



## IATA Dangerous Goods Regulations

62<sup>nd</sup> Edition (English)  
Effective 1 January 2021

### ADDENDUM REVISION 1

Posted 18 January 2021

Users of the IATA Dangerous Goods Regulations are asked to note the following amendments and corrections to the 62<sup>nd</sup> Edition, effective from 1 January 2021.

Where appropriate, changes or amendments to existing text have been highlighted (in yellow - PDF or grey - hardcopy) to help identify the change or amendment.

#### **New or Amended State Variations (Section 2.8.2)**

##### **Amend CAG (Canada)**

Add new:

**CAG-13** Most explosives, as defined in the Explosives Act, must be classified by Natural Resources Canada before being imported into Canada. It is the responsibility of the importer to confirm that an explosive is classified in Canada, or that an exemption exists for its import. Explosives manufactured in Canada are required to have been classified before they are transported.

Any request concerning the applicability of variation CAG-13 must be addressed to:

Natural Resources Canada  
Explosives Safety and Security Branch  
588 Booth Street  
Ottawa, Ontario  
Canada K1A 0E4  
Telephone: +1 855 912-0012  
Email: ERDmms@nrcan.gc.ca  
Website: <https://www.nrcan.gc.ca/explosives>

#### **New or Amended Operator Variations (Section 2.8.4)**

In 2.8.3.4 List:

|                          |                                   |    |
|--------------------------|-----------------------------------|----|
| After Atlasjet Ukraine   | Delete: Austral Lineas Aereas     | AU |
| After Hong Kong Airlines | Delete: Hong Kong Dragon Airlines | KA |
| After Jetstar Japan      | Delete: Jetstar Pacific           | BL |
| After LAN Peru           | Delete: Llc GloBus                | GH |

##### **Amend AF (Air France)**

**AF-01** Packages and overpacks containing ~~Lithium batteries – UN 3480 (Packing Instruction 965)~~, Lithium ion batteries packed with/contained in equipment – UN 3481 (respectively Packing Instruction 966 and 967), Lithium metal batteries packed with/contained in equipment – UN 3091 (respectively Packing Instruction 969 and 970) shall not exceed a max height of 1.6 m. ~~A derogation may be exceptionally granted upon prior request.~~

**AF-02** Irrespective of variation AF-03, Lithium ion batteries – UN 3480 and Lithium metal batteries – UN 3090 complying with Special Provision A201 are not accepted on Air France ~~flights passenger aircraft.~~

##### **Delete AU (Austral Lineas Aereas)**

~~**AU-01** Dangerous goods in excepted quantities will not be accepted (see Subsection 2.6).~~

~~**AU-02** Additional restrictions on “Provisions for Dangerous Goods Carried by Passengers or Crew” can be found at:~~

Website: <https://www.aerolineas.com.ar>

**AU-03** Airmail containing radioactive material or lithium metal batteries contained in equipment is not accepted for carriage (see 2.4 and 10.2.2).

**AU-04** Not used.

**AU-05** Radioactive material is not accepted for carriage when the transport index exceeds 3.0.

**AU-06** Not used.

**AU-07** Not used.

**AU-08** Not used.

**AU-09** The shipper must provide a 24-hour emergency telephone number of a person/agency, who is knowledgeable of the hazards, characteristics and actions to be taken in case of an accident or incident concerning each of the dangerous goods being transported. This telephone number, including the country and area code, preceded by the words "Emergency Contact" or "24-Hour number" must be shown in the Additional Handling Information box of the DGD (see 8.1.6.11 and 10.8.3.11).

**AU-10** Material Safety Data Sheet (MSDS) must be provided for all dangerous goods classes, excepted for carbon dioxide, solid (dry ice) (UN 1845, vehicles (UN 3166 and UN 3171) and engines (UN 3528, UN 3529 and UN 3530). The MSDS may be in Spanish or English. The MSDS must include the UN number, packing group if applicable, proper shipping name and all other relevant transport information.

**AU-11** Only the following lithium batteries are accepted for carriage:

- lithium ion batteries (UN 3481) prepared in accordance with Section II of Packing Instructions 966 and 967;
- lithium metal batteries (UN 3091) contained in temperature monitoring devices (e.g. data loggers), meeting the provisions of Section II of Packing Instruction 970 that are used for tracking shipments during flight.

**Note:**

*This restriction does not apply to company materials (COMAT). For COMAT prepared in accordance with UN 3091, only one spare part will be uplifted per flight.*

**AU-12** Not used.

**AU-13** Lithium battery shipments will only be accepted when accompanied by one of the following documents:

- duly completed Lithium Battery Declaration Form (the form is available at the cargo commercial office); or
- a MSDS or a duly signed business letter or a declaration on the air waybill. The MSDS or business letter or the air waybill must include the UN number, Packing Instruction(s) and Section that are applicable to the lithium batteries, and phone number of a person/agency, who can provide additional information about the batteries.

**AU-14** Not used.

**AU-15** Fissile radioactive material will not be accepted for transport (see 10.5.13).

Delete **BL (Jetstar Pacific)**

**BL-01** Dangerous goods consigned as cargo are not accepted for carriage on any Jetstar Pacific aircraft.

Amend **CZ (China Southern)**

**CZ-08** The following lithium cells and batteries will not be accepted:

- UN 3480, Lithium ion cells and batteries when prepared in accordance with Section IA, Section IB and Section II of Packing Instruction 965;

- **UN 3090**, Lithium metal or lithium alloy cells and batteries (**UN 3090**) when prepared in accordance with **Section IA, Section IB and Section II of** Packing Instruction 968;
- **UN 3091**, Lithium metal or lithium alloy cells and batteries contained in or packed with equipment (**UN 3091**) when prepared in accordance with Section I of Packing Instruction 969 or 970. This restriction does not apply to lithium cells and batteries packed with or contained in equipment (UN 3091) that fall into the category of company materials (COMAT).

**CZ-09** For UN 3480, Lithium ion cells and batteries (Section IA, Section IB and Section II), the shipper must clearly indicate that Lithium ion cells and batteries are at a state of charge (SOC) not exceeding 30% of their rate capacity. On the Shipper's Declaration the information should be shown in the "Additional Handling Information" box. For UN 3480, Section II, the Shipper must indicate this information with the compliance statement on the air waybill. Example: Lithium ion batteries are at a state of charge (SOC) not exceeding 30% of their rate capacity. **Not used.**

#### Amend FJ (Fiji Airways)

Add new

**FJ-06** The carriage of machinery incorporating a flammable liquid powered internal combustion engine, e.g. chainsaws, lawn mowers and generators, is not permitted in passenger baggage. They are only accepted as cargo and must be classified as UN 3528, Engine, internal combustion, flammable liquid powered.

#### Amend FX (Federal Express)



#### FX-03

- (a) Class 7 substances offered on FedEx International Priority Freight (IPF), FedEx International Premium (IP1), or FedEx International Express Freight (IXF) may require a pre-alert or pre-approval. Call +1 (877) 398-5851 for additional information. **The following UN numbers are prohibited when the contents include Plutonium 239 (PU 239) or Plutonium 241 (PU 241): UN 3324, UN 3325, UN 3326, UN 3327, UN 3329, UN 3330, UN 3331 or UN 3333. All UN numbers containing Plutonium 239 and Plutonium 241 fissile materials are prohibited for transport.**
- (b) FedEx Express will not accept labelled radioactive material with a subsidiary hazard of 1.4, 3, 4.1, 4.2, 4.3, 5.1, 5.2, 8 or 2.2 with a Cargo Aircraft Only label unless the shipper is pre-approved.  
Class 7 shipments originating in a non-U.S. location require pre-approval. Call your local FedEx customer service number and ask for FedEx Express Freight customer service.
- (c) All fissile shipments worldwide require pre-approval. Call +1 (901) 375 6806 and press "4" to reach the next Dangerous Goods Agent for assistance.
- (d) For mixtures or solutions of radionuclides enter "mixture" or "solution" as appropriate in the Quantity and Type of Packaging in association with the physical and chemical form (e.g. liquid salt solution or solid oxide mixture).
- (e) FedEx Express will not accept Radioactive Material, Excepted Package (UN 2908, UN 2909, UN 2910, UN 2911) in an Overpack nor will more than one package on a skid/pallet be accepted.

**FX-09** All Packed in One and Overpack shipments to or from the U.S. must comply with segregation requirements from 49 CFR **177.848**, see:

Website: [https://www.ecfr.gov/cgi-bin/text-idx?node=pt49.2.177&rgn=div5#se49.2.177\\_1848](https://www.ecfr.gov/cgi-bin/text-idx?node=pt49.2.177&rgn=div5#se49.2.177_1848)

**FX-10** **Not used.** Shipments containing accessible dangerous goods (ADG) and inaccessible dangerous goods (IDG) that are dropped off at staffed FedEx U.S. locations must be processed using a FedEx or third-party automation system, not paper airbills or air waybills.

**FX-18** Shipper's Declarations for dangerous goods for all FedEx Express® dangerous goods shipments originating in the US must be prepared using software (~~not paper airbills or air waybills~~) with dangerous goods compliance edit checks and by one of the following methods:

- FedEx electronic shipping solutions (see updated information below);
- Recognized shipper proprietary software; or
- FedEx recognized dangerous goods vendor software.

**Update** – All FedEx electronic shipping solutions must be version 2016 or newer on or before January 1, 2022. This includes FedEx Server applications and FedEx Web-Services uploads. If the upload of the DG information is not using the FedEx DG Ready DG Data Upload Mode, or is not using the newest version of FedEx Café and FedEx.com by this date, then shipments will not be accepted into the FedEx Express network.

FX-18 currently does not apply to:

- Shipments originating in non-U.S. locations (including U.S. territories overseas, such as Puerto Rico);
- FedEx International Express Freight® (IXF) and FedEx International Premium® (IP1);
- Shipments containing Class 7 radioactive materials.

**Note:**

A list of FedEx recognized dangerous goods shipping application vendors can be reviewed at <https://www.fedex.com/us>; dangerous goods (keyword).

**Amend FZ (flydubai)**

**FZ-01** flydubai does not accept dangerous goods consignments as cargo. For dangerous goods that are excepted from the regulations, e.g. by a special provision, please contact flydubai local office or at [cargo.capacity@flydubai.com](mailto:cargo.capacity@flydubai.com).

The shipper must provide a 24-hour emergency telephone number of a person/agency who is knowledgeable of the hazards, characteristics and actions to be taken in case of an accident or incident concerning (each of) the dangerous goods being transported. This telephone number, including country and area code, preceded by the words "Emergency Contact" or "24-hour number" must be inserted in the Additional Handling Information box of the Shipper's Declaration for Dangerous Goods.

Add new

**FZ-02** The following dangerous goods will not be accepted for carriage on flydubai:

- (a) Class 2
  - Division 2.1 – Flammable gas;
  - Division 2.2 – Non-flammable, Non-toxic gas;
  - Division 2.3 – Toxic gas.
- (b) Class 4
  - Division 4.1 – Flammable solids; self-reactive substances, polymerizing substances and solid desensitized explosives;
  - Division 4.2 – Substances liable to spontaneous combustion;
  - Division 4.3 – Substances which, in contact with water, emit flammable gases.
- (c) Class 5
  - Division 5.1 – Oxidizers;
  - Division 5.2 – Organic peroxides.
- (d) Division 6.2 – Infectious Substances Category A (UN 2814, UN 2900).
- (e) Class 7 – Category II-Yellow and Category III-Yellow (RRY).
- (f) UN 2809 – Mercury.

- (g) UN 3077, Environmentally hazardous substance, solid, n.o.s., in intermediate bulk containers (IBC).
- (h) Airmail containing dangerous goods.

Carriage of dangerous goods in all other classes and divisions requires pre-approval from flydubai Cargo Special Help Desk

email: [Cargo.SHD@flydubai.com](mailto:Cargo.SHD@flydubai.com)

**FZ-03** Effective 1<sup>st</sup> July 2021, all cargo shipments originated or re-exported from the United Arab Emirates are prohibited to use outer opaque shrink-wrap. This prohibition does not apply to interline cargo from another operator in the UAE for transport within the UAE, and UAE military and Ministry of Interior shipments carried on civilian aircraft.

#### Delete **GH (Llc GloBus)**

~~**GH-01** Shipment of dangerous goods transported by Llc GloBus flights will only be acceptable after getting advance approval of Llc GloBus. Requests for dangerous goods shipments must be sent to the following email address:~~

~~— email: [sgo@s7.ru](mailto:sgo@s7.ru)~~

~~Request for approval must be submitted and be made according to the special form of approval (form is provided by request). Form of approval to be attached to the set of accompanying documents and forwarded on board to the crew by the handling company at the airport of departure.~~

~~**GH-02** Not used.~~

~~**GH-03** The shipper must provide a 24-hour emergency telephone number of a person/agency who is knowledgeable of the hazards, characteristics and actions to be taken in case of an accident or incident concerning (any of) the dangerous goods being transported. This telephone number, including country and area code, preceded by the words “Emergency Contact” or “24-hour number” must be inserted on the Shipper’s DGD in the “Additional Handling Information” box, e.g. “Emergency Contact +7(495)-12-45-78.”~~

#### Amend **GK (Jetstar)**

~~**GK-01** Not used. Dangerous goods consigned as cargo are not accepted for carriage on any Jetstar Japan aircraft.~~

~~**GK-04** Due to no medical approver for JJP, Oxygen or Air, gaseous cylinders and oxygen concentrators are not accepted for carriage in passenger baggage. Oxygen or air, gaseous cylinders required for medical use by patients who are fully trained in their use, are accepted as carry-on baggage only.~~

~~**GK-05** Shipments of UN 3090, lithium metal cells and batteries are prohibited from carriage on Jetstar aircraft. This applies to Section IA, IB and Section II of Packing Instruction 968. Not used.~~

~~**GK-06** Shipments of UN 3480 —Lithium ion cells and batteries, including lithium polymer batteries are prohibited from carriage as cargo on Jetstar aircraft. This applies to Section IA, IB and Section II of Packing Instruction 965. Not used.~~

#### Amend **JQ (Jetstar)**

~~**JQ-05** Shipments of UN 3090, Lithium metal cells and batteries (including lithium alloy batteries) are prohibited from carriage on Jetstar aircraft. This applies to Section IA, IB and Section II of Packing Instruction 968.~~

~~**JQ-06** Shipments of UN 3480, —Lithium ion cells and batteries, (including lithium polymer batteries) are prohibited from carriage as cargo on Jetstar aircraft. This applies to Section IA, IB and Section II of Packing Instruction 965. Shipments exempt from this prohibition are:~~

- ~~UN 3480 Lithium ion batteries (including lithium polymer batteries), shipped as A.O.G. spares:~~

- ~~The words “A.O.G. Spares” must be entered in the “Additional Handling Information” on the Shipper’s Declaration or on the air waybill when no Shipper’s Declaration is required in the “Handling Information” or “Nature and Quantity of Goods”.~~

- UN 3480 Lithium ion batteries (including lithium polymer batteries), when shipped for use in urgent life-saving devices (where no other means of transport is available):
  - The words “Urgently required to Support Life-Saving Devices” must be entered in the “Additional Handling Information” on the Shipper’s Declaration or on the air waybill when no Shipper’s Declaration is required in the “Handling Information” or “Nature and Quantity of Goods”.

The above exempt shipments must:

- not exceed 100 kg net each;
- comply with all relevant parts of the Dangerous Goods Regulations (e.g. Shipper’s Declaration if applicable);
- not exceed 100 kg total weight per aircraft; and
- be loaded into a Class C cargo compartment (lower deck only).

#### Delete KA (Hong Kong Dragon Airlines (Cathay Dragon))

**KA-01** UN 3480 Lithium ion batteries. Lithium ion cells and batteries are prohibited from carriage as cargo on Cathay Dragon aircraft. This applies to Section IA, IB and Section II of Packing Instruction 965.

This prohibition does not apply to:

- lithium ion cells and batteries packed with or contained in equipment (UN 3481) in accordance with PI 966 and PI 967; or
- lithium batteries (rechargeable and non-rechargeable) covered by the Provisions for Dangerous Goods Carried by Passengers or Crew (see 2.3.2 to 2.3.5 and Table 2.3.A).

**KA-02** All combination packagings containing liquid dangerous goods in Packing Groups I, II or III must contain sufficient absorbent material to absorb the entire contents of all the inner packagings.

**KA-03** Not used.

**KA-04** The shipper must provide a 24-hour emergency telephone number of a person/agency who is knowledgeable of the hazards, characteristics and actions to be taken in case of an accident or incident concerning (each of) the dangerous goods being transported. This telephone number, including country and area code, preceded by the words “Emergency Contact” or “24-hour number” must be inserted on the DGD preferably in the “Additional Handling Information” box, e.g. “Emergency Contact +47 67 50 00 00 (see 8.1.6.11 and 10.8.3.11).

**KA-05** Liquid dangerous goods in single packagings of drums and jerricans of any material must be prepared as follows:

1. the steel drums/plastic drums/plastic jerricans must be protected by other strong outer packaging, for example fibreboard box; or
2. if prepared as an open overpack, a suitably sized plastic, foam or wooden pallet must be used to protect at least the top and bottom of the packaging.

**KA-06** In addition to the requirements of 8.2.5, the UN number(s) of all shipments of dangerous goods in excepted quantities must be indicated on the air waybill.

**KA-07** UN 3090 Lithium metal batteries. Lithium metal cells and batteries are prohibited from carriage as cargo on Cathay Dragon aircraft. This applies to Section IA, IB and Section II of Packing Instruction 968.

This prohibition does not apply to:

- lithium metal cells and batteries packed with or contained in equipment (UN 3481) in accordance with PI 969 and PI 970; or

- ~~lithium batteries (rechargeable and non-rechargeable) covered by the Provisions for Dangerous Goods Carried by Passengers or Crew (see 2.3.2 to 2.3.5 and Table 2.3.A).~~

#### Amend **KM (Air Malta)**

**KM-03** ~~Dangerous Goods are not permitted in the following:~~

- ~~air mail including those items permitted by 2.4.2;~~
- ~~courier shipments carried on board Air Malta flights. Not used.~~

#### Amend **MN (Comair)**

**MN-01** The following dangerous goods are prohibited for carriage on all Comair aircraft:

- (a) Class 1 to Class 8; with the exception of UN 1044, UN 1072, UN 1863, UN 1956, UN 2795, UN 2911, UN 2915, UN 3356 and UN 3373;
- (b) Class 9; with the exception of UN 1845, **UN 2990**, UN 3082, UN 3091, UN 3363 and UN 3481.

#### Amend **QR (Qatar Airways)**

**QR-03** The shipper must provide a 24-hour emergency contact telephone number of a person/agency, who is knowledgeable of the hazards, characteristics and actions to be taken **during an emergency in the case of an accident or incident** concerning each of the dangerous goods being transported. This telephone number, including the country and area code, preceded by the words **"24-hour emergency contact telephone number"** **"Emergency contact"** or **"24-hour number"**, must be inserted on the **DGD preferably in the "Additional Handling Information" box, e.g. "Emergency contact + 974 6750 0000 (see 8.1.6.11 and 10.8.3.11). "Handling Information" box of the DGD.**

**QR-08** The following **packaging** restrictions **apply to lithium ion cells and batteries (UN 3480 and UN 3481) and lithium metal cells and batteries (UN 3090 and UN 3091) when transported as cargo must be adhered to** on all Qatar Airways flights:

- **packages containing lithium cells or batteries must not be placed in an overpack with packages containing any other dangerous goods in Classes 1, 2, 3, 4, 5, or 8;**
- **lithium cells and batteries must not be packed in the same outer packaging with any other dangerous goods in Classes 1, 2, 3, 4, 5 or 8.**

#### Amend **S7 (PJSC Siberia Airlines)**

**S7-01** **Shipment of dangerous goods transported by Siberia Airlines flights will only be acceptable after getting advance approval of Siberia Airlines. Requests for dangerous goods shipments must be sent to the following email address:**

~~— email: [sgo@s7.ru](mailto:sgo@s7.ru)~~

~~Request for approval must be submitted and be made according to the special form of approval (form is provided by request). Form of approval to be attached to the set of accompanying documents and forwarded on board to the crew by the handling company at the airport of departure. Dangerous goods are only accepted with prior approval. Requests for an approval can be submitted through the informational system of Siberia Airlines. User instructions and access to the informational system can be requested by email at [cgo@s7.ru](mailto:cgo@s7.ru).~~

#### Amend **SQ (Singapore Airlines)**

**SQ-09** **Dangerous goods shipments from other carriers will not be accepted. Interline dangerous goods shipments will only be accepted from Scoot and Silkair.**



**Section 2**

**2.3 Dangerous Goods Carried by Passengers or Crew**

Page 25, revise Table 2.3.A as shown:

**TABLE 2.3.A Provisions for Dangerous Goods Carried by Passengers or Crew (Subsection 2.3)**

| The pilot-in-command must be informed of the location   |    |     |    |    |
|---|----|-----|----|----|
| Permitted in or as carry-on baggage   |    |     |    |    |
| Permitted in or as checked baggage  |    |     |    |    |
| The approval of the operator is required  |    |     |    |    |
| ...   | NO | YES | NO | NO |
| Internal combustion or fuel cell engines, must meet A70 (see <del>2.3.5.13</del> 2.3.5.12 for details). | NO | YES | NO | NO |
| ...   |    |     |    |    |

Page 26, revise the note in 2.3.4.7 as follows:

**2.3.4.7 Lithium Battery-Powered Electronic Devices**

For the purpose of these Regulations, lithium battery-powered electronic device means the equipment or apparatus for which the lithium cells or batteries will provide electrical power for its operation. These devices are permitted in checked and carry-on baggage with the approval of the operator as follows:

...

**Note:**

*For spare lithium metal batteries with a lithium content exceeding 2 g and lithium ion batteries with a Watt-hour rating exceeding 100 Wh see 2.3.3.2. For electronic devices with lithium metal batteries with a lithium content not exceeding 2 g and lithium ion batteries with a Watt-hour rating now exceeding 100 h see ~~2.3.5.9~~ 2.3.5.8.*

Page 30, revise 2.4 as shown:

**2.4 Transport of Dangerous Goods by Post**

...

**2.4.4** A designated postal operator must have received specific approval from the civil aviation authority before the designated postal operator can introduce the acceptance of lithium batteries as identified in 2.4.2(d) and (e). A list of DPO that have received approval to accept lithium batteries can be found on the UPU website at: Website:

<http://www.upu.int/fileadmin/documents/Files/activities/postalSecurity/listAuthorizedDOsLithiumBatteriesEn.pdf>

[https://www.upu.int/en/Postal-Solutions/Programmes-Services/Postal-Supply-Chain/Security#scroll-nav\\_2](https://www.upu.int/en/Postal-Solutions/Programmes-Services/Postal-Supply-Chain/Security#scroll-nav_2)

**Notes:**

1. Designated postal authorities may accept the dangerous goods identified in 2.4.2(a), (b) and (c) without receiving specific approval from the civil aviation authority.
2. Guidelines for appropriate national authorities and civil aviation authorities are contained in the Supplement to the ICAO Technical Instructions (S-1; 3).



Pages 30 – 31, revise 2.5 as shown:

## **2.5 Dangerous Goods in Operator's Property**

### **2.5.1 Exceptions**

The provisions contained in these Regulations do not apply to the articles and substances of 2.5.1.1 through **2.5.1.4** **2.5.1.5**.

#### **2.5.1.1 Aircraft Equipment**

Articles and substances which would otherwise be classified as dangerous goods but which are required to be aboard the aircraft in accordance with pertinent airworthiness requirements and operating regulations or that are authorized by the State of the operator to meet special requirements.

#### **2.5.1.2 Consumer Goods**

Aerosols, alcoholic beverages, perfumes, colognes, liquefied gas lighters and portable electronic devices containing lithium ion or lithium metal cells or batteries provided that the lithium batteries meet the provisions of 2.3.5.8 carried aboard an aircraft by the operator for use or sale on the aircraft during the flight, or series of flights, but excluding non-refillable gas lighters and those lighters liable to leak when exposed to reduced pressure.

#### **2.5.1.3 Carbon Dioxide, Solid (Dry Ice)**

Carbon dioxide solid, (dry ice) for use in food and beverage service aboard the aircraft.

#### **2.5.1.4 Hygiene Products**

**Alcohol-based hand sanitizers and alcohol-based cleaning products carried aboard an aircraft by the operator for use on the aircraft during the flight or series of flights for the purposes for passenger and crew hygiene.**

#### **2.5.1.4** **2.5.1.5** **Battery-Powered Electronic Equipment**

Electronic devices such as electronic flight bags, personal entertainment devices, credit card readers, containing lithium metal or lithium ion cells or batteries and spare lithium batteries for such devices carried aboard an aircraft by the operator for use on the aircraft during the flight or series of flights, provided that the batteries meet the provisions of 2.3.5.8. Spare lithium batteries must be individually protected so as to prevent short circuits when not in use. Conditions for the carriage and use of these electronic devices and for the carriage of spare batteries must be provided in the operations manual and/or other appropriate manuals as will enable flight crew, cabin crew and other employees to carry out the functions for which they are responsible.

### **2.5.2 Aircraft Spares**

**2.5.2.1** Unless otherwise authorized by the State of the operator, articles and substances intended as replacements for those referred to in 2.5.1.1 or articles and substances referred to in 2.5.1.1 which have been removed for replacement, must be transported in accordance with the provisions of these Regulations.

**2.5.2.2** When consigned by operators, these articles or substances may be carried in containers specially designed for their transport, provided such containers are capable of meeting at least the requirements for the packaging specified in these Regulations for the items packed in the containers. All other applicable provisions of these Regulations apply.

**2.5.2.3** Unless otherwise authorized by the State of the operator, articles and substances intended as replacements for those referred to in 2.5.1.2, **and** 2.5.1.3 **and** **2.5.1.4** must be transported in accordance with the provisions of these Regulations.

**2.5.2.4** Unless otherwise authorized by the State of the operator, battery-powered devices and spare batteries intended as replacements for those referred to in **2.5.1.4** **2.5.1.5** must be transported in accordance with the provisions of these Regulations.

### **Section 3**

Page 194, amend 3.9.2.5 as shown:

#### **3.9.2.5 Genetically Modified Micro-Organisms (GMMOs) or Genetically Modified Organisms (GMOs)**

##### **3.9.2.5.0 Assigned entries:**

- UN 3245 **Genetically modified micro-organisms** or **Genetically modified organisms**

**3.9.2.5.1** Genetically modified micro-organisms (GMMOs) and genetically modified organisms (GMOs) are micro-organisms and organisms in which genetic material has been purposely altered through genetic engineering in a way that does not occur naturally.

**3.9.2.5.2** Genetically modified organisms and micro-organisms which do not meet the definition of toxic or infectious substances must be assigned to UN 3245.

**3.9.2.5.3** GMMOs or GMOs are not subject to these Regulations when authorised for use by the appropriate national authorities of the States of origin, transit and destination.

**3.9.2.5.4** Genetically modified live animals must be transported under terms and conditions of the appropriate national authorities of the States of origin and destination.

**3.9.2.5.5** COVID-19 vaccines containing GMOs or GMMOs, including those in clinical trials, are not subject to these Regulations.

#### **3.12 Classification of Articles Containing Dangerous Goods, n.o.s.**

Page 198, revise the example in 3.12.2 as follows:

**3.12.2** Such articles may in addition contain batteries. Lithium batteries that are integral to the article shall be of a type proven to meet the testing requirements of the UN Manual of Tests and Criteria, part III, sub-section 38.3, except when otherwise specified by these Regulations (e.g. for **articles containing** pre-production prototype ~~articles containing~~ lithium batteries or for a small production run, consisting of not more than 100 such **articles batteries**).

**Section 4**

Table 4.2: Amend entries as shown:

| UN/<br>ID<br>no. | Proper Shipping Name/Description   | Class<br>or<br>Div.<br><br>(Sub<br>Risk) | Hazard Label(s)                | PG | EQ<br>see<br>2.6 | Passenger and Cargo Aircraft |                    |             |                    | Cargo Aircraft<br>Only |                       | S.P.<br>see<br>4.4   | ERG<br>Code |
|------------------|--|--|--------------------------------|----|------------------|------------------------------|--------------------|-------------|--------------------|------------------------|-----------------------|--|-------------|
|                  |  |  |                                |    |                  | Ltd Qty                      |                    | Pkg<br>Inst | Max Net<br>Qty/Pkg | Pkg<br>Inst            | Max<br>Net<br>Qty/Pkg |  |             |
|                  |  |  |                                |    |                  | Pkg<br>Inst                  | Max Net<br>Qty/Pkg |             |                    |                        |                       |  |             |
| 3481             | <b>Lithium ion batteries contained in equipment †</b><br>(including lithium ion polymer batteries) | 9  | Miscellaneous<br>Lithium batt. |    | E0               | Forbidden                    |                    | 967         | 5 kg               | 967                    | 35 kg                 | A48<br>A88<br>A99<br>A154<br>A164<br>A181<br>A185<br>A206<br>A213<br><b>A220</b> | 12FZ        |
| 3481             | <b>Lithium ion batteries packed with equipment †</b><br>(including lithium ion polymer batteries)  | 9  | Miscellaneous<br>Lithium batt. |    | E0               | Forbidden                    |                    | 966         | 5 kg               | 966                    | 35 kg                 | A88<br>A99<br>A154<br>A164<br>A181<br>A185<br>A206<br>A213<br><b>A802</b>        | 12FZ        |
| 3091             | <b>Lithium metal batteries contained in equipment †</b><br>(including lithium alloy batteries)     | 9  | Miscellaneous<br>Lithium batt. |    | E0               | Forbidden                    |                    | 970         | 5 kg               | 970                    | 35 kg                 | A48<br>A88<br>A99<br>A154<br>A164<br>A181<br>A185<br>A206<br>A213<br><b>A220</b> | 12FZ        |
| 3091             | <b>Lithium metal batteries packed with equipment †</b><br>(including lithium alloy batteries)      | 9  | Miscellaneous<br>Lithium batt. |    | E0               | Forbidden                    |                    | 969         | 5 kg               | 969                    | 35 kg                 | A88<br>A99<br>A154<br>A164<br>A181<br>A185<br>A206<br>A213<br><b>A802</b>        | 12FZ        |
| 3535             | <b>Toxic solid, flammable, inorganic, n.o.s.</b><br>★  | 6.1<br>(4.1)                             | Toxic & Flamm.<br>solid        | I  | E5               | Forbidden                    |                    | 665         | 1 kg               | 672                    | 15 kg                 | A5   | 6F          |
|                  |  |  |                                |    | II               | E4                           | Y644               | 1 kg        | 668                | 15 kg                  | 675                   | 50 kg  | A5          |

**4.4 Special Provisions**

Page 407, revise Special Provision A46 as follows:

**A46** (216) Mixtures of solids which are not subject to these Regulations and flammable liquids may be transported under this entry without first applying the classification criteria of Division 4.1, providing there is no free liquid visible at the time the substance is packaged and for single packagings the packaging must pass a leakproofness test at the Packing Group II level. ~~Small inner packagings consisting of sealed~~ **Sealed** packets ~~or~~

**and** articles containing less than 10 mL of a Packing Group II or III flammable liquid absorbed into a solid material are not subject to these Regulations provided there is no free liquid in the packet or article.

Pages 411 – 412, revise Special Provision A99 as follows:

**A99** Irrespective of the per package quantity limit for cargo aircraft specified in Column L of the List of Dangerous Goods (Subsection 4.2) and in Section I of Packing Instructions 965, 966, 967, 968, 969 or 970, a lithium battery or battery assembly (UN 3090 or UN 3480), including when packed with, or contained in equipment (UN 3091 or UN 3481) that meets the other requirements of Section I of the applicable packing instruction may have a mass exceeding 35 kg, if approved by the appropriate authority of the State of origin and the State of the operator and the requirements in Packing Instruction 974 of the ICAO Supplement to the Technical Instructions are met. **A copy of the document of approval must accompany the consignment.**

☞ When lithium batteries are shipped under an approval in accordance with this special provision, the packing instruction number shown on the Shipper's Declaration must be "974".

☞ **A copy of the document of approval must accompany the consignment. Transport in accordance with this special provision must be noted on the Shipper's Declaration.**

Page 424, add new Special provision A220 as follows:

**A220 Packages containing COVID-19 vaccines accompanied by data loggers and/or cargo tracking devices containing lithium batteries are not subject to the marking and documentation requirements of Section II of Packing Instruction 967 or 970, as applicable.**

## **Section 6**

### **6.0 General Provisions**

Page 657, revise 6.0.1.3 as shown:

**6.0.1.3** The requirements for packagings in 6.1 and 6.2 are based on packagings currently used. In order to take into account progress in science and technology, there is no objection to the use of packagings having specifications different from those in 6.1 and 6.2, provided they are equally effective, acceptable to the appropriate authority and are able to successfully withstand the tests described in **5.0.2.11 5.0.2.14** and 6.3. Methods of testing other than those described in these Regulations are acceptable, provided they are equivalent.

## **Section 8**

### **8.2.2 Mixed Shipment**

Page 758, revise 8.2.2 as shown:

An Air Waybill containing both dangerous goods and non-dangerous goods must indicate in the "Handling Information" box of the air Waybill the number of pieces of dangerous goods either before or after the statement "Dangerous Goods as per **attached associated** Shipper's Declaration" or "Dangerous Goods as per **attached associated** DGD".

## **Section 10**

### **10.0.2 Radiation Protection Program**

Page 794, revise 10.0.2.6 as shown:

The arrangements for preparedness and response must be based on the graded approach and take into consideration the identified hazards and their potential consequences, including the formation of other dangerous substances that may result from the reaction between the contents of a consignment and the environment in the event of a nuclear or radiological emergency. Guidance for the establishment of such arrangements is contained in "Preparedness and Response for a Nuclear or Radiological Emergency", IAEA Safety Standards Series No. GSR Part 7, IAEA, Vienna (2015), "Criteria for Use in Preparedness and Response for a Nuclear or Radiological Emergency", IAEA Safety Standards Series No. GSG-2, IAEA, Vienna (2011);

“Arrangements for Preparedness for a Nuclear or Radiological Emergency”, IAEA Safety Standards Series No. GS-G-2.1, IAEA, Vienna (2007), and “Arrangements for the Termination of a Nuclear or Radiological Emergency”, IAEA Safety Standards Series No. GSG-11, IAEA, Vienna (~~2008~~) (2018).

### 10.8.8.2 Mixed Shipment

Page 858, revise 10.8.8.2 as shown:

An Air Waybill containing both dangerous goods and non-dangerous goods must indicate in the “Handling Information” box of the Air Waybill, the number of pieces of dangerous goods either before or after the statement “Dangerous Goods as per ~~attached~~ **associated** Shipper’s Declaration” or “Dangerous Goods as per ~~attached~~ **associated** DGD”.

### 10.8.8.4 Examples

Page 859, revise Figure 10.8.G to be shown as follows:

**FIGURE 10.8.G**

#### **Air Waybill Example – Cargo Aircraft Only**

| Airport of Destination                                      |              | Requested Flight/Date |                    | Amount of Insurance |                   | INSURANCE - If carrier offers insurance, and such insurance is requested in accordance with the conditions thereof, indicate amount to be insured in figures in box marked "Amount of Insurance". |       |   |
|---|--------------|-----------------------|--------------------|---------------------|-------------------|---|-------|---|
| Handling Information  |              |                       |                    |                     |                   |   |       |   |
| Dangerous Goods as per associated DGD – Cargo Aircraft Only |              |                       |                    |                     |                   |   | SCI   |   |
| No. of Pieces RCP   | Gross Weight | Kg<br>lb              | Rate Class         |                     | Chargeable Weight | Rate / Charge   | Total | Nature and Quantity of Goods (incl. Dimensions of Volume) |
|   |              |                       | Commodity Item No. |                     |                   |   |       |   |
|   |              |                       |                    |                     |                   |   |       |   |

## **Appendix B.2**

Page 897, amend the meaning of the codes in B.2.2.4 as shown:

RBI – Fully regulated lithium ion batteries (Class 9, UN 3480) as per Section IA and IB of PI 965, **and where applicable lithium ion batteries shipped under an approval in accordance with special provision A88 or A99**

RBM – Fully regulated lithium metal batteries (Class 9, UN 3090) as per Section IA and IB of PI 968, **and where applicable lithium metal batteries shipped under an approval in accordance with special provision A88 or A99**

RLI – Fully regulated lithium ion batteries (Class 9, UN 3481) as per Section I of PI 966 and 967, **and where applicable lithium ion batteries shipped under an approval in accordance with special provision A88 or A99**

RLM – Fully regulated lithium metal batteries (Class 9, UN 3091) as per Section I of PI 969 and 970, **and where applicable lithium metal batteries shipped under an approval in accordance with special provision A88 or A99**

## **Appendix D.1**

Page 924, amend contact details for Germany (D) as follows:

### **Germany (D)**

Head Dangerous Goods Group  
Dangerous Goods Group  
Luftfahrt-Bundesamt  
Aussenstelle Frankfurt  
Sachgebiet Gefahrgut  
Kelsterbacherstr. 23  
65479 Raunheim  
GERMANY

Tel: +49 531 2355 3302

Fax: +49 531 2355 3398

Email: [Hermann.brockhaus@lba.de](mailto:Hermann.brockhaus@lba.de)

Email: [bernhardhermannjosef@web.de](mailto:bernhardhermannjosef@web.de)

Tel: +49 531 2355 8250

Email: [gefahrgut@lba.de](mailto:gefahrgut@lba.de)

Page 937, amend contact details for United States (USA) as follows:

### **United States (USA)**

Enforcement branch:

For Operator Compliance and Enforcement  
Director, Hazardous Materials Safety Program  
Office of Hazardous Materials Safety  
Federal Aviation Administration (FAA)  
FAA Headquarters (FOB10A)  
ADG-1, 800 Independence Ave.  
SW, Washington  
DC 20594  
U.S.A.

Tel: +1 (202) 267-94324

Fax: +1 (202) 267-9450

Email: [janet.mcluaghlin@faa.gov](mailto:janet.mcluaghlin@faa.gov)

Website: [www.faa.gov/about/office\\_org/headquarters\\_offices/ash/ash\\_programs/hazmat](http://www.faa.gov/about/office_org/headquarters_offices/ash/ash_programs/hazmat)

Office of Hazardous Materials Safety  
Federal Aviation Administration (FAA)  
470 L'Enfant Plaza East SW  
8<sup>th</sup> Floor  
Washington, DC 20024  
U.S.A.

Email: [hazmatinfo@faa.gov](mailto:hazmatinfo@faa.gov)

Website: [www.faa.gov/hazmat](http://www.faa.gov/hazmat)

## **Appendix D.2**

Page 952, amend the contact details for United States (USA) as follows:

### **United States (USA)**

~~Office of Sciences, Engineering and Research Office of Hazardous Materials Technology~~  
Pipeline and Hazardous Materials Safety Administration  
U.S. Department of Transportation  
Washington, DC  
U.S.A.  
20590

Tel: +1 (202) 366 4545  
Fax: +1 (202) 366 3753  
~~Telex: 892 427~~  
~~TWX: (710) 822 9426~~  
email: rick.boyle@dot.gov

Technical point of contact for Type B and fissile packages:

~~Spent Fuel Project Office~~  
~~Office of Nuclear Materials Safety and Safeguards~~  
~~U.S. Nuclear Regulatory Commission~~  
~~Washington, DC~~  
~~U.S.A.~~  
~~20555~~

~~Tel: +1 (302) 415 8500~~  
~~Fax: +1 (301) 415 8555~~  
~~email: EWB@nrc.gov~~

~~Division of Fuel Management~~  
~~Office of Nuclear Material Safety and Safeguards~~  
~~U.S. Nuclear Regulatory Commission~~  
~~Washington, DC 20555-0001~~  
~~U.S.A.~~

~~Tel: +1 (301) 415 8500~~  
~~Fax: +1 (301) 415 8555~~  
~~Email: Andrea.Kock@nrc.gov~~



### **Appendix F.3**

Page 1000, amend the contact details for the following Accredited Training School in Belgium:

#### **Belgium**

~~Swissport Cargo Service Belgium N.V.~~  
~~Brussels Airport Building 32 PB 3~~  
~~1930 Zaventem~~  
~~BELGIUM~~  
~~B-1931~~

Tel: +32 2 788 3205  
Email: [bru.ghtraining@swissport.com](mailto:bru.ghtraining@swissport.com)  
Website: [www.swissport.com](http://www.swissport.com)

~~Swissport Cargo Services Belgium NV~~  
~~BRUCARGO Building 704 Box3~~  
~~B-1830 Bedrijvenzone Machelen~~  
~~BELGIUM~~

Tel: +32 478 54 1787  
Email: [Be.cargotraining@swissport.com](mailto:Be.cargotraining@swissport.com)  
Website: [www.swissport.com](http://www.swissport.com)

Page 1006, add the following Accredited Training School for India:

#### **India**

~~International Aviation Training Center~~  
~~Off. 4, Building No. 84, Kurla Navchaitanya Chs Nehru~~  
~~Nagar Kurla East~~  
~~Mumbai 400024~~  
~~INDIA~~

Tel: +91 85 5209 5393  
Email: [vksharma@iatc.co.in](mailto:vksharma@iatc.co.in)  
Website: [www.iatc.co.in](http://www.iatc.co.in)