (16)" insert " In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3491 PG I	in column (16) insert "keep as dry as reasonably practicable" [in column (16)" insert " In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained."]
3498 PG II	in colum (7b) amend the code to read "E0"
3499	In column (2) amend the proper shipping name to read as follows: "CAPACITOR, ELECTRIC DOUBLE LAYER (with an energy storage capacity greater than 0.3Wh)"
3506	in column (5), delete the packing group.

3.2.1 Dangerous Goods List

Add the following new entries and amend appendix A and the alphabetical index accordingly:

(1)	(2)	(3)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
3316	CHEMICAL KIT or FIRST AID KIT	9	-	II	251 340	See SP 251	See SP 340	P901	-	-	-	-	-	-	F-A, S-P	Category A.	-
3316	CHEMICAL KIT or FIRST AID KIT	9		III	251 340	See SP 251	See SP 340	P901	-	-	-	-	-	-	F-A, S-P	Category A.	-
3507	URANIUM HEXAFLUORIDE, RADIOACTIVE MATERIAL, EXCEPTED PACKAGE, less than 0.1 kg per package, non-fissile or fissile-excepted	8	7	I	317 369	0	E0	P805	-	-	-	-	-	-	<u>F-I, S-S</u>	Category A, taking account of any supplementary requirements in the transport document	See 1.5.1.
3508	CAPACITOR, ASYMMETRIC (with an energy storage capacity greater than 0.3Wh)	9	-	-	372	0	E0	P003	-	-	-	-	-	-	--	Category A	Articles intended to store energy containing positive and negative electrodes comprised of different materials and an electrolyte. Asymetric capacitors may be transported in a charged state.
3509	PACKAGING DISCARDED, EMPTY, UNCLEANNED	9			968	0	E0	-	-	-	-	-	-	-	--	-	This entry shall not be used for sea transport. Discarded packaging shall meet the requirements of 4.1.1.11. Discarded packaging means packagings, large packagings or intermediate bulk containers (IBC), or parts thereof, which have contained dangerous goods, other than radioactive material, which are transported for disposal, recycling or recovery of their material, other than reconditioning, repair, routine maintenance, remanufacturing or reuse, and which have been emptied to the extent that only residues of dangerous goods adhering to the packaging parts are present.
3510	ADSORBED GAS, FLAMMABLE, N.O.S.	2.1	-	-	274	0	E0	P208	-	-	-	-	-	-	F-D, S-U	Category D. Clear of living quarters.	-
3511	ADSORBED GAS, N.O.S.	2.2		-	274		E0	P208	-	-	-	-	-	-	F-C, S-V	Category A.	-

(1)	(2)	(3)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
3512	ADSORBED GAS, TOXIC, N.O.S.	2.3		-	274	0	E0	P208	-	-	-	-	-	-	F-C, S-U	Category D. Clear of living quarters.	-
3513	ADSORBED GAS, OXIDIZING, N.O.S.	2.2	5.1	-	274	0	E0	P208	-	-	-	-	-	-	<u>F-C</u> , S-W	Category D.	-
3514	ADSORBED GAS, TOXIC, FLAMMABLE, N.O.S.	2.3	2.1	-	274	0	E0	P208	-	-	-	-	-	-	F-D, S,-U	Category D. Clear of living quarters.	-
3515	ADSORBED GAS, TOXIC, OXIDIZING, N.O.S.	2.3	5.1	-	274	0	E0	P208	-	-	-	-	-	-	<u>F-C</u> , S-W	Category D. Clear of living quarters.	-
3516	ADSORBED GAS, TOXIC, CORROSIVE, N.O.S.	2.3	8	-	274	0	E0	P208	-	-	-	-	-	-	F-C, S-U	Category D. Clear of living quarters.	-
3517	ADSORBED GAS, TOXIC, FLAMMABLE, CORROSIVE, N.O.S.	2.3	2.1 8	-	274	0	E0	P208	-	-	-	-	-	-	F-D, S-U	Category D. Clear of living quarters. Segregation as for class 2.1 but "away from" class 4.3.	-
3518	ADSORBED GAS, TOXIC, OXIDIZING, CORROSIVE, N.O.S.	2.3	5.1 8	-	274	0	E0	P208	-	-	-	-	-	-	<u>F-C</u> , S-W	Category D. Clear of living quarters. Segregation as for class 5.1 but "separated from" class 7	-
3519	BORON TRIFLUORIDE, ADSORBED	2.3	8	-		0	E0	P208	-	-	-	-	-	-	F-C, S-U	Category D. Clear of living quarters.	Non-flammable, toxic and corrosive gas. Forms dense white corrosive fumes in moist air. Reacts violently with water, evolving hydrogen fluoride, an irritating and corrosive gas apparent as white fumes. In the presence of moisture, highly corrosive to glass and most metals. Much heavier than air (2.35). Highly irritating to skin, eyes and mucous membranes.
3520	CHLORINE, ADSORBED	2.3	5.1 8	-		0	E0	P208	-	-	-	-	-	-	F-C, S-W	Category D. Clear of living quarters. Segregation as for class 5.1 but "separated from" class 7	Non-flammable, toxic and corrosive yellow gas with a pungent odour. Corrosive to glass and to most metals. Much heavier than air (2.4). Highly irritating to skin, eyes and mucous membranes. Powerful oxidant which may cause fire.
3521	SILICON TETRAFLUORIDE, ADSORBED	2.3	8	-		0	E0	P208	-	-	-	-	-	-	F-C, S-U	Category D. Clear of living quarters.	Non-flammable, toxic and corrosive gas with a pungent odour. Corrosive to metals. In moist air, produces hydrogen fluoride. Much heavier than air (3.6). Highly irritating to skin, eyes and mucous membranes.

(1)	(2)	(3)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
3522	ARSINE, ADSORBED	2.3	2.1	-		0	E0	P208	-	-	-	-	-	-	F-D, S-U	Category D. Clear of living quarters.	Flammable, toxic, colourless gas with a garlic odour. Explosive limits: 3.9% to 77.8%. Much heavier than air (2.8).
3523	GERMANE, ADSORBED	2.3	2.1	-		0	E0	P208	-	-	-	-	-	-	F-D, S-U	Category D. Clear of living quarters.	Flammable, toxic, colourless gas with a pungent odour. Much heavier than air (2.6)
3524	PHOSPHORUS PENTAFLUORIDE, ADSORBED	2.3	8	-		0	E0	P208	-	-	-	-	-	-	F-C, S-U	Category D. Clear of living quarters.	Non-flammable, toxic and corrosive gas with an irritating odour. Reacts with water or moist air to produce toxic and corrosive fumes. Corrosive to glass and to most metals. Much heavier than air (4.3). Highly irritating to skin, eyes and mucous membranes.
3525	PHOSPHINE, ADSORBED	2.3	2.1	-		0	E0	P208	-	-	-	-	-	-	F-D, S-U	Category D. Clear of living quarters.	Flammable, toxic, colourless gas with a garlic odour. Ignites spontaneously in air. Heavier than air (1.2). Irritating to skin, eyes and mucous membranes.
3526	HYDROGEN SELENIDE, ADSORBED	2.3	2.1	-		0	E0	P208	-	-	-	-	-	-	F-D, S-U	Category D. Clear of living quarters.	Flammable, toxic, colourless gas with a disagreeable odour. Much heavier than air (2.8). Highly irritating to skin, eyes and mucous membranes.
				-					-	-	-	-	-	-			
				-					-	-	-	-	-	-			
				-					-	-	-	-	-	-			

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

Amend the following Special Provisions as indicated hereunder:

SP 66 Amend to read as follows:

"Cinnabar is not subject to the provisions of this Code".

SP 122 At the end, add: ", 4.1.4.2 packing instruction IBC520 and 4.2.5.2.6 portable tank instruction T23."

SP 135 Amend to read as follows:

"135 The dehydrated sodium salt of dichloroisocyanuric acid does not meet the criteria for inclusion in Class 5.1 and is not subject to the provisions of this Code unless meeting the criteria for inclusion in another Class or Division."

SP 172 Amend to read as follows:

"172 Where a radioactive material has (a) subsidiary risk(s):

- .1 The substance shall be allocated to Packing Group I, II or III, if appropriate, by application of the packing group criteria provided in Part 2 corresponding to the nature of the predominant subsidiary risk;
- .2 Packages shall be labelled with subsidiary risk labels corresponding to each subsidiary risk exhibited by the material; corresponding placards shall be affixed to cargo transport units in accordance with the relevant provisions of 5.3.1;
- .3 For the purposes of documentation and package marking, the proper shipping name shall be supplemented with the name of the constituents which most predominantly contribute to this (these) subsidiary risk(s) and which shall be enclosed in parenthesis;
- .4 The dangerous goods transport document shall indicate the subsidiary class or division and, where assigned the packing group as required by 5.4.1.4.1.4 and 5.4.1.4.1.5.

For packing, see also 4.1.9.1.5."

SP 225 At the end, add:

"Fire extinguishers shall be manufactured, tested, approved and labelled according to the provisions of the country of manufacture. Fire extinguishers under this entry include:

- .1 portable fire extinguishers for manual handling and operation;
- .2 fire extinguishers for installation in aircraft;
- .3 fire extinguishers mounted on wheels for manual handling;

- .4 fire extinguishing equipment or machinery mounted on wheels or wheeled platforms or units transported similar to (small) trailers, and
- .5 fire extinguishers composed of a non-rollable pressure drum and equipment, and handled e.g. by fork lift or crane when loaded or unloaded."

SP 235 Amend to read as follows:

"235 This entry applies to articles which contain Class 1 explosive substances and which may also contain dangerous goods of other classes. These articles are used to enhance safety in vehicles, vessels or aircraft – e.g. air bag inflators, air bag modules, seat-belt pretensioners, and pyromechanical devices."

SP 251 Insert the following new third paragraph after "to any individual substance in the kit":

"Where the kit contains only dangerous goods to which no packing group is assigned, no packing group need be indicated on the dangerous goods transport document."

SP 280 Amend to read as follows:

"280 This entry applies to safety devices for vehicles, vessels or aircraft, e.g. air bag inflators, air bag modules, seat-belt pretensioners, and pyromechanical devices, which contain dangerous goods of Class 1 or of other classes, when transported as component parts and if these articles as presented for transport have been tested in accordance with Test Series 6(c) of Part 1 of the Manual of Tests and Criteria, with no explosion of the device, no fragmentation of device casing or pressure receptacle, and no projection hazard nor thermal effect which would significantly hinder fire-fighting or emergency response efforts in the immediate vicinity. This entry does not apply to life saving appliances described in special provision 296 (UN Nos. 2990 and 3072)."

SP 289 Amend to read as follows:

"289 Safety devices, electrically initiated and safety devices, pyrotechnic installed in vehicles, vessels or aircraft or in completed components such as steering columns, door panels, seats, etc. are not subject to the provisions of this Code."

SP 306 Amend to read as follows:

"306 This entry may only be used for substances that are too insensitive for acceptance into Class 1 when tested in accordance with Test Series 2 (see Manual of Tests and Criteria, Part I)."

SP 309 Amend the last sentence to read as follows:

"Substances shall satisfactorily pass Tests 8(a), (b) and (c) of Test Series 8 of the Manual of Tests and Criteria, Part I, Section 18 and be approved by the competent authority."

SP 310 At the end, include a new "Note" to read as follows:

"For damage or defective lithium batteries and cells see SP 376"

SP 361 At the end of subparagraph .5 insert "except those manufactured before 1 January 2014;"

SP 363 In subparagraph .3, replace "loaded in an orientation" with "oriented"

SP 961 Replace existing 961 with the following:

"SP 961 Internal combustion engines, fuel cell engines, vehicles, and battery-powered equipment are not subject to the provisions of this Code if any of the following conditions are met:

- .1 Internal combustion engines, fuel cell engines vehicles, and battery-powered equipment are stowed on the vehicle, special category and ro-ro spaces or on the weather deck of a roll-on/roll-off 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. Vehicles powered solely by lithium batteries and hybrid electric vehicles powered by both an internal combustion engine and lithium metal or ion batteries, the battery is of a type proved to meet the requirements of the United Nations Manual of Tests and Criteria, part III, subsection 38.3, unless otherwise approved by the competent Authority;
- .2 Internal combustion engines, 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 Internal combustion engines with a fuel tank attached and 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. The internal combustion engines or vehicle are considered to be empty of flammable liquid fuel when the fuel tank has been drained and the vehicle 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 Internal combustion engines with an attached fuel tank and 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 or battery powered equipment solely powered by a wet or dry electric storage battery or a sodium battery, and the battery is protected from short circuit;
- .6 Internal combustion engines powered by a flammable liquid or flammable gas have been cleaned, drained and purged of all flammable liquids and gases or the engine has been sealed to prevent leakage of any residues; or

- .7 Fuel cell engines are protected from inadvertent operation by closing fuel supply lines or by other means and the fuel supply reservoir has been drained and sealed. The fuel supply reservoir does not need to be cleaned or purged.

Notwithstanding above, dangerous goods required for the operation of the internal combustion engines or the vehicle or for the safety of the operator such as fire extinguishers, compressed gas cylinders, accumulators, airbag inflators, starter batteries, etc., shall be securely mounted. All other dangerous goods in the vehicle shall be separately packaged and consigned for transport, as appropriate, in accordance with this Code.

For fuel cell engines, all dangerous goods other than fuel and fuel cells shall be separately packaged and consigned for transport, as appropriate, in accordance with this Code."

SP 962 Replace 962 with the following:

"SP 962 internal combustion engines, vehicles, fuel cell engines, or battery powered equipment not meeting the conditions of special provision 961 shall be assigned to class 9 and shall meet the following requirements:

- .1 internal combustion engines, vehicles, combustion engines, fuel cell engines or battery powered equipment 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 and internal combustion engines 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;
- .3 for flammable gas powered vehicles and internal combustion engines, 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 ion or lithium metal batteries shall be of a type proved to meet the requirements of the United Nations Manual of Tests and Criteria, part III, subsection 38.3, unless otherwise approved by the competent authority; and

Notwithstanding above dangerous goods required for the operation of the internal combustion engines or the vehicle or for the safety of the operator such as fire extinguishers, compressed gas accumulators, airbag inflators, starter batteries, etc., shall be securely mounted.

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

SP 919 is deleted.

Insert the following new special provisions:

"367 For the purposes of documentation and package marking:

The proper shipping name "Paint related material" may be used for consignments of packages containing "Paint" and "Paint related material" in the same package;

The proper shipping name "Paint related material, corrosive, flammable" may be used for consignments of packages containing "Paint, corrosive, flammable" and "Paint related material, corrosive, flammable" in the same package;

The proper shipping name "Paint related material, flammable, corrosive" may be used for consignments of packages containing "Paint, flammable, corrosive" and "Paint related material, flammable, corrosive" in the same package; and

The proper shipping name "Printing ink related material" may be used for consignments of packages containing "Printing Ink" and "Printing ink related material" in the same package."

"368 In the case of non-fissile or fissile-excepted uranium hexafluoride, the material shall be classified under UN 3507 or UN 2978."

"369 In accordance with 2.0.3.5, this radioactive material in an excepted package possessing corrosive properties is classified in Class 8 with a radioactive material subsidiary risk.

Uranium hexafluoride may be classified under this entry only if the conditions of 2.7.2.4.1.2, 2.7.2.4.1.5, 2.7.2.4.5.2 and, for fissile-excepted material, of 2.7.2.3.6 are met.

In addition to the provisions applicable to the transport of Class 8 substances, 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.

No Class 7 label is required to be displayed."

"370 This entry applies to:

- ammonium nitrate with more than 0.2% combustible substances, including any organic substance calculated as carbon, to the exclusion of any added substance; and
- ammonium nitrate with not more than 0.2% combustible substances, including any organic substance calculated as carbon, to the exclusion of any added substance, that is not too sensitive for acceptance into Class 1 when tested in accordance with Test Series 2 (see Manual of Tests and Criteria, Part I). See also UN No. 1942."

"371 .1 This entry also applies to articles, containing a small pressure receptacle with a release device. Such articles shall comply with the following requirements:

- (a) The water capacity of the pressure receptacle shall not exceed 0.5 litres and the working pressure shall not exceed 25 bar at 15°C;
- (b) The minimum burst pressure of the pressure receptacle shall be at least four times the pressure of the gas at 15°C;
- (c) Each article shall be manufactured in such a way that unintentional firing or release is avoided under normal conditions of handling, packing, transport and use. This may be fulfilled by an additional locking device linked to the activator;
- (d) Each article shall be manufactured in such a way as to prevent hazardous projections of the pressure receptacle or parts of the pressure receptacle;
- (e) Each pressure receptacle shall be manufactured from material which will not fragment upon rupture;
- (f) The design type of the article shall be subjected to a fire test. For this test, the provisions of paragraphs 16.6.1.2 except letter g, 16.6.1.3.1 to 16.6.1.3.6, 16.6.1.3.7 (b) and 16.6.1.3.8 of the Manual of Tests and Criteria shall be applied. It shall be demonstrated that the article relieves its pressure by means of a fire degradable seal or other pressure relief device, in such a way that the pressure receptacle will not fragment and that the article or fragments of the article do not rocket more than 10 m;
- (g) The design type of the article shall be subjected the following single package test. A stimulating mechanism shall be used to initiate one article in the middle of the packaging. There shall be no hazardous effects outside the package such as disruption of the package, metal fragments or a receptacle which passes through the packaging.

.2 The manufacturer shall produce technical documentation of the design type, manufacture as well as the tests and their results. The manufacturer shall apply procedures to ensure that articles produced in series are made of good quality, conform to the design type and are able to meet the requirements in .1. The manufacturer shall provide such information to the Competent Authority on request."

"372 This entry applies to asymmetric capacitors with an energy storage capacity greater than 0.3 Wh. Capacitors with an energy storage capacity of 0.3 Wh or less are not subject to the provisions of this Code.

Energy storage capacity means the energy stored in a capacitor, as calculated according to the following equation,

$$Wh = 1/2C_N(U_R^2 - U_L^2) \times (1/3600),$$

using the nominal capacitance (C_N), rated voltage (U_R) and rated lower limit voltage (U_L).

All asymmetric capacitors to which this entry applies shall meet the following conditions:

- (a) Capacitors or modules shall be protected against short circuit;
- (b) Capacitors shall be designed and constructed to safely relieve pressure that may build up in use, through a vent or a weak point in the capacitor casing. Any liquid which is released upon venting shall be contained by packaging or by equipment in which a capacitor is installed;
- (c) Capacitors shall be marked with the energy storage capacity in Wh, except those manufactured before 1 January 2016;
- (d) Capacitors containing an electrolyte meeting the classification criteria of any class or division of dangerous goods shall be designed to withstand a 95 kPa pressure differential;

Capacitors containing an electrolyte not meeting the classification criteria of any class or division of dangerous goods, including when configured in a module or when installed in equipment are not subject to other provisions of this Code. Capacitors containing an electrolyte meeting the classification criteria of any class or division of dangerous goods, with an energy storage capacity of 20 Wh or less, including when configured in a module, are not subject to other provisions of this Code when the capacitors are capable of withstanding a 1.2 metre drop test unpackaged on an unyielding surface without loss of contents.

Capacitors containing an electrolyte meeting the classification criteria of any class or division of dangerous goods that are not installed in equipment and with an energy storage capacity of more than 20 Wh are subject to this Code.

Capacitors installed in equipment and containing an electrolyte meeting the classification criteria of any class or division of dangerous goods, are not subject to other provisions of these Regulations provided that the equipment is packaged in a strong outer packaging constructed of suitable material, and of adequate strength and design, in relation to the packaging's intended use and in such a manner as to prevent accidental functioning of capacitors during transport. Large robust equipment containing capacitors may be offered for transport unpackaged or on pallets when capacitors are afforded equivalent protection by the equipment in which they are contained.

Note: Notwithstanding the provisions of this special provision, nickel-carbon asymmetric capacitors containing Class 8 alkaline electrolytes shall be transported as UN 2795, BATTERIES, WET, FILLED WITH ALKALI, electric storage."

"373 Neutron radiation detectors containing non-pressurized boron trifluoride gas may be transported under this entry provided that the following conditions are met.

.1 Each radiation detector shall meet the following conditions.

- (i) The pressure in each detector shall not exceed 105 kPa absolute at 20°C;

- (ii) The amount of gas shall not exceed 13 g per detector;
- (iii) Each detector shall be manufactured under a registered quality assurance programme;

Note: The application of ISO 9001:2008 may be considered acceptable for this purpose.

- (iv) Each neutron radiation detector shall be of welded metal construction with brazed metal to ceramic feed through assemblies. These detectors shall have a minimum burst pressure of 1800 kPa as demonstrated by design type qualification testing; and
- (v) Each detector shall be tested to a 1×10^{-10} cm³/s leaktightness standard before filling.

.2 Radiation detectors transported as individual components shall be transported as follows:

- (i) Detectors shall be packed in a sealed intermediate plastics liner with sufficient absorbent material to absorb the entire gas contents;
- (ii) They shall be packed in strong outer packaging. The completed package shall be capable of withstanding a 1.8 m drop test without leakage of gas contents from detectors;
- (iii) The total amount of gas from all detectors per outer packaging shall not exceed 52 g.

.3 Completed neutron radiation detection systems containing detectors meeting the conditions of paragraph (a) shall be transported as follows:

- (i) The detectors shall be contained in a strong sealed outer casing;
- (ii) The casing shall contain sufficient absorbent material to absorb the entire gas contents;
- (iii) The completed systems shall be packed in strong outer packagings capable of withstanding a 1.8 m drop test without leakage unless a system's outer casing affords equivalent protection.

The transport document shall include the following statement "Transport in accordance with special provision 373".

Neutron radiation detectors containing not more than 1 g of boron trifluoride, including those with solder glass joints, are not subject to this Code provided they meet the requirements in paragraph .1 and are packed in accordance with paragraph .2. Radiation detection systems containing such detectors are not subject to this Code provided they are packed in accordance with paragraph .3.

Packing instruction P200 of 4.1.4.1 is not applicable.

Nuclear radiation detectors should be stowed in accordance stowage Category A."

"SP 375 These substances when transported in single or combination packagings containing a net quantity per single or inner packaging of 5 l or less for liquids or having a net mass of 5 kg or less for solids, are not subject to any other provisions of this Code 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."

"SP 376 Lithium ion cells or batteries and lithium metal cells or batteries identified as being damaged or defective such that they do not conform to the type tested according to the applicable provisions of the Manual of Tests and Criteria shall comply with the requirements of this special provision.

For the purposes of this special provision, these may include, but are not limited to:

- Cells or batteries identified as being defective for safety reasons;
- Cells or batteries that have leaked or vented;
- Cells or batteries that cannot be diagnosed prior to transport; or
- Cells or batteries that have sustained physical or mechanical damage.

NOTE: In assessing a battery as damaged or defective, the type of battery and its previous use and misuse shall be taken into account.

Cells and batteries shall be transported according to the provisions applicable to UN 3090, UN 3091, UN 3480 and UN 3481, except special provision 230 and as otherwise stated in this special provision.

Packages shall be marked "DAMAGED/DEFECTIVE LITHIUM-ION BATTERIES" or "DAMAGED/DEFECTIVE LITHIUM METAL BATTERIES", as applicable.

Cells and batteries shall be packed in accordance with packing instructions P908 of 4.1.4.1 or LP904 of 4.1.4.3, as applicable.

Cells and batteries liable to rapidly disassemble, dangerously react, produce a flame or a dangerous evolution of heat or a dangerous emission of toxic, corrosive or flammable gases or vapours under normal conditions of transport shall not be transported except under conditions specified by the competent authority."

"SP 377 Lithium ion and lithium metal cells and batteries and equipment containing such cells and batteries transported for disposal or recycling, either packed together with or packed without non-lithium batteries, may be packaged in accordance with packing instruction P909 of 4.1.4.1.

These cells and batteries are not subject to the requirements of section 2.9.4.

Packages shall be marked "LITHIUM BATTERIES FOR DISPOSAL" or "LITHIUM BATTERIES FOR RECYCLING".

Identified damaged or defective batteries shall be transported in accordance with special provision 376 and packaged in accordance with P908 of 4.1.4.1 or LP904 of 4.1.4.3, as applicable."

"SP 968 This entry shall not be used for sea transport. Discarded packaging shall meet the requirements of 4.1.1.11."

"SP 969 Substances classified in accordance to 2.9.3 are subject to the provisions for marine pollutants. Substances which are transported under UN 3077 and 3082 but which do not meet the criteria of 2.9.3 (see 2.9.2.2) are not subject to the provisions for marine pollutants. However for substances that are identified as marine pollutants in this Code (see Index) but which no longer meet the criteria of 2.9.3, the provisions of 2.10.2.6 apply."

"SP 970 This entry only applies to internal combustion engines (including machinery or equipment powered by such engines) to fuel cell engines, and to vehicles powered by flammable liquid, flammable gas and fuel cells containing flammable liquid or gas (including hybrid electric vehicles, see SP 312 or SP 240). For the purposes of this entry vehicles are defined as road vehicles (e.g. cars, motorcycles), boats, aircraft, wheeled or tracked construction or farming equipment and any other self-propelled apparatus designed to carry one or more persons or goods. For internal combustion engines where the requirement of Special Provisions 961 or 962 are not met, an appropriate name and description shall be selected and the relevant provisions of this Code shall apply. 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."

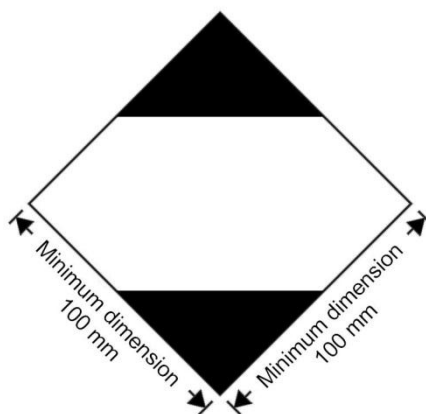
Chapter 3.4 – Dangerous goods packed in limited quantities

3.4.5 Marking and placarding

Amend section 3.4.5.1 and 3.4.5.2 to read as follows:

"3.4.5 Marking and Placarding

3.4.5.1 Except for air transport, packages containing dangerous goods in limited quantities shall bear the marking shown below:



Marking for packages containing limited quantities

The marking shall be readily visible, legible and able to withstand open weather exposure without a substantial reduction in effectiveness. The marking shall be in the form of a square set at an angle of 45° (diamond-shaped). The top and bottom portions and the surrounding line shall be black. The centre area shall be white or a suitable contrasting background. The minimum dimensions shall be 100 mm x 100 mm and the minimum width of line forming the diamond shall be 2 mm. Where dimensions are not specified, all features shall be in approximate proportion to those shown. If the size of the package so requires, the minimum outer dimensions shown above may be reduced to be not less than 50 mm x 50 mm provided the marking

remains clearly visible. The minimum width of the line forming the diamond may be reduced to a minimum of 1 mm.

NOTE: The provisions of 3.4.5.1 of the IMDG Code amendment 36-12 may continue to be applied until 31 December 2016."

3.4.5.2 Packages containing dangerous goods packed in conformity with the provisions of Part 3, Chapter 4 of the ICAO Technical Instructions for the Transport of Dangerous Goods may bear the marking shown below to certify conformity with these provisions:



Marking for packages containing limited quantities conforming to Part 3, Chapter 4 of the ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air

The marking shall be readily visible, legible and able to withstand open weather exposure without a substantial reduction in effectiveness. The marking shall be in the form of a square set at an angle of 45° (diamond-shaped). The top and bottom portions and the surrounding line shall be black. The centre area shall be white or a suitable contrasting background. The minimum dimensions shall be 100 mm x 100 mm and the minimum width of line forming the diamond shall be 2 mm. The symbol "Y" shall be placed in the centre of the mark and shall be clearly visible. Where dimensions are not specified, all features shall be in approximate proportion to those shown. If the size of the package so requires, the minimum outer dimensions shown above may be reduced to be not less than 50 mm x 50 mm provided the marking remains clearly visible. The minimum width of the line forming the diamond may be reduced to a minimum of 1 mm. The symbol "Y" shall remain in approximate proportion to that shown above.

NOTE: The provisions of 3.4.5.2 of IMDG Code (amendment 36-12) may continue to be applied until 31 December 2016."

3.4.5.3 Amend to read as follows:

"3.4.5.3 Multimodal recognition of marks

3.4.5.3.1 Packages containing dangerous goods bearing the marking shown in 3.4.5.2 with or without the additional labels and markings for air transport shall be deemed to meet the provisions of section 3.4.2 and need not bear the marking shown in 3.4.5.1.

3.4.5.3.2 Packages containing dangerous goods in limited quantities bearing the marking shown in 3.4.5.1 and conforming with the provisions of the ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air, including all necessary marks and labels specified in Parts 5 and 6, shall be deemed to meet the provisions of section 3.4.1 as appropriate and of section 3.4.2."

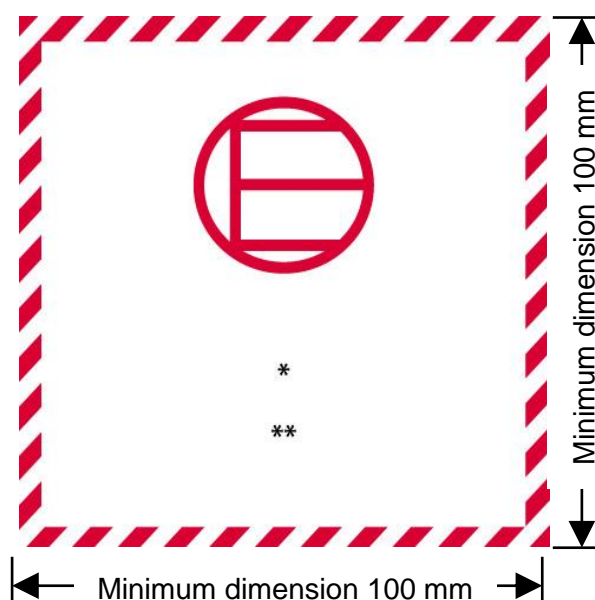
Chapter 3.5 – Dangerous goods packed in excepted quantities

3.5.4 Marking of packages

3.5.4.1 Delete the mark and the text below the mark.

3.5.4.2 and 3.5.4.3 Amend to read as follows:

"3.5.4.2



Excepted quantities mark

- * The Class or, when assigned, the Division number(s) shall be shown in this location.
- ** The name of the consignor or of the consignee shall be shown in this location if not shown elsewhere on the package.

The marking shall be in the form of a square. The hatching and symbol shall be of the same colour, black or red, on white or suitable contrasting background. The minimum dimensions shall be 100 mm x 100 mm. Where dimensions are not specified, all features shall be in approximate proportion to those shown.

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

NOTE: The provisions of 3.5.4.1 and 3.5.4.2 of the IMDG Code (amendment 36-12) may continue to be applied until 31 December 2016."

Appendix A – List of generic and N.O.S. Proper Shipping Names

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

Class or Division	Subsidiary Risk	UN No	Proper Shipping Name
2.1		3510	ADSORBED GAS, FLAMMABLE, N.O.S.
2.2		3511	ADSORBED GAS, N.O.S.
2.3		3512	ADSORBED GAS, TOXIC, N.O.S.
2.2	5.1	3513	ADSORBED GAS, OXIDIZING, N.O.S.
2.3	2.1	3514	ADSORBED GAS, TOXIC, FLAMMABLE, N.O.S.
2.3	5.1	3515	ADSORBED GAS, TOXIC, OXIDIZING, N.O.S.
2.3	8	3516	ADSORBED GAS, TOXIC, CORROSIVE, N.O.S.
2.3	2.1 + 8	3517	ADSORBED GAS, TOXIC, FLAMMABLE, CORROSIVE, N.O.S.
2.3	5.1 + 8	3518	ADSORBED GAS, TOXIC, OXIDIZING, CORROSIVE, N.O.S.

Appendix B – Glossary of terms

Amend the entry for "AIR BAG INFLATORS, PYROTECHNIC or AIR BAG MODULES, PYROTECHNIC or SEAT-BELT PRETENSIONERS, PYROTECHNIC" to read:

"SAFETY DEVICES, electrically initiated".

Amend the definition to read as follows:

"Articles which contain pyrotechnic substances or dangerous goods of other classes and are used in vehicles, vessels or aircraft to enhance safety to persons. Examples are: air bag inflators, air bag modules, seat-belt pretensioners and pyromechanical devices. These pyromechanical devices are assembled components for tasks such as but not limited to separation, locking, or release-and-drive or occupant restraint. The term includes "SAFETY DEVICES, PYROTECHNIC"."

Alphabetical index

Amend the following entries as indicated hereunder:

Amend the entries for "AIR BAG INFLATORS, PYROTECHNIC or AIR BAG MODULES, PYROTECHNIC or SEAT-BELT PRETENSIONERS, PYROTECHNIC" to read as follows:

«Air bag inflators, see	1.4G 9	0503 3268»
«Air bag modules, see	1.4G 9	0503 3268»
«Seat-belt pretensioners, see	1.4G 9	0503 3268»

In the entries for "Actinolite", "Anthophyllite" and "Tremolite" in the UN No. column, replace "2590" with "2212".

Delete the entries for "Asbestos, blue or brown", "Asbestos, white", "Chrysotile", , "BLUE ASBESTOS (crocidolite)", "BROWN ASBESTOS (amosite, mysorite)", "WHITE ASBESTOS (chrysotile, actinolite, anthophyllite, tremolite)". (delete entries regardless names in the UN Regulations differs from those in the IMDG Code)

In the entry for "TRIFLUOROCHLOROETHYLENE, STABILIZED" UN No. 1082, add at the end "(REFRIGERANT GAS R 1113)".

In the entry for "AMMONIUM NITRATE", (UN 1942), amend the description to read as follows "AMMONIUM NITRATE with not more than 0.2% combustible substances, including any organic substance calculated as carbon, to the exclusion of any other added substance".

In the entry for "AMMONIUM NITRATE", (UN 0222), amend the description to read as follows "AMMONIUM NITRATE".

In the entry for "CAPACITOR, electric double layer..." (UN 3499), amend the description to read as follows: "CAPACITOR, ELECTRIC DOUBLE LAYER (with an energy storage capacity greater than 0.3Wh)".

Drazoxolon: Replace "see PESTICIDE, N.O.S." with "see ORGANOCHLORINE PESTICIDE".

Kelevan: Replace "see PESTICIDE, N.O.S." with "see ORGANOCHLORINE PESTICIDE".

Nabam: Replace "see THIOCARBAMATE PESTICIDE" with "see Note 1".

Oxamyl: Replace "see PESTICIDE, N.O.S." with "see CARBAMATE PESTICIDE".

Add the following new entries in alphabetical order:

<i>Name and description</i>	<i>Class</i>	<i>UN No.</i>
ADSORBED GAS, FLAMMABLE, N.O.S.	2.1	3510
ADSORBED GAS, N.O.S.	2.2	3511
ADSORBED GAS, OXIDIZING, N.O.S.	2.2	3513
ADSORBED GAS, TOXIC, CORROSIVE, N.O.S.	2.3	3516
ADSORBED GAS, TOXIC, FLAMMABLE, CORROSIVE, N.O.S.	2.3	3517
ADSORBED GAS, TOXIC, FLAMMABLE, N.O.S.	2.3	3514
ADSORBED GAS, TOXIC, N.O.S.	2.3	3512
ADSORBED GAS, TOXIC, OXIDIZING, CORROSIVE, N.O.S.	2.3	3518
ADSORBED GAS, TOXIC, OXIDIZING, N.O.S.	2.3	3515
Amphibole asbestos, see	9	2212
ARSINE, ADSORBED	2.3	3522
ASBESTOS, AMPHIBOLE	9	2212
ASBESTOS, CHRYSTOTILE	9	2590
BORON TRIFLUORIDE, ADSORBED	2.3	3519
CAPACITOR, ASYMMETRIC, (with an energy storage capacity greater than 0.3Wh)	9	3508
CHLORINE, ADSORBED	2.3	3520
Chrysotile, see	9	2590
GERMANE, ADSORBED	2.3	3523
HYDROGEN SELENIDE, ADSORBED	2.3	3526

<i>Name and description</i>	<i>Class</i>	<i>UN No.</i>
Mercurous chloride, see	6.1	2025
PACKAGING DISCARDED, EMPTY, UNCLEANED	9	3509
PHOSPHINE, ADSORBED	2.3	3525
PHOSPHORUS PENTAFLUORIDE, ADSORBED	2.3	3524
SAFETY DEVICES, electrically initiated	9	3268
SAFETY DEVICES, PYROTECHNIC	1.4G	0503
SILICON TETRAFLUORIDE, ADSORBED	2.3	3521
URANIUM HEXAFLUORIDE, RADIOACTIVE MATERIAL, EXCEPTED PACKAGE, less than 0.1 kg per package, non- fissile or fissile-excepted	8	3507
Talcum with tremolite and/or actinolite, see	9	2212

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

4.1.1.5.2 Insert a new 4.1.1.5.2 to read as follows:

"4.1.1.5.2 Use of supplementary packagings within an outer packaging (e.g. an intermediate packaging or a receptacle inside a required inner packaging) additional to what is required by the packing instructions is authorized provided all relevant requirements are met, including those of 4.1.1.3, and, if appropriate, suitable cushioning is used to prevent movement within the packaging."

and the remaining paragraphs are renumbered accordingly.

4.1.4 List of packing instructions

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

P001 Insert a new last sentence in subparagraph (a) of PP1 as follows

"On roll-on/roll-off ships the unit loads may be carried in vehicles other than closed vehicles provided they are securely fenced to the full height of the cargo carried;"

P002 Add a new special packing provision **PP100** to read as follows:

"PP100 For UN 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."

P003 Add a new special packing provision PP91 to read as follows:

"PP91 For UN 1044, large fire extinguishers may also be transported unpackaged provided that the requirements of 4.1.3.8 .1 to (e) are met, the valves are protected by one of the methods in accordance with 4.1.6.1.8 (a) to (d) and other equipment mounted on the fire extinguisher is protected to prevent accidental activation. For the purpose of this special packing provision, "large fire extinguishers" means fire extinguishers as described in indents (c) to (e) of special provision 225 of Chapter 3.3."

and add the new special packing provision **PP100** to read as follows:

"PP100 For UN 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."

P114(a) Under Outer Packagings, Drums: Before "fibre (1G)" insert "plywood (1D)".

P116 In the column for "outer packagings", amend the first entry for "bags" to read: "woven plastics (5H1, 5H2, 5H3)". Amend special packing provision PP65 to read: "*Deleted*".

P131 and P137 In the entry for "boxes", in the column for "outer packagings" add: "plastics, solid (4H2)".

P404 (1) Amend to read as follows:

(1)	Combination packagings
	Outer packagings: (1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G, 4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G or 4H2)
	Inner packagings: Metal receptacles with a maximum net mass of 15 kg each. Inner packagings shall be hermetically sealed and have threaded closures; Glass receptacles, with a maximum net mass of 1 kg each, having threaded closures with gaskets, cushioned on all sides and contained in hermetically sealed metal cans.
	Outer packagings shall have a maximum net mass of 125 kg.

P410 In PP 31, insert the following UN Nos:

"1395, 1396 (PG II and PG III), 1398, 1402 (PG II), 1403, 1409 (PG II), 1418 (PG II and III), 1436, 3131 (PG II and III), 3132 (PG II and III), 3134 (PG II and III), 3135 (PG II and III), 3395 (PG II and III), 3396 (PG II and III) and 3397 (PG II and III)."

In PP40, Insert the following entries:

"1395, 1396 (PG III), 1398 and 1403"

and add the new special packing provision PP100 to read as follows:

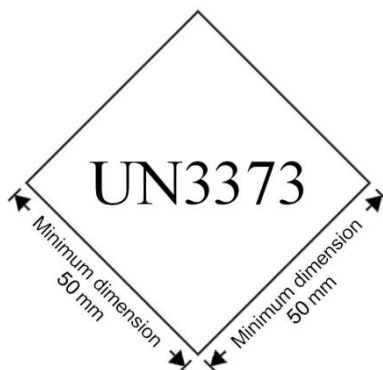
"PP100 For UN 2950 flexible, fibreboard or wooden packagings shall be sift-proof and water-resistant or shall be fitted with a sift-proof and water-resistant liner."

P501, P502 and P504 Amend the last entry under "Composite packaging" to read as follows:

"Glass receptacle in steel, aluminium, fibre or plywood drum (6PA1, 6PB1, 6PD1 or 6PG1) or in a steel, aluminium, wood or fibreboard box or in wickerwork hamper (6PA2, 6PB2, 6PC, 6PG2 or 6PD2) or in solid or expanded plastics packaging (6PH1 or 6PH2)."

P601 (2) and P602 (2) At the beginning, insert "or plastics" after "consisting of metal".

P650 Amend the diagram in paragraph (4) to read as follows:



"[NOTE: The mark shown in paragraph (4) of Packing Instruction P650 of the IMDG Code (amendment 36-12) may continue to be applied until 31 December 2016.]"

P802 (3) Amend to read as follows:

"(3) Composite packagings: Glass receptacle in steel, aluminium or plywood drum (6PA1, 6PB1 or 6PD1) or in a steel, aluminium or wood box or in wickerwork hamper (6PA2, 6PB2, 6PC or 6PD2) or in solid plastics packaging (6PH2); maximum capacity: 60 litres."

P901 After "(see 3.3.1, special provision 251)", insert the following new sentence: "Where the kit contains only dangerous goods to which no packing group is assigned, packagings shall meet Packing Group II performance level."

P903 In paragraph (2), replace subparagraphs (a) and (b) with the following subparagraphs (a) to (c):

- "(a) Strong outer packagings;
- (b) Protective enclosures (e.g. fully enclosed or wooden slatted crates); or
- (c) Pallets or other handling devices."

P904 Amend the diagram to read as follows:



"**[NOTE:** The mark shown in paragraph (2) of Packing Instruction P904 of the IMDG Code (amendment 36-12) may continue to be applied until 31 December 2016.]"

P906 (2) Amend to read as follows:

- "(2) For transformers and condensers and other devices:
 - (a) Packagings in accordance with packing instructions P001 or P002. The articles shall be secured with suitable cushioning material to prevent inadvertent movement during normal conditions of transport; or
 - (b) Leakproof packagings which are capable of containing, in addition to the devices, at least 1.25 times the volume of the liquid PCBs, polyhalogenated biphenyls or terphenyls present in them. There shall be sufficient absorbent material in the packagings to absorb at least 1.1 times the volume of liquid which is contained in the devices. In general, transformers and condensers shall be carried in leakproof metal packagings which are capable of holding, in addition to the transformers and condensers, at least 1.25 times the volume of the liquid present in them."

Insert the following new packing instructions:

P208	PACKING INSTRUCTION	P208
This instruction applies to Class 2 adsorbed gases.		
(1)	The following packagings are authorized provided the general packing requirements of 4.1.6.1 are met: Cylinders specified in Chapter 6.2 and in accordance with ISO 11513:2011 or ISO 9809-1:2010.	
(2)	The pressure of each filled cylinder shall be less than 101.3 kPa at 20°C and shall be less than 300 kPa at 50 °C.	
(3)	The minimum test pressure of the cylinder shall be 21 bar.	
(4)	The minimum burst pressure of the cylinder shall be 94.5 bar.	
(5)	The internal pressure at 65°C of the filled cylinder shall not exceed the test pressure of the cylinder.	
(6)	The adsorbent material shall be compatible with the cylinder and shall not form harmful or dangerous compounds with the gas to be adsorbed. The gas in combination with the adsorbent material shall not affect or weaken the cylinder or cause a dangerous reaction (e.g. a catalyzing reaction).	
(7)	The quality of the adsorbent shall be verified at the time of each fill to assure the pressure and chemical stability requirements of this packing instruction are met each time an adsorbed gas package is offered for transport.	
(8)	The adsorbent material shall not meet the criteria of any of the Classes or Divisions in this Code.	
(9)	Requirements for cylinders and closures containing toxic gases with an LC ₅₀ less than or equal to 200 ml/m ³ (ppm) (see Table 1) shall be as follows:	
	(a) Valve outlets shall be fitted with pressure retaining gas-tight plugs or caps having threads matching those of the valve outlets.	
	(b) Each valve shall either be of the packless type with non-perforated diaphragm, or be of a type which prevents leakage through or past the packing.	
	(c) Each cylinder and closure shall be tested for leakage after filling.	
	(d) Each valve shall be capable of withstanding the test pressure of the cylinder and be directly connected to the cylinder by either a taper-thread or other means which meets the requirements of ISO 10692-2:2001.	
	(e) Cylinders and valves shall not be fitted with a pressure relief device.	
(10)	Valve outlets for cylinders containing pyrophoric gases shall be fitted with gas-tight plugs or caps having threads matching those of the valve outlets.	
(11)	The filling procedure shall be in accordance with Annex A of ISO 11513:2011.	
(12)	The maximum period for periodic inspections shall be 5 years.	
(13)	Special packing provisions that are specific to a substance (see Table 1).	
	<i>Material compatibility</i>	
	a: Aluminum alloy cylinders shall not be used.	
	[b]: When steel cylinders are used, only those bearing the "H" mark in accordance with 6.2.2.7.4 (p) are permitted.	
	<i>Gas specific provisions</i>	
	r: The filling of this gas shall be limited such that, if complete decomposition occurs, the pressure does not exceed two thirds of the test pressure of the cylinder.	
	<i>Material Compatibility for N.O.S Adsorbed Gas Entries</i>	
	z: The construction materials of the cylinders and their accessories shall be compatible with the contents and shall not react to form harmful or dangerous compounds therewith.	

P208		PACKING INSTRUCTION			P208
Table 1: ADSORBED GASES					
UN No.	Name and description	Class or Division	Subsidiary risk	LC ₅₀ ml/m ³	Special packing provisions
(1)	(2)	(3)	(4)	(5)	(6)
3510	ADSORBED GAS, FLAMMABLE, N.O.S.	2.1			z
3511	ADSORBED GAS, N.O.S.	2.2			z
3512	ADSORBED GAS, TOXIC, N.O.S.	2.3		≤ 5000	z
3513	ADSORBED GAS, OXIDIZING, N.O.S.	2.2	5.1		z
3514	ADSORBED GAS, TOXIC, FLAMMABLE, N.O.S.	2.3	2.1	≤ 5000	z
3515	ADSORBED GAS, TOXIC, OXIDIZING, N.O.S.	2.3	5.1	≤ 5000	z
3516	ADSORBED GAS, TOXIC, CORROSIVE, N.O.S.	2.3	8	≤ 5000	z
3517	ADSORBED GAS, TOXIC, FLAMMABLE, CORROSIVE, N.O.S.	2.3	2.1 8	≤ 5000	z
3518	ADSORBED GAS, TOXIC, OXIDIZING, CORROSIVE, N.O.S.	2.3	5.1 8	≤ 5000	z
3519	BORON TRIFLUORIDE, ADSORBED	2.3	8	387	a
3520	CHLORINE, ADSORBED	2.3	5.1 8	293	a
3521	SILICON TETRAFLUORIDE, ADSORBED	2.3	8	450	a
3522	ARSINE, ADSORBED	2.3	2.1	20	d
3523	GERMANE, ADSORBED	2.3	2.1	620	d, r
3524	PHOSPHORUS PENTAFLUORIDE, ADSORBED	2.3	8	190	
3525	PHOSPHINE, ADSORBED	2.3	2.1	20	d
3526	HYDROGEN SELENIDE, ADSORBED	2.3	2.1	2	

P505 PACKING INSTRUCTION P505		
This instruction applies to UN No. 3375		
The following packagings are authorized, provided that the general provisions of 4.1.1 and 4.1.3 are met:		
Combination packagings:	Inner packaging maximum capacity	Outer packaging maximum net mass
Boxes (4B, 4C1, 4C2, 4D, 4G, 4H2) or drums (1B2, 1G, 1N2, 1H2, 1D) jerricans (3B2, 3H2) with glass, plastics or metal inner packagings	5 l	125 kg
Single packagings:	Maximum capacity	
Drums		
aluminium (1B1, 1B2), plastics (1H1, 1H2)	250 l 250 l	
Jerricans		
aluminium (3B1, 3B2), plastics (3H1, 3H2)	60 l 60 l	
Composite packagings		
plastics receptacle with outer aluminium drum (6HB1)	250 l	
plastics receptacle with outer fibre, plastics or plywood drum (6HG1, 6HH1, 6HD1)	250 l	
plastics receptacle with outer aluminium crate or box or plastics receptacle with outer wooden, plywood, fibreboard or solid plastics box (6HB2, 6HC, 6HD2, 6HG2 or 6HH2)	60 l	
glass receptacle with outer aluminium, fibre or plywood drum (6PB1, 6PG1, 6PD1) or with outer solid plastics or expanded plastics receptacles (6PH1 or 6PH2) or with outer aluminium crate or box or with outer wooden or fibreboard box or with outer wickerwork hamper (6PB2, 6PC, 6PG2 or 6PD2)	60 l	

P805 PACKING INSTRUCTION P805		
This instruction applies to UN 3507.		
The following packagings are authorized provided that the general provisions of 4.1.1 and 4.1.3 and the special packing provisions of 4.1.9.1.2, 4.1.9.1.4 and 4.1.9.1.7 are met:		
Packagings consisting of:		
(a) Metal or plastics primary receptacle(s); in (b) Leakproof rigid secondary packaging(s); in (c) A rigid outer packaging: Drums (1A2, 1B2, 1N2, 1H2, 1D, 1G); Boxes (4A, 4B, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2); Jerricans (3A2, 3B2, 3H2).		
Additional requirements:		
1. Primary inner receptacles shall be packed in secondary packagings in a way that, under normal conditions of transport, they cannot break, be punctured or leak their contents into the secondary packaging. Secondary packagings shall be secured in outer packagings with suitable cushioning material to prevent movement. If multiple primary receptacles are placed in a single secondary packaging, they shall be either individually wrapped or separated so as to prevent contact between them;		

P805	PACKING INSTRUCTION	P805
2.	The contents shall comply with the provisions of 2.7.2.4.5.2;	
3.	The provisions of 6.4.4 shall be met.	
Special packing provision:		
In the case of fissile-excepted material, limits specified in 2.7.2.3.5 and 6.4.11.2 shall be met.		

P908	PACKING INSTRUCTION	P908
This instruction applies to UN Nos. 3090, 3091, 3480 and 3481.		
<p>The following packagings are authorized for damaged or defective lithium ion cells and batteries and lithium metal cells and batteries including those contained in equipment, provided the general provisions of 4.1.1 and 4.1.3 are met:</p> <p>For cells and batteries and equipment containing cells and batteries:</p> <p style="padding-left: 40px;">Drums (1A2, 1B2, 1N2, 1H2, 1D, 1G)</p> <p style="padding-left: 40px;">Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2)</p> <p style="padding-left: 40px;">Jerricans (3A2, 3B2, 3H2)</p> <p>Packagings shall conform to the packing group II performance level.</p> <ol style="list-style-type: none"> Each cell or battery or equipment containing such cells or batteries shall be individually packed in inner packaging and placed inside of an outer packaging. The inner packaging or outer packaging shall be leak-proof to prevent the potential release of electrolyte. Each inner packaging shall be surrounded by sufficient non-combustible and non-conductive thermal insulation material to protect against a dangerous evolution of heat. Sealed packagings shall be fitted with a venting device when appropriate. Appropriate measures shall be taken to minimize the effects of vibrations and shocks, prevent movement of the cells or batteries within the package that may lead to further damage and a dangerous condition during transport. Cushioning material that is non-combustible and non-conductive may also be used to meet this requirement. Non combustibility shall be assessed according to a standard recognized in the country where the packaging is designed or manufactured. <p>For leaking cells or batteries, sufficient inert absorbent material shall be added to the inner or outer packaging to absorb any release of electrolyte.</p> <p>A cell or battery with a net mass of more than 30 kg shall be limited to one cell or battery per outer packaging.</p>		
Additional requirements:		
Cells or batteries shall be protected against short circuit.		

P909	PACKING INSTRUCTION	P909
This packing instruction applies to UN Nos. 3090, 3091, 3480 and 3481 transported for disposal or recycling, either packed together with or packed without non-lithium batteries:		
<p>(1) Cells and batteries shall be packed in accordance with the following:</p> <p>(a) The following packagings are authorized, provided that the general provisions of 4.1.1 and 4.1.3, are met: Drums (1A2, 1B2, 1N2, 1H2, 1D, 1G); Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H2); and Jerricans (3A2, 3B2, 3H2).</p> <p>(b) Packagings shall conform to the packing group II performance level.</p> <p>(c) Metal packagings shall be fitted with a non-conductive lining material (e.g., plastics) of adequate strength for the intended use.</p> <p>(2) However, lithium ion cells with a Watt-hour rating of not more than 20 Wh, lithium ion batteries with a Watt-hour rating of not more than 100 Wh, lithium metal cells with a lithium content of not more than 1 g and lithium metal batteries with an aggregate lithium content of not more than 2 g may be packed in accordance with the following:</p> <p>(a) In strong outer packaging up to 30 kg gross mass meeting the general provisions of 4.1.1, except 4.1.1.3, and 4.1.3.</p> <p>(b) Metal packagings shall be fitted with a non-conductive lining material (e.g., plastics) of adequate strength for the intended use.</p> <p>(3) For cells or batteries contained in equipment, strong outer packagings constructed of suitable material, and of adequate strength and design in relation to the packaging capacity and its intended use, may be used. Packagings need not meet the requirements of 4.1.1.3. Large equipment may be offered for transport unpackaged or on pallets when the cells or batteries are afforded equivalent protection by the equipment in which they are contained.</p> <p>(4) In addition, for cells or batteries with a gross mass of 12 kg or more employing a strong, impact resistant outer casing, strong outer packagings constructed of suitable material and of adequate strength and design in relation to the packagings capacity and its intended use, may be used. Packagings need not meet the requirements of 4.1.1.3.</p>		
<p>Additional requirements:</p> <p>1. Cells and batteries shall be designed or packed to prevent short circuits and the dangerous evolution of heat.</p> <p>2. Protection against short circuits and the dangerous evolution of heat 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.</p> <p>3. Cells and batteries shall be secured within the outer packaging to prevent excessive movement during transport (e.g. by using a non-combustible and non-conductive cushioning material or through the use of a tightly closed plastics bag).</p>		

4.1.4.2 Packing instructions concerning the use of IBCs

In IBC02, insert the following new special provision B16:

"B16 For UN 3375, IBCs of type 31A and 31N are not allowed without competent authority approval."

In IBC04, replace "and 21N" with ", 21N, 31A, 31B and 31N".

In IBC05 (1), replace "and 21N" with ", 21N, 31A, 31B and 31N".

In IBC05 (2), replace "and 21H2" with ", 21H2, 31H1 and 31H2".

In IBC05 (3), replace "and 21HZ1" with ", 21HZ1 and 31HZ1".

In IBC06 (1), IBC07 (1) and IBC08 (1), replace "and 21N" with ", 21N, 31A, 31B and 31N".

In IBC06 (2), IBC07 (2) and IBC08 (2), replace "and 21H2" with ", 21H2, 31H1 and 31H2".

In IBC06 (3), IBC07 (3) and IBC08 (3), replace "and 21HZ2" with "21HZ2 and 31HZ1".

IBC100, in the first line of packing instruction IBC100, insert "0222" after "0082". Insert the following special packing provisions:

"B2 For UN No. 0222 in IBCs other than metal or rigid plastics IBCs, the IBCs shall be transported in closed cargo transport units."

"B3 For UN No. 0222, flexible IBCs shall be sift-proof and water resistant or shall be fitted with a sift-proof and water resistant liner."

"B17 For UN No. 0222, metal IBCs are not authorized."

4.1.4.3 Special packing instructions concerning the use of large packagings

LP02 Insert a new special packing provision L3 to read as follows:

"L3 For UN 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."

and insert a new special packing provision L4 to read as follows:

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

Insert the following new packing instructions:

LP903	PACKING INSTRUCTION	LP903
This instruction applies to UN Nos. 3090, 3091, 3480 and 3481		
The following large packagings are authorized for a single battery, including for a battery contained in equipment, 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). The battery shall be packed so that the battery is protected against damage that may be caused by its movement or placement within the large packaging.		
Additional requirement: Batteries shall be protected against short circuit.		

LP904	PACKING INSTRUCTION	LP904
This instruction applies to UN Nos. 3090, 3091, 3480 and 3481		
<p>The following large packagings are authorized for a single damaged or defective battery and for a single damaged or defective battery contained in equipment, provided the general provisions of 4.1.1 and 4.1.3 are met</p> <p>For batteries and equipment containing batteries:</p> <ul style="list-style-type: none"> steel (50A) aluminium (50B) metal other than steel or aluminium (50N) rigid plastics (50H) plywood (50D) <p>Packagings shall conform to the packing group II performance level.</p> <ol style="list-style-type: none"> 1. Each battery or equipment containing such battery shall be individually packed in inner packaging and placed inside of an outer packaging. The inner packaging or outer packaging shall be leak-proof to prevent the potential release of electrolyte. 2. Each inner packaging shall be surrounded by sufficient non-combustible and non-conductive thermal insulation material to protect against a dangerous evolution of heat. 3. Sealed packagings shall be fitted with a venting device when appropriate. 4. Appropriate measures shall be taken to minimize the effects of vibrations and shocks, prevent movement of the battery within the package that may lead to further damage and a dangerous condition during transport. Cushioning material that is non-combustible and non-conductive may also be used to meet this requirement. 5. Non combustibility shall be assessed according to a standard recognized in the country where the packaging is designed or manufactured. <p>For leaking batteries, sufficient inert absorbent material shall be added to the inner or outer packaging to absorb any release of electrolyte.</p> <p>Additional requirements:</p> <p>Batteries shall be protected against short circuit.</p>		

4.1.6 Special packing provisions for goods of class 2

4.1.6.1 General provisions

4.1.6.1.2 Replace "ISO 11114-1:1997" with "ISO 11114-1:2012".

4.1.9 Special packing provisions for class 7

4.1.9.1 General

4.1.9 Amend the title to read "Special packing provisions for radioactive material"

4.1.9.1.3 Delete ", other than an excepted package,".

4.1.9.1.6 Amend the introductory sentence to read as follows:

"Before a packaging is first used to transport radioactive material, it shall be confirmed that it has been manufactured in conformity with the design specifications to ensure compliance with the relevant provisions of is Code and any applicable certificate of approval. The following requirements shall also be fulfilled, if applicable:".

In subparagraph .1, replace "package" with "packaging".

In subparagraph .2, amend the beginning of the sentence to read as follows:

"For each packaging intended for use as a Type B(U), Type B(M) or Type C package and for each packaging intended to contain fissile material ...".

In subparagraph.3, amend the text to read as follows:

".3 For each packaging intended to contain fissile material, it shall be ensured that the effectiveness of the criticality safety features is within the limits applicable to or specified for the design and in particular where, in order to comply with the requirements of 6.4.11.1 neutron poisons are specifically included, checks shall be performed to confirm the presence and distribution of those neutron poisons."

4.1.9.1.7 Insert a new paragraph to read as follows:

"4.1.9.1.7 Before each shipment of any package, it shall be ensured that the package contains neither:

- .1 Radionuclides different from those specified for the package design; nor
- .2 Contents in a form, or physical or chemical state different from those specified for the package design."

Current paragraphs 4.1.9.1.7 to 4.1.9.1.11 become new paragraphs 4.1.9.1.8 to 4.1.9.1.12.

4.1.9.1.8 (former 4.1.9.1.7) Amend to read as follows:

"4.1.9.1.8 Before each shipment of any package, it shall be ensured that all the requirements specified in the relevant provisions of this Code and in the applicable certificates of approval have been fulfilled. The following requirements shall also be fulfilled, if applicable:

- .1 It shall be ensured that lifting attachments which do not meet the requirements of 6.4.2.2 have been removed or otherwise rendered incapable of being used for lifting the package, in accordance with 6.4.2.3;
- .2 Each Type B(U), Type B(M) and Type C package shall be held until equilibrium conditions have been approached closely enough to demonstrate compliance with the requirements for temperature and pressure unless an exemption from these requirements has received unilateral approval;
- .3 For each Type B(U), Type B(M) and Type C package, it shall be ensured by inspection and/or appropriate tests that all closures, valves and other openings of the containment system through which the radioactive contents might escape are properly closed and, where appropriate, sealed in the manner for which the demonstrations of compliance with the requirements of 6.4.8.8 and 6.4.10.3 were made;

- .4 For packages containing fissile material the measurement specified in 6.4.11.5 (b) and the tests to demonstrate closure of each package as specified in 6.4.11.8 shall be performed."

4.1.9.2 Provisions and controls for transport of LSA material and SCO

4.1.9.2.2 Amend to read as follows:

"4.1.9.2.2 For LSA material and SCO which are or contain fissile material, which is not excepted under 2.7.2.3.5, the applicable requirements of [7.1.4.5.15 and 7.1.4.5.16] shall be met."

4.1.9.2.3 Insert a new paragraph 4.1.9.2.3 to read as follows:

"4.1.9.2.3 For LSA material and SCO which are or contain fissile material, the applicable requirements of 6.4.11.1 shall be met."

and Current paragraphs 4.1.9.2.3 and 4.1.9.2.4 become new paragraphs 4.1.9.2.4 and 4.1.9.2.5 respectively. Table 4.1.9.2.4 is renumbered as 4.1.9.2.5.

4.1.9.2.4 (former 4.1.9.2.3) In .2, delete "and" at the end.

Add a new subparagraph .4 to read as follows:

".4 Unpackaged fissile material shall meet the requirements of 2.7.2.3.5.5"

4.1.9.2.5 (former 4.1.9.2.4) Replace "4.1.9.2.3" with "4.1.9.2.4" and "Table 4.1.9.2.4" with "Table 4.1.9.2.5".

Table 4.1.9.2.5 In note "a" under the table replace "4.1.9.2.3" with "4.1.9.2.4".

4.1.9.3 Packages containing fissile material

4.1.9.3 Amend to read as follows:

"4.1.9.3 The contents of packages containing fissile material shall be as specified for the package design either directly in the provisions of this Code or in the certificate of approval."

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

4.2.5 Portable tank instructions and special provisions

4.2.5.2.6 Portable tank instructions

4.2.5.2.6 Amend the header to the tabulated portable tank instructions for T1 – T22 to read as follows:

"These portable tank instructions apply to liquid and solid substances of Class 1 and Classes 3 to 9. The general provisions of section 4.2.1 and the requirements of section 6.7.2 shall be met."

4.2.5.2.6 In tank instruction T23, at the end of footnote § add: "'CORROSIVE' subsidiary risk placard required (Model No 8, see 5.2.2.2.2)."

4.2.5.3 Portable tank special provisions

required (Model No 8, see 5.2.2.2.2)."

4.2.5.3 In special provision TP32, paragraph (b), at the beginning, insert "For UN 3375 only,".

4.2.5.3 Add the following new portable tank special provision:

"TP41 The 2.5 year internal examination may be waived or substituted by other test methods or inspection procedures specified by the competent authority or its authorized body, provided that the portable tank is dedicated to the transport of the organometallic substances to which this tank special provision is assigned. However this examination is required when the conditions of 6.7.2.19.7 are met."

PART 5 CONSIGNMENT PROCEDURES

Chapter 5.1 – General provisions

5.1.2 Use of overpacks and unit loads

5.1.2.1 Add the following new sentence and note at the end:

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

NOTE: The size requirement for the "OVERPACK" marking shall apply as from 1 January 2016."

5.1.3 Empty uncleaned packagings or units

5.1.3.2 Replace "Packagings, including IBCs, and tanks" with "Freight containers, tanks, IBCs, as well as other packagings and overpacks,".

5.1.5 General provisions for class 7

5.1.5.1 Approval of shipments and notification

5.1.5.1.1 General

5.1.5.1.1 In the first sentence replace "for package designs" with "of package designs".

5.1.5.1.2 Shipment approvals

5.1.5.1.2 In subparagraph (.4) replace "according to" with "in accordance with".

5.1.5.1.4 Notifications

5.1.5.1.4 In subparagraph (.3) replace "for shipment approval" with "for approval of shipment (see 6.4.23.2)".

5.1.5.2 Certificates issued by competent authority

5.1.5.2.1 In (.1), insert a new subparagraph (.3) to read as follows:

"(.3) fissile material excepted under 2.7.2.3.5 (.6);".

and consequently, current subparagraphs (.3) to (.6) are renumbered as (.4) to (.7).

5.1.5.2.1 In subparagraph .5 (former .4) delete "all" and "replace "6.4.11.2" with "2.7.2.3.5, 6.4.11.2 or 6.4.11.3".

5.1.5.2.1 Insert new (.4) and (.5) to read as follows:

.4 Determination of the basic radionuclide values referred to in 2.7.2.2.1 for individual radionuclides which are not listed in Table 2.7.2.2.1 (see 2.7.2.2.2 (.1));

.5 Alternative activity limits for an exempt consignment of instruments or articles (see 2.7.2.2.2 (.2));.

5.1.5.2.1 Amend the second paragraph after subparagraphs .1 to .5 to read as follows:

"The certificates of approval for the package design and the shipment may be combined into a single certificate."

5.1.5.2.3 In the first sentence, amend the beginning of the sentence to read:

"For package designs where it is not required that a competent authority issue a certificate of approval, the consignor ..."

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

5.1.5.3.4 In the first sentence, replace "and overpacks" with ", overpacks and freight containers".

In subparagraph .1, replace (twice) "or overpack" with ", overpack or freight container".

In subparagraph.5, insert "or freight container" after "overpack".

In the table in 5.1.5.3.4, replace "and overpacks" with ", overpacks and freight containers" and in note "b" to the table insert at end "except for freight containers (see Table [7.1.8.3.3])".

5.1.5.3.5 Replace "design or shipment approval" with "approval of design or shipment".

5.1.5.4 Specific provisions for excepted packages

5.1.5.4 Amend the title to read "Specific provisions for excepted packages of radioactive material of Class 7".

5.1.5.4.1 After "excepted packages", insert "of radioactive material of Class 7".

5.1.5.4.2 Amend to read as follows:

"5.1.5.4.2 The documentation requirements of Chapter 5.4 do not apply to excepted packages of radioactive material of Class 7, except that:

- .1 The UN number preceded by the letters "UN" and the name and address of the consignor and the consignee and, if relevant, the identification mark for each competent authority certificate of approval (see 5.4.1.5.7.1 7.) shall be shown on a transport document such as a bill of lading, air waybill or other similar document complying with the requirements of 5.4.1.2.1 to 5.4.1.2.4;
- .2 The requirements of 5.4.1.6.2 and, if relevant, those of 5.4.1.5.7.1 (.7), 5.4.1.5.7.3 and 5.4.1.5.7.4 shall apply;
- .3 The requirements of 5.4.2 and 5.4.4 shall apply."

5.1.5.4.3 Insert a new paragraph to read as follows:

"5.1.5.4.3 The requirements of 5.2.1.5.8 and 5.2.2.1.12.5 shall apply if relevant."

5.1.5.5 Specific provisions for the consignment of fissile material

Insert a new section 5.1.5.5 as follows:

"5.1.5.5 Specific provisions for the consignment of fissile material

Fissile material meeting one of the provisions of 2.7.2.3.5.1 to 2.7.2.3.5.6 shall meet the following requirements:

- .1 Only one of the provisions of 2.7.2.3.5.1 to 2.7.2.3.5.6 is allowed per consignment;
- .2 Only one approved fissile material in packages classified in accordance with 2.7.2.3.5.6 is allowed per consignment unless multiple materials are authorized in the certificate of approval;
- .3 Fissile material in packages classified in accordance with 2.7.2.3.5.3 shall be transported in a consignment with no more than 45 g of fissile nuclides;
- .4 Fissile material in packages classified in accordance with 2.7.2.3.5.4 shall be transported in a consignment with no more than 15 g of fissile nuclides;
- .5 Unpackaged or packaged fissile material classified in accordance with 2.7.2.3.5.5 shall be transported under exclusive use on a conveyance with no more than 45 g of fissile nuclides."

Chapter 5.2 – Marking and labelling of packages including IBCs

5.2.1 Marking of packages including IBCs

5.2.1.1 Amend the second sentence to read as follows:

"The UN number and the letters "UN" shall be at least 12 mm high, except for packages of 30 litres capacity or less or of 30 kg maximum net mass and for cylinders of 60 litres water capacity 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."

5.2.1.3 Add the following new sentence and note at the end:

"The lettering of the "SALVAGE" marking shall be at least 12 mm high.

NOTE: The size requirement for the "SALVAGE" marking shall apply as from 1 January 2016."

5.2.1.5 Special marking provisions for class 7

5.2.1.5 Replace "for Class 7" with "for radioactive material".

5.2.1.5.1 Insert the following sentence at the end:

"Each overpack shall be legibly and durably marked on the outside of the overpack with an identification of either the consignor or consignee, or both unless these markings of all packages within the overpack are clearly visible."

5.2.1.5.2 After "excepted packages" insert "of radioactive material of Class 7".

5.2.1.5.5 Amend the introductory sentence to read as follows:

"Each package which conforms to a design approved under one or more of paragraphs 5.1.5.2.1, 6.4.22.1 to 6.4.22.4, 6.4.23.4 to 6.4.23.7 and 6.4.24.2 shall be legibly and durably marked on the outside of the packaging with the following information:"

5.2.1.5.5 Amend .3 to read as follows:

".3 "Type B(U)", "Type B(M)" or "Type C", in the case of a Type B(U), Type B(M) or Type C package design"

5.2.1.5.5 Delete subparagraph 4.

5.2.1.5.7 Replace "4.1.9.2.3" with "4.1.9.2.4".

5.2.1.5.8 Replace "competent authority design or shipment approval" with "competent authority approval of design or shipment".

5.2.1.6 Special marking provisions for marine pollutants

5.2.1.6.1 Amend to read as follows:

"5.2.1.6.1 Unless otherwise specified in this Code, packages containing environmentally hazardous substances meeting the criteria of 2.9.3 (UN Nos. 3077 and 3082) shall be durably marked with the environmentally hazardous substance mark-marine pollutant mark.".]

5.2.1.6.3 Amend 5.2.1.6.3 and figure to read as follows:

"5.2.1.6.3 The marine pollutant mark shall be as shown in the figure below.



Marine Pollutant Mark

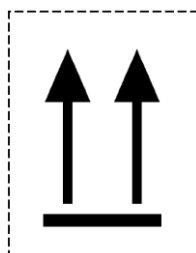
The marking shall be in the form of a square set at an angle of 45° (diamond-shaped). The symbol (fish and tree) shall be black on white or suitable contrasting background. The minimum dimensions shall be 100 mm x 100 mm and the minimum width of line forming the diamond shall be 2 mm. If the size of the package so requires, the dimensions/line thickness may be reduced, provided the marking remains clearly visible. Where dimensions are not specified, all features shall be in approximate proportion to those shown.

NOTE 1: The labelling provisions of 5.2.2 apply in addition to any requirement for packages to bear the marine pollutant mark.

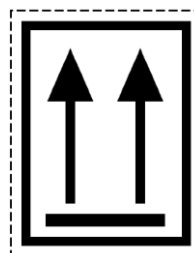
NOTE 2: The provisions of 5.2.1.6.3 of IMDG Code (Amendment 36-12) may continue to be applied until 31 December 2016."

5.2.1.7 Amend the figures and caption below to read as follows:

"



or



Two black or red arrows on white or suitable contrasting background.

The rectangular border is optional

All features shall be in approximate proportion to those shown."

5.2.2 Labelling of packages including IBCs

5.2.2.1 Labelling provisions

5.2.2.1.12 Special provisions for the labelling of radioactive material

5.2.2.1.12.1 Amend the first and second sentences to read as follows:

"Except when enlarged labels are used in accordance with 5.3.1.1.5.1, each package, overpack and freight container containing radioactive material shall bear the labels conforming to the applicable models Nos. 7A, 7B or 7C, according to the appropriate category. Labels shall be affixed to two opposite sides on the outside of the package or overpack or on the outside of all four sides of a freight container or tank."

5.2.2.1.12.1 In the fourth sentence amend "under 6.4.11.2" read "under the provisions of 2.7.2.3.5", replace "which conform to model" with "conforming to model"; replace the last phrase of the fourth sentence with the following:

"such labels, where applicable shall be affixed adjacent to the labels conforming to the applicable model Nos. 7A, 7B or 7C."

5.2.2.1.12.2 In the introductory sentence, replace "Nos. 7A, 7B and 7C" with "the applicable model No. 7A, 7B or 7C".

5.2.2.1.12.2 In (.2), amend the last sentence to read as follows:

"For fissile material, the total mass of fissile nuclides in units of grams (g), or multiples thereof, may be used in place of activity".

5.2.2.1.12.3 Amend to read as follows:

"5.2.2.1.12.3 Each label conforming to the model No. 7E shall be completed with the criticality safety index (CSI) as stated in the certificate of approval applicable in the countries through or into which the consignment is transported and issued by the competent authority or as specified in 6.4.11.2 or 6.4.11.3."

5.2.2.1.12.4 Amend to read as follows:

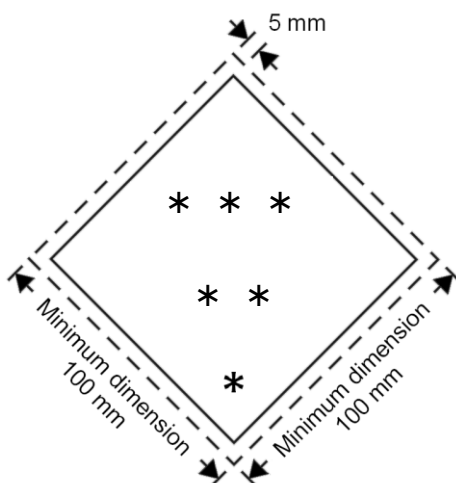
"5.2.2.1.12.4 For overpacks and freight containers, the label conforming to model No. 7E shall bear the sum of the criticality safety indexes of all the packages contained therein".

5.2.2.1.12.5 Replace "competent authority design or shipment approval" with "competent authority approval of design or shipment".

5.2.2.2 Provisions for labels

5.2.2.2.1.1 Amend to read as follows:

"5.2.2.2.1.1 Labels shall be configured as shown in the figure below:



Class/division label

- * The class or, for divisions 5.1 and 5.2, the Division number shall be shown in the bottom corner
- ** Additional text/numbers/letters shall (if mandatory) or may (if optional) be shown in this bottom half
- *** The class or division symbol or, for divisions 1.4, 1.5 and 1.6, the division number and for Model No 7E the word "FISSILE" shall be shown in this top half".

5.2.2.2.1.1.1 Labels shall be displayed on a background of contrasting colour, or shall have either a dotted or solid outer boundary line.

5.2.2.2.1.1.2 The label shall be in the form of a square set at an angle of 45° (diamond-shaped). The minimum dimensions shall be 100 mm x 100 mm and the minimum width of the line inside the edge forming the diamond shall be 2 mm. The line inside the edge shall be parallel and 5 mm from the outside of that line to the edge of the label. The line inside the edge on the upper half of the label shall be the same colour as the symbol and the line inside the edge on the lower half of the label shall be the same colour as the class or division number in the bottom corner. Where dimensions are not specified, all features shall be in approximate proportion to those shown.

5.2.2.2.1.1.3 If the size of the package so requires the dimensions may be reduced, provided the symbols and other elements of the label remain clearly visible. The line inside the edge shall remain 5 mm to the edge of the label. The minimum width of the line inside the edge shall remain 2 mm. Dimensions for cylinders shall comply with 5.2.2.2.1.2.

NOTE: The provisions of 5.2.2.2.1.1 of the IMDG Code (Amendment 36-12) may continue to be applied until 31 December 2016. When so applied, 5.2.2.2.1.1.1, 5.2.2.2.1.1.2 and 5.2.2.2.1.1.3 shall not apply until 31 December 2016."

5.2.2.2.2 Specimen Labels

5.2.2.2.2 Insert a new "note" under the heading" as follows:

["Note: Labels shall satisfy the provisions below and conform, in terms of colour, symbols and general format, to the models shown in 5.2.2.2. Corresponding models required for other modes of transport, with minor variations which do not affect the obvious meaning of the label, are also acceptable."]

The following symbols within the IMDG Code, should be replaced by those used by the UN Recommendations:

Class 2.1, Class 2.3, No. 3, No. 4, Class 4.3, Class 5.1, Class 5.2, Class 6 and Class 8.

Chapter 5.3 – Placarding and marking of cargo transport units

5.3.1 Placarding

5.3.1.1 Placarding provisions

5.3.1.1.4 *Placarding requirements*

5.3.1.1.4.1 Replace the existing subparagraph .1 with the following:

".1 a freight container, semi-trailer or portable tank: one on each side and one on each end of the unit. Portable tanks having a capacity of less than 3,000 litres may be placarded or, alternatively, may be labeled instead, on only two opposite sides."

5.3.1.1.5 *Special provisions for class 7*

5.3.1.1.5.1 Amend the last sentence to read as follows:

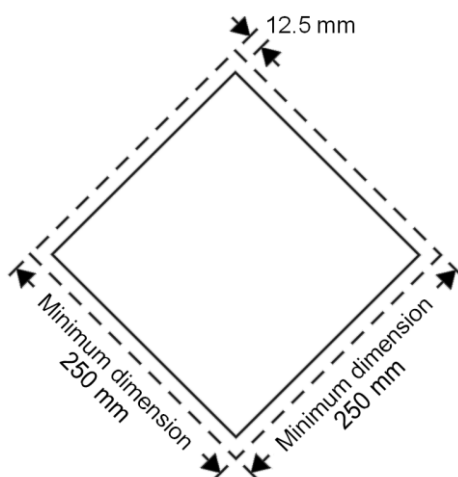
"Instead of using both labels and placards, it is permitted as an alternative to use enlarged labels only, as shown in label models Nos. 7A, 7B and 7C, except having the minimum size shown in Figure 5.3.1."

5.3.1.1.5.2 In the introductory sentence replace "No." with "Nos.", "or 7E" with "and 7E" and "(Model 7D)" with "(model No.7D)".

5.3.1.2 Specifications for placards

5.3.1.2.1 Amend to read as follows:

"5.3.1.2.1 Except as provided in 5.3.1.2.2 for the Class 7 placard, and in 5.3.2.3.2 for the marine pollutant mark, a placard shall be configured as shown in the figure below.



Placard (except for class 7)

The placard shall be in the form of a square set at an angle of 45° (diamond-shaped). The minimum dimensions shall be 250 mm x 250 mm (to the edge of the placard). The line inside the edge shall be parallel and 12.5 mm from the outside of that line to the edge of the placard. The symbol and line inside the edge shall correspond in colour to the label for the class or division of the dangerous goods in question. The class or division symbol/numeral shall be positioned and sized in proportion to those prescribed in 5.2.2.2 for the corresponding class or division of the dangerous goods in question. The placard shall display the number of the class or division (and for goods in Class 1, the compatibility group letter) of the dangerous goods in question in the manner prescribed in 5.2.2.2 for the corresponding label, in digits not less than 25 mm high. Where dimensions are not specified, all features shall be in approximate proportion to those shown.

NOTE: The provisions of 5.3.1.2.1 from the IMDG Code (amendment 36-12) may continue to be applied until 31 December 2016."

5.3.2 Marking of cargo transport units

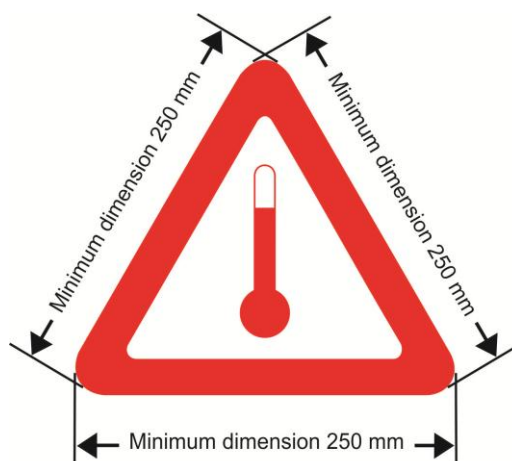
5.3.2.0.2 Insert a new second new sentence as follows:

"This may be reduced to 12 mm for portable tank containers with a capacity of less than 3,000 litres."

5.3.2.2 Elevated temperature substances

5.3.2.2.1 Amend to read as follows:

"5.3.2.2.1 Cargo transport units containing a substance that is transported or offered for transport in a liquid state at a temperature equal to or exceeding 100°C, in a solid state at a temperature equal to or exceeding 240°C shall bear on each side and on each end the mark shown in the figure below.



Mark for transport at elevated temperature

The marking shall be an equilateral triangle. The colour of the mark shall be red. The minimum dimension of the sides shall be 250 mm except for portable tanks with a capacity of less than 3,000 litres where the sides may be reduced to 100 mm. Where dimensions are not specified, all features shall be in approximate proportion to those shown.

NOTE: The provisions of 5.3.2.2 of the IMDG Code (Amendment 36-12) may continue to be applied until 31 December 2016."

5.3.2.3 Marine pollutant mark

5.3.2.3 In the existing text delete the last sentence "The mark shall conform to the specifications given in 5.2.1.6.3, and shall have minimum dimensions of 250 mm x 250 mm" and renumber the paragraph as "5.3.2.3.1".

5.3.2.3.2 Add a new paragraph 5.3.2.3.2 as follows:

"5.3.2.3.2 The marine pollutant mark for cargo transport units shall be as described in 5.2.1.6.3, except that the minimum dimensions shall be 250 mm x 250 mm. For portable tanks with a capacity of less than 3,000 litres, the dimensions may be reduced to 100 mm x 100 mm."

Chapter 5.4 – Documentation

5.4.1 Dangerous goods transport information

5.4.1.5 Information required in addition to the dangerous goods description

5.4.1.5.7 *Radioactive material*

5.4.1.5.7.1 Amend subparagraph .6 to read as follows:

".6 For fissile material:

- (i) Shipped under one exception of 2.7.2.3.5.1 to 2.7.2.3.5.6, reference to that paragraph;

- (ii) Shipped under 2.7.2.3.5.1 to 2.7.2.3.5.5, the total mass of fissile nuclides;
- (iii) Contained in a package for which one of 6.4.11.2 (a) to (c) or 6.4.11.3 is applied, reference to that paragraph;
- (iv) The criticality safety index, where applicable."

5.4.1.5.7.1 In subparagraph .7, replace "competent authority approval certificate" with "competent authority certificate of approval" and insert "fissile material excepted under 2.7.2.3.5.6," before "special arrangement".

5.4.1.5.7.3 Replace "competent authorities design or shipment approval" with "competent authority approval of design or shipment".

5.4.1.6 Certification

5.4.1.6.1 In the text of the certification, after "above", insert "/ below*".

and insert the following footnote:

** as appropriate".

5.4.2 Container/vehicle packing certificate

5.4.2.1.8 Amend to read as follows:

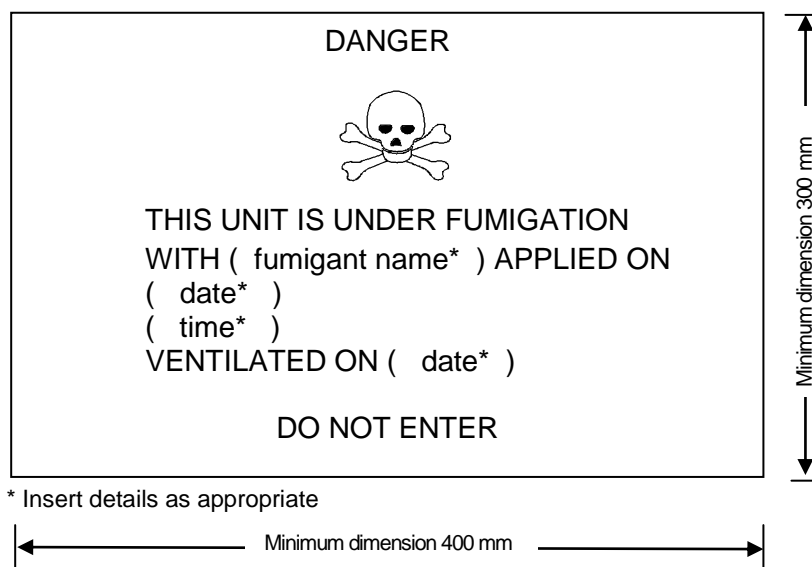
".8 When substances presenting a risk of asphyxiation are used for cooling or conditioning purposes (such as dry ice (UN 1845) or nitrogen, refrigerated liquid (UN 1977) or argon, refrigerated liquid (UN 1951)), the container/vehicle is externally marked in accordance with 5.5.3.6; and".

Chapter 5.5 – Special provisions

5.5.2.3 Marking and placarding

Amend 5.5.2.3.2 as follows:

"5.5.2.3.2 The fumigation warning mark shall be as shown in the figure below.



Fumigation warning mark

The marking shall be a rectangle. The minimum dimensions shall be 400 mm wide x 300 mm high and the minimum width of the outer line shall be 2 mm. The marking shall be in black print on a white background with lettering not less than 25 mm high. Where dimensions are not specified, all features shall be in approximate proportion to those shown.

NOTE: The provisions of 5.5.2.3.2 of the IMDG Code (Amendment 36-12) may continue to be applied until 31 December 2016."

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))

5.5.3.1 Scope

5.5.3 Add a new subparagraph 5.5.3.1.4 to read as follows:

"5.5.3.1.4 Cargo transport units containing substances used for cooling or conditioning purposes include cargo transport units containing substances used for cooling or conditioning purposes inside packages as well as cargo transport units with unpackaged substances used for cooling or conditioning purposes."

5.5.3.2 General

5.5.3.2.2 Amend the first sentence as follows:

"5.5.3.2.2 When dangerous goods are loaded in cargo transport units containing substances used for cooling or conditioning purposes any provisions of these Regulations relevant to these dangerous goods apply in addition to the provisions of this section."

5.5.3.2.4 Amend to read as follows:

"5.5.3.2.4 Persons engaged in the handling or transport of cargo transport units containing substances used for cooling or conditioning purposes shall be trained commensurate with their responsibilities."

5.5.3.6 Marking of cargo transport units

5.5.3.6.1 Add "purposes" after "cooling or conditioning" in the first sentence.

5.5.3.6.2 Amend paragraph to read as follows:

"5.5.3.6.2 The warning mark shall be as shown in the figure below



Coolant/conditioning warning mark for cargo transport units

- * Insert proper shipping name of the coolant/conditioner. The lettering shall be in capitals, all be on one line and shall be at least 25 mm high. If the length of the proper shipping name is too long to fit in the space provided, the lettering may be reduced to the maximum size possible to fit. For example: CARBON DIOXIDE, SOLID.
- ** Insert "AS COOLANT" or "AS CONDITIONER" as appropriate. The lettering shall be in capitals, all be on one line and be at least 25 mm high.

The marking shall be a rectangle. The minimum dimensions shall be 150 mm wide x 250 mm high. The word "WARNING" shall be in red or white and be at least 25 mm high. Where dimensions are not specified, all features shall be in approximate proportion to those shown.

NOTE: The provisions of 5.5.3.6.2 of the IMDG Code (Amendment 36-12) may continue to be applied until 31 December 2016."

5.5.3.7 Documentation

5.5.3.7.1 Replace "that have been cooled or conditioned" with "containing or have contained substances used for cooling or conditioning purposes".

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

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

6.1.1 Applicability and general provisions

6.1.1.1 Applicability

6.1.1.1.4 Amend to read "Packagings for liquids, other than combination packagings, with capacity exceeding 450 L".

6.1.3 Marking

6.1.3.1(e) Insert a reference to note * at the centre of the symbol and add the following note under the symbol:

"* The last two digits of the year of manufacture may be displayed at that place. In such a case, the two digits of the year in the type approval marking and in the inner circle of the clock shall be identical."

and insert a new Note at the end to read as follows:

"**NOTE:** Other methods that provide the minimum required information in a durable, visible and legible form are also acceptable."

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

6.2.1 General provisions

6.2.1.1 Design and construction

6.2.1.1.5 Add the following new last sentence:

"The test pressure of a cylinder for an adsorbed gas shall be in accordance with packing instruction P208."

6.2.2 Provisions for UN pressure receptacles

6.2.2 Add the following new second sentence:

"Manufacture of new pressure receptacles or service equipment according to any particular standard in 6.2.2.1 and 6.2.2.3 is not permitted after the date shown in the right hand column of the tables."

Renumber the existing NOTE as "NOTE 1".

Add the following new note:

"NOTE 2: UN pressure receptacles and service equipment constructed according to standards applicable at the date of manufacture may continue in use subject to the periodic inspection provisions of this Code."

6.2.2.1 Design, construction and initial inspection and test

6.2.2.1.1 In the table, add a new third column. Add a new first row with the following text:

Reference	Title	Applicable for manufacture
-----------	-------	----------------------------

For ISO Standards "ISO 9809-1:1999", "ISO 9809-2:2000" and "ISO 9809-3:2000", in the third column, add "Until 31 December 2018".

After ISO Standard "ISO 9809-1:1999" add the following new standard:

ISO 9809-1:2010	Gas cylinders -- Refillable seamless steel gas cylinders -- Design, construction and testing -- Part 1: Quenched and tempered steel cylinders with tensile strength less than 1 100 MPa	Until further notice
-----------------	---	----------------------

After ISO Standard "ISO 9809-2:2000" add the following new standard:

ISO 9809-2:2010	Gas cylinders – Refillable seamless steel gas cylinders – Design, construction and testing – Part 2: Quenched and tempered steel cylinders with tensile strength greater than or equal to 1 100 MPa	Until further notice
-----------------	---	----------------------

After ISO Standard "ISO 9809-3:2000" add the following new standard:

ISO 9809-3:2010	Gas cylinders -- Refillable seamless steel gas cylinders -- Design, construction and testing -- Part 3: Normalized steel cylinders	Until further notice
-----------------	--	----------------------

For all the other standards, in the column "Applicable for manufacture", add "Until further notice".

6.2.2.1.2 In the table, add a new third column. Add a new first row with the following text:

Reference	Title	Applicable for manufacture
-----------	-------	----------------------------

For ISO Standard "ISO 11120:1999", in the column "Applicable for manufacture", add "Until further notice".

6.2.2.1.3 Amend the first table to read as follows:

Reference	Title	Applicable for manufacture
ISO 9809-1:1999	Gas cylinders – Refillable seamless steel gas cylinders – Design, construction and testing – Part 1: Quenched and tempered steel cylinders with tensile strength less than 1 100 MPa NOTE: The note concerning the F factor in section 7.3 of this standard shall not be applied for UN cylinders.	Until 31 December 2018
ISO 9809-1:2010	Gas cylinders – Refillable seamless steel gas cylinders – Design, construction and testing – Part 1: Quenched and tempered steel cylinders with tensile strength less than 1 100 MPa	Until further notice
ISO 9809-3:2000	Gas cylinders – Refillable seamless steel gas cylinders – Design, construction and testing – Part 3: Normalized steel cylinders	Until 31 December 2018
ISO 9809-3:2010	Gas cylinders – Refillable seamless steel gas cylinders – Design, construction and testing – Part 3: Normalized steel cylinders	Until further notice

6.2.2.1.3 (second table), 6.2.2.1.4 and 6.2.2.1.5 In the tables, add a new third column. Add a new first row with the following text:

Reference	Title	Applicable for manufacture
-----------	-------	----------------------------

For all the standards, in the column "Applicable for manufacture", add "Until further notice".

6.2.2.1.6 After 6.2.2.1.5 insert the following new paragraphs:

"6.2.2.1.6 The standard shown below applies for the design, construction and initial inspection and test of UN bundles of cylinders. Each cylinder in a UN bundle of cylinders shall be a UN cylinder complying with the requirements of 6.2.2. The inspection requirements related to the conformity assessment system and approval for UN bundles of cylinders shall be in accordance with 6.2.2.5.

Reference	Title	Applicable for manufacture
ISO 10961:2010	Gas cylinders – Cylinder bundles – Design, manufacture, testing and inspection	Until further notice

NOTE: Changing one or more cylinders of the same design type, including the same test pressure, in an existing UN bundle of cylinders does not require re-certification of the existing bundle."

"6.2.2.1.7 The following standards apply for the design, construction and initial inspection and test of UN cylinders for adsorbed gases except that the inspection requirements related to the conformity assessment system and approval shall be in accordance with 6.2.2.5.

Reference	Title	Applicable for manufacture
ISO 11513:2011	Gas cylinders – Refillable welded steel cylinders containing materials for sub-atmospheric gas packaging (excluding acetylene) – Design, construction, testing, use and periodic inspection	Until further notice
ISO 9809-1:2010	Gas cylinders – Refillable seamless steel gas cylinders – Design, construction and testing – Part 1: Quenched and tempered steel cylinders with tensile strength less than 1 100 MPa	Until further notice

".

6.2.2.2 Materials

6.2.2.2 Replace "ISO 11114-1:1997" with "ISO 11114-1:2012". In the title for standard "ISO 11114-1:2012", delete "Transportable". Delete the note at the end.

6.2.2.3 Service equipment

6.2.2.3 Amend the first table to read as follows:

Reference	Title	Applicable for manufacture
ISO 11117:1998	Gas cylinders – Valve protection caps and valve guards for industrial and medical gas cylinders – Design, construction and tests	Until 31 December 2014
ISO 11117:2008 + Cor 1:2009	Gas cylinders – Valve protection caps and valve guards – Design, construction and tests	Until further notice
ISO 10297:1999	Gas cylinders – Refillable gas cylinder valves – Specification and type testing	Until 31 December 2008
ISO 10297:2006	Gas cylinders – Refillable gas cylinder valves – Specification and type testing	Until further notice
ISO 13340:2001	Transportable gas cylinders – Cylinders valves for non-refillable cylinders – Specification and prototype testing	Until further notice

6.2.2.3 In the second table, add a new third column. Add a new first row with the following text:

Reference	Title	Applicable for manufacture
-----------	-------	----------------------------

For ISO Standard "ISO 16111:2008", in the column "Applicable for manufacture", add "Until further notice".

6.2.2.4 In the table, add a new third column. Add a new first row with the following text:

Reference	Title	Applicable
-----------	-------	------------

For all standards, in the column "Applicable", add "Until further notice".

6.2.2.4 Periodic inspection and test

6.2.2.4 In the table of standards for periodic inspection and test, after the entry for "ISO 10462:2005" add the following new entry:

ISO 11513:2011	Gas cylinders – Refillable welded steel cylinders containing materials for sub-atmospheric gas packaging (excluding acetylene) – Design, construction, testing, use and periodic inspection	Until further notice
-------------------	---	----------------------

6.2.2.7 Marking of refillable UN pressure receptacles

6.2.2.7 Amend the note to read as follows:

"NOTE: Marking requirements for UN metal hydride storage systems are given in 6.2.2.9 and marking requirements for UN bundles of cylinders are given in 6.2.2.10."

6.2.2.7.4 In subparagraph (p) replace "ISO 11114-1:1997" with "ISO 11114-1:2012".

6.2.2.7 is deleted.

6.2.2.9 Marking of UN metal hydride storage systems

6.2.2.9.2 In subparagraph (j) replace "ISO 11114-1:1997" with "ISO 11114-1:2012".

6.2.2.10 Marking of bundles of cylinders

Add the following new section:

"6.2.2.10 Marking of bundles of cylinders

6.2.2.10.1 Individual cylinders in a bundle of cylinders shall be marked in accordance with 6.2.2.7.

6.2.2.10.2 Refillable UN bundles of cylinders shall be marked clearly and legibly with certification, operational, and manufacturing marks. These marks shall be permanently affixed (e.g. stamped, engraved, or etched) on a plate permanently attached to the frame of the bundle of cylinders. Except for the UN packaging symbol, the minimum size of the marks shall be 5 mm. The minimum size of the UN packaging symbol shall be 10 mm.

6.2.2.10.3 The following marks shall be applied:

- (a) The certification marks specified in 6.2.2.7.2 (a), (b), (c), (d) and (e);
- (b) The operational marks specified in 6.2.2.7.3 (f), (i), (j) and the total of the mass of the frame of the bundle and all permanently attached parts (cylinders, manifold, fittings and valves). Bundles intended for the carriage of UN 1001 acetylene, dissolved and UN 3374 acetylene, solvent free shall bear the tare mass as specified in clause B.4.2 of ISO 10961:2010; and

- (c) The manufacturing marks specified in 6.2.2.7.4 (n), (o) and, where applicable, (p).

6.2.2.10.4 The marks shall be placed in three groups:

- (a) The manufacturing marks shall be the top grouping and shall appear consecutively in the sequence given in 6.2.2.10.3 (c);
- (b) The operational marks in 6.2.2.10.3 (b) shall be the middle grouping and the operational mark specified in 6.2.2.7.3 (f) shall be immediately preceded by the operational mark specified in 6.2.2.7.3 (i) when the latter is required;
- (c) Certification marks shall be the bottom grouping and shall appear in the sequence given in 6.2.2.10.3 (a)."

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

6.2.4 In the heading, delete the word "flammable". Insert the following text after the heading:

"Each filled aerosol dispenser or gas cartridge or fuel cell cartridge shall be subjected to a test in a hot water bath in accordance with 6.2.4.1 or an approved water bath alternative in accordance with 6.2.4.2."

6.2.4.1 Small receptacles containing gas (gas cartridges) and fuel cell cartridges containing liquefied flammable gas

Delete 6.2.4.1, 6.2.4.1.1 and 6.2.4.1.2, heading 6.2.4.2 and the text under this heading.

Renumber heading 6.2.4.2.1 as 6.2.4.1.

6.2.4.2 Aerosol dispensers

6.2.4.2.1 *Hot water bath test*

6.2.4.2.1.1 Renumber as 6.2.4.1.1. In the first sentence, after "capacity of the aerosol dispenser" insert ", gas cartridge or fuel cell cartridge". In the second sentence, after "to heat or if aerosol dispensers" insert "gas cartridges or fuel cell cartridges" and after "one aerosol dispenser," insert "gas cartridge or fuel cell cartridge".

6.2.4.2.1.2 Renumber as 6.2.4.1.2. After the first "aerosol dispenser" insert ", receptacle or fuel cell cartridge". After the second "aerosol dispenser" insert ", gas cartridge or fuel cell cartridge".

Renumber heading 6.2.4.2.2 as 6.2.4.2 and, in the text under this heading, replace "of 6.2.4.2.2.1, 6.2.4.2.2.2 and 6.2.4.2.2.3" by "of 6.2.4.2.1 and, as appropriate, 6.2.4.2.2 or 6.2.4.2.3".

6.2.4.2.2 *Alternative methods*

6.2.4.2.2.1 Renumber as 6.2.4.2.1. In the first sentence, after "Aerosol dispenser" insert ", gas cartridge or fuel cell cartridge". In the second sentence, after "that all aerosol dispensers" insert ", gas cartridges or fuel cell cartridges" In indent (f) insert the following text at the end ", gas cartridges or fuel cell cartridges".

Before 6.2.4.2.2.2, insert the following text "6.2.4.2.2Aerosol dispensers".

6.2.4.2.2.2 *Pressure and leak testing of aerosol dispensers before filling*

6.2.4.2.2.2 Renumber as 6.2.4.2.2.1. Replace "Every" with "Each" at the beginning of the first sentence.

6.2.4.2.2.3 *Testing of the aerosol dispensers after filling*

6.2.4.2.2.3 Renumber as 6.2.4.2.2.2.

Add a new 6.2.4.2.3 to read as follows:

"6.2.4.2.3 Gas cartridges and fuel cell cartridges

6.2.4.2.3.1 Pressure testing of gas cartridges and fuel cell cartridges

Each gas cartridge or fuel cell cartridge shall be subjected to a test pressure equal to or in excess of the maximum expected in the filled receptacle at 55°C (50°C if the liquid phase does not exceed 95% of the capacity of the receptacle at 50°C). This test pressure shall be that specified for the gas cartridge or fuel cell cartridge and shall not be less than two thirds the design pressure of the gas cartridge or fuel cell cartridge. If any gas cartridge or fuel cell cartridge shows evidence of leakage at a rate equal to or greater than 3.3×10^{-2} mbar.l.s⁻¹ at the test pressure or distortion or any other defect, it shall be rejected.

6.2.4.2.3.2 Leak testing gas cartridges and fuel cell cartridges

Prior to filling and sealing, the filler shall ensure that the closures (if any), and the associated sealing equipment are closed appropriately and the specified gas is used.

Each filled gas cartridge or fuel cell cartridge shall be checked for the correct mass of gas and shall be leak tested. The leak detection equipment shall be sufficiently sensitive to detect at least a leak rate of 2.0×10^{-3} mbar.l.s⁻¹ at 20°C.

Any gas cartridge or fuel cell cartridge that has gas masses not in conformity with the declared mass limits or shows evidence of leakage or deformation, shall be rejected."

Chapter 6.4 – Provisions for the construction, testing and approval of packages and material of class 7

In the title, replace "class 7" with "radioactive material".

6.4.2 General provisions

6.4.2.11 Insert a new paragraph 6.4.2.11 to read as follows:

"6.4.2.11 A package shall be so designed that it provides sufficient shielding to ensure that, under routine conditions of transport and with the maximum radioactive contents that the package is designed to contain, the radiation level at any point on the external surface of the package would not exceed the values

specified in 2.7.2.4.1.2, 4.1.9.1.10 and 4.1.9.1.11, as applicable, with account taken of [7.1.4.5.4 and 7.1.5.8.4.5.3.2 and 7.2.3.1.2]."

Current paragraphs 6.4.2.11 and 6.4.2.12 become 6.4.2.12 and 6.4.2.13 respectively.

6.4.3 Additional provisions for packages transported by air

6.4.3.3 Replace "leakage" with "loss or dispersal of radioactive contents from the containment system,".

6.4.6 Provisions for packages containing uranium hexafluoride

6.4.6.1 Amend the first sentence to read as follows:

"Packages designed to contain uranium hexafluoride shall meet the requirements which pertain to the radioactive and fissile properties of the material prescribed elsewhere in this Code."

6.4.6.2 In subparagraphs .1 and .3, insert at the end: "except as allowed in 6.4.6.4".

6.4.6.4 In the introductory sentence replace "the approval of the competent authority" with "multilateral approval" and insert "the packages are designed:" at the end, after "if".

and in subparagraphs (a) and (b) delete "the packages are designed" and replace "and" with "and/or" at the end. In subparagraph (c), delete "for packaged designed" and replace "hexafluoride, the packages" with "hexafluoride and the packages".

6.4.8 Provisions for Type B(U) packages

6.4.8.1 Amend to read as follows:

"6.4.8.1 Type B(U) packages shall be designed to meet the requirements specified in 6.4.2, the requirements specified in 6.4.3 if carried by air, and of 6.4.7.2 to 6.4.7.15, except as specified in 6.4.7.14 (a), and, in addition, the requirements specified in 6.4.8.2 to 6.4.8.15."

6.4.8.2 Amend the end of the introductory paragraph to read: "...which may cause one or more of the following:". And in (a) and (b), delete "or" at the end.

6.4.8.8 In subparagraph (b), replace "and the tests in" with "and either the test in."

6.4.9 Provisions for Type B(M) packages

6.4.9.1 In the first sentence, replace "6.4.8.4, 6.4.8.5 and 6.4.8.6," with "6.4.8.4 to 6.4.8.6". And in the second sentence, insert "6.4.8.4 and" after "packages specified in".

6.4.10 Provisions for Type C packages

6.4.10.3 Amend to read as follows:

"6.4.10.3 A package shall be so designed that, if it were at the maximum normal operating pressure and subjected to:

- (a) The tests specified in 6.4.15, it would restrict the loss of radioactive contents to not more than 10^{-6} A₂ per hour; and
- (b) The test sequences in 6.4.20.1,
 - (i) it would retain sufficient shielding to ensure that the radiation level at 1 m from the surface of the package would not exceed 10 mSv/h with the maximum radioactive contents which the package is designed to contain; and
 - (ii) it would restrict the accumulated loss of radioactive contents in a period of 1 week to not more than 10 A₂ for krypton-85 and not more than A₂ for all other radionuclides."

The text of last paragraph remains unchanged.

6.4.11 Provisions for packages containing fissile material

6.4.11.1 In (a), insert "routine," before "normal".

6.4.11.1 Amend (b)(i) to read as follows: "of 6.4.7.2 except for unpackaged material when specifically allowed by 2.7.2.3.5.5;"

6.4.11.1 In (b)(ii) delete "and" at the end.

6.4.11.1 Amend (b)(iii) to read as follows: "of 6.4.7.3 unless the material is excepted by 2.7.2.3.5;"

6.4.11.1 Insert a new (b) (iv) to read as follows:

"(iv) of 6.4.11.4 to 6.4.11.14, unless the material is excepted by 2.7.2.3.5, 6.4.11.2 or 6.4.11.3."

6.4.11.2 Amend to read as follows:

"6.4.11.2 Packages containing fissile material that meet the provisions of subparagraph (d) and one of the provisions of (a) to (c) below are excepted from the requirements of 6.4.11.4 to 6.4.11.14.

- (a) Packages containing fissile material in any form provided that:
 - (i) The smallest external dimension of the package is not less than 10 cm;
 - (ii) The criticality safety index of the package is calculated using the following formula:

$$CSI = 50 \times 5 \times \left(\frac{\text{Mass of U - 235 in package (g)}}{Z} + \frac{\text{Mass of other fissile nuclides * in package (g)}}{280} \right)$$

* Plutonium may be of any isotopic composition provided that the amount of Pu-241 is less than that of Pu-240 in the package

where the values of Z are taken from Table 6.4.11.2.

- (iii) The CSI of any package does not exceed 10;
- (b) Packages containing fissile material in any form provided that:
 - (i) The smallest external dimension of the package is not less than 30 cm;
 - (ii) The package, after being subjected to the tests specified in 6.4.15.1 to 6.4.15.6;
 - Retains its fissile material contents;
 - Preserves the minimum overall outside dimensions of the package to at least 30 cm;
 - Prevents the entry of a 10 cm cube.
 - (iii) The criticality safety index of the package is calculated using the following formula:

$$CSI = 50 \times 2 \times \left(\frac{\text{Mass of U - 235 in package (g)}}{Z} + \frac{\text{Mass of other fissile nuclides * in package (g)}}{280} \right)$$

* Plutonium may be of any isotopic composition provided that the amount of Pu-241 is less than that of Pu-240 in the package.

where the values of Z are taken from Table 6.4.11.2.

- (iv) The criticality safety index of any package does not exceed 10;
- (c) Packages containing fissile material in any form provided that:
 - (i) The smallest external dimension of the package is not less than 10 cm;
 - (ii) The package, after being subjected to the tests specified in 6.4.15.1 to 6.4.15.6;
 - Retains its fissile material contents;
 - Preserves the minimum overall outside dimensions of the package to at least 10 cm;
 - Prevents the entry of a 10 cm cube.
 - (iii) The CSI of the package is calculated using the following formula:

$$CSI = 50 \times 2 \times \left(\frac{\text{Mass of U - 235 in package (g)}}{450} + \frac{\text{Mass of other fissile nuclides * in package (g)}}{280} \right)$$

* Plutonium may be of any isotopic composition provided that the amount of Pu-241 is less than that of Pu-240 in the package.

- (iv) The maximum mass of fissile nuclides in any package does not exceed 15 g;
- (d) The total mass of beryllium, hydrogenous material enriched in deuterium, graphite and other allotropic forms of carbon in an individual package shall not be greater than the mass of fissile nuclides in the package except where their total concentration does not exceed 1 g in any 1,000 g of material. Beryllium incorporated in copper alloys up to 4% in weight of the alloy does not need to be considered."

Table 6.4.11.2 Insert a new table 6.4.11.2 to read as follows:

"Table 6.4.11.2 Values of Z for calculation of criticality safety index in accordance with 6.4.11.2

<i>Enrichement^a</i>	<i>Z</i>
Uranium enriched up to 1.5%	2200
Uranium enriched up to 5 %	850
Uranium enriched up to 10 %	660
Uranium enriched up to 20 %	580
Uranium enriched up to 100 %	450

^a *If a package contains uranium with varying enrichments of U-235, then the value corresponding to the highest enrichment shall be used for Z.*

"

6.4.11.3 Insert a new paragraph 6.4.11.3 to read as follows:

"6.4.11.3 Packages containing not more than 1 000 g of plutonium are excepted from the application of 6.4.11.4 to 6.4.11.14 provided that:

- (a) Not more than 20% of the plutonium by mass is fissile nuclides;
- (b) The criticality safety index of the package is calculated using the following formula:

$$CSI = 50 \times 2 \times \frac{\text{mass of plutonium(g)}}{1000}$$

- (c) If uranium is present with the plutonium, the mass of uranium shall be no more than 1% of the mass of the plutonium."

Current paragraphs 6.4.11.3 to 6.4.11.13 become new paragraphs 6.4.11.4 to 6.4.11.14.

6.4.11.4 (former 6.4.11.3) Replace "6.4.11.7 to 6.4.11.12" with "6.4.11.8 to 6.4.11.13".

6.4.11.5 (former 6.4.11.4) Replace "6.4.11.7 to 6.4.11.12" with "6.4.11.8 to 6.4.11.13" and insert "either" at the end of the introductory sentence.

6.4.11.8 (former 6.4.11.7), in the last sentence of the introductory paragraph, insert "either of" before "the following:" and in subparagraph (a) and (b) (i), replace "6.4.11.12 (b)" with "6.4.11.13 (b)".

6.4.11.9 (former 6.4.11.8), in the last sentence replace "6.4.11.12 (b)" with "6.4.11.13 (b)" and "6.4.11.9 (c)" with "6.4.11.10 (c)".

6.4.11.10 (former 6.4.11.9) In the introductory sentence replace "6.4.11.7 and 6.4.11.8" with "6.4.11.8 and 6.4.11.9".

6.4.11.10 (former 6.4.11.9) In subparagraph (b), replace "6.4.11.11 (b)" with "6.4.11.12 (b)". In (c), replace "6.4.11.12 (b)" with "6.4.11.13 (b)".

6.4.11.11 (former 6.4.11.10) In subparagraph (b), replace "6.4.11.9" with "6.4.11.10" and "6.4.11.7" with "6.4.11.8".

6.4.11.13 (former 6.4.11.12) In subparagraph (c), replace "6.4.11.12 (b)" with "6.4.11.13(b)".

6.4.11.14 (former 6.4.11.13) Replace "6.4.11.11 and 6.4.11.12" with "6.4.11.12 and 6.4.11.13".

6.4.13 Testing the integrity of the containment system and shielding and evaluating criticality safety

6.4.13 In subparagraph (c) replace "6.4.11.13" with "6.4.11.14".

6.4.15 Test for demonstrating ability to withstand normal conditions of transport

6.4.15.5 In subparagraph (a), amend the beginning to read: "The equivalent of 5 times ...".

6.4.17 Tests for demonstrating ability to withstand accident conditions of transport

6.4.17.2 In the introductory paragraph, replace "6.4.11.12" with "6.4.11.13".

6.4.17.2 In subparagraph (b), move the phrase "so as to suffer maximum damage" to the end of the sentence after "on the target".

6.4.17.2 In subparagraph (c), insert the following new third sentence: "The lower face of the steel plate shall have its edges and corners rounded off to a radius of not more than 6 mm."

6.4.19 Water leakage test for packages containing fissile material

6.4.19.1 Replace "6.4.11.7 to 6.4.11.12" with "6.4.11.8 to 6.4.11.13".

6.4.19.2 Replace "6.4.11.12" with "6.4.11.13".

6.4.20 Tests for Type C packages

6.4.20.2 In the first sentence, insert "vertical" before "solid". In the second sentence replace "the probe to the surface of the specimen shall be as to cause" with "the package specimen and the impact point on the package surface shall be such as to cause".

6.4.22 Approvals of package designs and materials

6.4.22.4 Amend to read as follows:

"6.4.22.4 Each package design for fissile material which is not excepted by any of the paragraphs 2.7.2.3.5.1 to 2.7.2.3.5.6, 6.4.11.2 and 6.4.11.3 shall require multilateral approval."

6.4.22.6 Insert a new paragraph 6.4.22.6 to read as follows:

"6.4.22.6 The design for a fissile material excepted from "FISSILE" classification in accordance with 2.7.2.3.5.6 shall require multilateral approval."

6.4.22.7 Insert a new paragraph to read as follows:

"6.4.22.7 Alternative activity limits for an exempt consignment of instruments or articles in accordance with 2.7.2.2.2 shall require multilateral approval."

6.4.23 Applications for approval and approvals for radioactive material transport

6.4.23.2 In the introductory sentence replace "shipment approval" with "approval of shipment".

In subparagraph .3, amend the end of the paragraph to read as follows:

"... referred to in the certificate of approval for the package design, if applicable, issued under 5.1.5.2.1.1 (iii), (vi) or (vii), are to be put into effect."

6.4.23.4 In (f), insert "nuclear" after "irradiated" and replace "6.4.11.4 (b)" with "6.4.11.5 (b)". In (i), replace "quality assurance programme" with "management system" and "1.1.2.3.1" with "1.5.3.1".

6.4.23.5 In the introductory sentence, delete "for package approval".

in subparagraph (a), replace "6.4.8.4, 6.4.8.5, 6.4.8.6" with "6.4.8.4 to 6.4.8.6".

and in subparagraph (d), amend the beginning of the sentence to read: "a statement of the range".

6.4.23.6 Replace "quality assurance programme" with "management system".

6.4.23.7 Replace "quality assurance programme" with "management system".

6.4.23.8 In subparagraph (d) replace "quality assurance programme" with "management system".

6.4.23.9 Insert a new paragraph to read as follows:

"6.4.23.9 An application for approval of design for fissile material excepted from "FISSILE" classification in accordance with Table 2.7.2.1.1, under 2.7.2.3.5.6 shall include:

- (a) A detailed description of the material; particular reference shall be made to both physical and chemical states;

- (b) A statement of the tests that have been carried out and their results, or evidence based on calculation methods to show that the material is capable of meeting the requirements specified in 2.7.2.3.6;
- (c) A specification of the applicable management system as required in 1.5.3.1;
- (d) A statement of specific actions to be taken prior to shipment."

6.4.23.10 Insert a new paragraph to read as follows:

"6.4.23.10 An application for approval of alternative activity limits for an exempt consignment of instruments or articles shall include:

- (a) An identification and detailed description of the instrument or article, its intended uses and the radionuclide(s) incorporated;
- (b) The maximum activity of the radionuclide(s) in the instrument or article;
- (c) Maximum external radiation levels arising from the instrument or article;
- (d) The chemical and physical forms of the radionuclide(s) contained in the instrument or article;
- (e) Details of the construction and design of the instrument or article, particularly as related to the containment and shielding of the radionuclide in routine, normal and accident conditions of transport;
- (f) The applicable management system, including the quality testing and verification procedures to be applied to radioactive sources, components and finished products to ensure that the maximum specified activity of radioactive material or the maximum radiation levels specified for the instrument or article are not exceeded, and that the instruments or articles are constructed according to the design specifications;
- (g) The maximum number of instruments or articles expected to be shipped per consignment and annually;
- (h) Dose assessments in accordance with the principles and methodologies set out in the International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources, Safety Series No.115, IAEA, Vienna (1996), including individual doses to transport workers and members of the public and, if appropriate, collective doses arising from routine, normal and accident conditions of transport, based on representative transport scenarios the consignments are subject to."

Current paragraphs 6.4.23.9 to 6.4.23.11 become new paragraphs 6.4.23.11 to 6.4.23.13.

6.4.23.11 (former 6.4.23.9), in the introductory sentence, replace "approval certificate" with "certificate of approval".

6.4.23.11 (former 6.4.23.9) (a), replace "6.4.23.10 (b)" with "6.4.23.12 (b)".

6.4.23.11 (former 6.4.23.9) (b) Insert "or alternative activity limit for exempt consignment" at the end of the first sentence. Amend the second sentence to read: "The identification mark of the approval of shipment shall be clearly related to the identification mark of the approval of design."

6.4.23.11 (former 6.4.23.9) (c) In the introductory sentence, replace "types of approval certificates" with "types of certificate of approval". Insert the following line between those corresponding to LD and T: "FE Fissile material complying with the requirements of 2.7.2.3.6". Add the following line at the end of the list: "AL Alternative activity limits for an exempt consignment of instruments or articles".

6.4.23.11 (former 6.4.23.9) (d) Insert "certificates of approval of" before "package design", delete (twice) "approval certificates" after "radioactive material", and replace "6.4.24.2 to 6.4.24.4" with "6.4.24.2 to 6.4.24.5".

6.4.23.12 (former 6.4.23.10) In the introductory sentence replace "type codes" with "identification marks".

6.4.23.12 (former 6.4.23.10) (a) Replace "6.4.23.9 (a), (b), (c) and (d)" with "6.4.23.11 (a), (b), (c) and (d)"; "design approval" with "approval of design", and "shipment approval" with "the approval of shipment".

6.4.23.12 (former 6.4.23.10) (a) For A/132/B(M)F-96, replace "package design approval certificate" with "certificate of approval for the package design".

6.4.23.12 (former 6.4.23.10) (a) For A/132/B(M)F-96T, replace "shipment approval" with "approval of shipment".

6.4.23.12 (former 6.4.23.10) (a) For A/137/X, replace "a special arrangement approval" with "an approval of special arrangement".

6.4.23.12 (former 6.4.23.10) (a) For A/139/IF-96 and A/145/H(U)-96, replace "package design approval certificate" with "certificate of approval for the package design".

6.4.23.12 (former 6.4.23.10) (b) Replace "according to 6.4.23.16" with "in accordance with 6.4.23.20".

6.4.23.12 (former 6.4.23.10) (c) Replace (twice) "package design approval certificate" with "certificate of approval for the package design"; and "approval certificate" with "certificate of approval" in the last sentence.

6.4.23.13 (former 6.4.23.11) In the introductory sentence replace "approval certificate" with "certificate of approval" and in (i) replace "quality assurance programme" with "management system".

6.4.23.14 Insert a new paragraph to read as follows:

"6.4.23.14 Each certificate of approval issued by a competent authority for material excepted from classification as "FISSILE" shall include the following information:

- (a) Type of certificate;
- (b) The competent authority identification mark;
- (c) The issue date and an expiry date;
- (d) List of applicable national and international regulations, including the edition of the IAEA Regulations for the Safe Transport of Radioactive Material under which the exception is approved;
- (e) A description of the excepted material;
- (f) Limiting specifications for the excepted material;
- (g) A specification of the applicable management system as required in 1.5.3.1;
- (h) Reference to information provided by the applicant relating to specific actions to be taken prior to shipment;
- (i) If deemed appropriate by the competent authority, reference to the identity of the applicant;
- (j) Signature and identification of the certifying official;
- (k) Reference to documentation that demonstrates compliance with 2.7.2.3.6."

Current paragraphs 6.4.23.12 to 6.4.23.14 become new paragraphs 6.4.23.15 to 6.4.23.17.

6.4.23.15 (former 6.4.23.12), in the introductory sentence replace "approval certificate" with "certificate of approval".

6.4.23.15 (former 6.4.23.12) (j), replace "amounts" with "mass" and amend the end of the paragraph to read as follows: "... special form radioactive material, low dispersible radioactive material or fissile material excepted under 2.7.2.3.5.6 if applicable;"

6.4.23.15 (former 6.4.23.12) (k)(v), replace "6.4.11.4 (b)" with "6.4.11.5(b)".

6.4.23.15 (former 6.4.23.12) (r), replace "quality assurance programme" with "management system".

6.4.23.16 (former 6.4.23.13), in the introductory sentence, replace "approval certificate" with "certificate of approval".

6.4.23.16 (former 6.4.23.13) (i), replace "design approval certificate(s)" with "certificate(s) of approval of design".

6.4.23.16 (former 6.4.23.13) (g), replace "amounts" with "mass" and amend the end of the paragraph to read as follows: "...special form radioactive material, low dispersible radioactive material or fissile material excepted under 2.7.2.3.5.6 if applicable;"

6.4.23.16 (former 6.4.23.13) (l), replace "quality assurance programme" with "management system".

6.4.23.17 (former 6.4.23.14), in the introductory sentence, replace "approval certificate" with "certificate of approval".

6.4.23.17 (former 6.4.23.14) (h), replace "shipment approval" with "approval of shipment".

6.4.23.17 (former 6.4.23.14) (l), amend the end of the second sentence to read as follows: "... mass in grams (for fissile material the total mass of fissile nuclides or the mass for each fissile nuclide, when appropriate) and whether special form radioactive material, low dispersible radioactive material or fissile material excepted under 2.7.2.3.5.6, if applicable;"

6.4.23.17 (former 6.4.23.14) (n), amend the introductory sentence to read as follows: "For package designs containing fissile material which require multilateral approval of the package design in accordance with 6.4.22.4:"

6.4.23.17 (former 6.4.23.14) (n)(vi), replace "6.4.11.4 (b)" with "6.4.11.5 (b)".

6.4.23.17 (former 6.4.23.14) (t), replace "quality assurance programme" with "management system".

6.4.23.18 Insert a new paragraph 6.4.23.18 to read as follows:

"6.4.23.18 Each certificate issued by a competent authority for alternative activity limits for an exempt consignment of instruments or articles according to 5.1.5.2.1.4 shall include the following information:

- (a) Type of certificate;
- (b) The competent authority identification mark;
- (c) The issue date and an expiry date;
- (d) List of applicable national and international regulations, including the edition of the IAEA Regulations for the Safe Transport of Radioactive Material under which the exemption is approved;
- (e) The identification of the instrument or article;
- (f) A description of the instrument or article;
- (g) Design specifications for the instrument or article;
- (h) A specification of the radionuclide(s), the approved alternative activity limit(s) for the exempt consignment(s) of the instrument(s) or article(s);

- (i) Reference to documentation that demonstrates compliance with 2.7.2.2.2.2;
- (j) If deemed appropriate by the competent authority, reference to the identity of the applicant;
- (k) Signature and identification of the certifying official."

Current paragraphs 6.4.23.15 and 6.4.23.16 become 6.4.23.19 and 6.4.23.20 respectively.

6.4.24 Transitional measures for class 7

6.4.24.1 Amend to read as follows:

"Packages not requiring competent authority approval of design (excepted packages, Type IP-1, Type IP-2, Type IP-3 and Type A packages) shall meet these Regulations in full, except that packages that meet the requirements of the 1985 or 1985 (as amended 1990) Editions of IAEA Regulations for the Safe Transport of Radioactive Material (IAEA Safety Series No.6):

- (a) May continue in transport provided that they were prepared for transport prior to 31 December 2003, and subject to the requirements of 6.4.24.4, if applicable;
- (b) May continue to be used provided that:
 - (i) They were not designed to contain uranium hexafluoride;
 - (ii) The applicable requirements of 1.5.3.1 of this Code are applied;
 - (iii) The activity limits and classification in Chapter 2.7 of these Regulations are applied;
 - (iv) The requirements and controls for transport in Parts 1, 3, 4, 5 and 7 of this Code are applied;
 - (v) The packaging was not manufactured or modified after 31 December 2003."

6.4.24.2 Amend to read as follows:

"6.4.24.2 Packages requiring competent authority approval of the design shall meet the provisions of this Code in full unless the following conditions are met:

- (a) The packagings were manufactured to a package design approved by the competent authority under the provisions of the 1973 or 1973 (as amended) or the 1985 or 1985 (as amended 1990) Editions of IAEA Safety Series No.6);
- (b) The package design is subject to multilateral approval;
- (c) The applicable requirements of 1.5.3.1 of this Code are applied;

- (d) The activity limits and classification in Chapter 2.7 of this Code are applied;
- (e) The requirements and controls for transport in in Parts 1, 3, 4, 5 and 7 of this Code are applied;
- (f) For a package containing fissile material and transported by air, the requirement of 6.4.11.11 is met;
- (g) For packages that meet the requirements of the 1973 or 1973 (as amended) Editions of IAEA Safety Series No. 6:
 - (i) The packages retain sufficient shielding to ensure that the radiation level at 1 m from the surface of the package would not exceed 10 mSv/h in the accident conditions of transport defined in the 1973 Revised or 1973 Revised (as amended) Editions of IAEA Safety Series No.6 with the maximum radioactive contents which the package is authorized to contain;
 - (ii) The packages do not utilize continuous venting;
 - (iii) A serial number in accordance with the provision of 5.2.1.5.5 is assigned to and marked on the outside of each packaging."

6.4.24.3 Amend to read as follows:

"No new manufacture of packagings to a package design meeting the provisions of the 1973, 1973 (as amended), 1985, and 1985 (as amended 1990) Editions of IAEA Safety Series No.6 shall be permitted to commence."

6.4.24.4 Insert a new paragraph to read as follows:

"6.4.24.4 Packages excepted from the requirements for fissile materials under the Regulations annexed to the 16th revised edition or the seventeenth revised edition of the United Nations Recommendations on the Transport of Dangerous Goods (2009 Edition of IAEA Safety Standard Series No.TS-R-1)

6.4.24.4 Packages containing fissile material that is excepted from classification as "FISSILE" according to 2.7.2.3.5.1 (i) or (iii) of the IMDG Code amendment 35-10) or amendment 36-12, (paragraphs 417 (a) (i) or (iii) of the 2009 Edition of IAEA Regulations for the Safe Transport of Radioactive Material) prepared for transport before 31 December 2014 may continue in transport and may continue to be classified as non-fissile or fissile-excepted except that the consignment limits in Table 2.7.2.3.5 of these editions shall apply to the conveyance. The consignment shall be transported under exclusive use."

and current paragraph 6.4.24.4 becomes new 6.4.24.5.

6.4.24.5 (former 6.4.24.4) In the first sentence, replace "programme of quality assurance" with "management system". Replace the last sentence with the following: "No new manufacture of such special form radioactive material shall be permitted to commence."

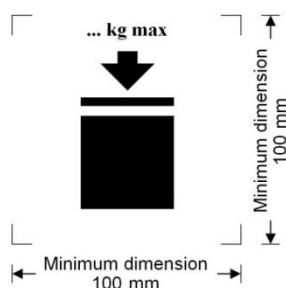
Chapter 6.5 – Provisions for the construction and testing of intermediate bulk containers (IBCs)

6.5.2 Marking

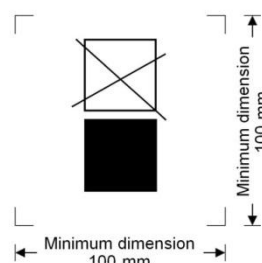
6.5.2.2 Additional marking

Amend 6.5.2.2.2 to read as follows:

"6.5.2.2.2 The maximum permitted stacking load applicable when the IBC is in use shall be displayed on a symbol as shown in the figures below. The symbol shall be durable and clearly visible.



IBCs capable of being stacked



IBCs NOT capable of being stacked

The minimum dimensions shall be 100 mm x 100 mm. The letters and numbers indicating the mass shall be at least 12 mm high. The area within the printer's marks indicated by the dimensional arrows shall be square. Where dimensions are not specified, all features shall be in approximate proportion to those shown. The mass marked above the symbol shall not exceed the load imposed during the design type test (see 6.5.6.6.4) divided by 1.8.

NOTE: The provisions of 6.5.2.2.2 shall apply to all IBCs manufactured, repaired or remanufactured as from 1 January 2011. The provisions of 6.5.2.2.2 of the IMDG Code (Amendment 36-12) may continue to be applied to all IBCs manufactured, repaired or remanufactured between 1 January 2011 and 31 December 2016."

6.5.2.2.4 After "The date of the manufacture of the plastics inner receptacle may alternatively be marked on the inner receptacle adjacent to the remainder of the marking." add the following new sentence: "In such a case, the two digits of the year in the primary marking and in the inner circle of the clock shall be identical.". At the end, add a new Note to read as follows:

"NOTE: Other methods that provide the minimum required information in a durable, visible and legible form are also acceptable."


Chapter 6.6 – Provisions for the construction and testing of large packagings

6.6.2 Code for designating types of large packagings

6.6.2.2 At the beginning, replace "The letter "W"" with "The letters "T" or "W"" and insert a new second sentence to read as follows: "The letter "T" signifies a large salvage packaging conforming to the requirements of 6.6.5.1.9."

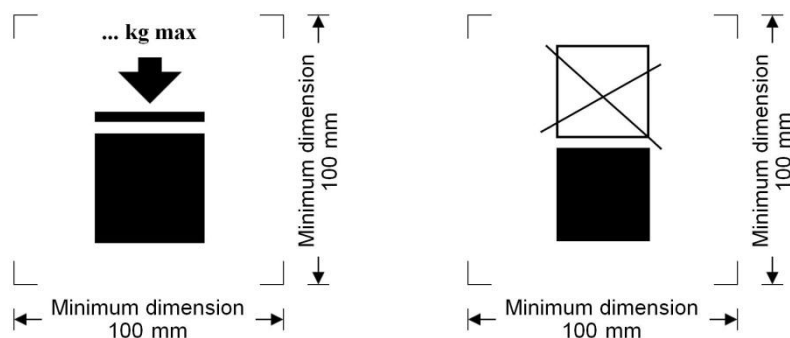
6.6.3 Marking

6.6.3.2 Insert a new second example to read as follows:

"  50AT/Y/05/01/B/PQRS 2500/1000 *For a large steel salvage packaging suitable for stacking; stacking load: 2 500 kg; maximum gross mass: 1,000 kg.*

Amend 6.6.3.3 to read as follows:

"6.6.3.3 The maximum permitted stacking load applicable when the large packaging is in use shall be displayed on a symbol as shown in the figures below. The symbol shall be durable and clearly visible.



Large packagings capable of being stacked

Large packagings NOT capable of being stacked

The minimum dimensions shall be 100 mm x 100 mm. The letters and numbers indicating the mass shall be at least 12 mm high. The area within the printer's marks indicated by the dimensional arrows shall be square. Where dimensions are not specified, all features shall be in approximate proportion to those shown. The mass marked above the symbol shall not exceed the load imposed during the design type test (see 6.6.5.3.3.4) divided by 1.8.

"NOTE: The provisions of 6.6.3.3 shall apply to all large packagings manufactured, repaired or remanufactured as from 1 January 2015. The provisions of 6.6.3.3 of the IMDG Code (Amendment 36-12) may continue to be applied to all IBCs manufactured, repaired or remanufactured between 1 January 2015 and 31 December 2016."

6.6.5 Test provisions for large packagings

6.6.5.1 Performance and frequency of test

6.6.5.1.9 Insert the following new paragraph to read as follows:

"6.6.5.1.9 Large salvage packagings

Large salvage packagings shall be tested and marked in accordance with the provisions applicable to packing group II large packagings intended for the transport of solids or inner packagings, except as follows:

- (a) The test substance used in performing the tests shall be water, and the large salvage packagings shall be filled to not less than 98% of their maximum capacity. It is permissible to use additives, such as bags of lead shot, to achieve the requisite total package mass so long as they are placed so that the test results are not affected. Alternatively, in performing the drop test, the drop height may be varied in accordance with 6.6.5.3.4.4.2 (b);
- (b) Large salvage packagings shall, in addition, have been successfully subjected to the leakproofness test at 30 kPa, with the results of this test reflected in the test report required by 6.6.5.4; and
- (c) Large salvage packagings shall be marked with the letter "T" as described in 6.6.2.2."

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

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

6.7.2.20.2, 6.7.3.16.2 and 6.7.5.13.2 Replace "shall be marked" with "shall be durably marked".

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

6.7.5.2.4.1 Replace "ISO 11114-1:1997" with "ISO 11114-1:2012".

PART 7 PROVISIONS CONCERNING TRANSPORT OPERATIONS

Chapter 7.1 – General stowage provisions

7.1.4 Special stowage provisions

7.1.4.5 Stowage of goods of class 7

7.1.4.5.2 Replace "approval certificate" with "certificate of approval".

7.1.4.5.3.1 In the table amend the two first rows under the heading to read as follows:

Freight container	
Small freight container	50
Large freight container	50

and in the note "a" to the table, replace "7.1.4.5.6" with "7.1.4.5.5".

7.1.4.5.3.4 In the table amend the two first rows under the heading to read as follows:

Freight container		
Small freight container	50	n.a
Large freight container	50	100

Amend the end of note "b" to the table to read as follows: "... and stowed so as to maintain a spacing of at least 6 m from other groups."

and amend the end of the first sentence of note "c" to the table to read as follows: "... and stowed so as to maintain a spacing of at least 6 m from other groups."

7.1.4.5.10 Amend the end of the paragraph to read as follows:

"... and shall not be re-used unless the following conditions are fulfilled:

- .1 the non-fixed contamination shall not exceed the limits specified in 4.1.9.1.2;
- .2 the radiation level resulting from the fixed contamination shall not exceed 5 μ Sv/h at the surface."

7.1.4.5.13.2 Delete " to the critical group".

Chapter 7.2 – General segregation provisions

7.2.4 Segregation table

[in the row "Flammable gases 2.1" versus column of class 4.3 replace "X" with "2".]

[in the row "Flammable liquid 3" versus column of class 4.3 replace "1" with "2".]

[in the row "Substances which, in contact with water, emit flammable gases 4.3" versus column 2.1 replace "X" with "2".]

[in the row "Substances which, in contact with water, emit flammable gases 4.3" versus column 3 replace "1" with "2".]

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

7.3.3.2 Insert a new sentence at the end, with the following:

"Whenever the stowage provision "keep as dry as reasonably practicable" is assigned in column (16) of the dangerous goods list, the closed cargo transport unit including any contained goods, securing or packing materials shall be kept as dry as reasonably practicable."

7.3.7 Cargo transport units under temperature control

7.3.7.2.4 Replace existing paragraph with the following:

"7.3.7.2.4 The refrigeration system shall be subjected to a thorough inspection and a test prior to the cargo transport unit being packed to ensure that all parts are functioning properly. Refrigerant gas shall only be replaced in accordance with the manufacturer's operating instructions for the refrigeration system. Prior to filling replacement refrigerant gas, a certificate of analysis from the supplier shall be obtained and checked to confirm that the gas meets refrigeration system specifications. In addition, the replacement refrigerant gas shall be checked for possible contamination prior to use. If the refrigerant gas is found to be contaminated it shall not be used, the cylinder shall be plainly marked "CONTAMINATED", the cylinder shall be sealed and sent for recycling or disposal and notification shall be given to the refrigerant gas supplier and authorized distributor and competent authority(ies) of the countries to which the supplier and distributor reside, as appropriate. The date of last refrigerant replacement shall be included in the maintenance record of the refrigeration system.

Note: Contamination can be checked by using flame halide lamp tests, gas sniffer tube tests or gas chromatography. Replacement refrigerant gas cylinders may be marked with the test result and the date of testing."

ANNEX 3

AMENDMENTS TO THE EMERGENCY RESPONSE PROCEDURES FOR SHIPS CARRYING DANGEROUS GOODS (EmS GUIDE) (MSC/Circ.1025, as amended by MSC.1/Circ.1025/Add.1, MSC.1/Circ.1262 and MSC.1/Circ.1360, MSC.1/Circ.1438)

EmS Guide

Fire

Introduction to the Emergency Schedules for FIRE

5 Evacuation

In section 5 of the Introduction to the Emergency Schedules for FIRE, the first sentence should be amended to read:

"Within some EmS FIRE SCHEDULES the phrase "Sudden or short-term events (e.g. explosions) may endanger the safety of the ship" or the phrase "The danger of uncontrolled spread of fire should be considered" has been introduced."

10 Special notes on classes of dangerous goods

10.5 Spontaneously combustible substances – class 4.2

Replace subparagraph "10.5.2" with the following:

"10.5.2 Although the use of dry inert powdered material to smother the fire would be the preferred option, in most circumstances such a procedure may not be possible. Two methods of dealing with such fire are possible:

- .1 controlled burning: Stay in a well-protected position. Let the goods burn. Many goods of this class react dangerously with water: refer to the relevant EmS FIRE SCHEDULE. In such cases, contact with water may intensify burning. Therefore it is not recommended to apply water directly on the burning goods. When portable water monitors providing water shield function are available: generate a water screen to prevent spread of fire. The fire involving the goods should be left to burn out completely. If the fire has already spread to the adjacent cargo which is not reacting with water (see relevant EmS FIRE SCHEDULE): fight this fire from a safe distance; and
- .2 fight the fire from a safe distance: if the location of the fire makes it possible, copious quantities of water should be used immediately. Although the goods on fire will react with water and create heat, a large quantity of water will cool down the reaction and prevent further heat radiation. However, water should not be used when the location of the fire makes it impossible to apply copious amounts of water directly onto the goods. Refer to the relevant EmS FIRE SCHEDULE."

10.6 Substances dangerous when wet – class 4.3

Replace subparagraph "10.6.2" with the following:

"10.6.2 Although the use of dry inert powdered material to smother the fire would be the preferred option, in most circumstances such a procedure may not be possible. Two methods of dealing with such fire are possible:

- .1 controlled burning: stay in a well-protected position. Let the goods burn. All goods of this class react dangerously with water: refer to the relevant EmS FIRE SCHEDULE. Contact with water will intensify burning. Therefore it is not recommended to apply water directly on the burning goods. When portable water monitors providing water shield function are available: generate water screen to prevent spread of fire. The fire involving the goods should be left to burn out completely. If the fire has already spread to adjacent cargo which is not reacting with water (see relevant EmS FIRE SCHEDULE): fight this fire from a safe distance;
- .2 fight the fire from a safe distance: refer to the relevant EmS FIRE SCHEDULE, since it is possible that fire fighting with water may intensify the fire and generate the evolution of flammable gases which could explode in mixtures with air."

Emergency Schedules for FIRE

F-C NON-FLAMMABLE GASES

In the row for special cases add the following:

"UN 3513, UN 3515, UN 3518"

F-G

WATER-REACTIVE SUBSTANCES

Replace existing schedule with the following:

"

General comments		<p>In a fire, exposed cargoes may explode or their containment may rupture.</p> <p>Liquid material leaking from ruptured receptacles may be ignited and spread the fire.</p> <p>Cargoes in tanks exposed to heat may explode suddenly in or after a fire situation by a <i>Boiling Liquid-Expanding Vapour Explosion</i> (BLEVE).</p> <p>Fight fire from a protected position from as far away as possible.</p> <p>Use of copious quantities of water at once is recommended to cool down the heat radiation and to cool down heated cargo nearby.</p> <p>Water in direct contact with the material will start or intensify burning of that material. Only in locations where direct access to the cargo is possible and where the cargo on fire can be submerged with water, large quantities of water may significantly reduce the thermal reactivity and stop the fire.</p> <p>THE DANGER OF UNCONTROLLED SPREAD OF FIRE SHOULD BE CONSIDERED</p>
Cargo on fire on deck	Packages	<p>DO NOT use water or foam; smother with dry inert powdered material when available or let fire burn.</p> <p>Cool nearby cargo with copious quantities of water.</p>
	Cargo Transport Units	<p>Let the fire burn. Cool nearby cargo with copious quantities of water. Use the water shield function of portable water monitors when available, to prevent the spread of fire.</p> <p>Try to avoid getting water into the cargo transport unit on fire.</p>
Cargo on fire under deck		<p>Stop ventilation and close hatches.</p> <p>The fixed gas fire-extinguishing system should be used.</p> <p>If this is not available:</p> <p>DO NOT use water onto the material in enclosed spaces under deck. Cool nearby cargo with copious quantities of water.</p>
Cargo exposed to fire		<p>If practicable, remove or jettison packages which are likely to be involved in the fire. Otherwise cool the cargo with copious quantities of water. Use the water shield function of portable water monitors when available, to prevent the spread of fire.</p>
Special cases class 4.3 packing group I		<p>In contact with water, large volumes of flammable gases are produced, which when not instantly ignited may form a highly dangerous explosive atmosphere.</p>

"

F-I

RADIOACTIVE MATERIAL

In the row for Special Cases, add the following:

"UN 3507 after UN 2978"

Emergency Schedules for SPILLAGE

S-S RADIOACTIVE MATERIAL

In the row for Special Cases, add the following:

"UN 3507 and UN 2978"

Index

For UN 3422 replace "S-B" with "S-A"

Insert the new following entries:

"

UN No.	EmS Fire	EmS Spill
3507	<u>F-I</u>	<u>S-S</u>
3508	F-A	S-I
3510	F-D	S-U
3511	F-C	S-V
3512	F-C	S-U
3513	<u>F-C</u>	S-W
3514	F-D	S-U
3515	<u>F-C</u>	S-W
3516	F-C	S-U
3517	F-D	S-U
3518	<u>F-C</u>	S-W
3519	F-C	S-U
3520	F-C	S-W
3521	F-C	S-U
3522	F-D	S-U
3523	F-D	S-U
3524	F-C	S-U
3525	F-D	S-U
3526	F-D	S-U

"