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Circular letter No.2673  
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To: All IMO Members and Contracting Governments to the International Convention for the Safety of Life at Sea, 1974

Subject: **Amendments to the International Maritime Dangerous Goods (IMDG) Code (resolution MSC.122(75))**

1 In accordance with the procedure established by MSC 75, the Sub-Committee on Dangerous Goods, Solid Cargoes and Containers, at its tenth session (26 to 30 September 2005), prepared and agreed to draft amendment (33-06) to the International Maritime Dangerous Goods Code (resolution MSC.122(75)), for circulation with a view to adoption at MSC 81.

2 The Secretary-General has the honour to transmit herewith, in accordance with article VIII(b)(i) of the International Convention for the Safety of Life at Sea, 1974, the text of the proposed draft amendments to the IMDG Code, set out in the annex, for consideration with a view to adoption by the Maritime Safety Committee, at its eighty-first session (10 to 19 May 2006), in accordance with article VIII(b)(iv) of the Convention.

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**ANNEX**

**DRAFT AMENDMENT 33-06 TO THE IMDG CODE**

**PART 1**

**Chapter 1.1**

1.1.3.2.3 Insert the following new first sentence “Doses to persons shall be below the relevant dose limits”.

At the end of the second sentence, replace: “and doses to persons shall be below the relevant dose limits”, with “within the restriction that the doses to individuals be subject to dose constraints.”.

1.1.3.2.4 Replace “the radiation hazards involved and” with “radiation protection including”.

Replace “to ensure restriction of their exposure and that” with “to restrict their occupational exposure and the exposure”.

1.1.3.2.5 In the French version, replace “dose effective” with “dose efficace”.

Delete indent .1 and renumber .2 and .3 as .1 and .2.

1.1.3.4.1 Insert “of radioactive material” after “which consignments”.

Delete “applicable to radioactive material” at the end.

1.1.3.4.2 Delete “international”, in the last sentence.

## Chapter 1.2

1.2.1 In the definition of “Elevated temperature substance”, amend “61°C” to read “60°C”.

1.2.3 Add the following abbreviations in alphabetical order:

*“ASTM American Society for Testing and Materials (ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA, 19428-2959, United States of America);”*

*“CGA Compressed Gas Association (CGA, 4221 Walney Road, 5th Floor, Chantilly VA 20151-2923, United States of America);”*

*“EN (standard) means a European standard published by the European Committee for Standardization (CEN) (CEN – 36 rue de Stassart, B-1050 Brussels, Belgium);”*

*“IAEA International Atomic Energy Agency (IAEA, P.O. Box 100 – A -1400 Vienna, Austria);”*

*“ICAO International Civil Aviation Organization (ICAO, 999 University Street, Montreal, Quebec H3C 5H7, Canada);”*

*“IMO International Maritime Organization (IMO, 4 Albert Embankment, London SE1 7SR, United Kingdom);”*

*“ISO (standard) an international standard published by the International Organization for Standardization (ISO - 1, rue de Varembé, CH-1204 Geneva 20, Switzerland);”*

*“UNECE United Nations Economic Commission for Europe (UNECE, Palais des Nations, 8-14 avenue de la Paix, CH-1211 Geneva 10, Switzerland);”*

and delete the current abbreviations and text against IAEA, IMO, ISO and UN ECE and provide addresses of other organizations.

## Chapter 1.4

1.4.3.1 For class 6.2, insert “(UN Nos.2814 and 2900)” after “Category A”.  
For class 7, replace “type B or type C” with “Type B(U) or Type B(M) or Type C”.  
Delete the last paragraph.

1.4.3.5 Add a new paragraph after 1.4.3.4 to read as follows:

“1.4.3.5 For radioactive material, the provisions of this chapter are deemed to be complied with when the provisions of the Convention on Physical Protection of Nuclear Material and of IAEA INFCIRC/225 (Rev.4) are applied”.

## PART 2

### Chapter 2.1

2.1.3.5 Insert the following new paragraphs:

**“2.1.3.5 *Assignment of fireworks to hazard divisions***

2.1.3.5.1 Fireworks shall normally be assigned to hazard divisions 1.1, 1.2, 1.3, and 1.4 on the basis of test data derived from Test Series 6 of the United Nations *Manual of Test and Criteria*. However, since the range of such articles is very extensive and the availability of test facilities may be limited, assignment to hazard divisions may also be made in accordance with the procedure in 2.1.3.5.2.

2.1.3.5.2 Assignment of fireworks to UN Nos.0333, 0334, 0335 or 0336 may be made on the basis of analogy, without the need for Test Series 6 testing, in accordance with the default fireworks classification table in 2.1.3.5.5. Such assignment shall be made with the agreement of the competent authority. Items not specified in the table shall be classified on the basis of test data derived from Test Series 6 of the United Nations *Manual of Test and Criteria*.

**NOTE:** *The addition of other types of fireworks to column 1 of the table in 2.1.3.5.5 shall only be made on the basis of full test data submitted to the UN Sub-Committee of Experts on the Transport of Dangerous Goods for consideration.*

2.1.3.5.3 Where fireworks of more than one hazard division are packed in the same package they shall be classified on the basis of the highest hazard division unless test data derived from Test Series 6 of the United Nations Manual of Test and Criteria indicate otherwise.

2.1.3.5.4 The classification shown in the table in 2.1.3.5.5 applies only for articles packed in fibreboard boxes (4G).

2.1.3.5.5 *Default fireworks classification table\**

**NOTE 1:** *References to percentages in the table, unless otherwise stated, are to the mass of all pyrotechnic composition (e.g., rocket motors, lifting charge, bursting charge and effect charge).*

**NOTE 2:** *“Flash composition” in this table refers to pyrotechnic compositions containing an oxidizing substance, or black powder, and a metal powder fuel that are used to produce an aural report effect or used as a bursting charge in fireworks devices.*

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\* This table contains a list of firework classifications that may be used in the absence of Test Series 6, of the United Nations Manual of Test and Criteria, data (see 2.1.3.5.2).

**NOTE 3:** *Dimensions in mm refers to:*

- *for spherical and peanut shells the diameter of the sphere of the shell;*
- *for cylinder shells the length of the shell;*
- *for a shell in mortar, Roman candle, shot tube firework or mine the inside diameter of the tube comprising or containing the firework;*
- *for a bag mine or cylinder mine, the inside diameter of the mortar intended to contain the mine.*

Type	Includes: / Synonym:	Definition	Specification	Classification
Shell, spherical or cylindrical	Spherical display shell: aerial shell, colour shell, dye shell, multi-break shell, multi-effect shell, nautical shell, parachute shell, smoke shell, star shell; report shell: maroon, salute, sound shell, thunderclap, aerial shell kit	Device with or without propellant charge, with delay fuse and bursting charge, pyrotechnic unit(s) or loose pyrotechnic composition and designed to be projected from a mortar	All report shells	1.1G
			Colour shell: $\geq 180$ mm	1.1G
			Colour shell: $< 180$ mm with $> 25\%$ flash composition, as loose powder and/ or report effects	1.1G
			Colour shell: $< 180$ mm with $\leq 25\%$ flash composition, as loose powder and/ or report effects	1.3G
			Colour shell: $\leq 50$ mm, or $\leq 60$ g pyrotechnic composition, with $\leq 2\%$ flash composition as loose powder and/ or report effects	1.4G
Peanut shell		Device with two or more spherical aerial shells in a common wrapper propelled by the same propellant charge with separate external delay fuses	The most hazardous spherical aerial shell determines the classification	
Preloaded mortar, shell in mortar		Assembly comprising a spherical or cylindrical shell inside a mortar from which the shell is designed to be projected	All report shells	1.1G
			Colour shell: $\geq 180$ mm	1.1G
			Colour shell: $> 50$ mm and $< 180$ mm	1.2G
			Colour shell: $\leq 50$ mm, or $< 60$ g pyrotechnic composition, with $\leq 25\%$ flash composition as loose powder and/ or report effects	1.3G

Type	Includes: / Synonym:	Definition	Specification	Classification
Shell, spherical or cylindrical ( <i>cont'd</i> )	Shell of shells (spherical)  (Reference to percentages for shell of shells are to the gross mass of the fireworks article)	Device without propellant charge, with delay fuse and bursting charge, containing report shells and inert materials and designed to be projected from a mortar	> 120 mm	1.1G
		Device without propellant charge, with delay fuse and bursting charge, containing report shells $\leq 25\text{g}$ flash composition per report unit, with $\leq 33\%$ flash composition and $\geq 60\%$ inert materials and designed to be projected from a mortar	$\leq 120$ mm	1.3G
		Device without propellant charge, with delay fuse and bursting charge, containing colour shells and/or pyrotechnic units and designed to be projected from a mortar	> 300 mm	1.1G
		Device without propellant charge, with delay fuse and bursting charge, containing colour shells $\leq 70\text{mm}$ and/or pyrotechnic units, with $\leq 25\%$ flash composition and $\leq 60\%$ pyrotechnic composition and designed to be projected from a mortar	> 200 mm and $\leq 300$ mm	1.3G
		Device with propellant charge, with delay fuse and bursting charge, containing colour shells $\leq 70$ mm and/or pyrotechnic units, with $\leq 25\%$ flash composition and $\leq 60\%$ pyrotechnic composition and designed to be projected from a mortar	$\leq 200$ mm	1.3G
Battery/ combination	Barrage, bombardos, cakes, finale box, flowerbed, hybrid, multiple tubes, shell cakes, banger batteries, flash banger batteries	Assembly including several elements either containing the same type or several types each corresponding to one of the types of fireworks listed in this table, with one or two points of ignition	The most hazardous firework type determines the classification	

Type	Includes: / Synonym:	Definition	Specification	Classification
Roman candle	Exhibition candle, candle, bombettes	Tube containing a series of pyrotechnic units consisting of alternate pyrotechnic composition, propellant charge, and transmitting fuse	$\geq 50$ mm inner diameter, containing flash composition, or $< 50$ mm with $> 25\%$ flash composition	1.1G
			$\geq 50$ mm inner diameter, containing no flash composition	1.2G
			$< 50$ mm inner diameter and $\leq 25\%$ flash composition	1.3G
			$\leq 30$ mm inner diameter, each pyrotechnic unit $\leq 25$ g and $\leq 5\%$ flash composition	1.4G
Shot tube	Single shot Roman candle, small preloaded mortar	Tube containing a pyrotechnic unit consisting of pyrotechnic composition, propellant charge with or without transmitting fuse	$\leq 30$ mm inner diameter and pyrotechnic unit $> 25$ g, or $> 5\%$ and $\leq 25\%$ flash composition	1.3G
			$\leq 30$ mm inner diameter, pyrotechnic unit $\leq 25$ g and $\leq 5\%$ flash composition	1.4G
Rocket	Avalanche rocket, signal rocket, whistling rocket, bottle rocket, sky rocket, missile type rocket, table rocket	Tube containing pyrotechnic composition and/or pyrotechnic units, equipped with stick(s) or other means for stabilization of flight, and designed to be propelled into the air	Flash composition effects only	1.1G
			Flash composition $> 25\%$ of the pyrotechnic composition	1.1G
			$> 20$ g pyrotechnic composition and flash composition $\leq 25\%$	1.3G
			$\leq 20$ g pyrotechnic composition, black powder bursting charge and $\leq 0.13$ g flash composition per report and $\leq 1$ g in total	1.4G

Type	Includes: / Synonym:	Definition	Specification	Classification
Mine	Pot-au-feu, ground mine, bag mine, cylinder mine	<p>Tube containing propellant charge and pyrotechnic units and designed to be placed on the ground or to be fixed in the ground. The principal effect is ejection of all the pyrotechnic units in a single burst producing a widely dispersed visual and/or aural effect in the air or:</p> <p>Cloth or paper bag or cloth or paper cylinder containing propellant charge and pyrotechnic units, designed to be placed in a mortar and to function as a mine</p>	> 25% flash composition, as loose powder and/ or report effects	1.1G
			≥ 180 mm and ≤ 25% flash composition, as loose powder and/ or report effects	1.1G
			< 180 mm and ≤ 25% flash composition, as loose powder and/ or report effects	1.3G
			≤ 150 g pyrotechnic composition, containing ≤ 5% flash composition as loose powder and/ or report effects. Each pyrotechnic unit ≤ 25 g, each report effect < 2g ; each whistle, if any, ≤ 3 g	1.4G
Fountain	Volcanos, gerbs, showers, lances, Bengal fire, flitter sparkle, cylindrical fountains, cone fountains, illuminating torch	Non-metallic case containing pressed or consolidated pyrotechnic composition producing sparks and flame	≥ 1 kg pyrotechnic composition	1.3G
			< 1 kg pyrotechnic composition	1.4G
Sparkler	Handheld sparklers, non-handheld sparklers, wire sparklers	Rigid wire partially coated (along one end) with slow burning pyrotechnic composition with or without an ignition tip	Perchlorate based sparklers: > 5 g per item or > 10 items per pack	1.3G
			Perchlorate based sparklers: ≤ 5 g per item and ≤ 10 items per pack; Nitrate based sparklers: ≤ 30 g per item	1.4G
Bengal stick	Dipped stick	Non-metallic stick partially coated (along one end) with slow-burning pyrotechnic	Perchlorate based items: > 5 g per item or > 10 items per pack	1.3 G

Type	Includes: / Synonym:	Definition	Specification	Classification
		composition and designed to be held in the hand	Perchlorate based items: $\leq 5$ g per item and $\leq 10$ items per pack; nitrate based items: $\leq 30$ g per item	1.4G
Low hazard fireworks and novelties	Table bombs, throwdowns, crackling granules, smokes, fog, snakes, glow worm, serpents, snaps, party poppers	Device designed to produce very limited visible and/ or audible effect which contains small amounts of pyrotechnic and/ or explosive composition	Throwdowns and snaps may contain up to 1.6 mg of silver fulminate; snaps and party poppers may contain up to 16 mg of potassium chlorate/ red phosphorous mixture; other articles may contain up to 5 g of pyrotechnic composition, but no flash composition	1.4G
Spinner	Aerial spinner, helicopter, chaser, ground spinner	Non-metallic tube or tubes containing gas- or spark-producing pyrotechnic composition, with or without noise producing composition, with or without aerofoils attached	Pyrotechnic composition per item $> 20$ g, containing $\leq 3\%$ flash composition as report effects, or whistle composition $\leq 5$ g	1.3G
			Pyrotechnic composition per item $\leq 20$ g, containing $\leq 3\%$ flash composition as report effects, or whistle composition $\leq 5$ g	1.4G
Wheels	Catherine wheels, Saxon	Assembly including drivers containing pyrotechnic composition and provided with a means of attaching it to a support so that it can rotate	$\geq 1$ kg total pyrotechnic composition, no report effect, each whistle (if any) $\leq 25$ g and $\leq 50$ g whistle composition per wheel	1.3G
			$< 1$ kg total pyrotechnic composition, no report effect, each whistle (if any) $\leq 5$ g and $\leq 10$ g whistle composition per wheel	1.4G

Type	Includes: / Synonym:	Definition	Specification	Classification
Aerial wheel	Flying Saxon, UFO's, rising crown	Tubes containing propellant charges and sparks- flame- and/ or noise producing pyrotechnic compositions, the tubes being fixed to a supporting ring	> 200 g total pyrotechnic composition or > 60 g pyrotechnic composition per driver, ≤ 3% flash composition as report effects, each whistle (if any) ≤ 25 g and ≤ 50 g whistle composition per wheel	1.3G
			≤ 200 g total pyrotechnic composition and ≤ 60 g pyrotechnic composition per driver, ≤ 3% flash composition as report effects, each whistle (if any) ≤ 5 g and ≤ 10 g whistle composition per wheel	1.4G
Selection pack	Display selection box, display selection pack, garden selection box, indoor selection box; assortment	A pack of more than one type each corresponding to one of the types of fireworks listed in this table	The most hazardous firework type determines the classification	
Firecracker	Celebration cracker, celebration roll, string cracker	Assembly of tubes (paper or cardboard) linked by a pyrotechnic fuse, each tube intended to produce an aural effect	Each tube ≤ 140 mg of flash composition or ≤ 1 g black powder	1.4G
Banger	Salute, flash banger, lady cracker	Non-metallic tube containing report composition intended to produce an aural effect	> 2 g flash composition per item	1.1G
			≤ 2 g flash composition per item and ≤ 10 g per inner packaging	1.3G
			≤ 1 g flash composition per item and ≤ 10 g per inner packaging or ≤ 10 g black powder per item	1.4G

## Chapter 2.2

2.2.2.2 Delete “are transported at a pressure not less than 280 kPa at 20°C, or as refrigerated liquids, and which”.

2.2.2.5 Add a new paragraph to read as follows:

“2.2.2.5 Gases of class 2.2, other than refrigerated liquefied gases, are not subject to the provisions of this Code if they are transported at an absolute pressure less than 280 kPa at 20°C.”.

## Chapter 2.3

2.3.1.2 Amend “61°C” to read “60°C”.

2.3.2.5 First indent; amend “61°C” to read “60°C”.

2.3.2.6 In the hazard grouping based on flammability table, amend “61” to read “60”.

## Chapter 2.4

2.4.2.3.1.1.2 Amend to read as follows:

“.2 they are oxidizing substances according to the classification procedure for class 5.1 (see 2.5.2.1.1) except that mixtures of oxidizing substances which contain 5.0% or more of combustible organic substances shall be subjected to the classification procedure defined in Note 3;”.

Add a new NOTE 3 to read as follows:

“NOTE 3: *Mixtures of oxidizing substances meeting the criteria of class 5.1 which contain 5.0% or more of combustible organic substances, which do not meet the criteria, mentioned in .1, .3, .4 or .5 above, shall be subjected to the self-reactive substance classification procedure.*

*A mixture showing the properties of a self-reactive substance, type B to F, shall be classified as a self-reactive substance of class 4.1.*

*A mixture showing the properties of a self-reactive substance, type G, according to the principle of 2.4.2.3.3.2.7 shall be considered for classification as a substance of class 5.1 (see 2.5.2).”.*

2.4.2.3.2.3 Add the following new entry to the table:

UN generic entry	SELF-REACTIVE SUBSTANCE	Concentration (%)	Packing method	Control temperature (°C)	Emergency temperature (°C)	Remarks
3228	ACETONE-PYROGALLOL COPOLYMER 2-DIAZO-1-NAPHTHOL-5-SULPHONATE	100	OP8			

In remark (2) after the table, insert “(Model No.1, see 5.2.2.2.2)” after “risk label”.

2.4.2.3.3.2.2 Insert “(Model No.1, see 5.2.2.2.2)” after “risk label”.

2.4.2.3.3.3 Delete.

2.4.5 In the flowchart on classification of organometallic substances, amend “61°C” to read “60°C”.

## Chapter 2.5

2.5.3.2.4 Amend the following entries in the table as follows:

Number (generic entry)	ORGANIC PEROXIDE	Concentration (%)	Diluent type A (%)	Diluent Type B (%)	Inert solid (%)	Water (%)	Packing Method	Control temperature (°C)	Emergency temperature (°C)	Subsidiary risks and remarks
3101	2,5 DIMETHYL-2,5-DI-( <i>tert</i> -BUTYLPEROXY)-HEXYNE-3	> 86-100					OP5			(3)
3107	POLYETHER POLY- <i>tert</i> -BUTYLPEROXY CARBONATE	≤ 52		≥ 48			OP8			
3115	ISOPROPYL <i>sec</i> -BUTYL PEROXYDICARBONATE + DI- <i>sec</i> -BUTYL PEROXYDICARBONATE + DI-ISOPROPYL PEROXYDICARBONATE	≤ 32 + ≤ 15-18 + ≤ 12-15	≥ 38				OP7	-20	-10	

In Note (8) after the table, replace “< 10.7%” with “≤ to 10.7%”.

In Note (18) after the table, add at the end of the sentence “for concentrations below 80%”.

2.5.3.3.2.2 Insert “(Model No.1, see 5.2.2.2.2)” after “risk label”.

2.5.3.3.3 Delete.

## Chapter 2.6

2.6.2.2.4.1 Amend the table to read as follows:

Packing group	Oral toxicity LD <sub>50</sub> (mg/kg)	Dermal toxicity LD <sub>50</sub> (mg/kg)	Inhalation toxicity by dusts and mists LC <sub>50</sub> (mg/l)
I	≤ 5.0	≤ 50	≤ 0.2
II	> 5.0 and ≤ 50	> 50 and ≤ 200	> 0.2 and ≤ 2.0
III*	> 50 and ≤ 300	> 200 and ≤ 1000	> 2.0 and ≤ 4.0

2.6.2.2.4.7.1 In the explanation of “*f<sub>i</sub>*”, replace “liquid” with “mixture”.

2.6.2.2.4.7.2 Insert “comprising the mixture” after “component substance” and before “using the formula”.

2.6.3.1.3 Amend to read as follows:

“*Cultures* are the result of a process by which pathogens are intentionally propagated. This definition does not include human or animal patient specimens as defined in 2.6.3.1.4.”.

2.6.3.1.4 Add a new 2.6.3.1.4 to read as follows and renumber subsequent paragraphs accordingly:

“2.6.3.1.4 *Patient specimens* are human or animal materials, collected directly from humans or animals, including, but not limited to, excreta, secretions, blood and its components, tissue and tissue fluid swabs, and body parts being transported for purposes such as research, diagnosis, investigational activities, disease treatment and prevention.”.

2.6.3.2.1 Insert “, UN 3291” after “UN 2900”.

2.6.3.2.2.1 In the first sentence, replace “disease to humans or animals” with “disease in otherwise healthy humans or animals”.

In the Table with the indicative examples:

Under UN 2814:

- Replace “Hantaviruses causing hantavirus pulmonary syndrome” with “Hantavirus causing hemorrhagic fever with renal syndrome”.
- Add “(cultures only)” after “Rabies virus”, “Rift Valley fever virus” and “Venezuelan equine encephalitis virus”.

Under UN 2900:

- Delete “African horse sickness virus” and “Bluetongue virus”.
- Insert “Velogenic” before “Newcastle disease virus”.
- Add “(cultures only)” after each micro-organism in the list.

2.6.3.2.2.2 Delete “except that cultures, as defined in 2.6.3.1.3, shall be assigned to UN 2814 or UN 2900 as appropriate”.

In the Note amend the proper shipping name to read: “BIOLOGICAL SUBSTANCE, CATEGORY B”.

2.6.3.2.3 Renumber current 2.6.3.2.3 as 2.6.3.2.3.1 and add a new 2.6.3.2.3 to read as follows:

“2.6.3.2.3 *Exemptions*”.

Insert the following new subparagraphs:

“2.6.3.2.3.2 Substances containing micro-organisms which are non-pathogenic to humans or animals are not subject to the provisions of this Code unless they meet the criteria for inclusion in another class.

2.6.3.2.3.3 Substances in a form that any present pathogens have been neutralized or inactivated such that they no longer pose a health risk are not subject to the provisions of this Code unless they meet the criteria for inclusion in another class.

2.6.3.2.3.4 Environmental samples (including food and water samples) which are not considered to pose a significant risk of infection are not subject to the provisions of this Code unless they meet the criteria for inclusion in another class.”.

2.6.3.2.4 Current 2.6.3.2.4 becomes new 2.6.3.2.3.5. Amend the beginning of the paragraph to read as follows: “Dried blood spots, collected by applying a drop of blood onto absorbent material, or faecal occult blood screening tests and blood or blood components...”.

Current 2.6.3.2.5 Delete.

2.6.3.2.3.6 Add a new paragraph to read as follows:

“2.6.3.2.3.6 Human or animal specimens for which there is minimal likelihood that pathogens are present are not subject to the provisions of this Code if the specimen is transported in a packaging which will prevent any leakage and which is marked with the words “Exempt human specimen” or “Exempt animal specimen”, as appropriate. The packaging should meet the following conditions:

- (a) The packaging should consist of three components:
  - (i) a leak-proof primary receptacle(s);
  - (ii) a leak-proof secondary packaging; and

- (iii) an outer packaging of adequate strength for its capacity, mass and intended use, and with at least one surface having minimum dimensions of 100 mm x 100 mm;
- (b) For liquids, absorbent material in sufficient quantity to absorb the entire contents should be placed between the primary receptacle(s) and the secondary packaging so that, during transport, any release or leak of a liquid substance will not reach the outer packaging and will not compromise the integrity of the cushioning material;
- (c) When multiple fragile primary receptacles are placed in a single secondary packaging, they should be either individually wrapped or separated to prevent contact between them.

***NOTE:** An element of professional judgment is required to determine if a substance is exempt under this paragraph. That judgment should be based on the known medical history, symptoms and individual circumstances of the source, human or animal, and endemic local conditions. Examples of specimens which may be transported under this paragraph include the blood or urine tests to monitor cholesterol levels, blood glucose levels, hormone levels, or prostate specific antibodies (PSA); those required to monitor organ function such as heart, liver or kidney function for humans or animals with non-infectious diseases, or therapeutic drug monitoring; those conducted for insurance or employment purposes and are intended to determine the presence of drugs or alcohol; pregnancy test; biopsies to detect cancer; and antibody detection in humans or animals.”*

2.6.3.5.1 Delete “or containing Category B infectious substances in cultures” in the first sentence and “, other than in cultures,” in the last sentence.

2.6.3.6 Add the following new title:

**“2.6.3.6 *Infected animals*”**

2.6.3.6.1 Current 2.6.3.2.6 becomes new 2.6.3.6.1. In new 2.6.3.6.1 add the following new first sentence: “Unless an infectious substance cannot be consigned by any other means, live animals shall not be used to consign such a substance.”.

2.6.3.6.2 Add a new 2.6.3.6.2 to read as follows:

“2.6.3.6.2 Animal carcasses affected by pathogens of category A or which would be assigned to Category A in cultures only, shall be assigned to UN 2814 or UN 2900 as appropriate.

Other animal carcasses affected by pathogens included in Category B shall be transported in accordance with provisions determined by the competent authority.”.

## Chapter 2.7

- 2.7.1.2 (e) Replace “the values specified in 2.7.7.2.” with “the values specified in 2.7.7.2.1 (b), or calculated in accordance with 2.7.7.2.2 to 2.7.7.2.6.”.
- 2.7.1.2 (f) Replace “defined” with “set out in the definition for ‘contamination’ ”.
- 2.7.2 In the definition of “*Multilateral approval*”, amend the first sentence to read as follows:
- Multilateral approval* means approval by the relevant competent authority of the country of origin of the design or shipment, as applicable and also, where the consignment is to be transported through or into any other country, approval by the competent authority of that country.”.
- In the definition of “*Freight container in the case of radioactive material transport*”, amend the end of the first sentence and the beginning of the current second sentence to read as follows: “...transport without intermediate reloading which is of a permanent enclosed character, ...”.
- In the definition of “*Specific activity of a radionuclide*”, delete: “or volume”.
- In the definition of “Natural Uranium” (under “Uranium-natural, depleted, enriched”) replace “chemically separated uranium” with “uranium (which may be chemically separated)”.
- 2.7.3.2 (a)(ii) Amend to read: “Natural uranium, depleted uranium, natural thorium or their compounds or mixtures, providing they are unirradiated and in solid or liquid form;”.
- 2.7.4.6 (a) Amend to read:
- “(a) The tests prescribed in 2.7.4.5 (a) and 2.7.4.5 (b) provided the mass of the special form radioactive material
- (i) is less than 200 g and they are alternatively subjected to the class 4 impact test prescribed in ISO 2919:1990 “Radiation protection - Sealed radioactive sources - General requirements and classification”; or
  - (ii) is less than 500 g and they are alternatively subjected to the class 5 impact test prescribed in ISO 2919:1990: “Sealed Radioactive Sources – Classification”; and”.
- 2.7.7.1.7 Amend the beginning of the first sentence to read: “Unless excepted by 6.4.11.2, packages containing...”.

2.7.7.1.8 Amend to read as follows:

“Packages containing uranium hexafluoride shall not contain:

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

2.7.7.2.1 In the table, amend the value in the last column for Te-121m to read “ $1 \times 10^6$ ” instead of “ $1 \times 10^5$ ”.

Amend (a) and (b) after the table as follows:

“(a)  $A_1$  and/or  $A_2$  values for these parent radionuclides include contributions from daughter radionuclides with half-lives less than 10 days, as listed in the following:

Mg-28	Al-28
Ar-42	K-42
Ca-47	Sc-47
Ti-44	Sc-44
Fe-52	Mn-52m
Fe-60	Co-60m
Zn-69m	Zn-69
Ge-68	Ga-68
Rb-83	Kr-83m
Sr-82	Rb-82
Sr-90	Y-90
Sr-91	Y-91m
Sr-92	Y-92
Y-87	Sr-87m
Zr-95	Nb-95m
Zr-97	Nb-97m, Nb-97
Mo-99	Tc-99m
Tc-95m	Tc-95
Tc-96m	Tc-96
Ru-103	Rh-103m
Ru-106	Rh-106
Pd-103	Rh-103m
Ag-108m	Ag-108
Ag-110m	Ag-110
Cd-115	In-115m
In-114m	In-114
Sn-113	In-113m
Sn-121m	Sn-121
Sn-126	Sb-126m
Te-118	Sb-118

Te-127m	Te-127
Te-129m	Te-129
Te-131m	Te-131
Te-132	I-132
I-135	Xe-135m
Xe-122	I-122
Cs-137	Ba-137m
Ba-131	Cs-131
Ba-140	La-140
Ce-144	Pr-144m, Pr-144
Pm-148m	Pm-148
Gd-146	Eu-146
Dy-166	Ho-166
Hf-172	Lu-172
W-178	Ta-178
W-188	Re-188
Re-189	Os-189m
Os-194	Ir-194
Ir-189	Os-189m
Pt-188	Ir-188
Hg-194	Au-194
Hg-195m	Hg-195
Pb-210	Bi-210
Pb-212	Bi-212, Tl-208, Po-212
Bi-210m	Tl-206
Bi-212	Tl-208, Po-212
At-211	Po-211
Rn-222	Po-218, Pb-214, At-218, Bi-214, Po-214
Ra-223	Rn-219, Po-215, Pb-211, Bi-211, Po-211, Tl-207
Ra-224	Rn-220, Po-216, Pb-212, Bi-212, Tl-208, Po-212
Ra-225	Ac-225, Fr-221, At-217, Bi-213, Tl-209, Po-213, Pb-209
Ra-226	Rn-222, Po-218, Pb-214, At-218, Bi-214, Po-214
Ra-228	Ac-228
Ac-225	Fr-221, At-217, Bi-213, Tl-209, Po-213, Pb-209
Ac-227	Fr-223
Th-228	Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Tl-208, Po-212
Th-234	Pa-234m, Pa-234
Pa-230	Ac-226, Th-226, Fr-222, Ra-222, Rn-218, Po-214
U-230	Th-226, Ra-222, Rn-218, Po-214
U-235	Th-231
Pu-241	U-237
Pu-244	U-240, Np-240m
Am-242m	Am-242, Np-238
Am-243	Np-239
Cm-247	Pu-243
Bk-249	Am-245
Cf-253	Cm-249”

(b) Insert “Ag-108m Ag-108” after: “Ru-106 Rh-106”.

Delete: “Ce-134, La-134”; “Rn-220, Po-216”; “Th-226, Ra-222, Rn-218, Po-214”; and “U-240, Np-240m”.

2.7.7.2.2 In the first sentence, delete “competent authority approval, or for international transport,” and amend the beginning of the second sentence to read as follows: “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...”.

In the table:

- Amend the second entry in the first column to read: “Alpha emitting nuclides but no neutron emitters are known to be present”.
- Amend the third entry in the first column to read: “Neutron emitting nuclides are known to be present or no relevant data are available”.

2.7.8.4 (d) and (e) Add at the end: “except under the provisions of 2.7.8.5”.

2.7.8.5 Add a new 2.7.8.5 to read:

“2.7.8.5 In case of international transport of packages requiring competent authority design or shipment approval, for which different approval types apply in the different countries concerned by the shipment, assignment to the category as required in 2.7.8.4 shall be in accordance with the certificate of the country of origin of design.”.

2.7.9.3 (b) In the first sentence, insert “manufactured” after “or” and before “article”.

## **Chapter 2.8**

2.8.2.2 Amend the beginning of the last sentence to read as follows: “Liquids, and solids which may become liquid during transport, which are judged not to cause...”  
*(remainder of the sentence unchanged).*

2.8.2.5.3.2 In the second sentence, amend “SAE 1015” to read “SAE 1020”.

## PART 3

### Chapter 3.1

3.1.2.6.1 Insert “or equal to” after “less than” and before “50°C”.

3.1.4.4 In the acids’ list, amend the proper shipping names of UN 1779, UN 1848, UN 2626 and UN 2823 to read: “Formic acid with more than 85% acid by mass”, “Propionic acid with not less than 10% and 90% by mass”, “Chloric acid, aqueous solution with not more than 10% chloric acid” and “Crotonic acid, solid” respectively.

In the acids’ list, delete the entry for 2253.

In the acids’ list, add the following entries in proper order:

“2353 Butyryl chloride

3412 Formic acid with not less than 10% but not more than 85% acid by mass

3412 Formic acid with not less than 5% but not more than 10% acid by mass

3463 Propionic acid with not less than 90% acid by mass

3472 Crotonic acid, liquid”

In the liquid halogenated hydrocarbons’ list, amend the proper shipping name of UN 1303 to read “Vinylidene chloride, stabilized”.

In the alkalis’ list, amend the proper shipping names of UN 1835, UN 2030, UN 2270, UN 2733, UN 2734 to read “Tetramethylammonium hydroxide solution”, “Hydrazine, aqueous solution with more than 37% hydrazine, by mass”, “Ethylamine, aqueous solution with not less than 50% but not more than 70% ethylamine”, “Amines, flammable, corrosive, n.o.s. or polyamines, flammable, corrosive, n.o.s.” and “Amines, liquid, corrosive, flammable, n.o.s. or polyamines, liquid, corrosive, flammable, n.o.s.” respectively.

### Chapter 3.2

3.2.1 In the explanations for column (7), insert “or article” after “inner packaging” in the first sentence.

In the explanations for column (13), add the following text at the end: “The gases authorized for transport in MEGCs are indicated in the column “MEGC” in Tables 1 and 2 of packing instruction P200 in 4.1.4.1.”.

## **Dangerous Goods List**

- UN 0153 Amend “P112 (a), (b) or (c)” to read “P112 (b) or (c)” in column 8.
- UN 0224 Amend the name in column (2) to read “BARIUM AZIDE, dry or wetted with less than 50% water, by mass”.
- UN 1014 Delete this entry.
- UN 1015 Delete this entry.
- UN 1040 Insert “TP 90” in column (14) and “TP91” in column (12).
- UN 1143 Amend the name in column (2) to read as follows: “CROTONALDEHYDE or CROTONALDEHYDE, STABILIZED” and add “324” in column (6).
- UN 1170 Insert “330” in column (6) and delete “PP2” from column (9).
- UN 1263 Add “TP27”, “TP28” and “TP29” in column (14) for packing groups I, II and III, respectively.
- UN 1268 Delete “TP9” in column (14) for packing groups II and III.
- UN 1295 Insert “See 7.2.1.13.1.2” in column (16).
- UN 1386 In column (8), delete “BP” for PG III.
- UN 1391 Replace “282” with “329” in column (6).
- UN 1463 Add “6.1” before “8” in column (4).
- UN 1569 Replace “T3” and “TP33” with “T10” and “TP2, TP13” in columns (13) and (14) respectively.
- UN 1649 Replace “162” with “329” in column (6) and insert “If flammable: F-E, S-D” in column (15).
- UN 1689 Add “B1” in column (11).
- UN 1733 Replace “1 L” with “1 kg” in column (7) and “P001” with “P002” in column (8).
- UN 1733 Replace “IBC02” with “IBC08” in column (10) and add “B2, B4” in column (11), “T3” in column (13) and “TP33” in column (14). In column (17) delete the first sentence.
- UN 1740 Amend the name in column (2) to read: “HYDROGENDIFLUORIDES, SOLID, N.O.S.”
- UN 1745 Add “TP2 , TP12 and TP13” in column (14).
- UN 1746 Add “TP2 , TP12 and TP13” in column (14).
- UN 1779 Amend the name in column (2), to read as follows: "FORMIC ACID with more than 85% acid by mass" and add "3" in column (4). In column (15) replace “F-A, S-B” with “F-E, S-C”. In column (17), first sentence, insert “flammable” between “colourless” and “liquid”. In column (17), add at the end “Pure FORMIC ACID: flashpoint 42°C c.c.”

- UN 1818 Insert “See 7.2.1.13.1.2” in column (16).
- UN 1848 Amend the name in column (2) to read as follows: “PROPIONIC ACID with not less than 10% and less than 90% acid by mass”.
- UN 1849 Replace “T4” with “-” in column (12).
- UN 1942 Amend the first two sentences in column (16) to read: “Category C. Category A only if the special stowage provisions of 7.1.11.5 are complied with.”
- UN 1950 Add “See SP63” in column (3), “327” and “959” in column (6), “LP02” in column (8) and “PP87” and “L2” in column (9). Insert the following text in column (16):
- “For WASTE AEROSOLS: Category C. Clear of living quarters and away from sources of heat. Segregation as for the appropriate sub-division of class 2.”. In the paragraph for AEROSOLS with a capacity above 1l in column (16), replace “division” with “sub-division”.
- UN 1956 Insert “292” in column (6).
- UN 1979 Delete this entry.
- UN 1980 Delete this entry.
- UN 1981 Delete this entry.
- UN 1987 Insert “330” in column (6).
- UN 1993 Insert “330” in column (6).
- UN 2014 Insert “See 7.2.1.13.1.2” in column (16).
- UN 2015 Replace “T10” with “T9” in column (13) and replace “T9” with “-” in column (12).
- UN 2030 Replace “298” with “329” in column (6). In column (13), replace “T20” with “T10” for packing group I and “T15” with “T7” for packing group II, and in column (14), replace “TP2” with “TP1” for packing group III. Insert “If flammable: F-E, S-C” in column (15).
- UN 2067 Amend the first two sentences in column (16) to read “Category C. Category A only if the special stowage provisions of 7.1.11.5 are complied with.”
- UN 2189 Insert “See 7.2.1.13.1.2” in column (16).
- UN 2211 Amend the text in column (16) to read “Category E. Shaded from radiant heat and protected from sparks and open flame. When stowed under deck, mechanical ventilation shall be in accordance with SOLAS regulation II-2/19 (II-2/54) for flammable liquids with flashpoint below 23°C (c.c). Segregation as for class 3 but “Separated from” class 1 except division 1.4S.”.

- UN 2258 Amend the proper shipping name to read “1, 2-PROPYLENEDIAMINE” in column (2).
- UN 2290 Replace “nitric” by “nitrous” in column (17).
- UN 2308 Replace “B11” with “B20” in column (11).
- UN 2346 Replace “P” with “-” in column (4).
- UN 2600 Delete this entry.
- UN 2662 Delete this entry.
- UN 2687 Replace “P” with “-” in column (4).
- UN 2758 Add “61” in column (6).
- UN 2760 Add “61” in column (6).
- UN 2762 Add “61” in column (6).
- UN 2764 Add “61” in column (6).
- UN 2772 Add “61” in column (6).
- UN 2776 Add “61” in column (6).
- UN 2778 Add “61” in column (6).
- UN 2779 Replace “See above” with “Category A. Clear of living quarters” in column (16) for packing groups II and III.
- UN 2780 Add “61” in column (6).
- UN 2782 Add “61” in column (6).
- UN 2784 Add “61” in column (6).
- UN 2787 Add “61” in column (6).
- UN 2802 Amend the third sentence in column (17) to read “Corrosive to steel.”.
- UN 2814 Insert “BK2 only for animal carcasses” in column (13).
- UN 2823 Amend the name in column (2) to read: “CROTONIC ACID, SOLID”.
- UN 2870 In columns (13) and (14) of the entry ALUMINIUM BOROHYDRIDE, insert “T21” and “TP7, TP33” respectively.
- UN 2870 In columns (13) and (14) of the entry for ALUMINIUM BOROHYDRIDE IN DEVICES delete “T21” and “TP7, TP33” respectively.
- UN 2880 For packing group II: insert “322” in column (6);  
For packing group III: replace “316” with “223”, “313” and “314”;

UN 2900 Insert “only for animal carcasses” after “BK2” in column (13).

UN 2912 Add “325” in column (6).

UN 2915 Add “325” in column (6).

UN 2927 Replace “TP 11” with “T11” in column (13) for packing group II.

UN 2984 Insert “See 7.2.1.13.1.2” in column (16).

UN 3021 Add “61” in column (6).

UN 3024 Add “61” in column (6).

UN 3065 Amend the end of the first paragraph in column (17) to read:

“...may be transported in wooden barrels with a capacity of more than 250 litres and not more than 500 litres meeting the general requirements of 4.1.1, as appropriate, on the following conditions:...”

Replace the word “casks” wherever it appears with “wooden barrels” in column (17).

UN 3066 Add “TP28” and “TP29” in column (14) for packing groups II and III, respectively.

UN 3100 Insert “●” in column (4) for packing group I.

UN 3100 Insert a new entry for packing group II to read “3100” “OXIDIZING SOLID, SELF-HEATING, N.O.S”, “5.1”, “4.2, “●”, “II”, “76, 274”, “None”, “P099”, “-”, “-”, “-”, “-”, “-”, “-”, “F-A, S-Q”, “-”, “-” in columns (1), (2), (3), (4), (5), (6), (7), (8), (9), (10), (11), (12), (13), (14), (15), (16) and (17) respectively.

UN 3101 Add “323” in column (6).

UN 3102 Add “323” in column (6).

UN 3103 Add “323” in column (6).

UN 3104 Add “323” in column (6).

UN 3105 Add “323” in column (6) and insert “See 7.2.1.13.1.2” in column (16).

UN 3106 Add “323” in column (6).

UN 3107 Add “323” in column (6) and insert “See 7.2.1.13.1.2” in column (16).

UN 3108 Add “323” in column (6).

UN 3109 Add “323” in column (6) and insert “See 7.2.1.13.1.2” in column (16).

UN 3110 Add “323” in column (6).

UN 3111 Add “323” in column (6).

- UN 3112 Replace “●” with “-” in column (4) and add “323” in column (6).
- UN 3113 Add “323” in column (6).
- UN 3114 Add “323” in column (6).
- UN 3115 Add “323” in column (6).
- UN 3116 Add “323” in column (6).
- UN 3117 Add “323” in column (6).
- UN 3118 Add “323” in column (6).
- UN 3119 Add “323” in column (6).
- UN 3120 Add “323” in column (6).
- UN 3127 Insert “●” in column (4) for packing groups II and III.
- UN 3130 Add “If under deck, in a mechanically ventilated space.” in column (16) for packing group II.
- UN 3133 Insert “●” in column (4) for packing groups II and III.
- UN 3137 Insert “●” in column (4).
- UN 3149 Insert “See 7.2.1.13.1.2” in column (16).
- UN 3245 Amend the proper shipping name in column (2) to read as follows: “GENETICALLY MODIFIED MICROORGANISMS or GENETICALLY MODIFIED ORGANISMS”.
- UN 3254 Replace “TP33” with “TP 2” in column (14).
- UN 3259 Replace “T3” with “T1” in column (13) for packing group III.
- UN 3291 Insert “BK2” in column (13).
- UN 3314 Amend the text in column (16) to read “Category E. Shaded from radiant heat and protected from sparks and open flame. When stowed under deck, mechanical ventilation shall be in accordance with SOLAS regulation II-2/19 (II-.2/54) for flammable liquids with flashpoint below 23°C (c.c). Segregation as for class 3 but “Separated from” class 1 except division 1.4S.”.
- UN 3321 Add “325” in column (6).
- UN 3322 Add “325” in column (6).
- UN 3324 Add “326” in column (6).
- UN 3325 Add “326” in column (6).

- UN 3327 Add "326" in column (6).
- UN 3346 Add "61" in column (6).
- UN 3350 Add "61" in column (6).
- UN 3359 In column (17), amend the first sentence to read: "A FUMIGATED UNIT is a closed cargo transport unit containing goods or materials that either are or have been fumigated within the unit."
- UN 3359 In column (17), amend the last sentence to read: "A closed cargo transport unit that has been fumigated is not subject to the provisions of this Code if it has been completely ventilated either by opening the doors of the unit or by mechanical ventilation after fumigation and if the date of ventilation is marked on the fumigation warning sign (see also special provision 910)."
- UN 3360 Replace "620" with "360" in the last sentence in column (17).
- UN 3373 Amend the proper shipping name in column (2) to read: "BIOLOGICAL SUBSTANCE, CATEGORY B" and add "T1" and "TP1" in columns (13) and (14), respectively. In column (17) amend existing text to read "Substances which are known or are reasonably expected to contain pathogens, transported in a form that when exposure to it occurs, are not capable of causing permanent disability, life-threatening or fatal disease to humans or animals. Human or animal specimens for which there is minimal likelihood that pathogens are present, are not subject to the provisions of this Code (see 2.6.3.2.3.6). Other exemptions are stated in 2.6.3.2.3."
- UN 3375 Amend the existing text in column (17) to read: "Non sensitized emulsions, suspensions and gels consisting primarily of a mixture of ammonium nitrate and fuel, intended to produce a Type E blasting explosive only after further processing prior to use. Substances shall satisfactorily pass Test Series 8 of the United Nations Manual of Tests and Criteria, Part I, Section 18 and be approved by the competent authority."
- UN 3378 Delete "B13" in column (11) for packing group III.
- UN 3424 Delete ", especially lead" after "heavy metals" in second sentence in column (16) for packing group III.
- UN 3435 Delete this entry.
- UN 3457 Add "Segregation as for class 5.1 but "Away from" classes 4.1, 5.1 and 7." in column (16).
- UN 3461 Add "PP31" in column (9).

Add the following new entries in the DGL and the Index as appropriate:

UN No	Name and description	Class or division	Subsidiary risk(s)	Packing group	Special provisions	Limited quantities	Packing		IBC		Portable tanks and bulk containers			EmS	Stowage and segregation	Properties and observations	UN No.
							Instruc-tions	Provi-sions	Instruc-tion	Provi-sions	IMO	UN	Provi-sions				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
3412	FORMIC ACID with not less than 10% but not more than 85% acid by mass	8		II		1 L	P001		IBC02			T7	TP2	F-A, S-B	Category A. Clear of living quarters.	Colourless liquid with a pungent odour. Corrosive to most metals. Causes burns to skin, eyes and mucous membranes.	3412
	FORMIC ACID with not less than 5% but less than 10% acid by mass	8		III		5 L	P001 LP01		IBC03			T4	TP1	F-A, S-B	Category A. Clear of living quarters.	See entry above.	3412
3463	PROPIONIC ACID with not less than 90% acid by mass	8	3	II		1 L	P001		IBC02			T7	TP2	F-E, S-C	Category A.	Colourless flammable liquid with a pungent odour. Miscible with water. Corrosive to lead and most other metals. Burns skin. Vapours irritate mucous membranes. Pure PROPIONIC ACID: flashpoint 50°C c.c.	3463

UN No	Name and description	Class or division	Subsidiary risk(s)	Packing group	Special provisions	Limited quantities	Packing		IBC		Portable tanks and bulk containers			EmS	Stowage and segregation	Properties and observations	UN No.
							Instruc-tions	Provi-sions	Instruc-tion	Provi-sions	IMO	UN	Provi-sions				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
3469	PAINT, FLAMMABLE, CORROSIVE (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL, FLAMMABLE, CORROSIVE (including paint thinning or reducing compound)	3	8 •	I	163	NONE	P001					T11	TP2 TP27	F-E, S-C	Category E. Clear of living quarters.	Miscibility with water depends upon the composition. Corrosive contents cause burns to skin, eyes and mucous membranes.	3469
		3	8 •	II	163 944	1 L	P001		IBC02			T7	TP2 TP8 TP28	F-E, S-C	Category B. Clear of living quarters.	See entry above.	3469
		3	8 •	III	163 223 944	5 L	P001		IBC03			T4	TP1 TP29	F-E, S-C	Category A. Clear of living quarters.	See entry above.	3469

UN No	Name and description	Class or division	Subsidiary risk(s)	Packing group	Special provisions	Limited quantities	Packing		IBC		Portable tanks and bulk containers			EmS	Stowage and segregation	Properties and observations	UN No.
							Instruc-tions	Provi-sions	Instruc-tion	Provi-sions	IMO	UN	Provi-sions				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
3470	PAINT, CORROSIVE, FLAMMABLE (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL CORROSIVE, FLAMMABLE (including paint thinning or reducing compound)	8	3 •	II	163 944	1 L	P001		IBC02			T7	TP2 TP8 TP28	F-E, S-C	Category B. Clear of living quarters.	Miscibility with water depends upon the composition. Corrosive contents cause burns to skin, eyes and mucous membranes.	3470
3471	HYDROGEN DIFLUORIDES SOLUTION, N.O.S.	8	6.1 •	II	944	1 L	P001		IBC02			T7	TP2	F-A, S-B	Category A. Shade from radiant heat. Clear of living quarters. “Separated from” acids.	When involved in a fire or in contact with acids, evolves hydrogen fluoride, an extremely irritating and corrosive gas. Corrosive to glass, other siliceous materials and most metals. Toxic if swallowed, by skin contact or by inhalation. Causes burns to skin, eyes and mucous membranes.	3471
		8	6.1 •	III	223 944	5 L	P001		IBC03			T4	TP1	F-A, S-B	Category A. Shade from radiant heat. Clear of living quarters. “Separated from” acids.	See entry above.	3471

UN No	Name and description	Class or division	Subsidiary risk(s)	Packing group	Special provisions	Limited quantities	Packing		IBC		Portable tanks and bulk containers			EmS	Stowage and segregation	Properties and observations	UN No.
							Instructions	Provisions	Instruction	Provisions	IMO	UN	Provisions				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
3472	CROTONIC ACID, LIQUID	8		III		5 L	P001 LP01		IBC03			T4	TP1	F-A, S-B	Category A. Keep as cool as reasonably practicable.	Causes burns to skin, eyes and mucous membranes.	3472
3473	FUEL CELL CARTRIDGES containing flammable liquids	3			328	1 L	P003	PP88						F-E, S-D	Category A.	Fuel cell cartridges containing flammable liquids including methanol or methanol/water solutions.	3473

### Chapter 3.3

3.3.1 **SP133** Insert “(Model No.1, see 5.2.2.2.2)” after “risk label”.

**SP162** Delete.

**SP181** Insert “(Model No.1, see 5.2.2.2.2)” after “risk label”.

**SP204** Insert “(Model No.8, see 5.2.2.2.2)” after “risk label”.

**SP215** In the last sentence, amend “azocarbonamide” to read “azodicarbonamide”.

**SP216** In the last sentence, insert “and articles” before “containing” and amend the end to read: “... free liquid in the packet or article.”.

**SP247** Amend the end of the first paragraph to read:

“... may be transported in wooden barrels with a capacity of more than 250 litres and not more than 500 litres meeting the general requirements of 4.1.1, as appropriate, on the following conditions:...”.

In subparagraph .5, add at the end “or regulation II-2/54 of SOLAS 74, as amended by the resolutions indicated in II-2/1.2.1, as applicable”.

Replace the word “casks” wherever it appears with “wooden barrels” in the special provision.

**SP251** In the first sentence, add “for example” before “for medical,” add “or repair” before “purposes”. Replace “or” between “analytical” and “testing” with “;”.

**SP282** Delete.

**SP289** Amend as follows:

Replace “vehicles” and “vehicle” with “conveyances” and “conveyance”, respectively.

**SP292** Amend to read as follows:

“Mixtures containing not more than 23.5% oxygen by volume may be transported under this entry when no other oxidizing gases are present. A class 5.1 subsidiary risk label is not required for any concentrations within this limit.”.

**SP293** Amend to read:

“The following definitions apply to matches:

- (a) Fusee matches are matches the heads of which are prepared with a friction-sensitive igniter composition and a pyrotechnic composition which burns with little or no flame, but with intense heat;

- (b) Safety matches are combined with or attached to the box, book or card that can be ignited by friction only on a prepared surface;
- (c) Strike anywhere matches are matches that can be ignited by friction on a solid surface;
- (d) Wax Vesta matches are matches that can be ignited by friction either on a prepared surface or on a solid surface.”.

**SP297** In the first paragraph, amend “5.4.2.1.9” to read “5.4.2.1.8”.

**SP298** Delete.

**SP299** In paragraph (iii), replace “620” with “360”.

**SP303** Amend to read as follows:

“Receptacles shall be assigned to the class and, if any, subsidiary hazard of the gas or mixture of gases contained therein determined in accordance with the provisions of chapter 2.2.”.

**SP309** Amend to read as follows:

“This entry applies to non sensitized emulsions, suspensions and gels consisting primarily of a mixture of ammonium nitrate and fuel, intended to produce a Type E blasting explosive only after further processing prior to use.

The mixture for emulsions typically has the following composition: 60-85% ammonium nitrate, 5-30% water, 2-8% fuel, 0.5-4% emulsifier agent, 0-10% soluble flame suppressants, and trace additives. Other inorganic nitrate salts may replace part of the ammonium nitrate.

The mixture for suspensions and gels typically has the following composition: 60-85% ammonium nitrate, 0-5% sodium or potassium perchlorate, 0-17% hexamine nitrate or monomethylamine nitrate, 5-30% water, 2-15% fuel, 0.5-4% thickening agent, 0-10% soluble flame suppressants, and trace additives. Other inorganic nitrate salts may replace part of the ammonium nitrate.

Substances shall satisfactorily pass Test Series 8 of the United Nations Manual of Tests and Criteria, Part I, Section 18 and be approved by the competent authority.”.

**SP313** Insert “(Model No.8, see 5.2.2.2.2)” after “risk label”.

**SP316** Delete “or hydrated”.

**SP319** Delete the first sentence.

Add the following new special provisions:

- “306** This entry may only be used for substances that do not exhibit explosive properties of class 1 when tested in accordance to Test Series 1 and 2 of class 1 (see *United Nations Manual of Tests and Criteria*, Part 1)”.
- 322** When transported in non-friable tablet form, these goods are assigned to packing group III.
- 323** The label conforming to the model No.5.2(a) as in 5.2.2.2.2 may be used until 1 January 2011.
- 324** This substance needs to be stabilized when in concentrations of not more than 99%.
- 325** In the case of non-fissile or fissile excepted uranium hexafluoride, the material shall be classified under UN 2978.
- 326** In the case of fissile uranium hexafluoride, the material shall be classified under UN 2977.
- 327** Waste aerosols consigned in accordance with 5.4.1.4.3.3 may be transported under this entry for the purposes of reprocessing or disposal. They need not be protected against inadvertent discharge provided that measures to prevent dangerous build up of pressure and dangerous atmospheres are addressed. Waste aerosols, other than those leaking or severely deformed, shall be packed in accordance with packing instruction P003 and special provision PP87, or packing instruction LP02 and special packing provision L2. Leaking or severely deformed aerosols shall be transported in salvage packagings provided appropriate measures are taken to ensure there is no dangerous build up of pressure. Waste aerosols shall not be transported in closed freight containers.
- 328** This entry applies to fuel cell cartridges containing flammable liquids including methanol or methanol/water solutions. Fuel cell cartridge means a container that stores fuel for discharge into fuel cell powered equipment through a valve(s) that controls the discharge of fuel into such equipment and is free of electric charge generating components. The cartridge shall be designed and constructed to prevent the fuel from leaking during normal conditions of transport.
- This entry applies to fuel cell cartridge design types shown without their packaging to pass an internal pressure test at a pressure of 100 kPa (gauge).
- 329** Where substances have a flashpoint of 60°C or less, the package(s) shall bear a “FLAMMABLE LIQUID” subsidiary risk label (Model No.3, see 5.2.2.2.2) in addition to the hazard label(s) required by this Code.
- 330** Alcohols containing petroleum products (e.g. gasoline) up to 5% shall be transported under the entry UN 1987 ALCOHOLS, N.O.S.
- 909** In the penultimate paragraph of SP 909, delete the words “other than the marine environment” and amend “environments” to read “the environment”.

**910** Amend the first sentence to read:

“A FUMIGATED UNIT is a closed cargo transport unit containing goods or materials that either are or have been fumigated within the unit.”.

**910** Amend paragraph 6 to read:

“A closed cargo transport unit that has been fumigated is not subject to the provisions of this Code if it has been completely ventilated either by opening the doors of the unit or by mechanical ventilation after fumigation and if the date of ventilation is marked on the fumigation warning sign. When the fumigated goods or materials have been unloaded, the fumigation warning sign(s) shall be removed (see also 7.4.3).”

**938** Delete.

**959** Add new SP959 to read:

“959 Waste aerosols authorized for transport under special provision 327 shall only be transported on short international voyages. Long international voyages are authorized only with the approval of the competent authority. Packagings shall be marked and labelled and cargo transport units shall be marked and placarded for appropriate sub-division of class 2 and, if applicable, the subsidiary risk(s).”.

### **Chapter 3.4**

3.4.1 Insert a new sentence before the last sentence to read as follows:

“The provisions of chapter 1.4 do not apply to the transport of dangerous goods packed in limited quantities.”.

Amend the beginning of the last sentence to read:

“All other provisions ....”.

3.4.2.1 In the first sentence amend “packaged” to read “packed”.

3.4.2.1 Insert a new second sentence to read: “However, the use of inner packagings is not necessary for the transport of articles such as aerosols or “receptacles, small, containing gas”.”

Amend 3.4.4.1 to read:

“3.4.4.1 Different dangerous substances in limited quantities may be packed in the same outer packaging, provided:

- .1 the substances comply with the provisions of 7.2.1.11; and
- .2 the segregation provisions of chapter 7.2, including the provisions in column (16) of the Dangerous Goods List, are taken into account. However, notwithstanding the individual provisions specified in the Dangerous Goods

List, substances in packing group III within the same class may be packed together subject to compliance with 3.4.4.1.1 of the IMDG Code. The following statement shall be included in the transport document: “Transport in accordance with 3.4.4.1.2 of the IMDG Code” (see 5.4.1.5.2.2).”.

- 3.4.5.2 Amend the first sentence to read “Cargo transport units containing dangerous goods in only limited quantities need not be marked nor placarded according to 5.3.2.0 and 5.3.2.1.
- 3.4.6.2 Delete.
- 3.4.7 Add “\*” after “UN Number” and insert the following footnote “The diamond mark is not required.”.

## PART 4

### Chapter 4.1

Renumber all references to renumbered paragraphs of chapters 6.1, 6.5 and 6.6, as appropriate.

4.1.1 In the Note, insert “only” after “6.2 and 7” and replace “P621” with “P620, P621, P650”.

4.1.1.5 Insert the following new second sentence:

“Inner packagings containing liquids shall be packaged with their closures upward and placed within outer packagings consistent with the orientation markings prescribed in 5.2.1.7 of this Code.”.

4.1.1.5.1 Insert a new paragraph 4.1.1.5.1 with the same text as in existing 6.1.5.1.6 with the insertion of the words “or a large packaging” after “combination packaging” and the words “or large packaging” after “outer packaging” in the first sentence. Renumber the current 4.1.1.5.1 and 4.1.1.5.2 as 4.1.1.5.2 and 4.1.1.5.3 respectively.

4.1.1.7.2 Replace “shall” with “should” at the end of the paragraph.

4.1.1.8 Amend to read as follows:

“4.1.1.8 Where pressure may develop in a package by the emission of gas from the contents (as a result of temperature increase or other causes), the packaging or IBC may be fitted with a vent provided that the gas emitted will not cause danger on account of its toxicity, its flammability, the quantity released, etc.

A venting device shall be fitted if dangerous overpressure may develop due to normal decomposition of substances. The vent shall be so designed that, when the packaging or IBC is in the attitude in which it is intended to be transported, leakages of liquid and the penetration of foreign substances are prevented under normal conditions of transport.

4.1.1.8.1 Liquids may only be filled into inner packagings which have an appropriate resistance to internal pressure that may be developed under normal conditions of transport.”.

4.1.1.12 In the first sentence, replace “, including IBCs,” with “as specified in chapter 6.1” and delete “, or 6.5.4.7 for the various types of IBCs”.

Delete .3.

In the last paragraph, delete “, or IBC,” in the first sentence and “or IBC” in the second sentence.

4.1.1.17.5 Replace “6.1.5.8” with “6.1.5.7”.

4.1.1.17.6 Add a new paragraph to read as follows:

“4.1.1.17.6 Appropriate measures shall be taken to ensure there is no dangerous build up of pressure.”.

4.1.2.1 Replace “61°C” with “60°C”.

4.1.2.2 Replace the first sentence with the following paragraph:

“Every metal, rigid plastics and composite IBC, shall be inspected and tested, as relevant, in accordance with 6.5.1.6.4 or 6.5.1.6.5:

- (a) before it is put into service;
- (b) thereafter at intervals not exceeding two and a half and five years, as appropriate;
- (c) after the repair or remanufacture, before it is re-used for transport.”

Amend the second sentence to read “An IBC shall not be filled and offered for transport after the date of expiry of the last periodic test or inspection.”.

4.1.3.6 Amend to read as follows:

“4.1.3.6 Pressure receptacles for liquids and solids

4.1.3.6.1 Unless otherwise indicated in this Code, pressure receptacles conforming to:

- a) the applicable requirements of chapter 6.2; or
- b) the National or International standards on the design, construction, testing, manufacturing and inspection, as applied by the country in which the pressure receptacles are manufactured, provided that the provisions of 4.1.3.6 and 6.2.3.3 are met,

are authorized for the transport of any liquid or solid substance other than explosives, thermally unstable substances, organic peroxides, self-reactive substances, substances where significant pressure may develop by evolution of chemical reaction and radioactive material (unless permitted in 4.1.9).

This sub-section is not applicable to the substances mentioned in 4.1.4.1, packing instruction P200, table 3.

4.1.3.6.2 Every design type of pressure receptacle shall be approved by the competent authority of the country of manufacture or as indicated in chapter 6.2.

4.1.3.6.3 Unless otherwise indicated, pressure receptacles having a minimum test pressure of 0.6 MPa shall be used.

4.1.3.6.4 Unless otherwise indicated, pressures receptacles may be provided with an emergency pressure relief device designed to avoid bursting in case of overfill or fire accidents.

Pressure receptacle valves shall be designed and constructed in such a way that they are inherently able to withstand damage without release of the contents or shall be protected from damage which could cause inadvertent release of the contents of the pressure receptacle, by one of the methods as given in 4.1.6.1.8 (.1) to (.5).

4.1.3.6.5 The level of filling shall not exceed 95% of the capacity of the pressure receptacle at 50°C. Sufficient ullage (outage) shall be left to ensure that the pressure receptacle will not be liquid full at a temperature of 55°C.

4.1.3.6.6 Unless otherwise indicated pressure receptacles shall be subjected to a periodic inspection and test every 5 years. The periodic inspection shall include an external examination, an internal examination or alternative method as approved by the competent authority, a pressure test or equivalent effective non-destructive testing with the agreement of the competent authority including an inspection of all accessories (e.g., tightness of valves, emergency relief valves of fusible elements). Pressure receptacles shall not be filled after they become due for periodic inspection and test but may be transported after the expiry of the time limit. Pressure receptacle repairs shall meet the requirements of 4.1.6.1.11.

4.1.3.6.7 Prior to filling, the filler shall perform an inspection of the pressure receptacle and ensure that the pressure receptacle is authorized for the substances to be transported and that the provisions of this Code have been met. Shut-off valves shall be closed after filling and remain closed during transport. The consignor shall verify that the closures and equipment are not leaking.

4.1.3.6.8 Refillable pressure receptacles shall not be filled with a substance different from that previously contained unless the necessary operations for change of service have been performed.

4.1.3.6.9 Marking of pressure receptacles for liquids and solids according to 4.1.3.6 (not conforming to the requirements of chapter 6.2) shall be in accordance with the requirements of the competent authority of the country of manufacturing.”.

4.1.4.1 **P001** Insert a new row after “Composite packagings” to read as follows:

“Pressure receptacles may be used provided that the general provisions of 4.1.3.6 are met.”.

Add “or” at the end of special packing provision PP1(a).

Amend special packing provision PP2, to read as follows:

“**PP2** For UN 3065, wooden barrels with a maximum capacity of 250 litres and which do not meet the provisions of chapter 6.1 may be used.”.

**P002** Insert a new row after “Composite packagings” to read as follows:

“Pressure receptacles may be used provided that the general provisions of 4.1.3.6 are met.”.

In special packing provision **PP37**, amend the second sentence to read as follows:

“All bags of any type shall be transported in closed cargo transport units or be placed in closed rigid overpacks.”.

**P003** Add the following new special packing provisions PP87 and PP88:

“**PP87** For UN 1950 waste aerosols transported in accordance with special provision 327, the packagings shall have a means of retaining any free liquid that might escape during transport, e.g. absorbent material. The packaging shall be adequately ventilated to prevent the creation of flammable atmosphere and the build-up of pressure.

**PP88** For UN 3473 when fuel cell cartridges are packed with equipment, they shall be packed in inner packagings or placed in the outer packaging with cushioning material so that the cartridges are protected against damage that may be caused by the movement or placement of the equipment and the cartridges within the outer packaging.”.

**P112(b)** Delete “and UN 0223” in special packing provision PP47.

**P200** In paragraph (3)(b), in the sentence preceding the first equation, replace “gases for which data are not provided in the table” with “gases and gas mixtures for which relevant data are not available”.

In paragraph (3)(c), in the sentence before the equation, replace “gases for which filling data are not provided in the table” with “gases and gas mixtures for which relevant data are not available”.

In paragraph (4), amend special provisions “k”, “l”, “n” and “z” as follows:

Special provision “k”: Replace lines 4 to 8 with the following text:

“Bundles containing UN 1045 Fluorine, compressed, may be constructed with isolation valves on assemblies (groups) of cylinders not exceeding 150 litres total water capacity instead of isolation valves on every cylinder.

Cylinders and individual cylinders in a bundle shall have a test pressure greater than or equal to 200 bar and a minimum wall thickness of 3.5 mm for aluminium alloy or 2 mm for steel. Individual cylinders not complying with this requirement shall be transported in a rigid outer packaging that will adequately protect the cylinder and its fittings and meeting the packing group I performance level. Pressure drums shall have a minimum wall thickness as specified by the competent authority.”.

Special provision “l”: In the last sentence, replace “total quantity” with “maximum net mass”.

Special provision “n”: Amend to read as follows:

“Individual cylinders and assemblies of cylinders within a bundle shall contain not more than 5 kg of UN 1045 Fluorine compressed. Bundles containing UN 1045 Fluorine, compressed, may be divided in assemblies (groups) of cylinders not exceeding 150 litres total water capacity.”.

Special provision “p”: Amend “porous mass” to read “porous material”.

Special provision “z”: Amend the third paragraph to read as follows:

“Toxic substances with an LC<sub>50</sub> less than or equal to 200 ml/m<sup>3</sup> shall not be transported in tubes, pressure drums or MEGCs and shall meet the requirements of special packing provision “k”. However, UN 1975 Nitric oxide and dinitrogen tetroxide mixture may be transported in pressure drums.”.

In Tables 1 and 2, delete the entries for the following UN Nos.: 1014, 1015, 1979, 1980, 1981 and 2600.

In Table 1, in the heading of column 13 and in the footnote, replace “Working pressure” with “Maximum working pressure”.

In Table 2:

- For UN Nos. 2192 and 2199, add “q” (twice for UN No. 2199) in the column under the heading “Special packing provisions”.
- For UN 2451, delete “300” and “0.75” in the columns for “Test pressure” and “Filling ratio”, respectively.

In Table 3: add a cross in the column “Pressure drums” for UN Nos. 1745, 1746 and 2495.

**P400 (1)** Amend to read as follows:

“Pressure receptacles may be used provided that the general provisions of 4.1.3.6 are met. They shall be made of steel and shall be subjected to an initial test and periodic tests every 10 years at a pressure of not less than 1MPa (10 bar, gauge pressure). During carriage, the liquid shall be under a layer of inert gas with a gauge pressure of not less than 20 kPa (0.2 bar).”.

**P401 (1) and P402 (1)** Amend to read as follows:

“Pressure receptacles may be used provided that the general provisions of 4.1.3.6 are met. They shall be made of steel and subjected to an initial test and periodic tests every 10 years at a pressure of not less than 0.6MPa (6 bar, gauge pressure). During carriage, the liquid shall be under a layer of inert gas with a gauge pressure of not less than 20 kPa (0.2 bar).”.

**P403, P404 and P410** Insert a new row after “Composite packagings” to read as follows:

“Pressure receptacles may be used provided that the general provisions of 4.1.3.6 are met.”.

**P404** In the second row, delete UN numbers “3052, 3203, 3392, 3394, 3395, 3396, 3397, 3398, 3399 and 3400” and add UN number “3461”.

Delete UN numbers “3052 and 3203” and add UN number “3461” in special packing provision PP31.

**P520** Under “Additional provisions” in “4”, insert “(Model No.1, see 5.2.2.2.2)” after “risk label”.

**P601 and P602** Amend paragraph (1) to read as follows:

“(1) Combination packagings with a maximum gross mass of 15 kg, consisting of:

- one or more glass inner packaging(s) with a maximum quantity of 1 litre each and filled to not more than 90% of their capacity; the closure(s) of which shall be physically held in place by any means capable of preventing back-off or loosening by impact or vibration during transport, individually placed in;
- metal receptacles together with cushioning and absorbent material sufficient to absorb the entire contents of the glass inner packaging(s), further packed in;
- 1A2, 1B2, 1N2, 1H2, 1D, 1G, 4A, 4B, 4C1, 4C2, 4D, 4F, 4G or 4H2 outer packagings.”.

Amend paragraph (4) to read as follows:

“(4) Pressure receptacles may be used provided that the general provisions of 4.1.3.6 are met. They shall be subjected to an initial test and periodic tests every 10 years at a pressure of not less than 1MPa (10 bar) (gauge pressure). Pressure receptacles may not be equipped with any pressure relief device. Each pressure receptacle containing a toxic by inhalation liquid with an LC<sub>50</sub> less than or equal to 200 ml/m<sup>3</sup> (ppm) shall be closed with a plug or valve conforming to the following:

- (a) Each plug or valve shall have a taper-threaded connection directly to the pressure receptacle and be capable of withstanding the test pressure of the pressure receptacle without damage or leakage;
- (b) Each valve shall be of the packless type with non-perforated diaphragm, except that, for corrosive materials, a valve may be of the packed type with an assembly made gas-tight by means of a seal cap with gasket joint attached to the valve body or the pressure receptacle to prevent loss of material through or past the packing;

- (c) Each valve outlet shall be sealed by a threaded cap or threaded solid plug and inert gasket material;
- (d) The materials of construction for the pressure receptacle, valves, plugs, outlet caps, luting and gaskets shall be compatible with each other and with the lading.

Each pressure receptacle with a wall thickness at any point of less than 2.0 mm and each pressure receptacle that does not have fitted valve protection shall be transported in an outer packaging. Pressure receptacles shall not be manifolded or interconnected.”.

**P650** Amend paragraph (2) to read as follows:

“(2) The packaging shall consist of at least three components:

- (a) a primary receptacle;
- (b) a secondary packaging; and
- (c) a outer packaging;

of which either the secondary or the outer packaging shall be rigid.”

In paragraph (4):

Amend the second sentence to read as follows: “The mark shall be in the form of a square set at an angle of 45° (diamond-shaped) with each side having a length of at least 50 mm, the width of the line shall be at least 2 mm and the letters and numbers shall be at least 6 mm high.”.

Add the following new third sentence: “The proper shipping name “BIOLOGICAL SUBSTANCE, CATEGORY B” in letters at least 6 mm high shall be marked on the outer package adjacent to the diamond-shaped mark.”.

Insert a new paragraph (5) to read as follows and renumber subsequent paragraphs accordingly:

“(5) At least one surface of the outer packaging shall have a minimum dimension of 100 mm × 100 mm.”.

Amend current paragraph (5) (renumbered (6)) to read as follows:

“(6) The completed package shall be capable of successfully passing the drop test in 6.3.2.5 as specified in 6.3.2.2 to 6.3.2.4 of this Code at a height of 1.2 m. Following the appropriate drop sequence, there shall be no leakage from the primary receptacle(s) which shall remain protected by absorbent material, when required, in the secondary packaging.”.

In (7) (renumbered (8)), add a new subparagraph (d) to read as follows:

- “(d) If there is any doubt as to whether or not residual liquid may be present in the primary receptacle during transport then a packaging suitable for liquids, including absorbent materials, shall be used.”.

In the last sentence of paragraph (8) (a) (renumbered (9) (a)), insert “the package (the outer packaging or the overpack)” after “packagings and” and before “shall be marked”.

Insert a new paragraph (10) to read as follows and renumber subsequent paragraphs accordingly:

- “(10) When packages are placed in an overpack, the package markings required by this packing instruction shall either be clearly visible or be reproduced on the outside of the overpack.”.

Add a new paragraph (13) to read as follows:

- “(13) Other dangerous goods shall not be packed in the same packaging as class 6.2 infectious substances unless they are necessary for maintaining the viability, stabilizing or preventing degradation or neutralizing the hazards of the infectious substances. A quantity of 30 ml or less of dangerous goods included in Classes 3, 8 or 9 may be packed in each primary receptacle containing infectious substances. When these small quantities of dangerous goods are packed with infectious substances in accordance with this packing instruction no other provisions of the Code need be met.”.

**P800** Amend paragraph (1) to read as follows:

- “(1) Pressure receptacles may be used provided that the general provisions of 4.1.3.6 are met.”.

**P802** In paragraph (4), delete “Austenitic”.

Amend paragraph (5) to read as follows:

- “(5) Pressure receptacles may be used provided that the general provisions of 4.1.3.6 are met.”.

**P906** In the second row, amend “3452” to read “3432”.

4.1.4.2 **IBC02** Add “,2984” after “2014” in special packing provision B5.

- 4.1.4.3 **LP02** Add a new special packing provision “L2” to read as follows:
- “**L2** For UN 1950 aerosols, the large packaging shall meet the packing group III performance level. Large packagings for waste aerosols transported in accordance with special provision 327 shall have in addition a means of retaining any free liquid that might escape during transport e.g., absorbent material.”.
- 4.1.6.1.2 Amend “porous mass” to read “porous material” (twice).
- 4.1.6.1.8 Delete “for unprotected valves as described in .4,” in the last paragraph.
- 4.1.9.1.3 Amend to read:
- “A package shall not contain any items other than those that are necessary for the use of the radioactive material. The interaction between these items and the package under the conditions of transport applicable to the design, shall not reduce the safety of the package.”.
- 4.1.9.2.2 Amend to read: “For LSA material and SCO which is or contains fissile material the applicable provisions of 6.4.11.1, 7.2.9.4 and 7.2.9.5 shall be met.”.

## Chapter 4.2

- 4.2.0 Amend the title to read:
- “**4.2.0 Transitional provisions**”
- 4.2.0 Number the existing text (including the Notes) under 4.2.0 as 4.2.0.1.
- 4.2.0.2 Add a new 4.2.0.2 to read as follows:
- “4.2.0.2 UN portable tanks and MEGCs constructed according to a design approval certificate which has been issued before 1 January 2008 may continue to be used provided that they are found to meet the applicable periodic inspection and test provisions.”.
- 4.2.1.15 Add a new 4.2.1.15 to read as follows:
- “4.2.1.15 Additional provisions applicable to the transport of class 6.2 substances in portable tanks (Reserved).”.
- Renumber subsequent paragraphs accordingly.
- 4.2.1.18.1 Replace “(10)” with “(13)”.

4.2.5.1.1 Add a note at the end of the paragraph to read as follows:  
  
“**NOTE:** The gases authorized for transport in MEGCs are indicated in the column “MEGC” in Tables 1 and 2 of packing instruction P200 in 4.1.4.1.”.

4.2.5.3 In TP4, replace “4.2.1.15.2” with “4.2.1.16.2”. In TP33 replace “4.2.1.18” with “4.2.1.19”.

In TP5, amend “shall not be exceeded” to read “shall be met”.

Add a new “TP 90” to read: “Tanks with bottom openings may be used on short international voyages.”.

Add a new “TP 91” to read: “Portable tanks with bottom openings may also be used on long international voyages.”.

### Chapter 4.3

4.3.2.4.1 Amend 4.3.2.4.1 to read:

**“4.3.2.4.1 Bulk waste goods of class 6.2 (UN Nos.2814 and 2900 (animal carcasses only))”.**

4.3.2.4.1.2 Replace “UN 2900” with “UN 2814 and 2900”.

4.3.2.4.1.3 Replace “UN 2900” with “UN 2814 and 2900”.

4.3.2.4.2 Add a new paragraph 4.3.2.4.2 to read as follows:

**“4.3.2.4.2 Bulk wastes of class 6.2 (UN 3291)**

- (a) Only closed bulk containers (BK2) shall be permitted;
- (b) Closed bulk containers, and their openings, shall be leakproof by design. These bulk containers shall have non porous interior surfaces and shall be free from cracks or other features that could damage packagings inside, impede disinfection or permit inadvertent release;
- (c) Wastes of UN 3291 shall be contained within the closed bulk container in UN type tested and approved sealed leakproof plastics bags tested for solids of packing group II and marked in accordance with 6.1.3.1. Such plastics bags shall be capable of passing the tests for tear and impact resistance according to ISO 7765-1:1988 “Plastics film and sheeting. Determination of impact resistance by the free-falling dart method. Part 1: Staircase methods” and ISO 6383-2:1983 “Plastics. Film and sheeting. Determination of tear resistance. Part 2: Elmendorf method”. Each bag shall have an impact resistance of at least 165 g and a tear resistance of at least 480 g in both parallel and perpendicular planes with respect to the length of the bag. The maximum net mass of each plastics bag shall be 30 kg;

- (d) Single articles exceeding 30 kg such as soiled mattresses may be transported without the need for a plastics bag when authorized by the competent authority;
- (e) Wastes of UN 3291 which contain liquids shall only be transported in plastics bags containing sufficient absorbent material to absorb the entire amount of liquid without it spilling in the bulk container;
- (f) Wastes of UN 3291 containing sharp objects shall only be transported in UN type tested and approved rigid packagings meeting the provisions of packing instructions P621, IBC620 or LP621.
- (g) Rigid packagings specified in packing instructions P621, IBC620 or LP621 may also be used. They shall be properly secured to prevent damage during normal conditions of transport. Wastes transported in rigid packagings and plastics bags together in the same closed bulk container shall be adequately segregated from each other, e.g., by suitable rigid barriers or dividers, mesh nets or otherwise securing the packagings, such that they prevent damage to the packagings during normal conditions of transport;
- (h) Wastes of UN 3291 in plastics bags shall not be compressed in a closed bulk container in such a way that bags may be rendered no longer leakproof;
- (i) The closed bulk container shall be inspected for leakage or spillage after each journey. If any wastes of UN 3291 have leaked or been spilled in the closed bulk container, it shall not be re-used until after it has been thoroughly cleaned and, if necessary, disinfected or decontaminated with an appropriate agent. No other goods shall be transported together with UN 3291 other than medical or veterinary wastes. Any such other wastes transported in the same closed bulk container shall be inspected for possible contamination.”.

## **PART 5**

### **Chapter 5.1**

- 5.1.2.1 Add at the end of the last sentence “unless markings and labels representatives of all dangerous goods, as required by chapter 5.2, in the overpack are visible.”.
- 5.1.2.3 Add a new paragraph to read as follows:  
“5.1.2.3 Each package bearing package orientation markings as prescribed in 5.2.1.7 of this Code and which is overpacked, placed in a unit load or used as an inner packaging in a large packaging shall be oriented in accordance with such markings.”.
- 5.1.5.1.2.3 Amend to read:  
“For each package requiring competent authority approval, it shall be ensured that all the requirements specified in the approval certificates have been satisfied;”.
- 5.1.5.2.2.3 Amend to read:  
“The shipment of packages containing fissile materials if the sum of the criticality safety indexes of the packages in a single freight container or in a single conveyance exceeds 50. Excluded from this requirement shall be shipments by seagoing vessels, if the sum of the criticality safety indexes does not exceed 50 for any hold, compartment or defined deck area and the distance of 6 m between groups of packages or overpacks as required in table 7.1.8.4.2 is met; and”.
- 5.1.5.2.4.4.5 Insert “symbol” after “SI prefix”.

### **Chapter 5.2**

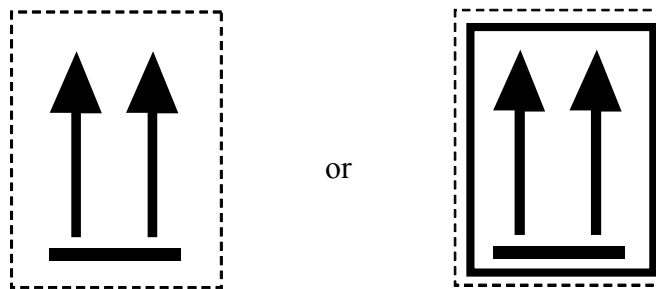
- 5.2.1.4 and 5.2.2.1.7 Add “and large packagings” after “capacity”.
- 5.2.1.5.4.3 Amend the end of the sentence to read as follows: “...origin of design and either the name of the manufacturer or other identification of the packaging specified by the competent authority of the country of origin of design.”.
- 5.2.1.5.8 Add the following new paragraph:  
“5.2.1.5.8 In case of international transport of packages requiring competent authority design or shipment approval, for which different approval types apply in the different countries concerned, marking shall be in accordance with the certificate of the country of origin of the design.”.

5.2.1.7 Add the following new paragraphs:

“5.2.1.7 Except as provided in 5.2.1.7.1:

- combination packagings having inner packagings containing liquid dangerous goods;
- single packagings fitted with vents; and
- open cryogenic receptacles intended for the transport of refrigerated liquefied gases,

shall be legibly marked with package orientation arrows which are similar to the illustration shown below or with those meeting the specifications of ISO 780:1985. The orientation arrows shall appear on two opposite vertical sides of the package with the arrows pointing in the correct upright direction. They shall be rectangular and of a size that is clearly visible commensurate with the size of the package. Depicting a rectangular border around the arrows is optional.



Two black or red arrows on white or suitable contrasting background. The rectangular border is optional

5.2.1.7.1 Orientation arrows are not required on packages containing:

- (a) pressure receptacles;
- (b) dangerous goods in inner packagings of not more than 120 ml which are prepared with sufficient absorbent material between the inner and outer packagings to completely absorb the liquid contents;
- (c) class 6.2 infectious substances in primary receptacles of not more than 50 ml;
- (d) class 7 radioactive material in Type IP-2, IP-3, A, B(U), B(M) or C packages; or
- (e) articles which are leak-tight in all orientations (e.g., alcohol or mercury in thermometers, aerosols, etc.).

5.2.1.7.2 Arrows for purposes other than indicating proper package orientation shall not be displayed on a package marked in accordance with this sub-section.”.

5.2.2.1.2 Amend to read as follows:

“Where articles or substances are specifically listed in the Dangerous Goods List, a danger class label shall be affixed for the hazard shown in column 3. A subsidiary risk label shall also be affixed for any risk indicated by a class or division number in column 4 of the Dangerous Goods List. However, special provisions indicated in column 6 may also require a subsidiary risk label where no subsidiary risk is indicated in column 4 or may exempt from the requirement for a subsidiary risk label where such a risk is indicated in the Dangerous Goods List.”

5.2.2.1.12.2.2 Insert “symbol” after “SI prefix”.

5.2.2.1.12.5 Add the following new paragraph:

“5.2.2.1.12.5 In case of international transport of packages requiring competent authorities design or shipment approval, for which different approval types apply in the different countries concerned, labelling shall be in accordance with the certificate of the country of origin of design.”.

5.2.2.1.13 Delete.

5.2.2.2.1 Add the following note at the end of the existing text:

“**NOTE:** Where appropriate, labels in 5.2.2.2.2 are shown with a dotted outer boundary as provided for in 5.2.2.2.1.1. This is not required when the label is applied on a background of contrasting colour.”.

5.2.2.2.1.1 Add the following sentence at the end: “Labels shall be displayed on a background of contrasting colour, or shall have either a dotted or solid outer boundary line.”.

5.2.2.2.2 In the labels for class 5:

Replace the text under label No. 5.1 with the following:

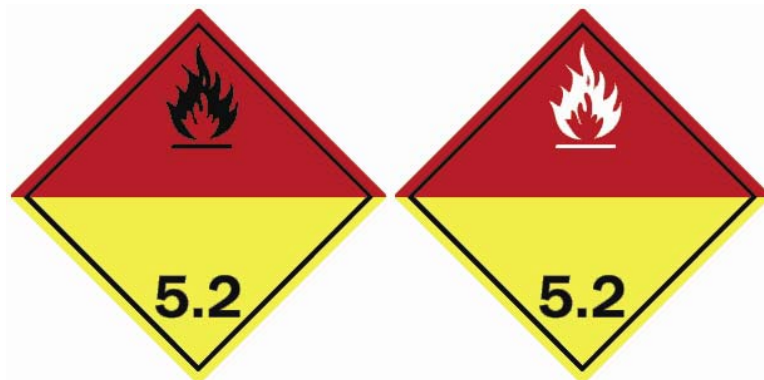
“(No.5.1)  
Class 5.1  
Oxidizing substances  
Symbol (flame over circle): black; Background: yellow  
Figure “5.1” in bottom corner”

Retain the existing label No.5.2 and replace the text below it by

“(No.5.2(a)<sup>\*</sup>)  
Class 5.2  
Organic peroxides  
Symbol (flame over circle): black; Background: yellow  
Figure “5.2” in bottom corner”

and add a footnote to read: “<sup>\*</sup> May be used until 1 January 2011.”.

Add label No.5.2(b) and the text under the label with the following:



“(No.5.2(b))  
Class 5.2  
Organic peroxides  
Symbol (flame): black or white;  
Background: upper half red; lower half yellow;  
Figure “5.2” in bottom corner”.

5.2.2.2.2 In the label for class 8:

Replace the shaded hand with unshaded hand. Add a footnote to read “A class 8 label with a shaded hand may also be used”.

### Chapter 5.3

5.3.1.1.2 Add the following sentence at the end: “Placards shall be displayed on a background of contrasting colour, or shall have either a dotted or solid outer boundary line.”.

5.3.1.1.3 Amend the first sentence to read as follows:

“Placards shall also be displayed for those subsidiary risks for which a subsidiary risk label is required according to 5.2.2.1.2.”

5.3.2.4 Amend the first sentence to read: “Cargo transport units containing dangerous goods in only limited quantities need not be marked nor placarded according to 5.3.2.0 and 5.3.2.1.”

5.3.2.5.2 Amend 5.3.2.5.2 to read:

“5.3.2.5.2 A fumigated unit shall be marked with the warning sign, as specified in .3, affixed in a location where it will be easily seen by persons attempting to enter the interior of the unit. The marking, as required by this paragraph, shall remain on the unit until the following provisions are met:

- .1 the fumigated unit has been ventilated to remove harmful concentrations of fumigant gas; and

.2 the fumigated goods or materials have been unloaded.”.

5.3.2.5.3 Add the following to the fumigation warning sign before the phrase “DO NOT ENTER”:

“VENTILATED ON [ date \* ]”

## Chapter 5.4

5.4.1.4.1 Replace current .2 and .3 with the following:

“.2 The proper shipping name, as determined according to 3.1.2, including the technical name enclosed in parenthesis, as applicable (see 3.1.2.8);

.3 The primary hazard class or, when assigned, the division of the goods, including for Class 1, the compatibility group letter. The words “Class” or “Division” may be included preceding the primary hazard class or division numbers;”.

Insert a new .4 to read as follows:

“.4 Subsidiary hazard class or division number(s) corresponding to the subsidiary risk label(s) required to be applied, when assigned, shall be entered following the primary hazard class or division and shall be enclosed in parenthesis. The words “Class” or “Division” may be included preceding the subsidiary hazard class or division numbers;”.

Current “.4” becomes new “.5”.

5.4.1.4.2 Amend the first paragraph and the examples to read as follows:

“The five elements of the dangerous goods description specified in 5.4.1.4.1 shall be shown in the order listed above (i.e. .1, .2, .3, .4, and .5) with no information interspersed, except as provided in this Code.

5.4.1.4.3.6 Amend “61°C” to read “60°C”.

5.4.1.4.4 Amend to read:

“5.4.1.4.4 Examples of a dangerous goods description:

UN1098 ALLYL ALCOHOL 6.1 (3) I (21°C c.c.)

UN1098, ALLYL ALCOHOL, class 6.1, (class 3), PG I, (21°C c.c.)

UN 1092, Acrolein, stabilized, class 6.1 (3), PG I, (-24°C c.c.) MARINE POLLUTANT

UN 2761, Organochlorine pesticide, solid, toxic (Aldrin 19%), class 6.1, PG III, MARINE POLLUTANT”

- 5.4.1.5.1 In the current last but one sentence, replace “packagings” with “packages” and insert the following sentence before the last sentence: “UN packaging codes may only be used to supplement the description of the kind of package (e.g., one box (4G)).”.
- 5.4.1.5.2 Number the first paragraph as “5.4.1.5.2.1”.
- 5.4.1.5.2.2 Add a new paragraph to read:
- “5.4.1.5.2.2 Where a shipment is offered in accordance with 3.4.4.1.2, the following statement shall be included in the transport document: “Transport in accordance with 3.4.4.1.2 of the IMDG Code.”.
- 5.4.1.5.7.1.3 Insert “symbol” after “SI prefix”.
- 5.4.1.5.7.3 Insert the following new paragraph:
- “5.4.1.5.7.3 In case of international transport of packages requiring competent authorities design or shipment approval, for which different approval types apply in the different countries concerned, the UN number and proper shipping name required in 5.4.1.4.1 shall be in accordance with the certificate of the country of origin of design.”.
- Renumber existing 5.4.1.5.7.3 as 5.4.1.5.7.4.
- 5.4.1.5.11 Amend the heading of 5.4.1.5.11 to read:
- “5.4.1.5.11 Special provisions for segregation”**
- 5.4.1.5.11 Number the first paragraph as “5.4.1.5.11.1” and replace “shown” with “included”.
- 5.4.1.5.11.2 Add a new paragraph to read:
- “5.4.1.5.11.2 When substances are loaded together in a cargo transport unit in accordance with 7.2.1.13.1.2, the following statement shall be included in the transport document: “Transport in accordance with 7.2.1.13.1.2 of the IMDG Code.”.
- 5.4.1.5.11.3 Add a new paragraph to read:
- “5.4.1.5.11.3 When acid and alkali substances of class 8 are transported in the same cargo transport unit, whether in the same packaging or not, in accordance with 7.2.1.13.2, the following statement shall be included in the transport document: “Transport in accordance with 7.2.1.13.2 of the IMDG Code.”.
- 5.4.1.5.12 Replace “shown” with “included”.

## PART 6

### Chapter 6.1

- 6.1.2.5 Under 2., replace “wooden barrel” with “(Reserved)”.
- 6.1.2.7 In the table, replace the text in the row for “Wooden barrels” with “(Reserved)”.
- 6.1.4.6 Amend to read: “6.1.4.6 (Deleted)”.
- 6.1.4.19.1.1 Amend “6.1.4.8.4” and “6.1.4.8.7” to read “6.1.4.8.3” and “6.1.4.8.6”, respectively.
- 6.1.4.19.2.8 Amend “6.1.4.8.3” and “6.1.4.8.7” to read “6.1.4.8.2” and “6.1.4.8.6”, respectively.
- 6.1.5.1.6 Replace current text with the following:  
“6.1.5.1.6 (Reserved)  
  
**NOTE:** *For the conditions for assembling different inner packagings in an outer packaging and permissible variations in inner packagings, see 4.1.1.5.1.”.*
- 6.1.5.2.4 Delete. Renumber next paragraph accordingly.
- 6.1.5.2.5 Amend “6.1.4.8.4” to read “6.1.4.8.3” at the end of the first sentence.
- 6.1.5.3.1 In the table, delete “wooden barrels” under “Packaging”.

### Chapter 6.2

- 6.2.1.3.6.5.4 Amend the footnote to read as follows:  
  
“\* See for example CGA Publications S-1.2-2003 “Pressure Relief Device Standards - Part 2 - Cargo and Portable Tanks for Compressed Gases” and S-1.1-2003 “Pressure Relief Device Standards - Part 1 - Cylinders for Compressed Gases”.”.
- 6.2.1.4.1.10 Amend “porous mass” to read “porous material”.
- 6.2.1.5.1 Amend subparagraph .3 to read as follows:  
  
“.3 Check of the threads if there is evidence of corrosion or if the fittings are removed;”

Amend the end of Note 2 under subparagraph .4 to read as follows:

*“... based on acoustic emission testing, ultrasonic examination or a combination of acoustic emission testing and ultrasonic examination.”.*

6.2.1.5.2 Amend “porous mass” to read “porous material”.

6.2.2.1.1 Insert the following new entry at the end of the table:

ISO 11119-3:2002	Gas cylinders of composite construction - Specification and test methods - Part 3: Fully wrapped fibre reinforced composite gas cylinders with non-load-sharing metallic or non-metallic liners
------------------	---

6.2.2.1.3 In the table, under “For the cylinder shell.”, delete the reference to ISO 7866:1999. Amend “porous mass” to read “porous material”.

6.2.2.1.4 Add a new paragraph to read as follows:

“6.2.2.1.4 The following standard applies for the design, construction and initial inspection and test of UN cryogenic receptacles, except that inspection requirements related to the conformity assessment system and approval shall be in accordance with 6.2.2.5:

ISO 21029-1:2004	Cryogenic vessels – Transportable vacuum insulated vessels of not more than 1000 l volume – Part 1: Design, fabrication, inspection and tests
------------------	---

6.2.2.5.2.1 Amend “6.2.2.6” and “6.2.2.7” to read “6.2.2.7” and “6.2.2.8” respectively at the end of the first paragraph.

6.2.2.5.3.1 In .1, insert “of personnel” after “responsibilities” and delete “, and power of the management”. Delete the “,” and insert “and” between “structure” and “responsibilities”.

In .2, replace “systematic actions” with “procedures”.

Delete the commas before “and” in .3 and .4.

6.2.2.5.4.10 Amend to read as follows:

“6.2.2.5.4.10 Modifications to approved design types

The manufacturer shall either:

- (a) inform the issuing competent authority of modifications to the approved design type, where such modifications do not constitute a new design, as specified in the pressure receptacle standard; or

- (b) request a subsequent design type approval where such modifications constitute a new design according to the relevant pressure receptacle standard. This additional approval shall be given in the form of an amendment to the original design type approval certificate.”.

6.2.2.7.2 In (g) add the following new last sentence at the end of the existing text:

“In the case of pressure receptacles for UN 1001 acetylene, dissolved and UN 3374 acetylene, solvent free, at least one decimal shall be shown after the decimal point and two digits for pressure receptacles of less than 1 kg;”.

In (k) and (l): Insert “, any coating,” after “during filling” and replace “two” with “three” in the first sentence. Insert the following new last sentence at the end of the existing text:

“At least one decimal shall be shown after the decimal point. For pressure receptacles of less than 1 kg, the mass shall be expressed to two significant figures rounded down to the last digit;”.

6.2.2.7.2 (g), Amend “porous mass” to read “porous material”.  
(k) and (l)

6.2.2.7.7 Add the following new paragraph:

“6.2.2.7.7 For acetylene cylinders, with the agreement of the competent authority, the date of the most recent periodic inspection and the stamp of the body performing the periodic inspection and test may be engraved on a ring held on the cylinder by the valve. The ring shall be configured so that it can only be removed by disconnecting the valve from the cylinder.”.

6.2.4 Renumber current paragraphs 6.2.4.1 and 6.2.4.2 as 6.2.4.1.1 and 6.2.4.1.2 respectively and insert a new 6.2.4.1 to read as follows:

**“6.2.4.1 *Small receptacles containing gas (gas cartridges)*”**

Add the following new paragraphs:

**“6.2.4.2 *Aerosol dispensers***

Each filled aerosol dispenser shall be subjected to a test performed in a hot water bath or an approved water bath alternative.

**6.2.4.2.1 *Hot water bath test***

6.2.4.2.1.1 The temperature of the water bath and the duration of the test shall be such that the internal pressure reaches that which would be reached at 55°C (50°C if the liquid phase does not exceed 95% of the capacity of the aerosol dispenser at 50°C). If the contents are sensitive to heat or if the aerosol dispensers are made of plastics material which softens at this test temperature, the temperature of the bath shall be set at between 20°C and 30°C but, in addition, one aerosol dispenser in 2000 shall be tested at the higher temperature.

6.2.4.2.1.2 No leakage or permanent deformation of an aerosol dispenser may occur, except that a plastic aerosol dispenser may be deformed through softening provided that it does not leak.

#### 6.2.4.2.2 *Alternative methods*

With the approval of the competent authority alternative methods which provide an equivalent level of safety may be used provided that the requirements of 6.2.4.2.2.1, 6.2.4.2.2.2 and 6.2.4.2.2.3 are met.

##### 6.2.4.2.2.1 Quality system

Aerosol dispenser fillers and component manufacturers shall have a quality system. The quality system shall implement procedures to ensure that all aerosol dispensers that leak or that are deformed are rejected and not offered for transport.

The quality system shall include:

- (a) a description of the organizational structure and responsibilities;
- (b) the relevant inspection and test, quality control, quality assurance, and process operation instructions that will be used;
- (c) quality records, such as inspection reports, test data, calibration data and certificates;
- (d) management reviews to ensure the effective operation of the quality system;
- (e) a process for control of documents and their revision;
- (f) a means for control of non-conforming aerosol dispensers;
- (g) training programmes and qualification procedures for relevant personnel; and
- (h) procedures to ensure that there is no damage to the final product.

An initial audit and periodic audits shall be conducted to the satisfaction of the competent authority. These audits shall ensure the approved system is and remains adequate and efficient. Any proposed changes to the approved system shall be notified to the competent authority in advance.

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

Every empty aerosol dispenser shall be subjected to a pressure equal to or in excess of the maximum expected in the filled aerosol dispensers at 55°C (50°C if the liquid phase does not exceed 95% of the capacity of the receptacle at 50°C). This shall be at least two-thirds of the design pressure of the aerosol dispenser. If any aerosol dispenser shows evidence of leakage at a rate equal to or greater than  $3.3 \times 10^{-2}$  mbar.l.s<sup>-1</sup> at the test pressure, distortion or other defect, it shall be rejected.

#### 6.2.4.2.2.3 Testing of the aerosol dispensers after filling

Prior to filling, the filler shall ensure that the crimping equipment is set appropriately and the specified propellant is used.

Each filled aerosol dispenser shall be weighed and leak tested. The leak detection equipment shall be sufficiently sensitive to detect at least a leak rate of  $2.0 \times 10^{-3}$  mbar.l.s<sup>-1</sup> at 20°C.

Any filled aerosol dispenser which shows evidence of leakage, deformation or excessive weight shall be rejected.”.

#### 6.2.4.3 Add a new paragraph to read as follows:

“6.2.4.3 With the approval of the competent authority, aerosols and receptacles, small, containing pharmaceutical products and non flammable gases which are required to be sterile, but may be adversely affected by water bath testing, are not subject to 6.2.4.1 and 6.2.4.2 if:

- (a) They are manufactured under the authority of a national health administration and, if required by the competent authority, follow the principles of Good Manufacturing Practice (GMP) established by the World Health Organization (WHO)<sup>2</sup>; and
- (b) An equivalent level of safety is achieved by the manufacturer's use of alternative methods for leak detection and pressure resistance, such as helium detection and water bathing a statistical sample of at least 1 in 2000 from each production batch.”.

### Chapter 6.4

#### 6.4.5.2.2 Amend to read as follows:

“.2 more than a 20% increase in the maximum radiation level at any external surface of the package.”.

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<sup>2</sup> WHO Publication: “Quality assurance of pharmaceuticals. A compendium of guidelines and related materials. Volume 2: Good manufacturing practices and inspection”.

- 6.4.5.4.1.3(ii) Amend to read “more than a 20% increase in the maximum radiation level at any external surface of the package.”.
- 6.4.5.4.2.3 Amend to read “more than a 20% increase in the maximum radiation level at any external surface of the package.”.
- 6.4.5.4.4.3.2 Amend to read “more than a 20% increase in the maximum radiation level at any external surface of the package.”.
- 6.4.5.4.5.2.2 Amend to read “more than a 20% increase in the maximum radiation level at any external surface of the package.”.
- 6.4.7.14(b) Amend to read “more than a 20% increase in the maximum radiation level at any external surface of the package.”.
- 6.4.7.16 In the first sentence, replace “liquids” with “liquid radioactive material”.
- 6.4.8.3 In the first sentence, delete “Except as required in 6.4.3.1 for a package transported by air,” and replace “6.4.8.4,” with “6.4.8.5 and in the absence of insulation,”.
- 6.4.8.4 The text of current 6.4.8.13 becomes new 6.4.8.4, with the following amendments:  
  
In the first sentence, insert “under exclusive use” before “shall not exceed 85°C” and replace “6.4.8.4” with “6.4.8.5”. Delete the second sentence: (“The package shall... exceeds 50°C.”).
- 6.4.8.4 to 6.4.8.12 Renumber as 6.4.8.5 to 6.4.8.13. Amend all cross-references accordingly.
- 6.4.11.2.1 Amend the end of the sentence after the formula to read: “provided that the smallest external dimension of each package is not less than 10 cm and that either:”.
- Amend .3 to read as follows:  
  
“.3 there are not more than 5 g of fissile material in any 10 litre volume of material. Neither beryllium nor deuterium shall be present in quantities exceeding 1% of the applicable consignment mass limits provided in Table 6.4.11.2, except for deuterium in natural concentration in hydrogen.”.
- 6.4.11.7 (b) Amend the first sentence to read as follows: “For packages containing uranium hexafluoride only, with maximum enrichment of 5 mass percent uranium-235:”.
- 6.4.13 Amend “6.4.1” to read “6.4.15”.
- 6.4.20.2 (a) Delete the duplicated words “at the top” in the second sentence.

6.4.22.1 (a) and (b) Amend to read as follows:

- “(a) Each design that meets the provisions of 6.4.6.4 shall require multilateral approval;
- (b) Each design that meets the provisions of 6.4.6.1 to 6.4.6.3 shall require unilateral approval by the competent authority of the country of origin of the design, unless multilateral approval is otherwise required by this Code.”.

6.4.23.3 (a) Replace “the consignment” with “the shipment”.

6.4.23.14 Insert a new paragraph (m) to read as follows:

“(m) A description of the containment system;”  
Renumber current subparagraphs (m) and (n) accordingly.

Under (n), insert a new subparagraph (ii) to read as follows:

“(ii) A description of the confinement system;”  
Renumber current subparagraphs (ii) to (vi) accordingly.

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

“(p) For packages containing more than 0.1 kg of uranium hexafluoride, a statement specifying those prescriptions of 6.4.6.4 that apply if any and any amplifying information which may be useful to other competent authorities.”.  
Renumber current subparagraphs (o) to (u) accordingly.

6.4.23.15 Delete the last sentence.

6.4.24.3 In the first sentence, delete “until 31 December 2003” and insert “the multilateral approval of package design;” before “the mandatory programme of quality assurance”.

Delete the sentence: “After this date use may continue subject, additionally, to multilateral approval of package design.”.

## Chapter 6.5

6.5.1 Amend the title to read “**General requirements**”.

6.5.1.4.3 In the table, in the entry for “HZ Composite with plastics inner receptacle”, second column, insert “inner” after “plastics” (six times).

6.5.1.5 Delete “6.5.1.5 Construction provisions”.

6.5.1.5.9 Delete.

Section 6.5.3 Insert a new section 6.5.3 as follows:

6.5.3 and 6.5.3.1 Insert two new paragraphs to read as follows:

**“6.5.3 Construction requirements**

**6.5.3.1 General requirements”**

6.5.3.1.1 to 6.5.3.1.8: Existing 6.5.1.5.1 to 6.5.1.5.8 become new paragraphs 6.5.3.1.1 to 6.5.3.1.8.

Section 6.5.4 Text of existing 6.5.1.6 with appropriate renumbering of paragraphs, subparagraphs and references to paragraphs numbers, becomes text of new sub-section 6.5.4, as follows:

6.5.4 Heading of existing 6.5.1.6.

6.5.4.1 Text of existing 6.5.1.6.1.

6.5.4.2 Text of existing 6.5.1.6.2 with the following modifications:

Replace “periodic tests” with “periodic inspections and tests” and “6.5.4.14” with “6.5.4.4” respectively.

6.5.4.3 Text of existing 6.5.1.6.3.

6.5.4.4 Text of existing 6.5.1.6.4 with the following modifications:

In the first paragraph, replace “Inspection:” with the heading “Inspection and testing” and add a new NOTE after the heading to read as follows:

*“NOTE: See also 6.5.4.5 for tests and inspections on repaired IBCs.”*

The text beginning with “every metal, rigid plastics...” and subparagraphs .1 and .2 become new 6.5.4.4.1 with the following modifications:

In .1, insert “(including after remanufactured)” after “put into service”.

Insert a new sentence, after the last sentence of subparagraph .2 (“Thermal insulation, ... body of the IBC.”), to read as follows: “Each IBC shall correspond in all respects to its design type.”.

Insert a new paragraph 6.5.4.4.2 as follows:

“6.5.4.4.2 Every metal, rigid plastics and composite IBC for liquids, or for solids which are filled or discharged under pressure, shall undergo a suitable leakproofness test and be capable of meeting the test level indicated in 6.5.6.7.3:

- (a) before it is first used for transport;
- (b) at intervals of not more than two and a half years.

For this test the IBC need not have its closures fitted. The inner receptacle of a composite IBC may be tested without the outer casing, provided the test results are not affected.”.

The last paragraph of existing 6.5.1.6.4 (“A report of each inspection ... requirements in 6.5.2.2.1).”) becomes new 6.5.4.4.3 with the following modifications:

In the first sentence, add “and test” after “each inspection” and “or test” after “next inspection” respectively.

In the second sentence, add “and test” after “inspection” twice.

6.5.4.5 Title of existing 6.5.1.6.6.

6.5.4.5.1 Text of existing 6.5.1.6.5.

6.5.4.5.2 Text of existing 6.5.1.6.6.1. Replace “6.5.4.14.3 and 6.5.1.6.4.1 (a)” with “6.5.4.4”.

6.5.4.5.3 Text of existing 6.5.1.6.6.2.

6.5.4.5.4 Text of existing 6.5.1.6.6.3. Replace “6.5.1.6.6.1” with “6.5.4.5.2”.

6.5.4.5.5 Text of existing 6.5.1.6.7.

Renumber existing sections 6.5.3 and 6.5.4 in 6.5.5 and 6.5.6 respectively, and renumber accordingly subsequent paragraphs and references thereto.

6.5.6.1.3 (current 6.5.4.1.3) Delete.

6.5.6.5.2 (current 6.5.4.5.2) Replace the last sentence of this paragraph with the following text:

“Flexible IBCs shall be filled with a representative material and then shall be loaded to six times their maximum permissible gross mass, the load being evenly distributed.”.

6.5.6.5.5 (b) (current 6.5.4.5.5.2): Add at the end: “and no loss of contents.”.

6.5.6.9.2 (current 6.5.4.9.2) In subparagraph .1, amend the first sentence to read:

“Metal IBCs: the IBC shall be filled to not less than 95% of its maximum capacity for solids or 98% of its maximum capacity for liquids.”.

Amend subparagraph .2 to read as follows: “Flexible IBCs: the IBC shall be filled to the maximum permissible gross mass, the contents being evenly distributed.”.

In subparagraph .3, amend the first sentence to read: “Rigid plastics and composite IBCs: the IBC shall be filled to not less than 95% of its maximum capacity for solids or 98% of its maximum capacity for liquids.”.

In subparagraph .4, insert “maximum” before “capacity” and delete “in accordance with the design type”.

6.5.6.9.4 (current 6.5.4.9.4) Amend to read as follows:

“6.5.6.9.4 *Drop height*

For solids and liquids, if the test is performed with the solid or liquid to be transported or with another substance having essentially the same physical characteristics:

Packing group I	Packing group II	Packing group III
1.8 m	1.2 m	0.8 m

For liquids if the test is performed with water:

(a) Where the substances to be transported have a relative density not exceeding 1.2:

Packing group II	Packing group III
1.2 m	0.8 m

(b) Where the substances to be transported have a relative density exceeding 1.2, the drop heights shall be calculated on the basis of the relative density (d) of the substance to be transported rounded up to the first decimal as follows:

Packing group II	Packing group III
$d \times 1.0$ m	$d \times 0.67$ m

6.5.6.14 to 6.5.6.14.4 (current 6.5.4.14 to 6.5.4.14.4) Delete.

## Chapter 6.6

6.6.5.1.6 Amend to read as follows:

“6.6.5.1.6 (Reserved)

**NOTE:** *For the conditions for assembling different inner packagings in a large packaging and permissible variations in inner packagings, see 4.1.1.5.1.”.*

6.6.5.2.2 Insert a new 6.6.5.2.2 with the same text as existing 6.5.4.1.3, replacing the reference to 6.5.4.9.4 by a reference to 6.6.5.3.4.4 in subparagraph (a).

Renumber accordingly existing 6.6.5.2.2 to 6.6.5.2.3 and references thereto.

6.6.5.3.2.4 and 6.6.5.3.3.5: Amend by replacing the existing text with that of 6.5.4.5.5 (renumbered 6.5.6.5.5) and 6.5.4.6.5 (renumbered 6.5.6.6.5) respectively, but replacing the word “IBCs” by “large packagings”.

## Chapter 6.7

6.7.1.1 In the first sentence, amend “classes 2” to read “classes 1,2,”.

6.7.2.19.1, 6.7.3.15.1

and 6.7.4.14.1 Replace the existing text and list of standards with the following text:

“Portable tanks meeting the definition of container in the International Convention for Safe Containers (CSC), 1972, as amended, shall not be used unless they are successfully qualified by subjecting a representative prototype of each design to the Dynamic, Longitudinal Impact Test prescribed in the United Nations Manual for Tests and Criteria, Part IV, Section 41. This provision only applies to portable tanks which are constructed according to a design approved certificate which has been issued on and after 1 January 2008.”.

6.7.3.8.1.1 In the footnote, replace “CGA S-1.2-1995” and “CGA Pamphlet S-1.2-1995” with “CGA S-1.2-2003 “Pressure Relief Device Standards-Part 2-Cargo and Portable Tanks for Compressed Gases”.”.

6.7.4.7.4 Add the following footnote “See for example CGA Pamphlet S-1.2-2003 “Pressure Relief Device Standards-Part 2-Cargo and Portable Tanks for Compressed Gases.””.

6.7.5.4.1 Replace the first sentence with the following two sentences:

“The elements of MEGCs used for the transport of UN 1013 carbon dioxide and UN 1070 nitrous oxide shall be isolated by a valve into assemblies of not more than 3,000 litres. Each assembly shall be fitted with one or more pressure relief devices.”.

*(Current final sentence remains unchanged).*

6.7.5.5.1 and

6.7.5.5.2 Replace “CGA S-1.2-1995” with “CGA S-1.2-2003 “Pressure Relief Device Standards, Part 2, Cargo and Portable Tanks for Compressed Gases”.”

Replace “CGA S-1.1-1994” with “CGA S-1.1-2003 “Pressure Relief Device Standards, Part 1, Cylinders for Compressed Gases”.”

6.7.5.6.1 Amend to read as follows:

“6.7.5.6.1 Pressure relief devices shall be clearly and permanently marked with the following:

- (a) the manufacturer’s name and relevant catalogue number;
- (b) the set pressure and/or the set temperature;
- (c) the date of the last test.”.

6.7.5.6.2 Delete this paragraph and renumber subsequent paragraph accordingly.

6.7.5.8.1 In the third sentence, replace “and oxidising” with “, pyrophoric and oxidizing”.

6.7.5.12.1 Replace the existing text and list of standards with the following text:

“MEGCs meeting the definition of container in the CSC shall not be used unless they are successfully qualified by subjecting a representative prototype of each design to the Dynamic, Longitudinal Impact Test prescribed in the United Nations Manual for Tests and Criteria, Part IV, Section 41. This provision only applies to MEGCs which are constructed according to a design approved certificate which has been issued on and after 1 January 2008.”.

### **Chapter 6.8**

6.8.3.3.2.1.5 Amend “6.7.4.2.1” to read “6.7.4.2.13”.

## PART 7

### Chapter 7.1

7.1.1.15 Amend “top of side walls ...” to read “top or side walls ...” in the first sentence.

7.1.11.5.1 Amend to read:

“7.1.11.5.1 AMMONIUM NITRATE, UN 1942 and AMMONIUM NITRATE BASED FERTILIZERS, UN 2067 may be stowed under deck in a clean cargo space capable of being opened up in an emergency. The possible need to open hatches in case of fire to provide maximum ventilation and to apply water in an emergency and the consequent risk to the stability of the ship through flooding of cargo space shall be considered before loading.”

### Chapter 7.2

Amend paragraph 7.2.1.13 to read:

**“7.2.1.13 Special provisions for segregation”**

Add new 7.2.1.13.1 to read:

“7.2.1.13.1 No segregation needs to be applied

- .1 between dangerous goods of different classes which comprise the same substance but vary only in their water content, such as sodium sulphide in classes 4.2 and 8 or for class 7 if the difference is due to quantity only;
- .2 between dangerous goods which belong to a group of substances of different classes but for which scientific evidence exists that they do not react dangerously when in contact with each other. Substances within the same table shown below are compatible with one another.

Table 1				
UN No.	Proper Shipping Name	Class	Subsidiary risk(s)	Packin g group
2014	HYDROGEN PEROXIDE, AQUEOUS SOLUTION with not less than 20% but not more than 60% hydrogen peroxide (stabilized as necessary)	5.1	8	II
2984	HYDROGEN PEROXIDE, AQUEOUS SOLUTION with not less than 8% but less than 20% hydrogen peroxide (stabilized as necessary)	5.1		III
3105	ORGANIC PEROXIDE TYPE D, LIQUID (peroxyacetic acid, type D, stabilized)	5.2	8	

Table 1				
UN No.	Proper Shipping Name	Class	Subsidiary risk(s)	Packing group
3107	ORGANIC PEROXIDE TYPE E, LIQUID (peroxyacetic acid, type E, stabilized)	5.2	8	
3109	ORGANIC PEROXIDE TYPE F, LIQUID (peroxyacetic acid, type F, stabilized)	5.2	8	
3149	HYDROGEN PEROXIDE AND PEROXYACETIC ACID, MIXTURE with acid(s), water and not more than 5% peroxyacetic acid, STABILIZED	5.1	8	II

Table 2				
UN No.	Proper Shipping Name	Class	Subsidiary risk(s)	Packing group
1295	TRICHLOROSILANE	4.3	3/8	I
1818	SILICON TETRACHLORIDE	8	-	II
2189	DICHLOROSILANE	2.3	2.1/8	-

7.2.1.13.2 Insert new paragraph 7.2.1.13.2 to read:

“7.2.1.13.2 Notwithstanding the provisions of 7.2.1.7.1 to 7.2.1.7.4, substances of class 8, packing group II or III, that would otherwise be required to be segregated from one another due to the provisions pertaining to segregation groups as identified by an entry in column (16) of the dangerous goods list indicating “Away from” or “Separated from” “acids” or “Away from” or “Separated from” “alkalis”, may be transported in the same cargo transported unit, whether in the same packaging or not, provided:

- .1 the substances comply with the provisions of 7.2.1.11;
- .2 the package does not contain more than 30 litres for liquids or 30 kg for solids;
- .3 the transport document includes the statement required by 5.4.1.5.11.3; and
- .4 a copy of the test report that verifies that the substances do not react dangerously with each other shall be provided if requested by the competent authority.”

7.2.7.2.1.1 Amend “7.2.7.4” to read “7.2.7.2.1.5” in the second sentence.

### Chapter 7.3

- 7.3.2.1 Replace “61°C” with “60°C”.

### Chapter 7.4

- 7.4.2.5.1 Amend 7.4.2.5.1 to read:

“7.4.2.5.1 Unless otherwise specified in this Code, the provisions concerning ventilation that are set out in various places in this Code shall be taken to refer to the space aboard the ship in which cargo transport units are stowed and shall not be interpreted to require ventilation into cargo transport unit.”.

- 7.4.3.2 Add at the end of 7.4.3.2:

“Ventilated containers shall be marked with the date of ventilation on the fumigated warning sign(s). When the fumigated goods or materials have been unloaded, the fumigation warning sign(s) shall be removed.”.

- 7.4.5.13 In the first indent, insert before “and the refrigeration”, “or regulation II-2/54 of SOLAS 74, as amended by the resolutions indicated II-2/1.2.1, as applicable,”.

- 7.4.6.4.2 Add, after “class 1”, “other than division 1.4”.

### Chapter 7.7

- 7.7.6 Insert new 7.7.6 as follows:

**“7.7.6 Special provisions for flammable gases or liquids having a flashpoint below 23°C c.c. transported under temperature control**

7.7.6.1 When flammable gases or liquids having a flashpoint below 23°C c.c. are packed or loaded in a cargo transport unit equipped with a refrigerating or heating system, the cooling or heating equipment shall comply with 7.7.3.

7.7.6.2 When flammable liquids having a flashpoint below 23°C c.c. and not requiring temperature control for safety reasons are transported under temperature control conditions for commercial reasons, explosion-proof electrical fittings are not required, when the substances are pre-cooled to and transported at a control temperature of at least 10°C below the flashpoint. In case of failure of the refrigerating system, the system shall be disconnected from the power supply.”

- 7.7.6 (existing) Renumber as 7.7.7.

- 7.7.7 (existing) Renumber as 7.7.8.

- 7.7.8 (new) Replace “exemption” with “approval”.

## Chapter 7.9

7.9.3 Replace existing 7.9.3 with the following:

**“7.9.3 Contact information for the main designated national competent authorities**

Contact information for the main designated national competent authorities concerned is given in this paragraph\*. Corrections to these addresses should be sent to the Organization\*\*.

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\* Reference is made to MSC.2/Circ.[...], as may be amended, which provides a more comprehensive listing of contact information for competent authorities and bodies.

\*\* International Maritime Organization  
4 Albert Embankment  
London SE1 7SR  
United Kingdom  
Email: [info@imo.org](mailto:info@imo.org)  
Fax: +44 207587 3210

**LIST OF CONTACT INFORMATION FOR THE MAIN DESIGNATED NATIONAL  
COMPETENT AUTHORITY**

<b>Country</b>	<b>Contact information for the main designated national competent authority</b>
<b>ALGERIA</b>	Ministère des Transports/Direction de la Marine Marchande 119 Rue Didouche Mourad Alger ALGÉRIE Telephone: +21326061 46 Telex: 66063 DGAF DZ
<b>ARGENTINA</b>	Prefectura Naval Argentina (Argentine Coast Guard) Dirección de Protección del Medio Ambiente Departamento Mercancías Peligrosas Avda. Eduardo Madero 235 4º piso, Oficina 4.36 y 4.37 Buenos Aires (C1106ACC) REPÚBLICA ARGENTINA Telephone: +54 11 4318 7669 Telefax: +5411 43188669/7474 Telex: 18581 PREFECT AR Email: <a href="mailto:dpmapna@ciudad.com.ar">dpmapna@ciudad.com.ar</a>
<b>AUSTRALIA</b>	<i>Canberra</i> Manager, Ship Inspection Maritime Operations Australian Maritime Safety Authority GPO Box 2181 Canberra ACT 2601 AUSTRALIA Telephone: +61 2 6279 5048 Telefax: +61 2 6279 5058 Email: <a href="mailto:psc@amsa.gov.au">psc@amsa.gov.au</a> Website: <a href="http://www.amsa.gov.au">http://www.amsa.gov.au</a>
<b>BAHAMAS</b>	Bahamas Maritime Authority Second Floor Latham House 16 Minories London, EC3N 1EH UNITED KINGDOM Telephone: +44 (0)20 7264 2550 Telefax: +44 (0)20 7264 2579 Telex: 892617 BAHREG G

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<b>BELGIUM</b>	<p><i>Brussels Office</i>            Federal Public Service Mobility and Transport            Directorate-general Maritime Transport            Aarlenstraat 104            B-1040 Brussels            BELGIUM            Telephone: +32 2 233 1211            Telefax: +32 2 230 3002</p>
<b>BRAZIL</b>	<p>Diretoria de Portos e Costas (DPC-20)            Rua Teófilo Otoni No. 04            Centro            Rio de Janeiro            CEP 20090-070            BRAZIL            Telephone: +55 21 2104 5203            Telefax: +55 21 2104 5202            Email: <a href="mailto:secom@dpc.mar.mil.br">secom@dpc.mar.mil.br</a></p>
<b>BULGARIA</b>	<p><i>Main Office</i>            State Shipping Inspectorate            Ministry of Transport            Levski Str. 9/11            1000 Sofia            BULGARIA            Telephone: +359 2 88 55 29</p>
<b>CANADA</b>	<p>The Chairman            Board of Steamship Inspection            Transport Canada -Marine Safety            Tower C, Place de Ville            330 Sparks Street, 11<sup>th</sup> Floor            Ottawa, Ontario, K1A ON5            CANADA            Telephone: +1 613 991 3132                              +1 613 991 3143                              +1 613 991 3140            Telefax: +1 613 993 8196</p>
<b>CHILE</b>	<p>Dirección General del Territorio Marítimo y de Marina Mercante            Dirección de Seguridad y Operaciones Marítimas            Depto. Prevención de Riesgos            Errázuriz 537            Valparaiso            CHILE            Telephone: +56 32 208256            Telefax: +56 32 208262            Telex: 230602 DGTM CL                      330461 DGTM CK</p>

<b>Country</b>	<b>Contact information for the main designated national competent authority</b>
<b>CHINA</b>	Maritime Safety Administration People's Republic of China 11 Jianguomen Nei Avenue Beijing 100736 CHINA Telephone: +86 10 6529 2588 +86 10 6529 2218 Telefax: +86 10 6529 2245 Telex: 222258 CMSAR CN
<b>CROATIA</b>	Ministry of Maritime Affairs Transport and Communication Marine Safety Division Prisavlje 14 1000 Zagreb REPUBLIC OF CROATIA Telephone: +385 1 611 5966 Telefax: +385 1 611 5968 Email: pomorski-promet@zg.tel.hr
<b>CUBA</b>	Ministerio del Transporte Dirección de Seguridad e Inspección Marítima Boyeros y Tulipán. Plaza Ciudad de la Habana CUBA Telephone: +53 7 816 607 +53 7 819 498 Telefax: +53 7811 514 Email: dsim@transmet.cu
<b>CYPRUS</b>	Department of Merchant Shipping Ministry of Communications and Works Kylinis Street Mesa Geitonia CY-4007 Lemesos P.O. Box 56193 CY-3305 Lemesos CYPRUS Telephone: +357 5 848 100 Telefax: +357 5 848 200 Telex: 2004 MERSHIP CY Email: dms@cytanet.com.cy

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<b>CZECH REPUBLIC</b>	Ministry of Transport of the Czech Republic Navigation and Waterways Division Nábr. L.. Svobody 12 110 15 Praha 1 CZECH REPUBLIC Telephone: +42 2 230 312 25 Telefax: +42 2 248 105 96 Telex: +42 2 12 10 96 Domi C
<b>DENMARK</b>	Danish Maritime Authority P.O. Box 2605 Vermundsgade 38C 2100 Copenhagen Ø DENMARK Telephone: +45 39 17 44 00 Telefax: +45 39 17 44 01 Email: SFS@dma.dk
<b>ECUADOR</b>	Dirección General de la Marine Mercante y del Litoral P.O. Box 7412 Guayaquil ECUADOR Telephone: +593 4 526 760 Telefax: +593 4 324 246 Telex: 04 3325 DIGMER ED
<b>ESTONIA</b>	Estonian Maritime Administration Maritime Safety Division Valge 4 EST-11413 Tallinn ESTONIA Telephone: +372 6205 700/715 Telefax: +372 6205 706 Email: mot@vta.ee
<b>FINLAND</b>	Finnish Maritime Administration P.O. Box 171 00181 Helsinki FINLAND Telephone: +358204484840/4336 Telefax: +358204484500 +358 20 4484336

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<b>FRANCE</b>	MTEM/DGMT / MMD Arche sud 92055 La Défence cedex FRANCE Telephone: +33 (0)1 40 81 86 49 Telefax: +33 (0)1 40 81 10 65 Telex: 250 823 FMIMER Email: olga.lefevre@equipement.gouv.fr
<b>GAMBIA</b>	The Managing Director Gambia Ports Authority Banjul THE GAMBIA Telephone: +220 27266 Telefax: +220 27268 Telex: 2235 GAMPORTS GV
<b>GERMANY</b>	Federal Ministry of Transport, Building and Housing Dangerous Goods Branch Robert-Schuman-Platz 1 D-53175 Bonn GERMANY Telephone: +49 228 3000 or 300- extension +49 228 300 2643 Telefax: +49 228 300 3428 Email: Ref-A33@bmvbw.bund.de
<b>GREECE</b>	Ministry of Mercantile Marine Safety of Navigation Division International Relations Department 150 Gr. Lambraki Av. 185 18 Piraeus GREECE Telephone: +301 4191188 Telefax: +301 4128150 Telex: +212022, 212239 YEN GR Email: dan@yen.gr
<b>ICELAND</b>	Iceland Maritime Administration Verturvör 2 IS-202 Kópavogur ICELAND Telephone: +354 560 0000 Telefax: +354 560 0060 E-mail: skrifstofa@vh.is

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<b>INDIA</b>	<p>The Directorate General of Shipping Jahz Bhawan Walchand Hirachand Marg Bombay 400 001 INDIA Telephone: +91 22 263651 Telex: +DEGESHIP 2813-BOMBAY</p>
<b>INDONESIA</b>	<p>Director of Marine Safety Directorate-General Sea Communication (Department Perhubungan) JI. Merdeka Barat No.8 Jakarta Pusat. INDONESIA Telephone: +381 3269 Telefax: +384 0788</p>
<b>IRAN</b>	<p>Ports and Shipping Organization 751 Enghelab Avenue ~ Tehran IRAN Telephone: +98 21 8809280 to 89 Telefax: +98 21 8804100 Telex: 212271 BNDR-IR</p>
<b>IRELAND</b>	<p>The Chief Surveyor Marine Survey Office Department of the Marine 26/27 Eden Quay Dublin 1 IRELAND Telephone: +353 18744900 / 18722045 +353 18743325 Telefax: +353872 4491 Telex: 33358 MSO EI</p>
<b>ISRAEL</b>	<p>Technical Services Department Shipping and Ports Administration 102 Haatzmout Road Haifa ISRAEL Telephone: +972 4 8535640 Telefax: +972 4 8510185 Telex: 46632 Email: <a href="mailto:mot.dov@mail.netvision.net.il">mot.dov@mail.netvision.net.il</a></p>

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<b>ITALY</b>	Ministero della Marine Mercantile Viale Asia Eur 00144 Roma ITALY Telephone: +39 06 5908 Telex: 612153 MIMERCI
<b>JAMAICA</b>	Testing and Certifying Authority The Bureau of Standards 6 Winchester Road P.O. Box 113 Kingston JAMAICA Telephone: +1 80992631407 Telex: 2291 STAN BUR Jamaica Cable: STANBUREAU
<b>JAPAN</b>	Inspection and Measurement Division Maritime Bureau Ministry of Land, Infrastructure and Transport 2-1-3 Kasumigaseki, Chiyoda-ku Tokyo JAPAN Telephone: +81 3 5253 8639 Telefax: +81 3 5253 1644 Email: MRB_KSK@mlit.go.jp
<b>LATVIA</b>	Maritime Administration of Latvia 5 Trijadibas iela L V-1 048 Riga LATVIA Telephone: +371 70 62 171 +371 70 62 120 +371 70 62 117 Telefax: +371 78 60 082

Country	Contact information for the main designated national competent authority
<b>LIBERIA</b>	<p>Office of the Deputy Commissioner of Maritime Affairs, R.L.            Technical Division            Marine Operations Department            c/o Liberian Services, Inc.            11495 Commerce Park Drive            Reston, Virginia, 22901-1507            USA            Telephone: +1 703 620 4880            Telefax: +1 703 476 8522            Telex: 248403 IRI UR</p> <p>Office of the Commissioner of Maritime Affairs            Bureau of Maritime Affairs, R.L.            Tubman Boulevard            P.O. Box 10-9042            1000 Monrovia 10            LIBERIA            Telephone: +231 224 604 / 908            Telefax: +231 226 069</p>
<b>MALAYSIA</b>	<p>Director            Marine Department, Peninsular Malaysia            P.O. Box 12            42007 Port Kelang            Selangor            MALAYSIA            Telex: MA 39748</p>
<b>MARSHAL ISLANDS</b>	<p>Office of the Maritime Administrator            Maritime Operations Department            Republic of the Marshall Islands            11495 Commerce Park Drive            Reston, Virginia 20191-1507            USA            Telephone: +1 703 620 4880            Telefax: +1 703 476 8522            Telex: 248403 IRI UR            Email: maritime@register-iri.com</p> <p>Captain David J.F. Bruce            c/o International Registries (U.K.) Ltd            Northumbrian House (2nd Floor)            14 Devonshire Square            London, EC2M 4TE            UNITED KINGDOM            Telephone: +44 (0)20 7247 8782            Telefax: +44 (0)20 7247 8771            Telex: (851) 25871 LIBSAF G</p>

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<b>MEXICO</b>	<p>Co-ordinación General de Puertos y Marina Mercante Secretaria de Comunicaciones y Transportes Av. Municipio Libre No. 377, Piso 12, Ala B Col. Santa Cruz Atoyac 03010 México, D.F. MEXICO Telephone: +6044249 +6 04 38 29 Co-ordinador General: Lic. Pedro Pablo Zepeda Bermúdez</p>
<b>MOROCCO</b>	<p>Direction de la Marine Marchande et des Pêches Maritimes Boulevard EI Hansali Casablanca MOROCCO Telephone: +1 2122278092 +12122221931 Telex: 24613 MARIMAR M 22824</p>
<b>NETHERLANDS</b>	<p>Ministry of Transport, Public Works and Water Management Directorate-General of Civil Aviation and Freight Transport Unit Safety Nieuwe Uitleg 1 P. O. Box 20904 2500 EX The Hague THE NETHERLANDS Telephone: +31 70 351 1577 (Ms. Tanja Woeltjes) Telefax : +31 70 351 1479 Email: tanja.woeltjes@minvenw.nl</p>
<b>NEW ZEALAND</b>	<p>Director of Maritime Safety Maritime Safety Authority of New Zealand Level 8 Gen-i Tower P.O. Box 1300 Wellington NEW ZEALAND Telephone: +64 4 473 0111 +644 472 7367 (24 hours) Telefax: +644473 1300</p>
<b>NORWAY</b>	<p>Norwegian Maritime Directorate Stensberggt. 27 P.O. Box 8123 Dep. 0032 Oslo NORWAY Telephone: +47 22 45 45 00 Telefax: +47 22 45 45 01 Email: postmottak@sjofartsdir.no</p>

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<b>PAKISTAN</b>	Mercantile Marine Department 70/4 Timber Hard N.M. Reclamation Keamari, Post Box No. 4534 Karachi 75620 PAKISTAN. Telephone: +9221 2851306 +92212851307 Telefax: +9221 4547472 (24 hours) +9221 4547897 Telex: 29822 DGPS PK (24 hours)
<b>PANAMA</b>	Autoridad Maritima de Panama Edificio 5534, Diablo Heights P.O. Box 8062, Panama 7 República de Panama Telephone: + 507 232 5100/5295 Telefax: + 507 232 5527 Email: <a href="mailto:ampadmon@amp.gob.pa">ampadmon@amp.gob.pa</a> Website: <a href="http://www.amp.gob.pa">www.amp.gob.pa</a>
<b>PAPUA NEW GUINEA</b>	First Assistant Secretary Department of Transport Division of Marine P.O. Box 457 Konedobu PAPUA NEW GUINEA (PNG) Telephone: +675 211866 Telex: 22203
<b>PERU</b>	Dirección General de Capitanías y Guardacostas Marine de Guerra del Perú Constitución 150 Callao PERU Telephone: +51-1-4200162 Telefax: +51-1-4690505 Telex: 26042 PE DICAPI 26069 PE COSCTAL
<b>PHILIPPINES</b>	Philippines Ports Authority Port of Manila Safety Staff P.O. Box 193, Port Area Manila 2803 PHILIPPINES Telephone: +632473441 to 49

<b>Country</b>	<b>Contact information for the main designated national competent authority</b>
<b>POLAND</b>	Ministry of Transport and Maritime Economy Department of Maritime and Inland Waters Administration ul. Chalubińskiego 4/6 00-928 Warsaw POLAND Telephone: +48 22 6 211 448 Telefax: +48 22 6 288 515 Telex: 816651 PKL PL
<b>PORTUGAL</b>	Direcção-Geral de Navegação e dos Transportes Marítimos Praça Luis de Camoes, 22 -2º Dto 1200 Lisboa PORTUGAL Telephone: +351 1 373821 Telefax: +351 1 373826 Telex: 16753 SEMM PO
<b>REPUBLIC OF KOREA</b>	Maritime Safety Policy Division Maritime Safety Management Bureau Ministry of Maritime Affairs and Fisheries 140-2 Gye-dong, Jongro-gu, Seoul, 110-793 REPUBLIC OF KOREA Telephone: +82 2-3674 6312 Telefax: +82 2 3674 6317
<b>RUSSIAN FEDERATION*</b>	Department of Shipping and Navigation Ministry of Transport Rozhdestvenka Street, 1/4 Moscow 103759 RUSSIAN FEDERATION Telephone: +70952283882 Telex: 411197 MORFLOT
<b>SAUDI ARABIA</b>	Port Authority Saudi Arabia Civil Defence Riyadh SAUDI ARABIA Telephone: +966 1 464 9477

\* Except for governmental explosives.

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<b>SLOVENIA</b>	Uprava Republike Siovenije za pomorstvo Ukmarjev trg 2 66 000 Koper SLOVENIA Telephone: +386 66 271 216 Telefax: +386 66 271 447 Telex: +34 235 UP POM SI
<b>SOUTH AFRICA</b>	South African Maritime Safety Authority P.O. Box 13186 Hatfield 0028 Pretoria SOUTH AFRICA Telephone: +27 12 342 3049 Telefax: +27 12 342 3160  South African Maritime Safety Authority Hatfield Gardens, Block E (Ground Floor) Corner Arcadia and Grosvenor Street Hatfield 0083 Pretoria SOUTH AFRICA
<b>SPAIN</b>	Dirección General de la Marina Mercante Subdirección General de Seguridad y Contaminación c/Ruiz de Alarcón, 1 28014 Madrid Telephone: +34 91 597 92 69/70 Telefax: +34 91 59792 87 Email: mercancias.peligrosas@mfom.es pmreal@mfom.es
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<b>UNITED STATES</b>	<p>US Department of Transportation            Pipeline and Hazardous Materials Safety Administration            Office of Hazardous Materials Exemptions and Approvals            400 Seventh Street SW            Washington, D.C. 20590-0001            USA            Telephone: +1 202 366 4511            Telefax: +1 2023663308            Email: infocntr@dot.gov            Website: hazmat.dot.gov</p> <p>United States Coast Guard            Hazardous Materials Standards Division (G-MSO-3)            2100 Second Street SW            Washington, D.C. 20593-0001            USA            Telephone: +1 202267 1577                              +1 2022671217            Telefax: +1 202 2674570</p>
<b>AMERICAN SAMOA</b>	<p>Silila Patane            Harbour Master            Port Administration            Pagopago            American Samoa            AMERICAN SAMOA 96799</p>
<b>URUGUAY</b>	<p>Prefectura del Puerto de Montevideo            Rambla 25 de Agosto de 1825 S/N            Montevideo            URUGUAY            Telephone: +598 2 960123                              +598 2 960022            Telex: 23929 COMAPRE-UY</p>
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<b>Country</b>	<b>Contact information for the main designated national competent authority</b>
<b>Associate Member HONG KONG, CHINA</b>	The Director of Marine Marine Department GPO Box 4155 HONG KONG, CHINA Telephone: +852 2852 3085 +852 2852 4538 Telefax: +85228158596 +85225423199 Telex: 64553 MARHQ HX

### **Appendix A**

In the table for class 6.2, amend the proper shipping name to read “BIOLOGICAL SUBSTANCES, CATEGORY B”.

In the table for class 8, amend the proper shipping name of UN No.1740 to read “HYDROGEN DIFLUORIDE, SOLID, N.O.S.”, and add a new entry under Specific entries “8” “6.1” “3471” “HYDROGEN DIFLUORIDE SOLUTION, N.O.S.”.

## Index

Delete the entries for “1,4-Benzenediol”, “p-Dihydroxybenzene”, “Hydroquinol”, “HYDROQUINONE, SOLID”, “Quinol” and “HYDROQUINONE SOLUTION”.

Delete all entries relevant to UN nos.1014, 1015, 1979, 1980, 1981, 2600, 2662 and 3435.

Amend the proper shipping names for UN nos.1143, 1740, 1779, 1848, 2823, 3245 and 3373.

Add entries relevant to UN Nos.3412 (two entries depending upon the concentration of acid), 3463, 3469, 3470, 3471, 3472 and 3473.

In column (2) of the entry for “*ortho*-Aminoanisoole, see”, replace “P” with “-”.

In column (4) of the entry for “n-Amylbenzene, see Note 1” add “-”.

In column (2) of the entry for “BUTANEDIONE”, delete “P”.

In column (4) of the entry for “Camphechlor”, insert “-”.

Delete the entry for “Copper Chloride (solution)”.

In column (2) of the entry for “Cupric Chloride, see”, replace “P” with “PP”.

In column (2) of the entry for “Cuprous Chloride, see”, replace “P” with “PP”.

In column (2) of the entry for “DICYCLOHEXYLAMMONIUM NITRITE”, replace “P” with “-”.

In the entry for “Difluoroethane and Dichlorodifluoromethane, Azeotropic Mixture with approximately 74% dichlorodifluoromethane, see DICHLORODIFLUOROMETHANE and DIFLUOROETHANE, AZEOTROPIC MIXTURE”, amend “and” to read “AND”.

In column (4) of the entry for “Dioxathion” insert “-”.

In column (2) of the entries for “FIBRES, VEGETABLE with oil” and “FIBRES, ANIMAL with oil”, add “N.O.S.”.

In column (2) of the entry for ORGANIC PEROXIDE TYPE B, SOLID, TEMPERATURE CONTROLLED, replace “●” with “-”.

Amend “ORGANOMETALLIC SUBSTANCE, SOLID, TOXIC” to read “ORGANOMETALLIC COMPOUND, SOLID, TOXIC”.

In column (2) of the entry for “OXIDIZING SOLID, FLAMMABLE, N.O.S.” replace “-” with “●”.

In column (2) of the entry for “OXIDIZING SOLID, SELF-HEATING, N.O.S.” replace “-” with “●”.

Amend “1,2-PROPYLENEDIAMINES” to read “1,2-PROPYLENEDIAMINE”.

In column (2) of the entry for “SELF-HEATING SOLID, OXIDIZING, N.O.S.” replace “-” with “●”.

Delete the entry for “Sodium Alloys (liquid), *see also* POTASSIUM SODIUM ALLOYS”.

In column (2) of the entry for “WATER-REACTIVE SOLID, OXIDIZING, N.O.S.” replace “-” with “●”.

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