

# International Maritime Dangerous Goods (IMDG) Code, 2018 Edition

## Amendment 39-18

### Corrigenda December 2019

This corrigenda makes editorial corrections to the English version of the IMDG Code (Amendment 39-18, as adopted by resolution MSC.442(99)).

## Volume 1

### Preamble

In paragraph 14, *replace* “(MSC.1/Circ.1025 as amended by MSC.1/Circ.1025/Add.1, MSC.1/Circ.1262, MSC.1/Circ.1360, MSC.1/Circ.1438, MSC.1/Circ.1476, MSC.1/Circ.1522 and MSC.1/Circ.1588” *with* “(MSC.1/Circ.1588”.

## PART 2 – CLASSIFICATION

### Chapter 2.2 *Class 2 – Gases*

#### 2.2.1 Definitions and general provisions

2.2.1.2.3 At the end of paragraph 2.2.1.2.3, *delete* “or”.

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

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

##### 2.4.2.3 Class 4.1 Self-reactive substances

##### 2.4.2.3.1 Definitions and properties

2.4.2.3.1.2.5 *Replace* “aromatic sulphonylhydrazides” *with* “aromatic sulphonylhydrazides”.

### Chapter 2.5 *Class 5 – Oxidizing substances and organic peroxides*

#### 2.5.3 Class 5.2 – Organic peroxides

##### 2.5.3.2 Classification of organic peroxides

##### 2.5.3.2.4 List of currently assigned organic peroxides in packagings

In the UN 3109 entry, for “1-PHENYLETHYL HYDROPEROXIDE”, *move* “ $\geq 62$ ” from column “Diluent type A (%)” to column “Diluent type B (%)”.

## Chapter 2.8 Class 8 – Corrosive substances

### 2.8.3 Packing group assignment for substances and mixtures

2.8.3.2 Replace “In the absence of human experience the grouping shall be based” with “In the absence of human experience, the assignment shall be based”.

### 2.8.4 Alternative packing group assignment methods for mixtures: step-wise approach

#### 2.8.4.3 Calculation method based on the classification of the substances

2.8.4.3.3 After the existing text, *add* the following:

“For this calculation method, generic concentration limits apply where 1% is used in the first step for the assessment of the packing group I substances, and where 5% is used for the other steps respectively.”

2.8.4.3.4 *Delete* the last sentence.

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

### 2.9.2 Assignment to class 9

2.9.2.2 Under **Lithium batteries**, at the end of the UN entry “3536 LITHIUM BATTERIES INSTALLED IN CARGO TRANSPORT UNIT”, *insert* “lithium ion batteries or lithium metal batteries”.

### 2.9.4 Lithium batteries

*Move* the note from the end to the end of sub-paragraph .5 and *apply indent* to denote that the note belongs to sub-paragraph .5.

## PART 4 – PACKING AND TANK PROVISIONS

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

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

4.1.1.2 At the end of sub-paragraph .1, *delete* “and”.

#### 4.1.4 List of packing instructions

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

P200 In **Table 2: LIQUEFIED GASES AND DISSOLVED GASES**, with regard to the UN 1082 entry, in the column **Proper shipping name**, after the word “STABILIZED”, *add* “(REFRIGERANT GAS R 1113)”.

P206 *Amend* paragraph (3) as follows:

In the first paragraph, *replace* “liquefied gas” with “liquid”.

In sub-paragraph (a), *replace* “liquefied gas” with “liquid”.

In sub-paragraph (d), *replace* “liquefied gas” with “liquid”.

In sub-paragraph (e), *replace* “liquefied gas” with “liquid”.

P407 Under Outer packagings, in the second line, *replace* “4H1,4 H2” with “4H1, 4H2”.

P504 Under **Combination packagings**, in sub-paragraph (4), *add* “1B1” before “1B2”.

P621 In paragraph (2), *indent* the sentence “Composite packagings (6HA1, 6HB1, 6HG1, 6HH1, 6HD1, 6HA2, 6HB2, 6HC, 6HD2, 6HG2, 6HH2, 6PA1, 6PB1, 6PG1, 6PD1, 6PH1, 6PH2, 6PA2, 6PB2, 6PC, 6PG2 or 6PD2).”

- P907 In the second paragraph, second sentence, *replace* “filling density” with “filling ratio”.
- P909 Under **Additional requirements**, paragraph 2, fourth indent, *replace* “the use of a non-conductive and non-combustible” with “the use of an electrically non-conductive and a non-combustible” and paragraph 3, *replace* “non-conductive” with “an electrically non-conductive”.
- P910 Under **Additional requirements**, fourth indent, *replace* “the use of a non-conductive and non-combustible” with “the use of an electrically non-conductive and a non-combustible”.

#### 4.1.4.2 Packing instructions concerning the use of IBCs

IBC08 Under **Special packing provisions**, in **B21**, *replace* “For substances, UN Nos. 1374, 2590 and 3535 in IBCs other than metal or rigid plastics IBCs,” with “For solid substances in IBCs other than metal or rigid plastics IBCs,”.

IBC520 In the UN 3109 entry, in the column for **Organic peroxide**, *amend* the entries as follows:

In the entry for “*tert*-Butyl peroxyacetate, not more than 32% in diluent type A”, *add* “31A” in “**Type of IBC**” column and *add* “1250” in “**Maximum quantity (litres)**” column.

In the entry for “3,6,9-Triethyl-3,6,9-trimethyl-1,4,7-triperoxonane not more than 27% in diluent type A”, *add* “,” *after* “-triperoxonane”.

In the UN 3119 entry, *replace* the sequence of the first two entries as follows:

| UN No. | Organic peroxide   | Type of IBC | Maximum quantity (litres) | Control temperature | Emergency temperature |
|--------|--|-------------|---------------------------|---------------------|-----------------------|
| 3119   | <i>tert</i> -Amyl peroxy-2-ethylhexanoate, not more than 62% in diluent type A | 31HA1       | 1000                      | +15°C               | +20°C                 |
|        | <i>tert</i> -Amyl peroxy-pivalate, not more than 32% in diluent type A         | 31A         | 1250                      | +10°C               | +15°C                 |

#### 4.1.4.3 Packing instructions concerning the use of large packagings

- LP903 In the second sentence, *delete* the words “cells or”.
- LP905 In the introductory sentence, *replace* “cells and batteries” with “cells or batteries” (*twice*).  
In paragraph (2), after the word “equipment”, *add* the words “containing cells or batteries”.
- LP906 In the second sentence, after the first paragraph, *delete* the words “cells or”.

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

### 4.2.5 Portable tank instructions and special provisions

#### 4.2.5.3 Portable tank special provisions

TP10 In the second sentence, *replace* “beyond the date of expiry of the last testing” with “beyond that date”.

### 4.2.6 Additional provisions for the use of road tank vehicles and road gas elements vehicles

4.2.6.2 In the second sentence, *replace* “and 8” with “, 8 and 9”.

## PART 5 – CONSIGNMENT PROCEDURES

### Chapter 5.1 General provisions

#### 5.1.1 Application and general provisions

5.1.1.6 *Move* the **Note** to the end of 5.1.1.2.

## 5.1.5 General provisions for class 7

### 5.1.5.1 Approval of shipments and notification

#### 5.1.5.1.2 Shipment approvals

In paragraph .4, *replace* “7.1.4.5.7” with “7.1.4.5.8.”.

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

5.1.5.3.4 In Table 5.1.5.3.4 – Categories of packages, overpacks and freight containers, in footnote “b”, *replace* “(see table 7.1.4.5.3)” with “(see table in 7.1.4.5.3.1)”.

## Chapter 5.2 Marking and labelling of packages including IBCs

### 5.2.2 Labelling of packages including IBCs

#### 5.2.2.1 Labelling provisions

##### 5.2.2.1.12 Special provisions for the labelling of radioactive material

5.2.2.1.12.1 *Delete* the third sentence “Each overpack ... the outside of the overpack.”.

#### 5.2.2.2 Provisions for labels

##### 5.2.2.2.2 Specimen labels

###### Class 2: Gases

###### Label model no. 2.1

In second column, *delete* “(except as provided for in 5.2.2.2.1.6.4)”;

in third column, under “Flame: black or white”, *add* “(except as provided for in 5.2.2.2.1.6.4)”;

in fifth column, under “(black or white)”, *add* “(except as provided for in 5.2.2.2.1.6.4)”.

###### Class 4: Flammable solids; substances liable to spontaneous combustion; substances which, in contact with water, emit flammable gases

###### Label model no. 4.1

In second column, *replace* “Flammable solids, self-reactive substances, solid desensitized explosives and polymerizing substances” with “Flammable solids, self-reactive substances, polymerizing substances and solid desensitized explosives”.

###### Class 7: Radioactive material

###### Label model no. 7A

In second column, *replace* “Category I” with “Category I – WHITE”.

###### Label model no. 7B

In second column, *replace* “Category II” with “Category II – YELLOW”.

###### Label model no. 7C

In second column, *replace* “Category III” with “Category III – YELLOW”.

## Chapter 5.4 Documentation

### 5.4.1 Dangerous goods transport information

#### 5.4.1.5 Information required in addition to the dangerous goods description

##### 5.4.1.5.11 Special provisions for segregation

5.4.1.5.11.1 *Replace* the text in paragraph to read as follows:

“For substances, mixtures, solutions or preparations classified under N.O.S. entries not included in the segregation groups listed in 3.1.4.4 but belonging, in the opinion of the consignor, to one of these groups (see 3.1.4.2), the appropriate segregation group name or segregation group code (SGG) listed in 7.2.5.2

preceded by the phrase “IMDG Code segregation group” shall be included in the transport document after the dangerous goods description.

For example:

- UN 1760 CORROSIVE LIQUID, N.O.S. (phosphoric acid, acetic acid) 8 III IMDG Code segregation group 1 – Acids; or
- UN 1760 CORROSIVE LIQUID, N.O.S. (phosphoric acid, acetic acid) 8 III IMDG Code segregation group SGG1.”.

5.4.1.5.11.3 *Replace “7.2.6.4” with “7.2.6.5” (twice).*

#### **5.4.5 Multimodal Dangerous Goods Form**

5.4.5.1 In the third sentence, *replace* “container packing certificate” with “container/vehicle packing certificate”.

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

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

#### **6.2.2 Provisions for UN pressure receptacles**

##### **6.2.2.1 Design, construction and initial inspection and test**

6.2.2.1.8 For reference “ISO 18172-1:2007”, in column **Applicable for manufacture**, *add* “Until further notice”.

##### **6.2.2.4 Periodic inspection and test**

6.2.2.4 In the tables of standards, *move* reference “ISO 16111:2008” from the first table to the second table and *move* reference “ISO 10460:2005” to the first table as second row.

##### **6.2.2.7 Marking of refillable UN pressure receptacles**

6.2.2.7.2 In sub-paragraph (c), after “as”, *insert* “indicated by”.

6.2.2.7.4 In sub-paragraph (n), after “the country of manufacture as”, *insert* “indicated by”.

6.2.2.7.7 In sub-paragraph (a), after “as”, *insert* “indicated by”.

##### **6.2.2.9 Marking of UN metal hydride storage systems**

6.2.2.9.2 In sub-paragraph (c), after “as”, *insert* “indicated by” and in sub-paragraph (h), after “country of manufacture as”, *insert* “indicated by”.

6.2.2.9.4 In sub-paragraph (a), in the first sentence, after “as”, *insert* “indicated by”.

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

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

##### **6.7.2.3 Design criteria**

6.7.2.3.2 In the second sentence, *replace* “4.2.5” with “4.2.5.2.6”.

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

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

#### **6.9.5.5** *Marking*

6.9.5.5.1 In sub-paragraph (e), after “as”, *insert* “indicated by”.

## **PART 7 – PROVISIONS CONCERNING TRANSPORT OPERATIONS**

### **Chapter 7.1** *General stowage provisions*

#### **7.1.4** Special stowage provisions

##### **7.1.4.7** Stowage of stabilized dangerous goods

In the beginning of the sentence, *replace* “Substances” *with* “For substances”.

### **Chapter 7.2** *General segregation provisions*

#### **7.2.6** Special segregation provisions and exemptions

7.2.6.4 *Replace* “7.2.6.3.2.4” *with* “7.2.6.3.4”.

#### **7.2.8** Segregation codes

In the table, for “SG67”, *replace* the words “compartment of hold” *with* the words “compartment or hold”.

In the table, *replace* “SG 74”, “SG 75”, “SG 76”, “SG 77”, “SG 78” *with* “SG74”, “SG75”, “SG76”, “SG77” and “SG78”, respectively.

### **Chapter 7.4** *Stowage and segregation on container ships*

#### **7.4.3** Segregation requirements

##### **7.4.3.1** Definitions and application

7.4.3.1.2 *Replace* the text in paragraph *with* the following:

“The provisions for segregation between containers on board container ships with closed cargo holds and on board hatchless container ships are given in the tables in 7.4.3.2 and 7.4.3.3, respectively.”

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

#### **7.6.3** Segregation provisions

##### **7.6.3.1** Segregation from foodstuffs

7.6.3.1.2 *Replace* the words “having a reference to 7.6.3.1.2 in column 16b” *with* the words “for which it is referred to in segregation code SG29 or SG50 in column 16b”.

## Chapter 7.9 Exemptions, approvals and certificates

### 7.9.3 Contact information for the main designated national competent authorities

For **FRANCE**, at the end, *add* the following text:

*“Competent authority for issuing agreements for class 7 packages containing radioactive materials:*

Autorité de Sûreté Nucléaire (ASN)

15, rue Louis Lejeune

CS 70013

F-92541 Montrouge Cedex

FRANCE

Telephone: +33 (0)1 46 16 41 09

Email: dts-transport@asn.fr”.

## Volume 2

### PART 3 – DANGEROUS GOODS LIST, SPECIAL PROVISIONS AND EXCEPTIONS

## Chapter 3.1 General

### 3.1.4 Segregation groups

3.1.4.4 *Amend* the corresponding segregation groups listed as follows:

**2 Ammonium compounds (SGG2)**

*Delete* “1512 Zinc ammonium nitrite”.

**7 Heavy metals and their salts (including their organometallic compounds) (SGG7)**

*Delete* “1512 Zinc ammonium nitrite”.

*Place* the two UN 1931 entries *in alphabetical order*, to read as follows:

“1931 Zinc dithionite

1931 Zinc hydrosulphite”.

**8 Hypochlorites (SGG8)**

In the UN 1748 entry, *replace* the text as follows:

“Calcium hypochlorite, dry or calcium hypochlorite mixture, dry with more than 39% available chlorine (8.8% available oxygen)”.

**11 Mercury and mercury compounds (SGG11)**

In the UN 0135 entry, *replace* the text as follows:

“Mercury fulminate, wetted with not less than 20% water, or mixture of alcohol and water, by mass”.

**12 Nitrites and their mixtures (SGG12)**

*Delete* “1512 Zinc ammonium nitrite”.

**15 Powdered metals (SGG15)**

In the UN 1418 entry, *replace* the text as follows:

“Magnesium powder or magnesium alloys powder”.

In the UN 3170 entry, *replace* the text as follows:

“Aluminium smelting by-products or aluminium remelting by-products”.

**17 Azides (SGG17)**

In the UN 0129 entry, *replace* the text as follows:

“Lead azide, wetted with not less than 20% water, or mixture of alcohol and water, by mass”.

In the UN 0224 entry, *replace* the text as follows:  
“Barium azide, dry or wetted with less than 50% water, by mass”.

In the UN 1571 entry, *replace* the text as follows:  
“Barium azide, wetted with not less than 50% water, by mass”.

#### 18 Alkalis (SGG18)

In the UN 2671 entry, *replace* the text as follows:  
“Aminopyridines (*o*-, *m*-, *p*-)”.

In the UN 2678 entry, *replace* the text as follows:  
“Rubidium hydroxide”.

In the UN 2949 entry, *replace* “solid” with “hydrated”.

## Chapter 3.2 Dangerous Goods List

In the Dangerous Goods List, *amend* the following entries as follows:

| UN No.      | Amendment  |
|-------------|--|
| 1011        | Move “392” from column (5) to column (6)   |
| 1016        | Move “974” from column (5) to column (6)   |
| 1051        | In column (15), <i>replace</i> “S-D” with “ <u>S-D</u> ”   |
| 1092        | In column (15), <i>replace</i> “S-D” with “ <u>S-D</u> ”   |
| 1098        | In column (15), <i>replace</i> “S-D” with “ <u>S-D</u> ”   |
| 1099        | In column (15), <i>replace</i> “S-D” with “ <u>S-D</u> ”   |
| 1143        | In column (15), <i>replace</i> “S-D” with “ <u>S-D</u> ”   |
| 1144        | In column (17), <i>replace</i> the words “Explosive limits: 1.4% to ...” with “Lower explosive limit: 1.4%.”   |
| 1156        | In column (17), <i>replace</i> the words “Explosive limits: 1.6% to ...” with “Lower explosive limit: 1.6%.”   |
| 1163        | In column (15), <i>replace</i> “S-C” with “ <u>S-C</u> ”, and in column (16b), <i>move</i> “SGG18” above “SG5” |
| 1206        | In column (15), <i>replace</i> “S-D” with “ <u>S-D</u> ”   |
| 1208        | In column (15), <i>replace</i> “S-D” with “ <u>S-D</u> ”   |
| 1218        | In column (15), <i>replace</i> “S-D” with “ <u>S-D</u> ”   |
| 1244        | In column (16b), <i>move</i> “SGG18” above “SG5”   |
| 1259        | In column (15), <i>replace</i> “S-D” with “ <u>S-D</u> ”   |
| 1264        | In column (17), <i>replace</i> the words “Explosive limits: 1.3% to ...” with “Lower explosive limit: 1.3%.”   |
| 1303        | In column (15), <i>replace</i> “S-D” with “ <u>S-D</u> ”   |
| 1305        | In column (17), <i>replace</i> the words “Explosive limits: 3% to ...” with “Lower explosive limit: 3%.”       |
| 1347        | In column (16b), <i>move</i> “SGG7” above “SG7”  |
| 1405 PG II  | In column (9), <i>insert</i> “PP40”  |
| 1449        | In column (16b), <i>move</i> “SGG16” above “SG16”  |
| 1457        | In column (16b), <i>move</i> “SGG16” above “SG16”  |
| 1472        | In column (16b), <i>move</i> “SGG16” above “SG16”  |
| 1476        | In column (16b), <i>move</i> “SGG16” above “SG16”  |
| 1483 PG II  | In column (16b), <i>move</i> “SGG16” above “SG16”  |
| 1483 PG III | In column (16b), <i>move</i> “SGG16” above “SG16”  |
| 1491        | In column (16b), <i>move</i> “SGG16” above “SG16”  |



| <b>UN No.</b> | <b>Amendment</b>  |
|---------------|---|
| 1504          | In column (16b), <i>move</i> “SGG16” <i>above</i> “SG16”  |
| 1509          | In column (16b), <i>move</i> “SGG16” <i>above</i> “SG16”  |
| 1512          | In column (16b), <i>delete</i> “SGG2”, “SGG7” and “SGG12” |
| 1516          | In column (16b), <i>move</i> “SGG16” <i>above</i> “SG16”  |
| 1541          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1547          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1565          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1569          | In column (15), <i>replace</i> “S-D” with “ <u>S-D</u> ”  |
| 1571          | In column (16b), <i>move</i> “SGG17” <i>above</i> “SG7”   |
| 1573          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1574          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1575          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1577          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1580          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1585          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1586          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1587          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1588 PG I     | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1588 PG II    | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1588 PG III   | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1590          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1598          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1599 PG II    | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1599 PG III   | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1600          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1606          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1607          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1608          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1611          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1613          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1616          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1617          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1618          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1620          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1621          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1622          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1623          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1624          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1625          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |

| <b>UN No.</b> | <b>Amendment</b>   |
|---------------|--|
| 1626          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> " |
| 1627          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> " |
| 1629          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> " |
| 1630          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> " |
| 1631          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> " |
| 1634          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> " |
| 1636          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> " |
| 1637          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> " |
| 1638          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> " |
| 1639          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> " |
| 1640          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> " |
| 1641          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> " |
| 1642          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> " |
| 1643          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> " |
| 1644          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> " |
| 1645          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> " |
| 1646          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> " |
| 1647          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> " |
| 1649          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> " |
| 1653          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> " |
| 1669          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> " |
| 1670          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> " |
| 1674          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> " |
| 1679          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> " |
| 1680          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> " |
| 1683          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> " |
| 1684          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> " |
| 1687          | In column (16b), <i>move</i> "SGG17" above "SG15"        |
| 1689          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> " |
| 1692          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> " |
| 1695          | In column (15), <i>replace</i> "S-C" with " <u>S-C</u> " |
| 1698          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> " |
| 1699          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> " |
| 1702          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> " |
| 1704          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> " |
| 1707          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> " |
| 1708          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> " |
| 1712          | In column (2), <i>replace</i> "and" with "AND"           |
| 1713          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> " |

| <b>UN No.</b> | <b>Amendment</b>  |
|---------------|---|
| 1739          | In column (15), <i>replace</i> “S-B” with “ <u>S-B</u> ”  |
| 1748 PG III   | In column (16b), <i>add</i> “SGG8”  |
| 1753          | In column (15), <i>replace</i> “S-B” with “ <u>S-B</u> ”  |
| 1758          | In column (17), <i>delete</i> the sentence: “In the presence of moisture, highly corrosive to most metals.” |
| 1761 PG II    | In column (15), <i>replace</i> “S-B” with “ <u>S-B</u> ”  |
| 1761 PG III   | In column (15), <i>replace</i> “S-B” with “ <u>S-B</u> ”  |
| 1766          | In column (15), <i>replace</i> “S-B” with “ <u>S-B</u> ”  |
| 1791 PG II    | In column (15), <i>replace</i> “S-B” with “ <u>S-B</u> ”  |
| 1791 PG III   | In column (15), <i>replace</i> “S-B” with “ <u>S-B</u> ”  |
| 1840          | In column (15), <i>replace</i> “S-B” with “ <u>S-B</u> ”  |
| 1843          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1846          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1889          | In column (15), <i>replace</i> “S-B” with “ <u>S-B</u> ”  |
| 1892          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1894          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1895          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1897          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1935 PG I     | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1935 PG II    | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 1935 PG III   | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 2014          | In column (16b), <i>move</i> “SGG16” above “SG16”   |
| 2015          | In column (16b), <i>move</i> “SGG16” above “SG16”   |
| 2023          | In column (15), <i>replace</i> “S-D” with “ <u>S-D</u> ”  |
| 2024 PG I     | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 2024 PG II    | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 2024 PG III   | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 2025 PG I     | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 2025 PG II    | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 2025 PG III   | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 2026 PG I     | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 2026 PG II    | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 2026 PG III   | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 2029          | In column (16b), <i>move</i> “SGG18” above “SG5”  |
| 2038          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 2046          | In column (15), <i>replace</i> “S-D” with “ <u>S-D</u> ”  |
| 2057 PG II    | In column (15), <i>replace</i> “S-D” with “ <u>S-D</u> ”  |
| 2057 PG III   | In column (15), <i>replace</i> “S-D” with “ <u>S-D</u> ”  |
| 2216          | In column (6), <i>delete</i> “945”  |
| 2218          | In column (15), <i>replace</i> “S-C” with “ <u>S-C</u> ”  |

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|---------------|---|
| 2235          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> "  |
| 2237          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> "  |
| 2241          | In column (15), <i>replace</i> "S-D" with " <u>S-D</u> "  |
| 2277          | In column (17), <i>replace</i> the words "Explosive limits: 1.8% to ..." with "Lower explosive limit: 1.8%."    |
| 2279          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> "  |
| 2291          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> "  |
| 2294          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> "  |
| 2296          | In column (15), <i>replace</i> "S-D" with " <u>S-D</u> "  |
| 2306          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> "  |
| 2307          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> "  |
| 2310          | In column (17), <i>replace</i> the words "Explosive limits: 1.7% to ..." with "Lower explosive limit: 1.7%."    |
| 2315          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> "  |
| 2316          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> "  |
| 2317          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> "  |
| 2321          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> "  |
| 2322          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> "  |
| 2325          | In column (15), <i>replace</i> "S-D" with " <u>S-D</u> "  |
| 2331          | In column (15), <i>replace</i> "S-B" with " <u>S-B</u> "  |
| 2338          | In column (17), <i>replace</i> the words "Explosive limits: 2.1% to ..." with "Lower explosive limit: 2.1%."    |
| 2345          | In column (17), <i>replace</i> the words "Explosive limits: 3% to ..." with "Lower explosive limit: 3%."        |
| 2362          | In column (17), <i>replace</i> the words "Explosive limits: 5.6% to ..." with "Lower explosive limit: 5.6%."    |
| 2363          | In column (15), <i>replace</i> "S-D" with " <u>S-D</u> "  |
| 2381          | In column (15), <i>replace</i> "S-D" with " <u>S-D</u> "  |
| 2382          | In column (15), <i>replace</i> "S-D" with " <u>S-D</u> ", and in column (16b), <i>move</i> "SGG18" above "SG17" |
| 2384          | In column (17), <i>replace</i> the words "Explosive limits: 1.7% to ..." with "Lower explosive limit: 1.7%."    |
| 2404          | In column (17), <i>replace</i> the words "Explosive limits: 3.1% to ..." with "Lower explosive limit: 3.1%."    |
| 2411          | In column (17), <i>replace</i> the words "Explosive limits: 1.6% to ..." with "Lower explosive limit: 1.6%."    |
| 2433          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> "  |
| 2466          | In column (16b), <i>move</i> "SGG16" above "SG16"   |
| 2471          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> "  |
| 2504          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> "  |
| 2514          | In column (15), <i>replace</i> "S-D" with " <u>S-D</u> "  |
| 2515          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> "  |
| 2516          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> "  |
| 2518          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> "  |
| 2547          | In column (16b), <i>move</i> "SGG16" above "SG16"   |
| 2558          | In column (15), <i>replace</i> "S-D" with " <u>S-D</u> "  |
| 2567          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> "  |
| 2574          | In column (15), <i>replace</i> "S-A" with " <u>S-A</u> "  |

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| 2612          | In column (17), <i>replace</i> the words “Explosive limits: 2% to ...” <i>with</i> “Lower explosive limit: 2%.”  |
| 2651          | In column (15), <i>replace</i> “S-A” <i>with</i> “ <u>S-A</u> ”  |
| 2672          | In column (15), <i>replace</i> “S-B” <i>with</i> “ <u>S-B</u> ”  |
| 2709          | In column (15), <i>replace</i> “S-D” <i>with</i> “ <u>S-D</u> ”  |
| 2777 PG I     | In column (15), <i>replace</i> “S-A” <i>with</i> “ <u>S-A</u> ”  |
| 2777 PG II    | In column (15), <i>replace</i> “S-A” <i>with</i> “ <u>S-A</u> ”  |
| 2777 PG III   | In column (15), <i>replace</i> “S-A” <i>with</i> “ <u>S-A</u> ”  |
| 2778 PG I     | In column (15), <i>replace</i> “S-D” <i>with</i> “ <u>S-D</u> ”  |
| 2778 PG II    | In column (15), <i>replace</i> “S-D” <i>with</i> “ <u>S-D</u> ”  |
| 2786 PG I     | In column (15), <i>replace</i> “S-A” <i>with</i> “ <u>S-A</u> ”  |
| 2786 PG II    | In column (15), <i>replace</i> “S-A” <i>with</i> “ <u>S-A</u> ”  |
| 2786 PG III   | In column (15), <i>replace</i> “S-A” <i>with</i> “ <u>S-A</u> ”  |
| 2787 PG I     | In column (15), <i>replace</i> “S-D” <i>with</i> “ <u>S-D</u> ”  |
| 2787 PG II    | In column (15), <i>replace</i> “S-D” <i>with</i> “ <u>S-D</u> ”  |
| 2788 PG I     | In column (15), <i>replace</i> “S-A” <i>with</i> “ <u>S-A</u> ”  |
| 2788 PG II    | In column (15), <i>replace</i> “S-A” <i>with</i> “ <u>S-A</u> ”  |
| 2788 PG III   | In column (15), <i>replace</i> “S-A” <i>with</i> “ <u>S-A</u> ”  |
| 2826          | In column (15), <i>replace</i> “S-C” <i>with</i> “ <u>S-C</u> ”  |
| 2842          | In column (17), <i>replace</i> the words “Explosive limits: 3.4% to ...” <i>with</i> “Lower explosive limit: 3.4%.”  |
| 3011 PG I     | In column (15), <i>replace</i> “S-D” <i>with</i> “ <u>S-D</u> ”  |
| 3011 PG II    | In column (15), <i>replace</i> “S-D” <i>with</i> “ <u>S-D</u> ”  |
| 3011 PG III   | In column (15), <i>replace</i> “S-D” <i>with</i> “ <u>S-D</u> ”  |
| 3012 PG I     | In column (15), <i>replace</i> “S-A” <i>with</i> “ <u>S-A</u> ”  |
| 3012 PG II    | In column (15), <i>replace</i> “S-A” <i>with</i> “ <u>S-A</u> ”  |
| 3012 PG III   | In column (15), <i>replace</i> “S-A” <i>with</i> “ <u>S-A</u> ”  |
| 3019 PG I     | In column (15), <i>replace</i> “S-D” <i>with</i> “ <u>S-D</u> ”  |
| 3019 PG II    | In column (15), <i>replace</i> “S-D” <i>with</i> “ <u>S-D</u> ”  |
| 3019 PG III   | In column (15), <i>replace</i> “S-D” <i>with</i> “ <u>S-D</u> ”  |
| 3020 PG I     | In column (15), <i>replace</i> “S-A” <i>with</i> “ <u>S-A</u> ”  |
| 3020 PG II    | In column (15), <i>replace</i> “S-A” <i>with</i> “ <u>S-A</u> ”  |
| 3020 PG III   | In column (15), <i>replace</i> “S-A” <i>with</i> “ <u>S-A</u> ”  |
| 3073          | In column (16b), <i>move</i> “SGG18” <i>above</i> “SG5”  |
| 3090          | In column (17), <i>delete</i> the following sentence: “Lithium batteries may also be shipped in, or packed with, equipment.”   |
| 3091          | In column (17), <i>replace</i> “See above” <i>with</i> “Electrical batteries containing lithium encased in a rigid metallic body. Lithium batteries may also be shipped in, or packed with, equipment. Electrical lithium batteries may cause fire due to an explosive rupture of the body caused by improper construction or reaction with contaminants.” |
| 3146 PG I     | In column (15), <i>replace</i> “S-A” <i>with</i> “ <u>S-A</u> ”  |
| 3146 PG II    | In column (15), <i>replace</i> “S-A” <i>with</i> “ <u>S-A</u> ”  |
| 3146 PG III   | In column (15), <i>replace</i> “S-A” <i>with</i> “ <u>S-A</u> ”  |

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| 3149          | In column (16b), <i>move</i> “SGG16” <i>above</i> “SG16”  |
| 3151          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 3152          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 3155          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 3219 PG II    | In column (6), <i>insert</i> “900”  |
| 3294          | In column (15), <i>replace</i> “S-D” with “ <u>S-D</u> ”  |
| 3389          | In column (17), <i>replace</i> “See entry above.” with “A variety of toxic liquids which present a highly toxic inhalation hazard as well as being corrosive. Highly toxic if swallowed, by skin contact or by inhalation.” |
| 3413 PG I     | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 3413 PG II    | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 3413 PG III   | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 3414 PG I     | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 3414 PG II    | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 3414 PG III   | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 3424 PG II    | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 3424 PG III   | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 3427          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 3431          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 3432          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 3441          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 3442          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 3450          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 3451          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 3454          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 3457          | In column (15), <i>replace</i> “S-A” with “ <u>S-A</u> ”  |
| 3483          | In column (15), <i>replace</i> “S-D” with “ <u>S-D</u> ”  |
| 3484          | In column (16b), <i>move</i> “SGG18” <i>above</i> “SG5”   |
| 3543          | In column (2), <i>replace</i> the existing proper shipping name to read “ARTICLES CONTAINING A SUBSTANCE WHICH IN CONTACT WITH WATER EMITS FLAMMABLE GASES, N.O.S.”   |

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

|       |  |
|-------|--|
| SP29  | <i>Delete</i> the last three sentences.  |
| SP63  | In the second paragraph, <i>replace</i> “D 240” with “D240”.   |
| SP133 | In the last sentence, <i>replace</i> “7.2.3.3, 7.1.3.1 and 7.1.4.4” with “7.1.3.1, 7.1.4.4 and 7.2.3.3”.   |
| SP188 | <i>Move</i> the last two sentences “When packages are placed in an overpack, the lithium battery mark shall either be clearly visible or be reproduced on the outside of the overpack and the overpack shall be marked with the word “OVERPACK”. The lettering of the “OVERPACK” mark shall be at least 12 mm high;” <i>from</i> sub-paragraph .5 <i>to</i> the end of sub-paragraph .6.<br><br>In sub-paragraphs .7 and .8, <i>replace</i> “Except when batteries” with “Except when cells or batteries”. |
| SP240 | <i>Delete</i> the special provision number “240”.  |

- SP241 In the second sentence, *replace* the words “test No. 1” *with* the words “test N.1”.
- SP362 In the first sentence, *replace* the words “2.2.1.2.1 or 2.2.1.2.2” *with* “2.2.1.1 and 2.2.1.2.1 or 2.2.1.2.2”.
- SP392 Under **CNG tanks**, in the entry for ECE Regulation No. 110, in the first sentence, after the words “concerning”, add the words “the approval of”.
- Under **Hydrogen pressure tanks**, in the entry for ECE Regulation No. 134, *replace* “Hydrogen and fuel cell vehicles (HFCV)” *with* the following text:
- “Uniform provisions concerning the approval of motor vehicles and their components with regards to the safety-related performance of hydrogen-fuelled vehicles (HFCV)”.
- In sub-paragraph .2, in **Note 1**, *replace* the words “standard ISO 11623:2015 *Transportable gas cylinders – Periodic inspection and testing of composite gas cylinders*” *with* the words “standard ISO 11623:2015 *Gas cylinders – Composite construction – Periodic inspection and testing*”.

## APPENDICES

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

In the table, for class 4.3, for UN 3543, under **General Entries**, in the column for “**Proper shipping name**”, *replace* “ARTICLES CONTAINING A SUBSTANCE WHICH EMITS FLAMMABLE GAS IN CONTACT WITH WATER, N.O.S.” *with* “ARTICLES CONTAINING A SUBSTANCE WHICH IN CONTACT WITH WATER EMITS FLAMMABLE GASES, N.O.S.”.

In the table, for class 5.2, after the entry UN 3120, in the column “**Proper shipping name**”, *insert* the words **General entries**.

In the table, for class 6.1, under **Specific entries**, *delete* the entry UN 3462, TOXINS, EXTRACTED FROM LIVING SOURCES, SOLID, N.O.S.

### Appendix B *Glossary of terms*

In the entry “ARTICLES, EXPLOSIVE, EXTREMELY INSENSITIVE (ARTICLES, EEI)”, *replace* the words “Articles that contain only extremely insensitive substances” *with* the words “Articles that predominantly contain extremely insensitive substances”.

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*Replace* “ARTICLES CONTAINING A SUBSTANCE WHICH EMITS FLAMMABLE GAS IN CONTACT WITH WATER, N.O.S.” *with* the following:

“ARTICLES CONTAINING A SUBSTANCE WHICH IN CONTACT WITH WATER EMITS FLAMMABLE GASES, N.O.S.”

In the column for “Substance, material or article”, after the words “DI-(4-*tert*-butylcyclohexyl) peroxydicarbonate”, *insert* the words “(concentration ≤ 42%, as a paste)”.

In the column for “Substance, material or article”, after the words “Diisobutryl peroxide”, *insert* the words “(concentration ≤ 42%, as a stable dispersion in water)”.

In the column for “Substance, material or article”, after the words “1-Phenylethyl hydroperoxide”, *insert* the words “(concentration ≤ 38%, with diluent Type B)”.

In the column for “Substance, material or article”, after the words “Phosphorothioic acid, *o*-[[cyanophenyl methylene] azanyl] *o,o*-diethyl ester”, *insert* the words “(concentration 82–91% (Z isomer))”.