

Consolidated Changes Agreed for 59th Edition DGR

SECTION 1—APPLICABILITY

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1.7 Dangerous Goods Security

1.7.0 General

This subsection addresses the security responsibilities of operators, shippers and others involved in the transport of dangerous goods aboard aircraft. It should be noted that ICAO Annex 17—Security provides comprehensive requirements for implementation of security measures by States to prevent unlawful interference with civil aviation or when such interference has been committed. In addition, the ICAO Security Manual for Safeguarding Civil Aviation against Acts of Unlawful Interference (Doc 8973 - Restricted) provides procedures and guidance on aspects of aviation security and is intended to assist States in the implementation of their respective national civil aviation security programmes. The current edition of the IATA Security Manual contains guidance material directed at industry entities such as operators and airports. The requirements in this subsection are intended to supplement the requirements of Annex 17 and to implement measures to be taken to minimize theft or misuse of dangerous goods that may endanger persons or property. The provisions of this subsection do not ~~supersede~~^{supercede} the requirements of Annex 17 and mandatory elements of the associated documents.

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1.7.2 Dangerous Goods Security Training

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1.7.2.2 Security awareness training should address the nature of security risks, recognition of security risks, methods to address and reduce such risks and actions to be taken in the event of a security breach. It should include awareness of security plans (if appropriate) commensurate with the responsibilities of individuals and their role in implementing security plans.

Note:

Persons who have received security training in accordance with the requirements of a National Security Plan or other security requirements that ~~fulfill~~^{fulfil} the elements of 1.7.2.2 need not receive additional training.

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SECTION 2—LIMITATIONS

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2.3 Dangerous Goods Carried by Passengers or Crew

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2.3.2 Goods Acceptable with Operator Approval, as Checked Baggage Only

The following dangerous goods, as listed in 2.3.2.1 through 2.3.2.6, are permitted on aircraft as checked baggage only and with the approval of the operator(s).

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2.3.2.5 Camping Stoves and Fuel Containers that have Contained a Flammable Liquid Fuel

~~With the approval of the operator, as checked baggage only, c~~Camping stoves and fuel containers for camping stoves that have contained a flammable liquid fuel may be carried provided the fuel tank of the camping stove and/or fuel container has been completely drained of all liquid fuel and action has been taken to nullify the danger. To nullify the danger, the empty fuel tank and/or container must be allowed to drain for at least 1 hour, the fuel tank and/or container must then be left uncapped for a minimum of 6 hours to allow any residual fuel to evaporate. Alternative methods, such as adding cooking oil to the fuel tank and/or container to elevate the flash point of any residual liquid above the flash point of flammable liquid and then emptying the fuel tank and/or container, are equally acceptable. The fuel tank and/or container must then have the cap securely fastened and be wrapped in

an absorbent material such as paper towel and placed in a polyethylene or equivalent bag. The top of the bag must then be sealed or gathered and closed with an elastic band or twine.

Note:

Provided the above cleaning method is followed in accordance with these Regulations, the fuel stove or container can be classified as non-hazardous. However to control the carriage of these items, they are listed in Table 2.3.A Provisions for Dangerous Goods Carried by Passengers or Crew.

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2.3.3 Goods Acceptable with Operator Approval as Carry-on Baggage Only

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2.3.3.2 Spare Lithium Batteries

Spare lithium batteries including articles containing lithium metal or lithium ion cells or batteries, the primary purpose of which is to provide power to another device, e.g. power banks, are permitted in carry-on baggage as follows:

- (a) for portable medical electronic devices (PMED), such as automated external defibrillators (AED), portable oxygen concentrators (POC) and continuous positive airway pressure (CPAP):

...

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

Table 2.3.A

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				
...				
<p>Batteries, spare/loose, including lithium metal or lithium ion cells or batteries, for portable electronic devices must be in carry-on baggage only. <u>For lithium metal batteries the lithium metal content must not exceed 2 g and for lithium ion batteries the Watt-hour rating must not exceed 100 Wh.</u> Articles which have the primary purpose as a power source, e.g. power banks are considered as spare batteries. These batteries must be individually protected to prevent short circuits. These batteries must be individually protected to prevent short circuits. <u>Each person is limited to a maximum of 20 spare batteries.</u> <u>*The operator may approve the carriage of more than 20 batteries.</u></p>	NO*	NO	YES	NO
...				
<p>Lithium Batteries: Portable electronic devices (PED) containing lithium metal or lithium ion cells or batteries, including medical devices such as portable oxygen concentrators (POC) and consumer electronics such as cameras, mobile phones, laptops and tablets, when carried by passengers or crew for personal use. For lithium metal batteries the lithium metal content must not exceed 2 g and for lithium ion batteries the Watt-hour rating must not exceed 100 Wh. Devices in checked baggage must be completely switched off and must be protected from damage. <u>Each person is limited to a maximum of 15 PED.</u> <u>*The operator may approve the carriage of more than 15 PED.</u></p>	NO*	YES	YES	NO
...				
<p>Mobility Aids: Battery-powered <u>wheelchairs or other similar mobility devices mobility aids</u> with lithium ion batteries (collapsible), lithium-ion battery must be removed and carried in the cabin (see 2.3.2.4 (d) for details)</p>	YES	NO	YES	NO

2.3.4 Goods Acceptable with Operator Approval as Baggage

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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 ~~Lithium battery-powered electronic~~ devices are permitted in checked and carry-on baggage with the approval of the operator as follows:

- (a) portable medical electronic devices (PMED), such as automated external defibrillators (AED), portable oxygen concentrators (POC) and continuous positive airway pressure (CPAP), containing lithium metal or lithium ion cells or batteries may be carried by passengers for medical use as follows:

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2.3.5 Goods Acceptable without the Operator's Approval

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2.3.5.9 Portable Electronic Devices (PED) (Including Medical Devices) Containing Batteries

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 ~~Portable electronic~~ devices (PED), which may include medical devices such as portable oxygen concentrators (POC) and consumer electronics such as cameras, mobile phones, laptops and tablets containing batteries when carried by passengers or crew for personal use, which should be carried in carry-on baggage. Each person is limited to a maximum of 15 PED and a maximum of 20 spare batteries; however the operator may approve the carriage of more than 15 PED and/or 20 spare batteries. Spare batteries must be individually protected to prevent short circuits by placement in the original retail packaging or by otherwise insulating terminals, e.g. by taping over exposed terminals or placing each battery in a separate plastic bag or protective pouch and carried in carry-on baggage only. In addition, lithium batteries are subject to the following conditions:

- (a) each installed or spare battery must not exceed:
1. for lithium metal or lithium alloy batteries, a lithium content of not more than 2 g; or
 2. for lithium ion batteries, a watt-hour rating of not more than 100 Wh.
- (b) batteries and cells must be of a type that meets the requirements of the UN Manual of Tests and Criteria, Part III, subsection 38.3;
- (c) articles containing lithium metal or lithium ion cells or batteries, the primary purpose of which is to provide power to another device, e.g. power banks, are permitted in carry-on baggage only. These articles must be individually protected to prevent short circuits by placement in the original retail packaging or by otherwise insulating terminals, e.g. by taping over exposed terminals or placing each battery in a separate plastic bag or protective pouch;
- (d) electronic cigarettes containing lithium batteries are permitted in carry-on baggage only (see 2.3.5.17);
- (e) if devices are carried in checked baggage the passenger/crew member must take measures to prevent unintentional activation.

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2.4 Transport of Dangerous Goods by Post

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2.4.2 The dangerous goods listed in this subsection may be accepted in mail for air carriage subject to the provisions of the appropriate national authorities concerned and the parts of these Regulations which relate to such materials:

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2.4.4 ~~Before 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) ~~they must have received specific approval from the civil aviation authority.~~ A list of DPO that have received approval to accept lithium batteries can be found on the UPU website at:

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

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).

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2.6.8 Documentation

2.6.8.1 The Shipper's Declaration for Dangerous Goods is not required.

2.6.8.2 If a document (such as a bill of lading or air waybill) accompanies dangerous goods in excepted quantities, it must include the statement "Dangerous Goods in Excepted Quantities" and indicate the number of packages unless these are the only packages within the consignment.

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2.7 Dangerous Goods in Limited Quantities

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2.7.2 Limitations

2.7.2.1 Dangerous Goods Permitted in Limited Quantities

Only dangerous goods which are permitted on passenger aircraft and which meet the criteria of the following classes, divisions and packing groups (if appropriate) may be carried under the provisions for dangerous goods in limited quantities:

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- (c) Class 4: Flammable solids of Division 4.1 in Packing Groups II and III but excluding self-reactive substances irrespective of packing group and polymerizing substances; Substances of Division 4.3 in Packing Groups II and III, solids only and UN 3476 (Fuel cell cartridges, containing water-reactive substances);

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SECTION 3—CLASSIFICATION

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3.4 Class 4—Flammable Solids; Substances Liable to Spontaneous Combustion; Substances which, in Contact with Water, Emit Flammable Gases

3.4.0 General

3.4.0.1 Class 4 is divided into three divisions as follows:

- Division 4.1 Flammable solids; Self-Reactive Substances; Polymerizing Substances; and Solid Desensitized Explosives.

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3.4.1 Division 4.1—Flammable Solids; Self-Reactive Substances; Polymerizing Substances; and Solid Desensitized Explosives

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3.9 Class 9—Miscellaneous Dangerous Substances and Articles, Including Environmentally Hazardous Substances

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3.9.2 Assignment to Class 9

Class 9 includes, ~~but is not limited to~~, the following articles and substances:

3.9.2.1 Aviation Regulated Solid or Liquid

3.9.2.1.0 Assigned entries:

- **UN 3334 Aviation regulated liquid, n.o.s.**
- **UN 3335 Aviation regulated solid, n.o.s.**

3.9.2.1.1 Any material, which has narcotic, noxious, irritating or other properties such that, in the event of spillage or leakage on an aircraft, could cause extreme annoyance or discomfort to crew members so as to prevent the correct performance of assigned duties. The materials included under this proper shipping name must not meet any of the definitions for Classes 1 through 8.

3.9.2.2 Magnetized Material

3.9.2.2.0 Assigned entry:

- **UN 2807 Magnetized material**

3.9.2.2.1 Any material which, when packed for air transport, has a maximum magnetic field strength sufficient to cause a compass deflection of more than 2 degrees at a distance of 2.1 m from any point on the surface of the assembled package. The magnetic field strength at the compass producing a 2 degree deflection is taken to be 0.418 A/m (0.00525 Gauss).

3.9.2.2.2 The magnetic field strength must be measured with a magnetic compass sensitive enough to read a 2 degree variation, preferably in 1 degree increments or finer, or using a Gauss meter having a sensitivity sufficient to measure magnetic fields greater than 0.0005 Gauss within a tolerance of ± 5 per cent, or by an equivalent means.

3.9.2.2.3 Compass measurements must be taken in an area free from magnetic interference other than the earth's magnetic field. When using a compass, the material and the compass must be aligned in an East/West direction. Gauss meter measurements must be in accordance with the manufacturer's instructions. Measurements are taken while the packaged material is rotated through 360 degrees in its horizontal plane while maintaining a constant distance (2.1 m or 4.6 m as referred to in Packing Instruction 953) between the measuring device and any point on the outside surface of the package. Shielding may be used to reduce the package's magnetic strength.

Note:

Masses of ferro-magnetic metals such as automobiles, automobile parts, metal fencing, piping and metal construction material, even if not meeting the definition of magnetized materials may affect aircraft compasses, as may packages or items which individually do not meet the definition of magnetized materials but cumulatively may have a magnetic field strength of a magnetized material.

3.9.2.3 Elevated Temperature Substances

3.9.2.3.0 Assigned entries:

- **UN 3257 Elevated temperature liquid, n.o.s.**
- **UN 3258 Elevated temperature solid, n.o.s.**

3.9.2.3.1 Substances that are transported or offered for transport at temperatures equal to or exceeding 100°C in a liquid state or at temperatures equal to or exceeding 240°C in a solid state (these substances may only be carried under the provisions of 2.1.2).

3.9.2.4 Environmentally Hazardous Substances

3.9.2.4.0 Substances or mixtures dangerous to the aquatic environment not presenting a danger covered by other classes, must be assigned to packing group III and designated:

UN 3077 Environmentally hazardous substance, solid, n.o.s.; or

UN 3082 Environmentally hazardous substance, liquid, n.o.s.

3.9.2.4.1 Environmentally Hazardous substances (aquatic environment) are those that meet the criteria in 2.9.3 of the UN Model Regulations or that meet criteria in national or international regulations established by the appropriate national authority in the State of origin, transit or destination of the consignment. The detailed classification categories and criteria for environmentally hazardous substances (aquatic environment) as set out in 2.9.3 of the UN Model Regulations can be found at

<http://www.iata.org/whatwedo/cargo/dgr/Documents/rev19.PDF>

~~Substances or mixtures dangerous to the aquatic environment not presenting a danger covered by other classes, must be assigned to packing group III and designated:~~

~~UN 3077 Environmentally hazardous substance, solid, n.o.s.; or~~

~~UN 3082 Environmentally hazardous substance, liquid, n.o.s.~~

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.

3.9.2.6 Lithium Batteries

3.9.2.6.0 Assigned entries:

- **UN 3090 Lithium metal batteries**
- **UN 3091 Lithium metal batteries contained in equipment or Lithium metal batteries packed with equipment**
- **UN 3480 Lithium ion batteries**
- **UN 3481 Lithium ion batteries contained in equipment or Lithium ion batteries packed with equipment**

3.9.2.6.1 Cells and batteries, cells and batteries contained in equipment, or cells and batteries packed with equipment, containing lithium in any form must be assigned to UN 3090, UN 3091, UN 3480 or UN 3481, as appropriate. They may be transported under these entries if they meet the following provisions:

- (a) each cell or battery is of the type proved to meet the requirements of each test of the UN Manual of Tests and Criteria, Part III, subsection 38.3. Cells and batteries manufactured according to a type meeting the requirements of subsection 38.3 of the UN Manual of Tests and Criteria, Revision 3, Amendment 1 or any subsequent revision and amendment applicable at the date of the type testing may continue to be transported, unless otherwise provided in these Regulations. Cell and battery types only meeting the requirements of the UN Manual of Tests and Criteria, Revision 3, are no longer valid. However, cells and batteries manufactured in conformity with such types before 1 July 2003 may continue to be transported if all other applicable requirements are fulfilled.

Note:

Batteries, including those which have been refurbished or otherwise altered, must be of a type proved to meet the testing requirements of the Manual of Tests and Criteria, Part III, subsection 38.3, irrespective of whether the cells of which they are composed are of a tested type.

- (b) each cell and battery incorporates a safety venting device or is designed to preclude a violent rupture under conditions normally incident to transport;
- (c) each cell and battery is equipped with an effective means of preventing external short circuits;
- (d) each battery containing cells or series of cells connected in parallel is equipped with effective means as necessary to prevent dangerous reverse current flow (e.g., diodes, fuses, etc.);
- (e) cells and batteries must be manufactured under a quality management program that includes:
1. a description of the organizational structure and responsibilities of personnel with regard to design and product quality;
 2. the relevant inspection and test, quality control, quality assurance and process operation instructions that will be used;

3. process controls that should include relevant activities to prevent and detect internal short circuit failure during manufacture of cells;
4. quality records, such as inspection reports, test data, calibration data and certificates. Test data must be kept and made available to the appropriate national authority upon request;
5. management reviews to ensure the effective operation of the quality management programme;
6. a process for control of documents and their revision;
7. a means for control of cells or batteries that are not conforming to the type tested as mentioned in (a) above;
8. training programmes and qualification procedures for relevant personnel; and
9. procedures to ensure that there is no damage to the final product.

Note:

In house quality management programmes may be accepted. Third party certification is not required, but the procedures listed in 1. to 9. above must be properly recorded and traceable. A copy of the quality management programme must be made available to the appropriate national authority upon request.

3.9.2.7 ~~Miscellaneous Articles and Substances~~Substances which, on Inhalation as Fine Dust, may Endanger Health

3.9.2.7.0 ~~Examples included in this class~~Assigned entries:

- UN 2212 Asbestos, amphibole (amosite, tremolite, actinolite, anthophyllite, crocidolite)
- UN 2590 Asbestos, chrysotile

3.9.2.8 Capacitors

3.9.2.8.0 Assigned entries:

- UN 3499 Capacitor, electric double layer
- UN 3508 Capacitor asymmetric

3.9.2.9 Substances Evolving Flammable Vapour

3.9.2.9.0 Assigned entries:

- UN 2211 Polymeric beads, expandable
- UN 3314 Plastics moulding compound

3.9.2.10 Life-Saving Appliances

3.9.2.10.0 Assigned entries:

- UN 2990 Life-saving appliances, self-inflating
- UN 3072 Life-saving appliances not self-inflating
- UN 3268 Safety devices

3.9.2.11 Substances and Articles which, in the Event of Fire, may Form Dioxins

3.9.2.11.0 Assigned entries:

- UN 2315 Polychlorinated biphenyls, liquid
- UN 3151 Polyhalogenated biphenyls, liquid or Halogenated monomethyldiphenylmethanes, liquid or Polyhalogenated terphenyls, liquid
 - UN 3152 Polyhalogenated biphenyls, solid or Polyhalogenated terphenyls, solid Halogenated monomethyldiphenylmethanes, solid
- UN 3432 Polychlorinated biphenyls, solid

3.9.2.12 Other Substances or Articles Presenting a Danger During Transport, but not Meeting the Definitions of Another Class

3.9.2.12.0 Assigned entries:

- UN 1841 Acetaldehyde ammonia
- UN 1845 Carbon dioxide, solid or (d)Dry ice
- UN 1931 Zinc dithionite or Zinc hydrosulphite

- UN 1941 Dibromodifluoromethane
- UN 1990 Benzaldehyde
- UN 2071 Ammonium nitrate based fertilizer
- UN 2216 Fish meal, stabilized or Fish scrap, stabilized
- UN 2969 Castor beans or Castor flake or Castor meal or Castor pomace
- UN 3166 Vehicle, flammable gas powered or Vehicle, flammable liquid powered or Vehicle, fuel cell, flammable gas powered or Vehicle, fuel cell, flammable liquid powered
- UN 3171 Battery-powered equipment or Battery-powered vehicle
- UN 3316 Chemical kit or First aid kit
- UN 3359 Fumigated cargo transport unit
- UN 3363 Dangerous goods in apparatus or Dangerous goods in machinery
- UN 3509 Packagings, discarded, empty, uncleaned
- UN 3530 Engines, internal combustion or Machinery, internal combustion
- ID 8000 Consumer commodity (see A112)
- ~~Chemical and First aid kits~~
- ~~Life-saving appliances~~
- ~~Engines, internal combustion~~
- ~~Vehicles (flammable gas powered), Vehicles (flammable liquid powered)~~
- ~~Polymeric beads~~
- ~~Battery-powered equipment or vehicles~~
- ~~Zinc dithionite~~

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SECTION 4—IDENTIFICATION

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4.4 Special Provisions

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A70 Internal combustion or fuel cell engines, being shipped either separately or incorporated into a vehicle, machine or other apparatus, without batteries or other dangerous goods, are not subject to these Regulations when carried as cargo, provided that:

(a) for flammable liquid powered engines:

1. the engine is powered by a fuel that does not meet the classification criteria for any class or division; or
2. the fuel tank of the vehicle, machine or other apparatus has never contained any fuel, or the fuel tank has been flushed and purged of vapours and adequate measures taken to nullify the hazard ; ~~and~~
3. the shipper has provided the operator with written or electronic documentation stating that a flushing and purging procedure has been followed; and
34. the entire fuel system of the engine has no free liquid and all fuel lines are sealed or capped or securely connected to the engine and vehicle, machinery or apparatus.

(b) for flammable gas powered internal combustion or fuel cell engines:

1. the entire fuel system must have been flushed, purged and filled with a non-flammable gas or fluid to nullify the hazard;
2. the final pressure of the non-flammable gas used to fill the system does not exceed 200 kPa at 20°C;
3. the shipper has made prior arrangements with the operator; and
4. the shipper has provided the operator with written or electronic documentation stating that the flushing, purging and filling procedure has been followed and that the final contents of the engine(s) have been tested and verified to be non-flammable.

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A78 (172) Where a radioactive material has (a) subsidiary risk(s):

- (a) the substance must be allocated to Packing Groups I, II or III, if appropriate, by application of the packing group criteria in Section 3 corresponding to the nature of the predominant subsidiary risk;
- (b) packages must be labelled with subsidiary risk labels corresponding to each subsidiary risk exhibited by the material in accordance with the relevant provisions of 10.7.2. Corresponding placards must be affixed to cargo transport units in accordance with the relevant provisions of 10.7.5;
- (c) for the purposes of documentation and package marking, the proper shipping name must be supplemented with the name of the constituents which most predominantly contribute to this (these) subsidiary risk(s) and which must be enclosed in parenthesis. However, where the constituent is listed by name in Table 4.2 and:
 - “forbidden” is shown in columns I/J, the Shipper’s Declaration must indicate Cargo Aircraft Only and the package must bear CAO labels, except when A1 is shown in column M when the substance may be shipped with the prior approval of the appropriate authority of the State of origin and the State of the operator under the conditions established by those authorities. A copy of the document of approval, showing the quantity limitations and the packaging requirements, must accompany the consignment;
 - “forbidden” is shown in columns K/L, the substance is forbidden for transport by air except when A2 is shown in column M when the substance may be shipped with the prior approval of the appropriate authority of the State of origin and the State of the operator under the conditions established by those authorities. A copy of the document of approval, showing the quantity limitations and the packaging requirements, must accompany the consignment.
- (d) the Shipper's Declaration must indicate the subsidiary class or division and where assigned, the packing group as required by 10.8.3.9.1, Step 4 and Step 5.
- (e) the packaging must also be capable of meeting the appropriate performance criteria for the subsidiary risk.

For packing, see also 10.3.10.1(c).

Radioactive material with a subsidiary risk of Division 4.2 (Packing Group I) must be transported in Type B packages. Radioactive material with a subsidiary risk of Division 2.1 is forbidden from transport on passenger aircraft and radioactive material with a subsidiary risk of Division 2.3 is forbidden from transport on passenger or cargo aircraft except with the prior approval of the appropriate authority of the State of origin and the State of the operator under the conditions established by those authorities. A copy of the document of approval, showing the quantity limitations and the packaging requirements, must accompany the consignment.

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A80 (220) ~~The technical name of the flammable liquid component only of~~For this solution or mixture only the technical name of the flammable component must be shown in parentheses immediately following the proper shipping name.

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A123 This entry applies to Batteries, electric storage, not otherwise listed in Subsection 4.2–List of Dangerous Goods. Examples of such batteries are: alkali-manganese, zinc-carbon and nickel-cadmium batteries. Any electrical battery or battery powered device, equipment or vehicle having the potential of a dangerous evolution of heat must be prepared for transport so as to prevent:

- (a) a short-circuit (e.g. in the case of batteries, by the effective insulation of exposed terminals; or, in the case of equipment, by disconnection of the battery and protection of exposed terminals); and
- (b) accidental-unintentional activation.

The words “Not Restricted” and the Special Provision number must be included in the description of the substance on the Air Waybill as required by 8.2.6, when an Air Waybill is issued.

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A130 When this radioactive material meets the definitions and criteria of other classes or divisions as defined in Section 3, it must be classified in accordance with the following:

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(d) when the substance meets a special provision that ~~exempts-excepts~~ this substance from all dangerous goods provisions of the other classes it must be classified in accordance with the applicable UN number of class 7 and all requirements specified in 10.0.1.5 apply.

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A203 (380) If a vehicle is powered by a flammable liquid and a flammable gas internal combustion engine, it must be assigned to UN 3166 **Vehicle, flammable gas powered**. The requirements of packing instruction 950(a) for flammable liquid tanks must also be met.

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A208 (363) This entry applies to engines or machinery, powered by fuels classified as dangerous goods via internal combustion systems or fuel cells (e.g. combustion engines, generators, compressors, turbines, heating units, etc.).

Engines and machinery containing fuels meeting the classification criteria of Class 3, must be consigned under the entries UN 3528 **Engine, internal combustion, flammable liquid powered** or UN 3528 **Engine, fuel cell, flammable liquid powered** or UN 3528 **Machinery, internal combustion, flammable liquid powered** or UN 3528 **Machinery, fuel cell, flammable liquid powered**, as appropriate.

Engines and machinery containing fuels meeting the classification criteria of Division 2.1, must be consigned under the entries UN 3529 **Engine, internal combustion, flammable gas powered** or UN 3529 **Engine, fuel cell, flammable liquid powered** or UN 3529 **Machinery, internal combustion, flammable gas powered** or UN 3529 **Machinery, fuel cell, flammable gas powered**, as appropriate.

Engines and machinery powered by both a flammable gas and a flammable liquid must be consigned under the appropriate UN 3529 entry.

Engines and machinery containing liquid fuels meeting the classification criteria of 2.9.3 of the UN Model Regulations for environmentally hazardous substances and not meeting the classification criteria of any other class or division, must be consigned under the entries UN 3530 **Engine, internal combustion** or UN 3530 **Machinery, internal combustion**, as appropriate.

Note:

~~Until 31 March 2017, shippers may identify engines as Class 9, UN 3166 using the proper shipping names and Packing Instruction 950 or 951 as shown in the 2016 Edition of these Regulations. In that instance the Shipper's Declaration must indicate the packing instruction number and the UN number and proper shipping name in effect in the 2016 Edition of these Regulations. The marks and labels applied, when required, must be consistent with the information shown on the Shipper's Declaration.~~

...

A324 For the purpose of transporting a symbolic flame, the appropriate authority of the States of origin and of the operator may approve the carriage of lamps fuelled by UN 1223—Kerosene, or UN 3295—Hydrocarbons, liquid, n.c.s., carried by a passenger as carry on baggage only.

Lamps must be of a "Davy" type or similar apparatus. In addition, the following conditions apply as a minimum:

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(h) 9.5.1.1.3(b), (c), (e), 9.5.1.2, 9.5.1.3 and 9.6.1 of these Regulations must apply.

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SECTION 5 – PACKING

5.0 General

5.0.1 Shipper's Responsibility

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5.0.1.5 Overpacks

The shipper must ensure that where an overpack is used to enclose packages of dangerous goods, the requirements of 5.0.1.5.1 to 5.0.1.5.3 must be met:

5.0.1.5.1 The overpack must not contain packages enclosing different substances which might react dangerously with each other or packages of dangerous goods which require segregation according to Table 9.3.A. In addition packages containing UN 3090, lithium metal batteries prepared in accordance with Section IA or Section IB of PI 968 and UN 3480, lithium ion batteries prepared in accordance with Section IA or Section IB of PI 965 are not permitted in an overpack with packages containing dangerous goods classified in Class 1 other than Division 1.4S, Division 2.1, Class 3, Division 4.1 or Division 5.1.

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5.0.2 General Packing Requirements

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5.0.2.11 Different Dangerous Goods Packed in One Outer Packaging

An outer packaging may contain more than one item of dangerous goods or other goods provided that:

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Notes:

1. For packages containing radioactive material, see Subsection 10.5.
2. The calculated "Q" value must be rounded up to the first decimal place and entered on the Shipper's Declaration (see 8.1.6.9.2(g)).
3. UN 3316 is not permitted in the same outer packaging with other dangerous goods (see PI 960).
4. UN 3090, lithium metal batteries prepared in accordance with Section IA or Section IB of PI 968 and UN 3480, lithium ion batteries prepared in accordance with Section IA or Section IB of PI 965 are not permitted in the same outer packaging with dangerous goods classified in Class 1 other than Division 1.4S, Division 2.1, Class 3, Division 4.1 or Division 5.1.
45. For dangerous goods where the maximum quantity per package has a packing instruction reference shown in Column J or L in the List of Dangerous Goods, refer to the maximum net quantity per package as shown in the packing instruction.

...

5.0.2.12 Inner Packagings

5.0.2.12.1 Cushioning Material

Inner packagings must be packed, secured or cushioned in an outer packaging in such a way that, under normal conditions of transport, they cannot break, be punctured or leak their contents into the outer packaging. Inner packagings containing liquids must be packaged with their closures upward and placed within outer packagings consistent with the orientation marks prescribed in 7.2.4.4 of these Regulations. Inner packagings that are liable to break or be punctured easily, such as those made of glass, porcelain or stoneware or of certain plastic material, ~~etc.~~, must be secured in the outer packagings with suitable cushioning material. Any leakage of contents must not substantially impair the protective properties of the cushioning material or of the outer packaging.

Note:

The "inners" of "combination packagings" are always termed "inner packagings" not "inner receptacles". A glass bottle is an example of such an "inner packaging". The "inners" of "composite packagings" are normally termed "inner receptacles". For example, the "inner" of a 6HA1 composite packaging (plastic material) is such an "inner receptacle" since it is normally not designed to perform a containment function without its "outer packaging" and is not therefore an "inner packaging".

...

5.2 Packing Instructions—Class 2—Gases

...

PACKING INSTRUCTION 220

This instruction applies to UN 3529 **Engine, internal combustion, flammable gas powered, Engine, fuel cell, flammable gas powered, Machinery, internal combustion, flammable gas powered** and **Machinery, fuel cell, flammable gas powered** on Cargo Aircraft Only (see PI 378 for flammable liquid powered engines and machinery, PI 950 for flammable liquid powered vehicles, PI 951 for flammable gas powered vehicles, PI 952 for battery-powered equipment and vehicles and PI 972 for engines and machinery powered by fuels that are classified as environmentally hazardous substances).

...

- (c) Batteries. All batteries must be installed and securely fastened in the battery holder of the machinery or equipment and be protected in such a manner as to prevent damage and short circuits. In addition:
1. if spillable batteries are installed, and it is possible for the machine or equipment to be handled in such a way that batteries would not remain in their intended orientation, they must be removed and packed according to Packing Instruction 492 or 870, as applicable;
 2. if lithium batteries are installed, they must meet the provisions of 3.9.2.6.1, unless otherwise approved by the appropriate national authority of the State of origin, must be securely fastened in the machinery or equipment and must be protected in such a manner as to prevent damage and short circuits;
 3. if sodium batteries are installed they must conform to the requirements of Special Provision A94.

...

5.3 Packing Instructions—Class 3—Flammable Liquids

...

PACKING INSTRUCTION 378

This instruction applies to UN 3528 **Engine, internal combustion, flammable liquid powered, Engine, fuel cell, flammable liquid powered, Machinery, internal combustion, flammable liquid powered** and **Machinery, fuel cell, flammable liquid powered** on passenger aircraft and Cargo Aircraft Only (see PI 220 for flammable gas powered engines and machinery, PI 950 for flammable liquid powered vehicles, PI 951 for flammable gas powered vehicles, PI 952 for battery-powered equipment and vehicles and PI 972 for engines and machinery powered by fuels that are classified as environmentally hazardous substances).

...

- (c) Batteries. All batteries must be installed and securely fastened in the battery holder of the machinery or equipment and be protected in such a manner as to prevent damage and short circuits. In addition:
1. if spillable batteries are installed, and it is possible for the machine or equipment to be handled in such a way that batteries would not remain in their intended orientation, they must be removed and packed according to Packing Instruction 492 or 870, as applicable;
 2. if lithium batteries are installed, they must meet the provisions of 3.9.2.6.1, unless otherwise approved by the appropriate national authority of the State of origin, must be securely fastened in the machinery or equipment and must be protected in such a manner as to prevent damage and short circuits;
 3. if sodium batteries are installed they must conform to the requirements of Special Provision A94.

...

5.9 Packing Instructions—Class 6—Toxic and Infectious Substances

...

PACKING INSTRUCTION 603

This instruction applies to UN 3507 on passenger and Cargo Aircraft Only.

...

Additional Packing Requirements

- substances must be packed in a metal or plastic primary receptacle in a leakproof rigid secondary packaging in a rigid outer packaging.
- primary inner receptacles must be packed in secondary packagings in a way that, under normal conditions of transport, they cannot break, be punctured or leak their contents into the secondary packaging. Secondary packagings must be secured in outer packagings with suitable cushioning material to prevent movement. If multiple primary receptacles are placed in a single secondary packaging, they must be either individually wrapped or separated so as to prevent contact between them;
- the contents must comply with the provisions of 10.3.11.5.2;
- the provisions of 10.6.0 and 10.6.1 must be met;
- in the case of fissile-excepted material, limits specified in ~~40.3.7.1~~210.3.7.2 and ~~40.3.7.2~~10.6.2.8.1.3 apply.

Single packagings are not permitted.

...

5.9 Packing Instructions—Class 9 — Miscellaneous Dangerous Goods

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PACKING INSTRUCTION 950

This instruction applies to UN 3166 **Vehicle, flammable liquid powered and Vehicle, fuel cell, flammable liquid powered** on passenger aircraft and Cargo Aircraft Only (see PI 220 for flammable gas powered engines and machinery, PI 378 for flammable liquid powered engines and machinery, PI 951 for flammable gas powered vehicles, PI 952 for battery-powered equipment and vehicles and PI 972 for engines and machinery powered by fuels that are classified as environmentally hazardous substances).

...

- (c) Batteries. All batteries must be installed and securely fastened in the battery holder of the machinery or equipment and be protected in such a manner as to prevent damage and short circuits. In addition:
1. if spillable batteries are installed, and it is possible for the machine or equipment to be handled in such a way that batteries would not remain in their intended orientation, they must be removed and packed according to Packing Instruction 492 or 870, as applicable;
 2. if lithium batteries are installed, they must meet the provisions of 3.9.2.6.1, ~~(a) to (e)~~, unless otherwise approved by the appropriate national authority of the State of origin, must be securely fastened in the machinery or equipment and must be protected in such a manner as to prevent damage and short circuits;
 3. if sodium batteries are installed they must conform to the requirements of Special Provision A94.

...

PACKING INSTRUCTION 951

This instruction applies to UN 3166, Vehicle, flammable gas powered and Vehicle, fuel cell, flammable gas powered on Cargo Aircraft Only (see PI 220 for flammable gas powered engines and machinery, PI 378 for flammable liquid powered engines and machinery, PI 950 for flammable liquid powered vehicles, PI 952 for battery-powered equipment and vehicles and PI 972 for engines and machinery powered by fuels that are classified as environmentally hazardous substances).

Vehicles containing internal combustion engines or fuel cells engines powered by a flammable gas must meet the following requirements:

...

(b) Flammable liquid fuel tanks. If a vehicle is powered by a flammable liquid and a flammable gas internal combustion engine, the requirements indicated in packing instruction 950(a) Flammable liquid fuel tanks must be met.

- ~~(c)~~**(b)** Batteries All batteries must be installed and securely fastened in the battery holder of the machinery or equipment and be protected in such a manner as to prevent damage and short circuits. In addition:

1. if spillable batteries are installed, and it is possible for the machine or equipment to be handled in such a way that batteries would not remain in their intended orientation, they must be removed and packed according to Packing Instruction 492 or 870, as applicable;
2. if lithium batteries are installed, they must meet the provisions of 3.9.2.6.1, ~~(a) to (e)~~, unless otherwise approved by the appropriate national authority of the State of origin, must be securely fastened in the machinery or equipment and must be protected in such a manner as to prevent damage and short circuits;
3. if sodium batteries are installed they must conform to the requirements of Special Provision A94.

~~(d)~~(e) Other operational requirement

...

PACKING INSTRUCTION 952

This instruction applies to UN 3171 Battery-powered equipment and Battery-powered vehicle on passenger aircraft and Cargo Aircraft Only. This applies to vehicles and equipment that are powered by wet batteries or sodium batteries and to vehicles powered by lithium batteries and which are transported with these batteries installed. Examples of such vehicles and equipment are electrically powered cars, lawn mowers, wheelchairs and other mobility aids. Vehicles that also contain an internal combustion engine or fuel cell engine must be consigned under UN 3166 (see PI 950 or PI 951).

...

Battery-powered vehicles, machines or equipment must meet the following requirements:

- (a) Batteries. All batteries must be installed and securely fastened in the battery holder of the vehicle, machinery or equipment and be protected in such a manner as to prevent damage and short circuits. In addition:
1. if spillable batteries are installed and it is possible for the vehicle, machine or equipment to be handled in such a way that batteries would not remain in their intended orientation, they must be removed and packed according to Packing Instruction 492 or 870, as applicable;
 2. if lithium batteries are installed in a vehicle, they must meet the provisions of 3.9.2.6.1 ~~(a) to (e)~~, unless otherwise approved by the appropriate national authority of the State of origin. Lithium batteries identified by the manufacturer as being defective for safety reasons, or that have been damaged, that have the potential of producing a dangerous evolution of heat, fire or short circuit are forbidden for transport (e.g. those being returned to the manufacturer for safety reasons);

...

PACKING INSTRUCTION 956

This instruction applies to UN 1841, UN 1931, UN 2969, UN 3077, UN 3152, UN 3335 and UN 3432 on passenger aircraft and Cargo Aircraft Only.

...

UN number	Quantity per package Passenger aircraft	Quantity per package Cargo Aircraft Only
UN 1931, Zinc dithionite Zinc hydrosulphite , or Zinc hydrosulphite UN 3152, Polyhalogenated biphenyls, solid, Polyhalogenated terphenyls, solid or Halogenated monomethyldiphenylmethanes, solid UN 3432, Polychlorinated biphenyls, solid	100 kg	200 kg
...		

...

PACKING INSTRUCTION Y960

This instruction applies to Limited Quantities of dangerous goods in Chemical kits or First aid kits.

...

Additional Packing Requirements

- kits may contain dangerous goods which require segregation according to Table 9.3.A;

Note:

Dangerous goods in Packing Group I are not permitted.

- kits must not be packed with other dangerous goods in the same outer packaging with the exception of dry ice. If dry ice is used, the provisions of Packing Instruction 954 must be met.

...

PACKING INSTRUCTION 965

Introduction

...

Section IA

These requirements apply to lithium ion cells with a Watt-hour rating in excess of 20 Wh and lithium ion batteries with a Watt-hour rating in excess of 100 Wh that have been determined to meet the criteria for assignment to Class 9.

The General Packing Requirements of 5.0.2 must be met.

Each cell or battery must:

- a) meet the provisions of 3.9.2.6.1;
- b) meet the General Requirements, above; and
- c) lithium ion cells and batteries must be offered for transport at a state of charge (SoC) not exceeding 30% of their rated ~~design~~ capacity. Cells and/or batteries at a SoC of greater than 30% may only be shipped with the approval of the State of Origin and the State of the Operator under the written conditions established by those authorities (see Special Provision A331).

Note:

Guidance and methodology for determining the rated capacity can be found in Section 38.3.2.3 of the UN Manual of Tests and Criteria, 6th revised edition.

...

Additional Requirements—Section IA

- cells and batteries must be placed in inner packagings that completely enclose the cell or battery then placed in an outer packaging. The completed package for the cells or batteries must meet the Packing Group II performance standards;
- cells and batteries must not be packed in the same outer packaging with dangerous goods classified in Class 1 (explosives) other than Division 1.4S, Division 2.1 (flammable gases), Class 3 (flammable liquids), Division 4.1 (flammable solids) or Division 5.1 (oxidizers);
- batteries with a weight of 12 kg or greater and having a strong, impact-resistant outer casing, or assemblies of such batteries, may be transported when packed in strong outer packagings or protective enclosures (e.g. in fully enclosed or wooden slatted crates) not subject to the requirements of Section 6 of these Regulations, if approved by the appropriate authority of the State of origin. A copy of the document of approval must accompany the consignment;
- batteries manufactured after 31 December 2011 must be marked with the Watt-hour rating on the outside case;

- packages containing cells or batteries must not be placed in an overpack with packages containing dangerous goods classified in Class 1 other than Division 1.4S, Division 2.1, Class 3, Division 4.1 or Division 5.1.

...

Section IB

Lithium ion cells and batteries may be offered for transport provided that each cell and battery meets the provisions of 3.9.2.6.1(a) and (e) and they meet all of the following:

- a) for lithium ion cells, the Watt-hour rating is not more than 20 Wh;
- b) for lithium ion batteries, the Watt-hour rating is not more than 100 Wh. The Watt-hour rating must be marked on the outside of the battery case except for those batteries manufactured before 1 January 2009; and
- c) lithium ion cells and batteries must be offered for transport at a state of charge (SoC) not exceeding 30% of their rated ~~design~~ capacity. Cells and/or batteries at a SoC of greater than 30% may only be shipped with the approval of the State of Origin and the State of the Operator under the written conditions established by those authorities (see Special Provision A331).

Note:

Guidance and methodology for determining the rated capacity can be found in Section 38.3.2.3 of the UN Manual of Tests and Criteria, 6th revised edition.

...

Additional Requirements—Section IB

Cells and batteries must be packed in inner packagings that completely enclose the cell or battery. To provide protection from damage or compression to the batteries, the inner packagings must be placed in a strong rigid outer packaging of one of the packaging types shown below.

Cells and batteries must not be packed in the same outer packaging with dangerous goods classified in Class 1 (explosives) other than Division 1.4S, Division 2.1 (flammable gases), Class 3 (flammable liquids), Division 4.1 (flammable solids) or Division 5.1 (oxidizers).

Each package must be capable of withstanding a 1.2 m drop test in any orientation without:

- damage to cells or batteries contained therein;
- shifting of the contents so as to allow battery to battery (or cell to cell) contact;
- release of contents.

Packages containing cells or batteries must not be placed in an overpack with packages containing dangerous goods classified in Class 1 other than Division 1.4S, Division 2.1, Class 3, Division 4.1 or Division 5.1.

...

Section II

Lithium ion cells and batteries meeting the requirements in this section are not subject to other additional requirements of these Regulations except for:

- (a) restrictions on dangerous goods in consolidations (1.3.3.2.3 and 1.3.3.2.6);
- (b) provision of adequate instruction (1.6);
- (c) dangerous goods in passenger and crew baggage (Subsection 2.3). Only those lithium ion batteries as specifically permitted may be carried in carry-on baggage;
- (d) dangerous goods in air mail (Subsection 2.4);
- (e) use of unit load devices (5.0.1.3);
- (f) marking of packages (7.1.5.5);
- ~~(fg)~~ loading of cargo aircraft (9.3.4);
- ~~(gh)~~ reporting of dangerous goods accidents, incidents and other occurrences (9.6.1 and 9.6.2).

Cells and batteries offered for transport must meet the provisions of 3.9.2.6.1(a) and (e) the General Requirements of this packing instruction and:

- a) for lithium ion cells, the Watt-hour rating is not more than 20 Wh;
- b) for lithium ion batteries, the Watt-hour rating is not more than 100 Wh. The Watt-hour rating must be marked on the outside of the battery case except for those batteries manufactured before 1 January 2009; and
- c) lithium ion cells and batteries must be offered for transport at a state of charge (SoC) not exceeding 30% of their rated ~~design~~-capacity.

Note:

Guidance and methodology for determining the rated capacity can be found in Section 38.3.2.3 of the UN Manual of Tests and Criteria, 6th revised edition.

...

Additional Requirements—Section II

Cells and batteries must be packed in inner packagings that completely enclose the cell or battery. To provide protection from damage or compression to the batteries, the inner packagings must be placed in a strong rigid outer packaging of one of the packaging types shown below.

Cells and batteries must not be packed in the same outer packaging with other dangerous goods.

...

Each package must be durably and legibly marked with the lithium battery mark, shown in (Figure 7.1.C), as required by 7.1.5.5 and the Cargo Aircraft Only label (Figure 7.4.B). The package must be of such a size that there is adequate space to affix the mark on one side of the package without the mark being folded. When the package dimensions are adequate, the Cargo Aircraft Only label must be located on the same surface of the package near the lithium battery mark.

Note:

The provisions for the lithium battery handling label, Figure 7.4.H and 7.2.4.7 may continue to be used until 31 December 2018.

...

Overpacks—Section II

No more than one (1) package complying with the requirements of Section II may be placed in an overpack. The overpack may also contain packages of dangerous goods, other than dangerous goods classified in Class 1 other than Division 1.4S, Division 2.1, Class 3, Division 4.1 and Division 5.1, or goods not subject to these Regulations provided that the packages do not contain substances which might react dangerously with each other. An overpack must be marked with the word "Overpack" and durably and legibly marked with the mark shown in Figure 7.1.D and the Cargo Aircraft Only label (Figure 7.4.B), unless the marks and label on the package(s) inside the overpack are visible.

Note:

For the purpose of Section II, an overpack is an enclosure used by a single shipper that contains no more than one package prepared in accordance with this section. For shipments prepared in accordance with Section IA and/or IB, this limit of one package of Section II batteries per overpack still applies.

...

PACKING INSTRUCTION 966

Introduction

...

Section I

These requirements apply to lithium ion cells with a Watt-hour rating in excess of 20 Wh and lithium ion batteries with a Watt-hour rating in excess of 100 Wh that have been determined to meet the criteria for assignment to Class 9.

The General Packing Requirements of 5.0.2 must be met.

Each cell or battery must:

- a) meet the provisions of 3.9.2.6.1; and
- b) meet the General Requirements, above.

...

Section II

Lithium ion cells and batteries meeting the requirements in this section are not subject to other additional requirements of these Regulations except for:

(a) provision of adequate instruction (1.6);

(ab) dangerous goods in passenger and crew baggage (Subsection 2.3). Only those lithium ion batteries as specifically permitted may be carried in carry-on baggage;

(bc) dangerous goods in air mail (Subsection 2.4);

(d) marking of packages (7.1.5.5);

(ee) reporting of dangerous goods accidents, incidents and other occurrences (9.6.1 and 9.6.2).

Cells and batteries offered for transport must meet the provisions of 3.9.2.6.1(a) and (e) the General Requirements of this packing instruction and:

- a) for lithium ion cells, the Watt-hour rating is not more than 20 Wh;
- b) for lithium ion batteries, the Watt-hour rating is not more than 100 Wh. The Watt-hour rating must be marked on the outside of the battery case except for those batteries manufactured before 1 January 2009.

...

Additional Requirements—Section II

...

Each package must be durably and legibly marked with the lithium battery mark, ~~shown in~~ Figure 7.1.C, as required by 7.1.5.5. The package must be of such a size that there is adequate space to affix the mark on one side of the package without the mark being folded.

Note:

The provisions for the lithium battery handling label, Figure 7.4.H and 7.2.4.7 may continue to be used until 31 December 2018.

...

PACKING INSTRUCTION 967

Introduction

...

Section I

These requirements apply to lithium ion cells with a Watt-hour rating in excess of 20 Wh and lithium ion batteries with a Watt-hour rating in excess of 100 Wh that have been determined to meet the criteria for assignment to Class 9.

The General Packing Requirements of 5.0.2 must be met.

Each cell or battery must:

- a) meet the provisions of 3.9.2.6.1; and
- b) meet the General Requirements, above.

...

Section II

Lithium ion cells and batteries meeting the requirements in this section are not subject to other additional requirements of these Regulations except for:

(a) provision of adequate instruction (1.6);

(ab) dangerous goods in passenger and crew baggage (Subsection 2.3). Only those lithium ion batteries as specifically permitted may be carried in carry-on baggage;

(bc) dangerous goods in air mail (Subsection 2.4);

(d) marking of packages (7.1.5.5);

(ee) reporting of dangerous goods accidents, incidents and other occurrences (9.6.1 and 9.6.2).

Cells and batteries offered for transport must meet the provisions of 3.9.2.6.1(a) and (e) the General Requirements of this packing instruction and:

- a) for lithium ion cells, the Watt-hour rating is not more than 20 Wh;
- b) for lithium ion batteries, the Watt-hour rating is not more than 100 Wh. The Watt-hour rating must be marked on the outside of the battery case except for those batteries manufactured before 1 January 2009.

...

Additional Requirements–Section II

The equipment must be packed in strong rigid outer packagings constructed of suitable material of adequate strength and design in relation to the packaging's capacity and its intended use unless the cell or battery is afforded equivalent protection by the equipment in which it is contained.

Each package must be durably and legibly marked with the lithium battery mark, shown in Figure 7.1.C, as required by 7.1.5.5. The package must be of such size that there is adequate space to affix the mark on one side of the package without the mark being folded. This requirement The application of the lithium battery mark does not apply to:

...

PACKING INSTRUCTION 968

...

Section IA

These requirements apply to lithium metal cells with a lithium metal content in excess of 1 g and lithium metal batteries with a lithium metal content in excess of 2 g that have been determined to meet the criteria for assignment to Class 9.

The General Packing Requirements of 5.0.2 must be met.

Each cell or battery must:

1. meet the provisions of 3.9.2.6.1; and
2. meet the General Requirements, above.

...

Additional Requirements–Section IA

- cells and batteries must be placed in inner packagings that completely enclose the cell or battery then placed in an outer packaging. The completed package for the cells or batteries must meet the Packing Group II performance standards;
- cells and batteries must not be packed in the same outer packaging with dangerous goods classified in Class 1 (explosives) other than Division 1.4S, Division 2.1 (flammable gases), Class 3 (flammable liquids), Division 4.1 (flammable solids) or Division 5.1 (oxidizers);
- batteries with a weight of 12 kg or greater and having a strong, impact-resistant outer casing, or assemblies of such batteries, may be transported when packed in strong outer packagings or protective enclosures (e.g. in fully enclosed or wooden slatted crates) not subject to the requirements of Section 6 of these Regulations, if approved by the appropriate authority of the State of origin. A copy of the document of approval must accompany the consignment;

- packages containing cells or batteries must not be placed in an overpack with packages containing dangerous goods classified in Class 1 other than Division 1.4S, Division 2.1, Class 3, Division 4.1 or Division 5.1.

...

Section IB

Lithium metal or lithium alloy cells and batteries may be offered for transport provided that each cell and battery meets the provisions of 3.9.2.6.1(a) and (e) and they meet all of the following:

- a) for a lithium metal cell, the lithium content is not more than 1 g; and
- b) for a lithium metal or lithium alloy battery, the aggregate lithium content is not more than 2 g.

...

Additional Requirements—Section IB

Cells and batteries must be packed in inner packagings that completely enclose the cell or battery. To provide protection from damage or compression to the batteries, the inner packagings must be placed in a strong rigid outer packaging of one of the packaging types shown below.

Cells and batteries must not be packed in the same outer packaging with dangerous goods classified in Class 1 (explosives) other than Division 1.4S, Division 2.1 (flammable gases), Class 3 (flammable liquids), Division 4.1 (flammable solids) or Division 5.1 (oxidizers).

Each package must be capable of withstanding a 1.2 m drop test in any orientation without:

- damage to cells or batteries contained therein;
- shifting of the contents so as to allow battery to battery (or cell to cell) contact;
- release of contents.

Packages containing cells or batteries must not be placed in an overpack with packages containing dangerous goods classified in Class 1 other than Division 1.4S, Division 2.1, Class 3, Division 4.1 or Division 5.1.

TABLE 968-IB

...

Section II

Lithium metal or lithium alloy cells and batteries meeting the requirements in this section are not subject to other additional requirements of these Regulations except for:

- (a) restrictions on dangerous goods in consolidations (1.3.3.2.3 and 1.3.3.2.6);
- (b) provision of adequate instruction (1.6);
- ~~(bc)~~ dangerous goods in passenger and crew baggage (Subsection 2.3). Only those lithium ion batteries as specifically permitted may be carried in carry-on baggage;
- ~~(ed)~~ dangerous goods in air mail (Subsection 2.4);
- ~~(ee)~~ use of unit load devices (5.0.1.3);
- (f) marking of packages (7.1.5.5);
- ~~(eg)~~ loading of cargo aircraft (9.3.4);
- ~~(fh)~~ reporting of dangerous goods accidents, incidents and other occurrences (9.6.1 and 9.6.2).

Cells and batteries offered for transport must meet the provisions of 3.9.2.6.1(a) and (e) the General Requirements of this packing instruction and:

- a) for cells, the lithium metal content is not more than 1 g; and
- b) for batteries, the aggregate lithium metal content is not more than 2 g.

...

Additional Requirements—Section II

Cells and batteries must be packed in inner packagings that completely enclose the cell or battery. To provide protection from damage or compression to the batteries, the inner packagings must be placed in a strong rigid outer packaging of one of the packaging types shown below.

Cells and batteries must not be packed in the same outer packaging with other dangerous goods.

...

Each package must be durably and legibly marked with the lithium battery mark, ~~shown in~~ Figure 7.1.C, as required by 7.1.5.5 and the Cargo Aircraft Only label (Figure 7.4.B). The package must be of such a size that there is adequate space to affix the mark on one side of the package without the mark being folded. When the package dimensions are adequate, the Cargo Aircraft Only label must be located on the same surface of the package near the lithium battery mark.

Note:

The provisions for the lithium battery handling label, Figure 7.4.H and 7.2.4.7 may continue to be used until 31 December 2018.

...

Overpacks—Section II

Not more than one (1) package complying with the requirements of Section II may be placed in an overpack. The overpack may also contain packages of dangerous goods, other than dangerous goods classified in Class 1 other than Division 1.4S, Division 2.1, Class 3, Division 4.1 and Division 5.1, or goods not subject to these Regulations provided that the packages do not contain substances which might react dangerously with each other. An overpack must be marked with the word “Overpack” and durably and legibly marked with the mark shown in Figure 7.1.D and the Cargo Aircraft Only label (Figure 7.4.B), unless the mark and label on the package(s) inside the overpack are visible.

Note:

For the purpose of Section II, an overpack is an enclosure used by a single shipper that contains no more than one package prepared in accordance with this section. For shipments prepared in accordance with Section IA and/or IB, this limit of one package of Section II batteries per overpack still applies.

...

PACKING INSTRUCTION 969

Introduction

...

Section I

These requirements apply to lithium metal cells with a lithium metal content in excess of 1 g and lithium metal batteries with a lithium metal content in excess of 2 g that have been determined to meet the criteria for assignment to Class 9.

The General Packing Requirements of 5.0.2 must be met.

Each cell or battery must:

1. meet the provisions of 3.9.2.6.1; and
2. meet the General Requirements, above.

...

Section II

Lithium metal or lithium alloy cells and batteries meeting the requirements in this section are not subject to other additional requirements of these Regulations except for:

(a) provision of adequate instruction (1.6):

- (ab) dangerous goods in passenger and crew baggage (Subsection 2.3). Only those lithium ion batteries as specifically permitted may be carried in carry-on baggage;
- (bc) dangerous goods in air mail (Subsection 2.4);

(d) marking of packages (7.1.5.5);

~~(ee)~~ reporting of dangerous goods accidents, incidents and other occurrences (9.6.1 and 9.6.2).

Cells and batteries offered for transport must meet the provisions of 3.9.2.6.1(a) and (e) the General Requirements of this packing instruction and:

1. for cells, the lithium metal content is not more than 1 g; and
2. for batteries, the aggregate lithium metal content is not more than 2 g.

...

Additional Requirements—Section II

...

Each package must be durably and legibly marked with the lithium battery mark, shown in (Figure 7.1.C), as required by 7.1.5.5. The package must be of such a size that there is adequate space to affix the mark on one side of the package without the mark being folded.

Note:

The provisions for the lithium battery handling label, Figure 7.4.H and 7.2.4.7 may continue to be used until 31 December 2018.

...

PACKING INSTRUCTION 970

Introduction

...

Section I

These requirements apply to lithium metal cells with a lithium metal content in excess of 1 g and lithium metal batteries with a lithium metal content in excess of 2 g that have been determined to meet the criteria for assignment to Class 9.

The General Packing Requirements of 5.0.2 must be met.

Each cell or battery must:

1. meet the provisions of 3.9.2.6.1; and
2. meet the General Requirements, above.

...

Section II

Lithium metal or lithium alloy cells and batteries meeting the requirements in this section are not subject to other additional requirements of these Regulations except for:

(a) provision of adequate instruction (1.6);

~~(ab)~~ dangerous goods in passenger and crew baggage (Subsection 2.3). Only those lithium ion batteries as specifically permitted may be carried in carry-on baggage;

~~(bc)~~ dangerous goods in air mail (Subsection 2.4);

(d) marking of packages (7.1.5.5);

~~(ee)~~ reporting of dangerous goods accidents, incidents and other occurrences (9.6.1 and 9.6.2).

Cells and batteries offered for transport must meet the provisions of 3.9.2.6.1(a) and (e) the General Requirements of this packing instruction and:

1. for cells, the lithium metal content is not more than 1 g; and
2. for batteries, the aggregate lithium metal content is not more than 2 g.

...

Additional Requirements—Section II

The equipment must be packed in strong rigid outer packagings constructed of suitable material of adequate strength and design in relation to the packaging's capacity and its intended use unless the cell or battery is afforded equivalent protection by the equipment in which it is contained.

Each package must be durably and legibly marked with the lithium battery mark, shown in (Figure 7.1.C), as required by 7.1.5.5. The package must be of such size that there is adequate space to affix the mark on one side of the package without the mark being folded. ~~This requirement~~The application of the lithium battery mark does not apply to:

...
...

PACKING INSTRUCTION 972

This instruction applies to UN 3530 Engine, internal combustion and Machinery, internal combustion on passenger aircraft and Cargo Aircraft Only (see PI 220 for flammable gas powered engines and machinery, PI 378 for flammable liquid powered engines and machinery, PI 950 for flammable liquid powered vehicles, PI 951 for flammable gas powered vehicles and PI 952 for battery-powered equipment and vehicles).

Machines or equipment containing internal combustion engines powered by a fuel meeting the criteria as environmentally hazardous must meet the following requirements:

...

(c) Batteries. All batteries must be installed and securely fastened in the battery holder of the machinery or equipment

and be protected in such a manner as to prevent damage and short circuits. In addition:

1. if spillable batteries are installed, and it is possible for the machine or equipment to be handled in such a way that batteries would not remain in their intended orientation, they must be removed and packed according to Packing Instruction 492 or 870, as applicable;
2. if lithium batteries are installed, they must meet the provisions of 3.9.2.6 1(a) to (e), unless otherwise approved by the appropriate national authority of the State of origin, must be securely fastened in the machinery or equipment and must be protected in such a manner as to prevent damage and short circuits;
3. if sodium batteries are installed they must conform to the requirements of Special Provision A94.

...

SECTION 7—MARKING AND LABELLING

...

7.1 Marking

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7.1.5.3 Environmentally Hazardous Substances

7.1.5.3.1 Unless otherwise specified in these Regulations, packages containing environmentally hazardous substances or mixtures meeting the criteria of 3.9.2.4 (UN 3077 and UN 3082), must be durably marked with the environmentally hazardous substance mark as shown in Figure 7.1.B and in addition packages must bear the Class 9 hazard label shown in Figure 7.3.W.

Notes:

1. *The environmentally hazardous substance mark (Figure 7.1.B) may also appear on packages containing substances other than UN 3077 and UN 3082 when required by other international or national transport regulations (see ~~7.1.5.5~~7.1.5.6).*
2. *The environmentally hazardous substance mark is not required on single packagings and combination packagings packed in accordance with Special Provision A197. If a shipper prefers to send the item as environmentally hazardous substances (UN 3077 or UN 3082 only) all applicable parts of the Regulations must be followed.*

...

7.1.5.5 Lithium Batteries

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7.1.5.5.2 The mark must indicate:

(a) the appropriate UN number preceded by the letters "UN" as follows:

- 1 "UN 3090" for lithium metal cells or batteries;
2. "UN 3480" for lithium ion cells or batteries;
3. "UN 3091" for lithium metal cells or batteries contained in, or packed with, equipment; or
4. "UN 3481" for lithium ion cells or batteries contained in, or packed with, equipment.

Where a package contains lithium cells or batteries assigned to different UN numbers, all applicable UN numbers must be indicated on one or more marks.

(b) the UN number(s) indicated on the mark should be at least 12 mm high.

~~(bc)~~ a telephone number for additional information.

...

7.1.7 Markings of Overpacks

7.1.7.1 Unless all marks representative of all dangerous goods in the overpack are clearly visible, the overpack must be marked with:

- the word "overpack". The lettering of the "Overpack" mark must be at least 12 mm high;
- the required marks of 7.1.4.1(a), (b), (e) through (i);
- for UN 1845, carbon dioxide, solid (dry ice), the total net quantity of dry ice in the overpack;
- the required marks of ~~7.1.4.4~~7.1.4.3;
- the required marks of 7.1.5.1, 7.1.5.2, ~~and~~7.1.5.3 and 7.1.5.5, as applicable;
- any special handling instructions appearing on packages inside the overpack.

...

7.2 Labelling

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7.2.2.3 Label Specifications

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7.2.2.3.2 Hazard labels must conform to the following specifications:

(a) labels must be configured as shown in Figure 7.3.A. The label must be in the form of a square set at an angle of 45° (diamond shaped). Except as provided in 7.2.2.3.1, the minimum dimensions must be 100 × 100 mm and the minimum width of the line inside the edge forming the diamond must be 2 mm. The line inside the edge must be parallel and 5 mm from the outside of that line to the edge of the label. The line inside the edge on the upper half of the label the line must be the same colour as the symbol and the line inside the edge on the lower half of the label must be the same colour as the class or division number in the bottom corner. Where dimensions are not specified, all features must be in approximate proportion to those shown. Dimensions for labels on cylinders must comply with subparagraph (b);

Note:

~~Labels conforming to the specifications of the 55th edition of these Regulations where the line is not 2 mm in width are acceptable until 31 December 2016.~~

(b) cylinders for Class 2 may, on account of their shape, orientation and securing mechanisms for transport, bear labels representative of those specified in Subsection 7.3, which have been reduced in size, according to ISO 7225:~~4994~~2005 "Gas cylinders - Precautionary labels", for display on the non-cylindrical part (shoulder) of such cylinders. Labels may overlap to the extent provided for by ISO 7225:~~4994~~2005"Gas cylinders - Precautionary labels"; however, in all cases, the labels representing the primary hazard and the numbers appearing on any label must remain fully visible and symbols recognisable.

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SECTION 8—DOCUMENTATION

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8.1 Shipper's Declaration for Dangerous Goods

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8.1.4 Other Requirements

8.1.4.1 Signature

8.1.4.1.1 The declaration form must be signed and dated by the shipper or a designated representative as described below. Facsimile signatures are acceptable where applicable laws and regulations recognize the legal validity of facsimile signatures. A typewritten signature is not acceptable. It is acceptable for persons or organisations (including consolidators, freight forwarders and IATA cargo agents) employed by the shipper to act on their behalf to undertake the shipper's responsibilities in the preparation of the consignment provided that they have been and trained as required by Subsection 1.5 to sign the Shipper's Declaration for Dangerous Goods.

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8.1.6 Detailed Instructions for Completing the Declaration Form

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8.1.6.9 Nature and Quantity of Dangerous Goods

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8.1.6.9.1 First Sequence—Identification

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Step 5. The applicable packing group (Column E) for the substance or article which may be preceded by "PG" (e.g. "PG II"). For chemical kits and/or first aid kits the most stringent packing group assigned to any individual substance contained in the kit. For samples transported under the provision of 3.11, the most stringent packing possible for the proper shipping name must be assigned (see 3.11.1).

Note:

Regardless of a package being required to meet a higher packing group performance standard as indicated in Special Provisions A802, A803 and A804, for the purposes of identification and documentation the packing group as shown in Table 4.2 applies and is to be used in the completion of the Shipper's Declaration.

Notes:

~~1. Regardless of a package being required to meet a higher packing group performance standard as indicated in Special Provisions A802, A803 and A804, for the purposes of identification and documentation the packing group as shown in Table 4.2 applies and is to be used in the completion of the Shipper's Declaration.~~

~~2. Until 31 March 2017, shippers may identify engines as Class 9, UN 3166 using the proper shipping names and Packing Instruction 950 or 951 as shown in the 2016 Edition of these Regulations. In that instance the Shipper's Declaration must indicate the packing instruction number and the UN number and proper shipping name in effect, in the 2016 Edition of these Regulations. The marks and labels applied, when required, must be consistent with the information shown on the Shipper's Declaration.~~

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SECTION 9 – HANDLING

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9.3 Loading

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9.3.2.1 Segregation of Dangerous Goods

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TABLE 9.3.A
Segregation of Packages (9.3.2)

Hazard Label	1 excl 1.4S	2.1	2.2 2.3	3	4.1	4.2	4.3	5.1	5.2	8	9 see 9.3.2.1.3
1 excluding 1.4S	See 9.3.2.2.5	x	x	x	x	x	x	x	x	x	x
2.1	x	—	—	—	—	—	—	—	—	—	x
2.2, 2.3	x	—	—	—	—	—	—	—	—	—	—
3	x	—	—	—	—	—	—	x	—	—	x
4.1	x	—	—	—	—	—	—	—	—	—	x
4.2	x	—	—	—	—	—	—	x	—	—	—
4.3	x	—	—	—	—	—	—	—	—	x	—
5.1	x	—	—	x	—	x	—	—	—	—	x
5.2	x	—	—	—	—	—	—	—	—	—	—
8	x	—	—	—	—	—	x	—	—	—	—
9 see 9.3.2.1.3	x	x	—	x	x	—	—	x	—	—	—

...

9.3.2.1.3 Packages and overpacks containing lithium ion batteries prepared in accordance with Section IA or Section IB of PI 965 and packages and overpacks containing lithium metal batteries prepared in accordance with Section IA or Section IB of PI 968 must not be stowed on an aircraft next to, or in a position that would allow interaction in the event of damage/fire with packages or overpacks containing dangerous goods which bear a Class 1, other than Division 1.4S, Division 2.1, Class 3, Division 4.1 or Division 5.1 hazard label. To maintain acceptable segregation between packages and overpacks, the segregation requirements shown in Table 9.3.A must be observed. The segregation requirements apply based on all hazard labels applied on the package or overpack, irrespective of whether the hazard is the primary or subsidiary risk.

Note:

Operators should take steps to implement these segregation requirement as soon as possible, however the provisions on this paragraph with respect to the segregation of lithium batteries from other dangerous goods as shown in Table 9.3.A do not become mandatory until 1 January 2019.

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9.3.4 Loading of Cargo Aircraft

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9.3.4.3 The requirements of 9.3.4.1(a), (b) or (c) and 9.3.4.2 do not apply to:

- flammable liquids (Class 3), Packing Group III, other than those with a subsidiary risk of Class 8;
- toxic substances (Division 6.1) with no subsidiary risk other than Class 3
- infectious substances (Division 6.2);
- radioactive materials (Class 7);
- miscellaneous dangerous goods (Class 9).

...

9.5 Provision of Information

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9.5.1.1.5

For UN 3480 (Lithium ion batteries) and UN 3090 (lithium metal batteries), the information required by 9.5.1.1.3 may be replaced by the UN number, proper shipping name, class, total quantity at each loading location, the aerodrome at which the package(s) is to be unloaded and whether the package must be carried on a cargo aircraft only. UN 3480 (Lithium ion batteries) and UN 3090 (lithium metal batteries) carried under a State exemption must meet all of the requirements in 9.5.1.1.3.

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SECTION 10 – RADIOACTIVE MATERIAL

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10.3 Classification

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10.3.5 Low Specific Activity (LSA) Material

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10.3.5.1.3 LSA-III

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10.3.5.1.3.2 Compliance—Demonstration of compliance with the performance standards in 10.3.5.1.3.3 must be in accordance with 10.6.3.1.1 and 10.6.3.1.2.

10.3.5.1.3.3 Tests—LSA-III material must be tested as follows:

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10.6 Packaging Specifications and Performance Testing

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10.6.2 Packaging Requirements

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10.6.2.7 Requirements for Type C Packages

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10.6.2.7.2 Type C packages must be designed to meet the requirements of 10.6.0, 10.6.1, 10.6.2.4.1 except for 10.6.2.4.1.6(b), 10.6.2.4.2, 10.6.2.5.3, ~~10.6.2.5.4~~, to 10.6.2.5.6, 10.6.2.5.11 to 10.6.2.5.16 and in addition, the requirements specified in 10.6.2.7.3 to 10.6.2.7.5.

...

10.6.4 Transitional Measures for Class 7

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

(a) may continue in transport provided that they were prepared for transport prior to 31 December 2003 and subject to the requirements of ~~10.6.4.36.4.24.4 of the UN Model Regulations~~, if applicable;

(b) may continue to be used provided that;

...

10.8 Documentation

...

10.8.3 Detailed Instructions for Completing the Declaration Form

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10.8.3.9 Nature and Quantity of Dangerous Goods

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10.8.3.9.2 Second Sequence—Quantity and Type of Packing

Step 6.

- (a) name or symbol of each radionuclide(s) or, for mixtures of radionuclides, an appropriate general description or a list of the most restrictive radionuclides;
- (b) a description of the physical and chemical form of the material, or a notation that the material is Special Form radioactive material (not required for UN 3332 and UN 3333) or low dispersible material. A generic chemical description is acceptable for chemical form;

Note:

For empty Type B(U) or Type B(M) packages as specified in the note to ~~10.3.11.1.5~~10.3.11.1.6, the name or symbol of the radionuclide of the shielding material followed by the physical and chemical form must be included (e.g. U-dep., solid, metal oxide) in which case the indicated radionuclide may differ from the radionuclide(s) authorized in the package design certificate.

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10.9 Handling

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10.9.3 Loading of Radioactive Material

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Table 10.9.B TI and CSI Limits for Freight Containers and Aircraft (~~10.9.3.5.2~~, 10.9.3.6.3)

Type of Freight Container or Aircraft	Maximum Total Sum of Transport Indices (TI)				Maximum Total Sum of Criticality Safety Indices (CSI)	
	Not Under Exclusive Use		Under Exclusive Use		Not Under Exclusive Use	Under Exclusive Use
	Non-fissile	Fissile	Non-fissile	Fissile		
Small freight container	50	50	—	—	50	—
Large freight container	50	50	No limit	400	50	100
Passenger aircraft	50	50	—	—	50	—
Cargo aircraft	200	50	No limit	400	50	100

...

APPENDIX A—GLOSSARY

...

GALLIUM is a silvery-white metal with a melting point of 29.7°C (~~85.5°F~~) which may be under-cooled to almost 0°C (~~32°F~~) without solidifying. It has the property of penetrating very rapidly the grain boundaries of aluminium alloys and other metals and causing embrittlement.

...

APPENDIX B—NOMENCLATURE

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B.2 Symbols and Abbreviations

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B.2.2 Abbreviations

...

B.2.2.4 IATA Cargo IMP Codes

The following Cargo-IMP Codes are used extensively within the airline industry and have the meanings shown:

...

RBI — Fully regulated lithium ion batteries (Class 9, UN 3480) as per Section IA and IB of PI 965

RBM — Fully regulated lithium metal batteries (Class 9, UN 3090) as per Section IA and IB of PI 968

...

RLI — Fully regulated lithium ion batteries (Class 9, UN 3481) as per ~~Section IA and IB of PI 965 and~~ Section I of PI 966 ~~and~~ 967

RLM — Fully regulated lithium metal batteries (Class 9, UN 3091) as per ~~Section IA and IB of PI 968 and~~ Section I of PI 969 ~~and~~ —970

...

APPENDIX C—CURRENTLY ASSIGNED SUBSTANCES

C.1 Self-Reactive Substances of Division 4.1

This list is based on paragraph 2.4.2.3.2.4 of the 19th revised edition of the UN ~~Recommendations on the Transport of Dangerous Goods~~ Model Regulations, with irrelevant material removed.

Notes:

1. Self-reactive substances to be transported must ~~fulfill~~ fulfil the classification and the control and emergency temperatures (derived from the SADT) as listed.
2. Self-reactive substances not listed in Table C.1 are subject to classification approval by the appropriate national authority of the State ~~of origin~~ in which the dangerous goods were manufactured (See 3.4.1.2.4.1).

...

C.2 Organic Peroxides (Division 5.2)

This list is based on paragraph 2.5.3.2.4 of the 19th revised edition of the UN ~~Recommendations on the Transport of Dangerous Goods~~ Model Regulations, with irrelevant material removed.

Allocation of new organic peroxides or new formulations of currently assigned organic peroxides to a generic entry should be made by the competent authority of the country of manufacture and notification sent to the competent authority of the country of destination if so required by it.

Notes:

1. The UN ~~Orange Book~~ Model Regulations contains a complete description of the classification of Division 5.2, Organic Peroxides.
2. Peroxides to be transported must ~~fulfill~~ fulfil the classification and the control and emergency temperature (derived from the SADT) as listed.
3. Organic peroxides not listed in Table C.2 are subject to classification approval by the appropriate national authority of the State ~~of origin~~ in which the dangerous goods were manufactured (See 3.5.2.3.1).