



WORKING PAPER

DANGEROUS GOODS PANEL (DGP)

TWENTY-FIRST MEETING

Montréal, 5 to 16 November 2007

Agenda Item 2: Development of recommendations for amendments to the *Technical Instructions for the Safe Transport of Dangerous Goods by Air* (Doc 9284) for incorporation in the 2009-2010 Edition

DRAFT AMENDMENTS OF THE TECHNICAL INSTRUCTIONS TO ALIGN TO THE UN RECOMMENDATIONS — PART 3

(Presented by the Secretary)

SUMMARY

Below are the draft amendments to Part 3, Chapters 2, 3 and 4 to reflect the decisions taken by the UN Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals at its third session (Geneva, 15 December 2006) and as modified by the decisions of WG/06 and WG/07.

The DGP is invited to agree to the draft amendments in this working paper.

Reference for amendments to Part 3: DGP-WG/07-WP/4, unless otherwise indicated.

Part 3

**DANGEROUS GOODS LIST, SPECIAL PROVISIONS
AND
~~LIMITED QUANTITIES EXCEPTIONS~~**

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Chapter 2

ARRANGEMENT OF THE DANGEROUS GOODS LIST (TABLE 3-1)

Parts of this Chapter are affected by State Variations AU 1, AU 2, AU 3, BE 3, CA 7, CA 8, CA 10, CA 11, CA 13, FR 1, GB 3, IR 3, NL 1, US 3, US 6, US 15, ZA 1; see Table A-1

2.1 ARRANGEMENT OF THE DANGEROUS GOODS LIST (TABLE 3-1)

2.1.1 The Dangerous Goods List (Table 3-1) is divided into 12 columns as follows:

DGP-WG/06-WP/2:

Column 1 "Name" — this column contains the alphabetically arranged list of dangerous goods, identified by their proper shipping names in boldface characters (see 1.2). Also included, in lightface type, are:

a) other names by which certain articles and substances may be known; in such cases a cross reference to the proper shipping name is given;

b) names of articles and substances which are forbidden for carriage by air under any circumstances; and

c) names of articles and substances which are subject to additional considerations under special provisions.

An explanation of some of the terms used appears in Attachment 2.

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Proposed amendments to Table 1 are presented in Appendices A and B to this working paper. Appendix A contains the amendments in UN No. order and Appendix B contains the same proposed amendments in alphabetical order.

Chapter 3

SPECIAL PROVISIONS

DGP-WG/07-WP/9:

Editorial Note.— The special provisions have been separated into two tables. Table 3-2 contains special provisions which have equivalent special provisions in the UN Model Regulations. Table 3-3 contains special provisions which apply to air transport.

Table 3-2. Special provisions — Multimodal

<i>ITs</i>	<i>UN</i>	
A3	<u>223</u>	If the chemical or physical properties of a substance covered by this description are such that, when tested, it does not meet the established defining criteria for the class or division listed in column 3, or any other class or division, it is not subject to these Instructions.

<u>TI</u>	<u>UN</u>	
A6	43	When offered for carriage as pesticides, these substances must be carried under the relevant pesticide entry and in accordance with the relevant pesticide provisions (see 2;6.2.3 and 2;6.2.4).
A7		Not used.
A8	322	When transported in non-friable tablet form, these goods are assigned to Packing Group III.
A10	39	This substance is not subject to these Instructions when it contains less than 30 per cent or not less than 90 per cent silicon.
A11	305	These substances are not subject to these Instructions when in concentrations of not more than 50 mg/kg.
A12	45	Antimony sulphides and oxides which contain not more than 0.5 per cent of arsenic calculated on the total weight <u>mass</u> are not subject to these Instructions.
A13	47	Ferricyanides and ferrocyanides are not subject to these Instructions.
A15	59	These substances are not subject to these Instructions when they contain not more than 50 per cent magnesium.
A16	62	This substance is not subject to these Instructions when it does not contain more than 4 per cent sodium hydroxide.
A18	66	Mercurous chloride and cinnabar are not subject to these Instructions.
A19	225	Fire extinguishers under this entry may include installed actuating cartridges (cartridges, power device of Division 1.4C or 1.4S), without changing the classification of Division 2.2 provided the total quantity of deflagrating (propellant) explosives does not exceed 3.2 grams per extinguishing unit.
A23	325	In the case of non-fissile or fissile excepted uranium hexafluoride, the material must be classified under UN 2978.
A25	205	This entry must not be used for Pentachlorophenol (UN 3155).
A27	276	This includes any substance which is not covered by any of the other classes but which has narcotic, noxious or other properties such that, in the event of spillage or leakage on an aircraft, extreme annoyance or discomfort could be caused to crew members so as to prevent the correct performance of assigned duties.
A28	135	The dihydrated sodium salt of dichloroisocyanuric acid is not subject to these Instructions.
A29	138	p-Bromobenzyl cyanide is not subject to these Instructions.
A30	273	Maneb and maneb preparations stabilized against self-heating need not be classified in Division 4.2 when it can be demonstrated by testing that a cubic metre of the substance does not self-ignite and that the temperature at the centre of the sample does not exceed 200EC, when the sample is maintained at a temperature of not less than 75EC ± 2EC for a period of 24 hours.
A31	141	Products which have undergone sufficient heat treatment so they present no hazard during transport are not subject to these Instructions.
A33	103	Ammonium nitrites and mixtures of an inorganic nitrite with an ammonium salt are prohibited.
A34	113	The transport of chemically unstable mixtures is prohibited.
A38	207	Polymeric beads and moulding compounds may be made from polystyrene, poly(methyl methacrylate) or other polymeric material.
A40	28	This substance may be transported under provisions of Division 4.1 only if it is so packed that the percentage of diluent will not fall below that stated at any time during transport.
A42	249	Ferrocium (lighter flints), stabilized against corrosion, with a minimum iron content of 10 per cent are not subject to these Instructions.
A43	210	Toxins from plant, animal or bacterial sources which contain infectious substances, or toxins that are contained in infectious substances, must be classified as Division 6.2.
A47	219	Genetically modified micro-organisms and genetically modified organisms, which meet the definition of an infectious substance and the criteria for inclusion in Division 6.2 in accordance with 2;6, must be transported as UN 2814, UN 2900 or UN 3373, as appropriate.

<u>TI</u>	<u>UN</u>	
A52	<u>228</u>	Mixtures not meeting the criteria for flammable gases (Division 2.1) must be transported under UN 3163.
A53	<u>37</u>	This substance is not subject to these Instructions when coated.
A54	<u>32</u>	This substance is not subject to these Instructions when in any other form.
A55	<u>142</u>	Solvent extracted soya bean meal containing not more than 1.5 per cent oil and not more than 11 per cent moisture, which is substantially free of flammable solvent, is not subject to these Instructions.
A58	<u>144</u>	An aqueous solution containing not more than 24 per cent alcohol by volume is not subject to these Instructions.
A60	<u>215</u>	This entry only applies to the technically pure substance or to formulations derived from it having an SADT higher than 75EC and therefore does not apply to formulations which are self-reactive substances. (For self-reactive substances, see 2.4.2.3. Table 2-6). Homogeneous mixtures containing not more than 35 per cent by mass of azocarbonamide and at least 65 per cent of inert substance are not subject to these Instructions unless criteria of other classes or divisions are met.
A61	<u>168</u>	Asbestos which is immersed or fixed in a natural or artificial binder (such as cement, plastics, asphalt, resins or mineral ore) in such a way that no escape of hazardous quantities of respirable asbestos fibres can occur during transport is not subject to these Instructions. Manufactured articles, containing asbestos and not meeting this requirement, are nevertheless not subject to these Instructions, when packed so that no escape of hazardous quantities of respirable asbestos fibres can occur during transport.
A62	<u>178</u>	This designation must be used only when no other appropriate designation exists in the list and then only with the approval of the appropriate authority of the State of Origin.
A63		Not used.
A64	<u>306</u>	This entry may only be used for substances that do not exhibit explosive properties of Class 1 when tested in accordance with test series 1 and 2 of Class 1 (see UN <i>Manual of Tests and Criteria</i> , Part I).
A65	<u>270</u>	Aqueous solutions of Division 5.1 inorganic solid nitrate substances are considered as not meeting the criteria of Division 5.1 if the concentration of the substances in solution at the minimum temperature encountered in transport is not greater than 80 per cent of the saturation limit.
A68	<u>272</u>	This substance must not be transported under the provisions of Division 4.1 unless specifically authorized by the appropriate national authority. (See UN 0143.)
A71	<u>38</u>	This substance is not subject to these Instructions when it contains not more than 0.1 per cent calcium carbide.
A72	<u>163</u>	A substance specifically listed by name in Table 3-1 must not be transported under this entry. Materials transported under this entry may contain 20 per cent or less nitrocellulose provided the nitrocellulose contains not more than 12.6 per cent nitrogen.
A73	<u>237</u>	The membrane filters, including paper separators, coating, or backing materials, etc., that are present in transport, must not be liable to propagate a detonation as tested by one of the tests described in the UN <i>Manual of Tests and Criteria</i> , Part I, Test Series 1(a). In addition, the appropriate authority may determine, on the basis of the results of suitable burning rate tests taking account of the standard tests in the UN <i>Manual of Tests and Criteria</i> , Part III, subsection 33.2.1, that nitrocellulose membrane filters in the form in which they are to be transported are not subject to the provisions of these Instructions applicable to flammable solids in Division 4.1.
A74	<u>169</u>	Phthalic anhydride in the solid state and tetrahydrophthalic anhydrides, with not more than 0.05 per cent maleic anhydride, are not subject to these Instructions. Phthalic anhydride molten at a temperature above its flash point, with not more than 0.05 per cent maleic anhydride, must be classified under UN 3256.
A76	<u>326</u>	In the case of fissile uranium hexafluoride, the material must be classified under UN 2977.

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DGP-WG/07-WP/4:

- A79 307 This entry may only be used for uniform mixtures containing ammonium nitrate as the main ingredient within the following composition limits:
- a) not less than 90 per cent ammonium nitrate with not more than 0.2 per cent total combustible/organic material calculated as carbon and with added matter, if any, which is inorganic and inert towards ammonium nitrate; or
 - b) less than 90 per cent but more than 70 per cent ammonium nitrate with other inorganic materials or more than 80 per cent but less than 90 per cent ammonium nitrate mixed with calcium carbonate and/or dolomite and/or mineral calcium sulphate and not more than 0.4 per cent total combustible/organic material calculated as carbon; or
 - c) nitrogen type ammonium nitrate based fertilizers containing mixtures of ammonium nitrate and ammonium sulphate with more than 45 per cent but less than 70 per cent ammonium nitrate and not more than 0.4 per cent total combustible/organic material calculated as carbon such that the sum of the percentage composition of ammonium nitrate and ammonium sulphate exceeds 70 per cent.
- A80 220 The technical name of the flammable liquid component only of this solution or mixture must be shown in parenthesis immediately following the proper shipping name.
- A82 177 Barium sulphate is not subject to these Instructions.
- A83 208 The commercial grade of calcium nitrate fertilizer, when consisting mainly of a double salt (calcium nitrate and ammonium nitrate) containing not more than 10 per cent ammonium nitrate and at least 12 per cent water of crystallization, is not subject to these Instructions.
- A84 182 The group of alkali metals includes lithium, sodium, potassium, rubidium and caesium.
- A85 183 The group of alkaline earth metals includes magnesium, calcium, strontium and barium.
- A86 241 The formulation must be prepared so that it remains homogeneous and does not separate during transport. Formulations with low nitrocellulose contents are not subject to these Instructions provided that 1) they do not exhibit dangerous properties when tested for their liability to detonate, deflagrate or explode when heated under defined confinement by tests of test series 1(a), 2(b) and 2(c) respectively in the UN *Manual of Tests and Criteria* and 2) they are not flammable solids when tested in accordance with test N1 in the UN *Manual of Tests and Criteria*, Part III, subsection 3.3.2.1.4 (chips, if necessary, crushed and sieved to a particle size of less than 1.25 mm).
- A89 186 In determining the ammonium nitrate content, all nitrate ions for which a molecular equivalent of ammonium ions is present in the mixture shall be calculated as ammonium nitrate.
- A90 193 This entry may only be used for uniform ammonium nitrate based fertilizer mixtures of the nitrogen, phosphate or potash type, containing not more than 70 per cent ammonium nitrate and not more than 0.4 per cent total combustible/organic material calculated as carbon or with not more than 45 per cent ammonium nitrate and unrestricted combustible material. Fertilizers within these composition limits are not subject to these Instructions if shown by a Trough Test (see UN *Manual of Tests and Criteria*, Part III, subsection 38.2) not to be liable to self-sustaining decomposition.

DGP-WG/07-WP/4:

- A91 198 A nitrocellulose solution containing not more than 20 per cent nitrocellulose may be transported under the requirements for "Paint" or "Printing ink" as applicable; see UN 1210, 1263 ~~and~~ 3066, 3469 and 3470.
- A92 199 Lead compounds which, when mixed in a ratio of 1:1000 with 0.07 M hydrochloric acid and stirred for 1 hour at a temperature of 23°C ±2°C, exhibit a solubility of 5 per cent or less are ~~considered insoluble~~ (see ISO 3711:1990 "Lead chromate pigments and lead chromate-molybdate pigments — Specifications and methods of test") are considered insoluble and are not subject to these Instructions unless they meet the criteria for inclusion in another hazard class or division.
- A95 203 This entry is not to be used for Polychlorinated biphenyls (UN 2315).

<u>TLs</u>	<u>UN</u>	
A96	<u>196</u>	Only formulations which in laboratory testing neither detonate in the cavitated state nor deflagrate, which show no effect when heated under confinement and which exhibit no explosive power may be transported under this entry. The formulation must also be thermally stable (i.e. the SADT is 60°C or higher for a 50 kg package). Formulations not meeting these criteria must be transported under the appropriate provisions of Division 5.2.
A100	<u>243</u>	Gasoline, motor spirit and petrol for use in spark-ignition engines (e.g. in automobiles, stationary engines and other engines) must be assigned to this entry regardless of variations in volatility.
A101	<u>227</u>	When phlegmatized with water and inorganic inert material, the content of urea nitrate may not exceed 75 per cent by mass and the mixture must not be capable of being detonated by the series 1 type (a) test in the UN <i>Manual of Tests and Criteria</i> , Part I.
A102	<u>244</u>	This listing includes aluminium dross, aluminium skimmings, spent cathodes, spent potliner and aluminium salt slags.
A105	<u>242</u>	Sulphur is not subject to these Instructions when it has been formed to a specific shape (e.g. prills, granules, pellets, pastilles or flakes).
A110	<u>226</u>	Formulations of these substances containing not less than 30 per cent non-volatile, non-flammable phlegmatizer are not subject to these Instructions.
A113	<u>279</u>	The substance is assigned to this classification or Packing Group based on human experience rather than the strict application of classification criteria set out in the Instructions.
A114	<u>283</u>	Articles, containing gas, intended to function as shock absorbers, including impact energy absorbing devices, or pneumatic springs are not subject to these Instructions provided: <ul style="list-style-type: none"> a) each article has a gas space capacity not exceeding 1.6 litres and a charge pressure not exceeding 280 bar where the product of the capacity (litres) and charge pressure (bars) does not exceed 80 (i.e. 0.5 litre gas space and 160 bar charge pressure, 1 litre gas space and 80 bar charge pressure, 1.6 litre gas space and 50 bar charge pressure, 0.28 litre gas space and 280 bar charge pressure); b) each article has a minimum burst pressure of 4 times the charge pressure at 20°C for products not exceeding 0.5 litre gas space capacity and 5 times charge pressure for products greater than 0.5 litre gas space capacity; c) each article is manufactured from material which will not fragment upon rupture; d) each article is manufactured in accordance with a quality assurance standard acceptable to the appropriate national authority; and e) the design type has been subjected to a fire test demonstrating that pressure in the article is relieved by means of a fire-degradable seal or other pressure-relief device such that the article will not fragment and the article does not rocket.
A115	<u>280</u>	This entry applies to articles which are used as lifesaving vehicle air bag inflators, or air bag modules or seat belt pretensioners, and which contain dangerous goods of Class 1 or dangerous goods of other classes and when transported as component parts and when these articles as presented for transport have been tested in accordance with test series 6 (c) of Part I of the UN <i>Manual of Tests and Criteria</i> , with no explosion of the device, no fragmentation of the device casing or pressure vessel, no projection hazard and no thermal effect which would significantly hinder firefighting or other emergency response efforts in the immediate vicinity.
A121		Not used.
A122	<u>286</u>	Nitrocellulose membrane filters covered by this entry, each with a mass not exceeding 0.5 g, are not subject to these Instructions when contained individually in an article or a sealed packet.
A124	<u>292</u>	Mixtures containing not more than 23.5 per cent oxygen by volume may be transported under this entry when no other oxidizing gases are present. A Division 5.1 subsidiary risk label is not required for any concentrations within this limit.

<u>TLs</u>	<u>UN</u>	
A125	<u>293</u>	The following definitions apply to matches: <ul style="list-style-type: none"> a) Fusee matches are matches the heads of which are prepared with a friction-sensitive igniter composition and a pyrotechnic composition which burns with little or no flame, but with intense heat; b) Safety matches are combined with or attached to the box, book or card that can be ignited by friction only on a prepared surface; c) Strike anywhere matches are matches that can be ignited by friction on a solid surface; d) Wax Vesta matches are matches that can be ignited by friction either on a prepared surface or on a solid surface.
A126		Not used.
A127		Not used.
A128	<u>153</u>	This entry only applies if it is demonstrated, on the basis of tests, that the substances, when in contact with water are not combustible nor show a tendency to auto-ignition and that the mixture of gases evolved is not flammable.
A129	<u>252</u>	Provided the ammonium nitrate remains in solution under all conditions of transport, aqueous solutions of ammonium nitrate, with not more than 0.2 per cent combustible material, in a concentration not exceeding 80 per cent are not subject to these Instructions.
A132	<u>204</u>	Articles containing smoke-producing substance(s) corrosive according to the criteria for Class 8 must be labelled with a "Corrosive" subsidiary risk label.
A134	<u>312</u>	Vehicles which contain an internal combustion engine must be consigned under the entries UN 3166 Vehicle, flammable gas powered or UN 3166 Vehicle, flammable liquid powered , as appropriate. These entries include hybrid electric vehicles powered by both an internal combustion engine and wet batteries, sodium batteries or lithium batteries, transported with the battery(ies) installed.
A135	<u>313</u>	Substances and mixtures meeting the criteria for Class 8 must be labelled with a "Corrosive" subsidiary risk label.
A136	<u>314</u>	<ul style="list-style-type: none"> a) These substances are liable to exothermic decomposition at elevated temperatures. Decomposition can be initiated by heat or by impurities (e.g. powdered metals (iron, manganese, cobalt, magnesium) and their compounds). b) During the course of transport, these substances must be shaded from direct sunlight and all sources of heat and be placed in adequately ventilated areas.
A137	<u>315</u>	This entry must not be used for Division 6.1 substances that meet the inhalation toxicity criteria for Packing Group I described in 2;6.2.2.4.3.
A138	<u>316</u>	This entry applies only to calcium hypochlorite, dry, when transported in non-friable tablet form.
A139	<u>317</u>	"Fissile-excepted" applies only to those packages complying with 6;7.10.2.
A140	<u>318</u>	For the purposes of documentation, the proper shipping name must be supplemented with the technical name (see 1.2.7). Technical names need not be shown on the package. When the infectious substances to be transported are unknown, but suspected of meeting the criteria for inclusion in category A and assignment to UN 2814 or UN 2900, the words "suspected category A infectious substance" must be shown, in parentheses, following the proper shipping name on the transport document, but not on the outer packagings.
A141		Not used.
A142		Not used.
A143	<u>321</u>	These storage systems must always be considered as containing hydrogen.

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DGP-WG/07-WP/4, DGP-WG/07-WP/22:

- A146 328 ~~This entry applies to fuel cell cartridges containing flammable liquids, including methanol or methanol/water solutions, including when contained in equipment or packed with equipment. Fuel cell cartridges installed in or integral to a fuel cell system are regarded as contained in equipment.~~ Fuel cell cartridge means an container article that stores fuel for discharge into the fuel cell-powered equipment through a valve(s) that controls the discharge of fuel into such equipment and is free of electric charge generating components the fuel cell. ~~The cartridge~~ Fuel cell cartridges, including when contained in equipment, must be designed and constructed to prevent the fuel from leaking ~~age during under~~ normal conditions of transport.
- This entry applies to Fuel cell cartridge design types shown without their packaging to using liquids as fuels must pass an internal pressure test at a pressure of 100 kPa (gauge) without leakage.
- Except for fuel cell cartridges containing hydrogen in metal hydride which must be in compliance with A162, each fuel cell cartridge design type must be shown to pass a 1.2 meter drop test onto an unyielding surface in the orientation most likely to result in failure of the containment system with no loss of contents.
- A147 329 Where substances have a flash point of 60°C or less, the package(s) must bear a "FLAMMABLE LIQUID" subsidiary risk label in addition to the hazard label(s) required by these Instructions.

DGP-WG/07-WP/4:

- A148 330 ~~Alcohols containing petroleum products (e.g. gasoline) up to 5 per cent must be transported under the entry UN 1987 Alcohols, n.o.s. Not used.~~
- A149 Not used.
- A155 332 Magnesium nitrate hexahydrate is not subject to these Instructions.
- A156 333 Ethanol and gasoline, motor spirit or petrol mixtures for use in spark-ignition engines (e.g. in automobiles, stationary engines and other engines) must be assigned to this entry regardless of variations in volatility.
- A157 334 A fuel cell cartridge may contain an activator provided it is fitted with two independent means of preventing unintended mixing with the fuel during transport.
- A158 335 Mixtures of solids which are not subject to these Instructions and environmentally hazardous liquids or solids must be classified as UN 3077 and may be transported under this entry, provided there is no free liquid visible at the time the substance is loaded or at the time the packaging is closed. Sealed packets and articles containing less than 10 mL of an environmentally hazardous liquid, absorbed into a solid material but with no free liquid in the packet or article, or containing less than 10 g of an environmentally hazardous solid, are not subject to these Instructions.
- A159 336 A single package of non-combustible solid LSA-II or LSA-III material must not contain an activity greater than 3000 A₂.
- A160 337 Type B(U) and Type B(M) packages, must not contain activities greater than the following:
- a) For low dispersible radioactive material: as authorized for the package design as specified in the certificate of approval;
 - b) For special form radioactive material: 3000 A₁ or 100 000 A₂, whichever is the lower; or
 - c) For all other radioactive material: 3000 A₂.

<u>TIs</u>	<u>UN</u>	
A161	<u>338</u>	<p><u>Each fuel cell cartridge transported under this entry and designed to contain a liquefied flammable gas must:</u></p> <ul style="list-style-type: none"><u>a) be capable of withstanding, without leakage or bursting, a pressure of at least two times the equilibrium pressure of the contents at 55°C;</u><u>b) not contain more than 200 mL of liquefied flammable gas with a vapour pressure not exceeding 1 000 kPa at 55°C; and</u><u>c) pass the hot water bath test prescribed in 6:5.4.1.</u>
A162	<u>339</u>	<p><u>Fuel cell cartridges containing hydrogen in a metal hydride transported under this entry must have a water capacity less than or equal to 120 mL.</u></p> <p><u>The pressure in the fuel cell cartridge must not exceed 5 MPa at 55°C. The design type must withstand, without leaking or bursting, a pressure of two (2) times the design pressure of the cartridge at 55°C or 200 kPa more than the design pressure of the cartridge at 55°C, whichever is greater. The pressure at which this test is conducted is referred to in the drop test and the hydrogen cycling test as the "minimum shell burst pressure".</u></p> <p><u>Fuel cell cartridges must be filled in accordance with procedures provided by the manufacturer. The manufacturer must provide the following information with each fuel cell cartridge:</u></p> <ul style="list-style-type: none"><u>a) inspection procedures to be carried out before initial filling and before refilling of the fuel cell cartridge;</u><u>b) safety precautions and potential hazards to be aware of;</u><u>c) method for determining when the rated capacity has been achieved;</u><u>d) minimum and maximum pressure range;</u><u>e) minimum and maximum temperature range; and</u><u>f) any other requirements to be met for initial filling and refilling including the type of equipment to be used for initial filling and refilling.</u> <p><u>The fuel cell cartridges must be designed and constructed to prevent fuel leakage under normal conditions of transport. Each cartridge design type, including cartridges integral to a fuel cell, must be subjected to and must pass the following tests:</u></p> <p><u>Drop test</u></p> <p><u>A 1.8 metre drop test onto an unyielding surface in four different orientations:</u></p> <ul style="list-style-type: none"><u>a) vertically, on the end containing the shut-off valve assembly;</u><u>b) vertically, on the end opposite to the shut-off valve assembly;</u><u>c) horizontally, onto a steel apex onto a steel apex with a diameter of 38 mm, with the steel apex in the upward position; and</u><u>d) at a 45° angle on the end containing the shut-off valve assembly.</u> <p><u>There must be no leakage, determined by using a soap bubble solution or other equivalent means on all possible leak locations, when the cartridge is charged to its rated charging pressure. The fuel cell cartridge must then be hydrostatically pressurized to destruction. The recorded burst pressure must exceed 85 per cent of the minimum shell burst pressure.</u></p> <p><u>Fire test</u></p> <p><u>A fuel cell cartridge filled to rated capacity with hydrogen must be subjected to a fire engulfment test. The cartridge design, which may include a vent feature integral to it, is deemed to have passed the fire test if:</u></p> <ul style="list-style-type: none"><u>a) the internal pressure vents to zero gauge pressure without rupture of the cartridge; or</u><u>b) the cartridge withstands the fire for a minimum of 20 minutes without rupture.</u> <p><u>Hydrogen cycling test</u></p> <p><u>This test is intended to ensure that a fuel cell cartridge design stress limits are not exceeded during use.</u></p> <p><u>The fuel cell cartridge must be cycled from not more than 5 per cent rated hydrogen capacity to not less than 95 per cent rated hydrogen capacity and back to not more than 5 per cent rated hydrogen capacity. The rated charging pressure must be used for charging and temperatures must be held within the operating temperature range. The cycling must be continued for at least 100 cycles.</u></p>

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Following the cycling test, the fuel cell cartridge must be charged and the water volume displaced by the cartridge must be measured. The cartridge design is deemed to have passed the hydrogen cycling test if the water volume displaced by the cycled cartridge does not exceed the water volume displaced by an uncycled cartridge charged to 95 per cent rated capacity and pressurized to 75 per cent of its minimum shell burst pressure.

Production leak test

Each fuel cell cartridge must be tested for leaks at 15°C ± 5°C, while pressurized to its rated charging pressure. There must be no leakage, determined by using a soap bubble solution or other equivalent means on all possible leak locations.

Each fuel cell cartridge must be permanently marked with the following information:

- a) the rated charging pressure in megapascals (MPa);
- b) the manufacturer's serial number of the fuel cell cartridges or unique identification number; and
- c) the date of expiry based on the maximum service life (year in four digits; month in two digits).

A163 340 Chemical kits, first aid kits and polyester resin kits containing dangerous substances in inner packagings which do not exceed the quantity limits for excepted quantities applicable to individual substances as specified in [1:2.4.3] may be transported in accordance with 3.5. Division 5.2 substances, although not individually authorized as excepted quantities in the Dangerous Goods List, are authorized in such kits and are [assigned Code E2 (see 3.5.2)].

Table 3-3. Special provisions — transport by air

- A1 This commodity may be transported on passenger aircraft, only with the prior approval of the appropriate authority of the State of Origin under the written conditions established by that authority. The conditions must include the quantity limitations and packing requirements and these must comply with S-3;1.2.2 of the Supplement. A copy of the document of approval, showing the quantity limitations and packing requirements, must accompany the consignment. The commodity may be carried on cargo aircraft in accordance with columns 11 and 12 of Table 3-1. When States, other than the State of Origin, have notified ICAO that they require prior approval of shipments made under this special provision, approval must also be obtained from these States, as appropriate.
- A2 This commodity may be transported on passenger aircraft and on cargo aircraft, only with the prior approval of the appropriate authority of the State of Origin under the written conditions established by the authority.
- Where States, other than the State of Origin, have notified ICAO that they require prior approval of shipments made under this special provision, approval must also be obtained from the States of transit, overflight and destination and of the State of the Operator, as appropriate.
- In each case the conditions must include the quantity limitations and packing requirements and these must comply with S-3;1.2.3 of the Supplement. A copy of the document(s) of approval, showing the quantity limitations and the packing and labelling requirements, must accompany the consignment.
- A4 Liquids having a vapour inhalation toxicity of Packing Group I are forbidden on both passenger and cargo aircraft.
- Liquids having a mist inhalation toxicity of Packing Group I are forbidden on a passenger aircraft. They may be carried on cargo aircraft providing they are packed in accordance with the packing instructions for the Packing Group I substance and the maximum net quantity per package does not exceed 5 L.
- A5 Solids having an inhalation toxicity of Packing Group I are forbidden on passenger aircraft. They may be carried on cargo aircraft providing they are packed in accordance with the packing instructions for the Packing Group I substance and the maximum net quantity per package does not exceed 15 kg.
- A9 Alcoholic beverages containing not more than 70 per cent alcohol by volume, when packed in receptacles of 5 litres or less, are not subject to these Instructions when carried as cargo.
- A14 The label conforming to Figure 5-13 may be used until 31 December 2010.
- A17 These substances must not be classified and transported unless authorized by the appropriate authority of the State of Origin on the basis of results from Series 2 tests and a Series 6(c) test on packages as prepared for transport.
- A20 During the course of transport this substance must be protected from direct sunlight and all sources of heat and be placed in an adequately ventilated area. A statement to this effect must be included in the Dangerous Goods Transport Document.

- A21 This entry only applies to vehicles and equipment which are powered by wet batteries, sodium batteries or 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 must be consigned under the entry Vehicle (flammable gas powered) or Vehicle (flammable liquid powered), as appropriate. Hybrid electric vehicles powered by both an internal combustion engine and wet batteries, sodium batteries or lithium batteries, transported with the battery(ies) installed, must be consigned under the entries UN 3166 **Vehicle, flammable gas powered** or UN 3166 **Vehicle, flammable liquid powered**, as appropriate.
- A22 The classification of this substance will vary with particle size and packaging, but borderlines have not been experimentally determined. The appropriate classification must be made using the procedure for the classification of explosives.
- A24 The total quantity of explosive substance contained in the shaped charges and the detonating cord must not exceed 10 kg per assembled perforating gun.
- A26 Refrigerating machines include air conditioning units and machines or other appliances which have been designed for the specific purpose of keeping food or other items at low temperature in an internal compartment. Refrigerating machines and refrigerating machine components are considered not subject to these Instructions if containing less than 12 kg of a gas in Division 2.2 or if containing less than 12 L ammonia solution (UN 2672).

DGP-WG/07-WP/4:

- A32 Air bags inflators, air bag modules or seat-belts pretensioners installed in conveyances or in completed conveyance components such as steering columns, door panels, seats, etc., which are not capable of inadvertent activation are not subject to these Instructions.
- A35 This substance is not subject to these Instructions when:
- mechanically produced, particle size more than 53 microns; or
 - chemically produced, particle size more than 840 microns.
- A36 The provisions of Special Provision A2 apply to this entry for Packing Group I only and the provisions of Special Provision A1 apply to this entry for Packing Group II only, as applicable.
- A37 This entry is not intended to include Ammonium permanganate, the transport of which is prohibited under any circumstances.
- A39 This substance possesses some dangerous explosive properties when transported in large volumes.
- A41 Permeation devices that contain dangerous goods and that are used for calibrating air quality monitoring devices are not subject to these Instructions provided the following requirements are met:
- a) Each device must be constructed of a material compatible with the dangerous goods it contains;
 - b) The total contents of dangerous goods in each device is limited to 2 millilitres and the device must not be liquid full at 55°C;
 - c) Each permeation device must be placed in a sealed, high impact-resistant, tubular inner packaging of plastic or equivalent material. Sufficient absorbent material must be contained in the inner packaging to completely absorb the contents of the device. The closure of the inner packaging must be securely held in place with wire, tape or other positive means;
 - d) Each inner packaging must be contained in a secondary packaging constructed of metal, or plastic having a minimum thickness of 1.5 mm. The secondary packaging must be hermetically sealed;
 - e) The secondary packaging must be securely packed in strong outer packaging. The completed package must be capable of withstanding, without breakage or leakage of any inner packaging and without significant reduction in effectiveness:
 - i) the following free drops onto a rigid, non-resilient, flat and horizontal surface from a height of 1.8 m:
 - one drop flat on the bottom;
 - one drop flat on the top;
 - one drop flat on the long side;
 - one drop flat on the short side;
 - one drop on a corner at the junction of three intersecting edges; and
 - ii) a force applied to the top surface for a duration of 24 hours, equivalent to the total weight of identical packages if stacked to a height of 3 m (including the test sample).

Note.— Each of the above tests may be performed on different but identical packages.

- f) The gross mass of the completed package must not exceed 30 kg.
- A44 Chemical kits or first aid kits include boxes, cases, etc., containing small amounts of one or more compatible items of dangerous goods which are used, for example, for medical, analytical or testing or repair purposes.
- The only dangerous goods which are permitted in the kits are substances which may be transported as:
- a) excepted quantities, under 1;2.4.2.2 provided the inner packagings and quantities are as prescribed in 1;2.4.3 a) and 1;2.4.4 a); or
- b) limited quantities under 3;4.1.2.

DGP-WG/07-WP/4, DGP-WG/07-WP/11 and DGP-WG/07-WP/45:

Editorial Note.— A45 below is similar to UN SP A188:

- A45 ~~Lithium cells and batteries offered for transport are not subject to other provisions of these Instructions if they meet the following:~~
- a) ~~For a lithium metal or lithium alloy cell, the lithium content is not more than 1 g, and for a lithium ion cell, the lithium equivalent content is not more than 1.5 g.~~ Watt-hour rating is not more than 20 Wh;
- b) ~~For a lithium metal or lithium alloy battery, the aggregate lithium content is not more than 2 g, and for a lithium ion battery, the aggregate lithium equivalent content is not more than 8 g.~~ Watt-hour rating is not more than 100 Wh. Lithium ion batteries subject to this provision must be marked with the Watt-hour rating on the outside case;
- c) ~~Each cell or battery is of the type proved to meet the requirements of each test in the UN *Manual of Tests and Criteria*, Part III, subsection 38.3;~~
- ~~d) Cells and batteries are separated so as to prevent short circuits and are packed in strong packagings, except when installed in equipment; and~~
- ~~e) Except when installed in equipment, each package containing more than 24 lithium cells or 12 lithium batteries must in addition meet the following requirements:~~
- ~~i) Each package must be marked indicating that it contains lithium batteries and that special procedures should be followed in the event that the package is damaged;~~
- ~~ii) Each shipment must be accompanied with a document indicating that packages contain lithium batteries and that special procedures should be followed in the event a package is damaged;~~
- ~~iii) Each package is capable of withstanding a 1.2 m drop test in any orientation without damage to cells or batteries contained therein, without shifting of the contents so as to allow battery to battery (or cell to cell) contact and without release of contents; and~~
- ~~iv) Except in the case of lithium batteries packed with equipment, packages may not exceed 30 kg gross mass.~~
- d) Cells and batteries, except when installed in equipment, must be packed in inner packagings that completely enclose the cell or battery. Cells and batteries must be protected so as to prevent short circuits. This includes protection against contact with conductive materials within the same packaging that could lead to a short circuit. The inner packagings must be packed in strong outer packagings which conform to the provisions of 4;1.1.1, 4;1.1.3.1, and 4;1.1.9.
- e) Cells and batteries when installed in equipment must be protected from damage and short circuit, and the equipment must be equipped with an effective means of preventing accidental activation. When lithium batteries are installed in equipment, the equipment must be packed in strong outer packagings constructed of suitable material of adequate strength and design in relation to the packaging's capacity and its intended use unless the battery is afforded equivalent protection by the equipment in which it is contained.
- f) Except for packages containing no more than four cells installed in equipment or no more than two batteries installed in equipment, each package must be marked with the following:
- i) an indication that the package contains "lithium metal" or "lithium ion" cells or batteries, as appropriate;
- ii) an indication that the package must be handled with care and that a flammability hazard exists if the package is damaged;

- iii) an indication that special procedures must be followed in the event the package is damaged, to include inspection and repacking if necessary; and
- iv) a telephone number for additional information.
- g) Each consignment of one or more packages marked in accordance with paragraph (f) must be accompanied with a document including the following:
 - i) an indication that the package contains "lithium metal" or "lithium ion" cells or batteries, as appropriate;
 - ii) an indication that the package must be handled with care and that a flammability hazard exists if the package is damaged;
 - iii) an indication that special procedures must be followed in the event the package is damaged, to include inspection and repacking if necessary; and
 - iv) a telephone number for additional information.
- h) Except when lithium batteries are installed in equipment, each package must be capable of withstanding a 1.2 m drop test in any orientation without damage to cells or batteries contained therein, without shifting of the contents so as to allow battery to battery (or cell to cell) contact and without release of contents; and
- (i) Except when lithium batteries are installed in or packed with equipment, packages must not exceed 30 kg gross mass.

As used above and elsewhere in the Instructions, "lithium content" means the mass of lithium in the anode of a lithium metal or lithium alloy cell, ~~except in the case of a lithium ion cell the "lithium equivalent content" in grams is calculated to be 0.3 times the rated capacity in ampere-hours.~~

DGP-WG/07-WP/45:

- Any lithium battery or lithium battery powered device, equipment or vehicle having the potential of 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) unintentional activation.

DGP-WG/07-WP/4:

Separate entries exist for lithium metal batteries and lithium ion batteries to facilitate the transport of these batteries for specific modes of transport and to enable the application of different emergency response actions.

- A46 Mixtures of solids which are not subject to these Instructions 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 the packaging must pass a leakproofness test at the Packing Group II level. Small inner packagings consisting of sealed packets or 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 Instructions provided there is no free liquid in the packet or articles.
- A48 Packaging tests are not considered necessary.
- A49 Other inert material or inert material mixture may be used at the discretion of the appropriate authority of the State of Origin, provided this inert material has identical phlegmatizing properties.
- A50 Mixtures of solids which are not subject to these Instructions and toxic liquids may be transported under this entry without first applying the classification criteria of Division 6.1, providing there is no free liquid visible at the time the substance is packaged and the packaging must pass a leakproofness test at the Packing Group II level. This entry must not be used for solids containing a Packing Group I liquid.
- A51 Irrespective of the limit specified in column 10 of Table 3-1, aircraft batteries up to a limit of 100 kg gross mass per package may be transported. Transport in accordance with this special provision must be noted on the dangerous goods transport document.
- A56 This entry applies to articles which contain Class 1 explosive substances and which may also contain dangerous goods of other classes. These articles are used as lifesaving vehicle air bag inflators or air bag modules or seat belt pretensioners.

The quantities given in columns 10 and 12 of Table 3-1 refer to the net mass of the finished article.

Note.— For the carriage of a vehicle, see Packing Instruction 900.

- A57 Packagings must be so constructed that explosion is not possible by reason of increased internal pressure.
- A59 A tire assembly unserviceable or damaged is not subject to these Instructions if the tire is completely deflated. A tire assembly with a serviceable tire is not subject to these Instructions provided the tire is not inflated to a gauge pressure exceeding the maximum rated pressure for that tire. However, such tires (including valve assemblies) must be protected from damage during transport, which may require the use of a protective cover.

DGP-WG/07-WP/4:

- A66 Polyester resin kits consist of two components: a base material (Class 3, Packing Group II or III) and an activator (Division 5.2). The organic peroxide must be type D, E or F, not requiring temperature control. Only organic peroxides that are authorized for transport on passenger aircraft are permitted in the kits. Those requiring temperature control are forbidden. Packing Group II or III is assigned according to the criteria for Class 3, applied to the base material. The quantity limit [and the excepted quantity code] shown in [1;2.4.3] apply to the base material.

DGP-WG/07-WP/45:

- A67 Non-spillable batteries meeting the requirements of Packing Instruction 806 are not subject to these Instructions if, at a temperature of 55°C, the electrolyte will not flow from a ruptured or cracked case. The battery must not contain any free or unabsorbed liquid. ~~When packaged for transport, the terminals must be protected from short circuit such as by the use of non-conductive caps that entirely cover the terminals.~~ Any electrical battery or battery powered device, equipment or vehicle having the potential of 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) unintentional activation.

- A69 Articles, each containing not more than 100 mg of mercury, gallium or inert gas and packaged so that the quantity of mercury, gallium or inert gas per package does not exceed 1 g, are not subject to these Instructions when carried as cargo.

DGP-WG/07-WP/38:

- A70 Internal combustion engines being shipped either separately or incorporated into a machine or other apparatus, the fuel tank of which has never contained any fuel, and the fuel system of which is completely empty of fuel, or that are powered by a fuel that does not meet the classification criteria for any class or division, and without batteries or other dangerous goods, are not subject to these Instructions.

- A75 Articles such as sterilization devices, when containing less than 30 mL per inner packaging with not more than 150 mL per outer packaging, may be transported on passenger and cargo aircraft in accordance with the provisions in 1;2.4, irrespective of 1;2.4.2.2 and the indication of "forbidden" in columns 9 to 12 of the Dangerous Goods List (Table 3-1), provided such packagings were first subjected to comparative fire testing. Comparative fire testing must show no difference in burning rate between a package as prepared for transport (including the substance to be transported) and an identical package filled with water.

- A77 Mixtures of solids which are not subject to these Instructions and corrosive liquids may be transported under this entry without first applying the classification criteria of Class 8, providing there is no free liquid visible at the time the substance is packaged and the packaging must pass a leakproofness test at the packing group II level.

- A78 Radioactive material with a subsidiary risk must:

- a) be labelled with subsidiary risk labels corresponding to each subsidiary risk exhibited by the material in accordance with the relevant provisions of 5;3.2; corresponding placards must be affixed to transport units in accordance with the relevant provisions of 5;3.6;
- b) be allocated to Packing Groups I, II or III, as and if appropriate, by application of the grouping criteria provided in Part 2 corresponding to the nature of the predominant subsidiary risk.

The description required in 5;4.1.5.7.1 b) must include a description of these subsidiary risks (e.g. "Subsidiary risk: 3,6.1"), the name of the constituents which most predominantly contribute to this (these) subsidiary risk(s) and, where applicable, the packing group.

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 under the conditions established by that authority. A copy of the document of approval, showing the quantity limitations and the packaging requirements, must accompany the consignment.

- A81 The quantity limit shown in column 10 does not apply to body fluids known to contain or suspected of containing infectious substances provided they are not in risk group 4, when in primary receptacles not exceeding 1000 mL, and in outer packagings not exceeding 4 L. The quantity limits shown in columns 10 and 12 do not apply to body parts, organs or whole bodies known to contain or suspected of containing infectious substances.
- A87 Articles which are not fully enclosed by packaging, crates or other means that prevent ready identification are not subject to the marking requirements of 5;2 or the labelling requirements of 5;3.
- A88 Prototype lithium batteries and cells to be tested that are packed with not more than 24 cells or 12 batteries per packaging that have not been tested to the requirements in subsection 38.3 of the UN *Manual of Tests and Criteria* may be transported aboard cargo aircraft if approved by the appropriate authority of the State of Origin and the following requirements are met:
- a) the cells and batteries must be transported in an outer packaging that is a metal, plastic or plywood drum or a metal, plastic or wooden box and that meets the criteria for Packing Group I packagings; and
 - b) each cell and battery must be individually packed in an inner packaging inside an outer packaging and surrounded by cushioning material that is non-combustible, and non-conductive. Cells and batteries must be protected against short circuiting.
- A93 A heat-producing article is not subject to these Instructions when the heat-producing component or the energy source is removed to prevent unintentional functioning during transport.
- A94 Batteries or cells containing sodium must not contain dangerous goods other than sodium, sulphur and/or polysulphides. Batteries or cells must not be offered for transport at a temperature such that liquid elemental sodium is present in the battery or cell unless approved and under the conditions established by the appropriate national authority.
- Cells must consist of hermetically sealed metal casings which fully enclose the dangerous goods and which are so constructed and closed as to prevent the release of the dangerous goods under normal conditions of transport.
- Batteries must consist of cells secured within and fully enclosed by a metal casing so constructed and closed as to prevent the release of the dangerous goods under normal conditions of transport.
- A97 These entries may be used for substances which are hazardous to the environment but do not meet the classification criteria of any other class or other substance within Class 9. This must be based on the criteria in the Regulations of other modes of transport or criteria recognized by the appropriate authority of the State of origin, transit or destination. This designation may also be used for wastes not otherwise subject to these Instructions but which are covered under the *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal*.
- Note.— If any document has been issued in relation to such designation, it is not required to accompany a consignment.*
- A98 Aerosols, gas cartridges and receptacles, small, containing gas with a capacity not exceeding 50 ml, containing no constituents subject to these Instructions other than a Division 2.2 gas, are not subject to these Instructions unless their release could cause extreme annoyance or discomfort to crew members so as to prevent the correct performance of assigned duties.
- A99 Irrespective of the limit specified in column 12 of Table 3-1, a lithium battery or battery assembly that has successfully passed the tests specified in the UN *Manual of Tests and Criteria*, Part III, subsection 38.3, and that meets the requirements of Packing Instruction 903 as prepared for transport may have a mass exceeding 35 kg G, if approved by the appropriate authority of the State of Origin. A copy of the document of approval must accompany the consignment.
- A103 Flammable liquefied gases must be contained within refrigerating machine components. These components must be designed and tested to at least three times the working pressure of the machinery. The refrigerating machines must be designed and constructed to contain the liquefied gas and preclude the risk of bursting or cracking of the pressure-retaining components during normal conditions of transport. Refrigerating machines and refrigerating machine components are considered not subject to these Instructions if containing less than 100 g flammable, non-toxic, liquefied gas.
- A104 A toxic subsidiary risk label, although not required by these Instructions, may be applied.
- A106 This entry may only be used for samples of chemicals taken for analysis in connection with the implementation of the Chemical Weapons Convention.

They may be transported on a passenger or cargo aircraft providing prior approval has been granted by the appropriate authority of the State of Origin or the Director General of the Organization for the Prohibition of Chemical Weapons and providing the samples comply with the requirements shown against the entry for chemical samples in Table S-3-1 of the Supplement.

The substance is assumed to meet the criteria of Packing Group I for Division 6.1. Subsidiary risk labelling is not required.

A copy of the document of approval showing the quantity limitations and the packing requirements must accompany the consignment.

Note.— The transport of substances under this description must be in accordance with chain of custody and security procedures specified by the Organization for the Prohibition of Chemical Weapons.

- A107 This entry only applies to machinery or apparatus containing dangerous goods as a residue or as an integral element of the machinery or apparatus. It must not be used for machinery or apparatus for which a proper shipping name already exists in Table 3-1.
- A108 The provisions of Special Provision A1 apply to this entry for Packing Group I only.
- A109 This commodity may be transported on cargo aircraft, only with the prior approval of the appropriate authority of the State of Origin under the written conditions established by that authority. The conditions must include the quantity limitations and packing requirements and these must comply with S-3;1.2.4 of the Supplement. A copy of the document of approval, showing the quantity limitations and packing requirements, must accompany the consignment.
- Where States, other than the State of Origin, have notified ICAO that they require prior approval of shipments made under this special provision, approval must also be obtained from these States, as appropriate.
- A111 Oxygen generators, chemical, that have passed their expiration date, are unserviceable or that have been used are forbidden for transport.
- A112 Consumer commodities may only include substances of Class 2 (non-toxic aerosols only), Class 3, Packing Group II or III, Division 6.1 (Packing Group III only) and UN 3175, provided such substances do not have a subsidiary risk. Dangerous goods that are forbidden for transport aboard passenger aircraft must not be transported as consumer commodities.
- A116 An oxygen generator, chemical, when containing an explosive actuating device must only be transported under this entry when excluded from Class 1 in accordance with 2;1.1 b).
- A117 Wastes transported under UN 3291 are wastes derived from the medical treatment of humans or animals or from bio-research, where there is a relatively low probability that infectious substances are present. Waste infectious substances which can be specified must be assigned to UN 2814 or UN 2900. Decontaminated wastes which previously contained infectious substances may be considered as not subject to these Instructions unless the criteria of another class or division are met.
- A118 Items classified as explosive must be removed from vehicles and transported in accordance with the provisions of these Instructions unless authorized by the appropriate national authority under the written conditions established by that authority. In such circumstances, vehicles may be transported on cargo aircraft only.
- Note.— This special provision does not apply where the explosives are a smoke candle installed as a permanent part of the vehicle or are part of an assembly classified as dangerous goods of other than Class 1, e.g. Air bag inflators, Air bag modules and Seat-belt pretensioners (UN 3268), Fire extinguishers (UN 1044). Additionally, this special provision does not apply in the case of Air bag modules and Air bag inflators and Seat-belt pretensioners (UN 0503) installed in the vehicle.*
- A119 Irrespective of the limit specified in column 12 of Table 3-1, a handling device meeting the requirements of Packing Instruction 917 as prepared for transport may have a gross mass not exceeding 1 000 kg.
- A120 This entry includes but is not limited to automobiles, motorcycles, aircraft, boats, snowmobiles, jet skis, etc.

DGP-WG/07-WP/23:

- A123 This entry applies to Batteries, electric storage, not otherwise listed in Table 3-1. Examples of such batteries are: alkali-manganese, zinc-carbon, nickel-metal hydride and nickel-cadmium batteries. Any electrical battery or battery-powered device, equipment or vehicle having the potential of a dangerous evolution of heat ~~that is not prepared~~ 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) unintentional activation is forbidden from transport.

- A130 When this material meets the definitions and criteria of other classes or divisions as defined in Part 2, it must be classified in accordance with the predominant subsidiary risk. Such material must be declared under the proper shipping name and UN number appropriate for the material in that predominant Class or division, with the addition of the name applicable to this radioactive material according to column 1 of the Dangerous Goods List, and must be transported in accordance with the provisions applicable to that UN number. In addition, all other requirements specified in ~~2.7.9.4~~ 1.6.1.5 must apply.
- A131 Sterilization devices, when containing less than 30 mL per inner packaging with not more than 300 mL per outer packaging, may be transported on passenger and cargo aircraft in accordance with the provisions in 1;2.4, irrespective of 1;2.4.2.2 and the indication of "Forbidden" in columns 9 to 12 of the Dangerous Goods List (Table 3-1). In addition, after filling, each inner packaging must be determined to be leak-tight by placing the inner packaging in a hot water bath at a temperature, and for a period of time, sufficient to ensure that an internal pressure equal to the vapour pressure of ethylene oxide at 55°C is achieved. Any inner packaging showing evidence of leakage, distortion or other defect under this test may not be transported under the terms of this special provision. In addition to the packaging required by 1;2.4, inner packagings must be placed in a sealed plastics bag compatible with ethylene oxide and capable of containing the contents in the event of breakage or leakage of the inner packaging. Glass inner packagings must be placed within a protective shield capable of preventing the glass from puncturing the plastics bag in the event of damage to the packaging (e.g. crushing).
- A133 Substances must not be transported under this entry unless approved by the appropriate national authority on the basis of the results of appropriate tests according to Part I of the UN *Manual of Tests and Criteria*. Packaging must ensure that the percentage of diluent does not fall below that stated in the appropriate authority approval at any time during transport.
- A144 Protective breathing equipment (PBE) containing a small chemical oxygen generator for use by aircrew members may be transported on passenger aircraft in accordance with Packing Instruction 523 subject to the following conditions:
- a) the PBE must be serviceable and contained in the manufacturer's original unopened inner packaging (i.e. vacuum sealed bag and protective container);
 - b) the PBE may only be consigned by, or on behalf of, an operator in the event that a PBE(s) has been rendered unserviceable or has been used and there is a need to replace such items so as to restore the number of PBEs on an aircraft to that required by pertinent airworthiness requirements and operating regulations;
 - c) a maximum of two PBE may be contained in a package;
 - d) the statement "Aircrew protective breathing equipment (smoke hood) in accordance with Special Provision A144" must be:
 - (i) included on the dangerous goods transport document;
 - (ii) marked adjacent to the proper shipping name on the package.
- All other requirements applicable to chemical oxygen generators must apply except that the "cargo aircraft only" handling label must not be displayed.
- A145 Waste aerosols are prohibited from air transport.
- A150 An additional subsidiary risk hazard label may be required by a Note found adjacent to the technical name entry in Table 2-7.
- A151 When dry ice is used as a refrigerant for other than dangerous goods loaded in a unit load device or other type of pallet, the quantity limits per package shown in columns 10 and 12 of Table 3-1 for dry ice do not apply. In such case, the unit load device or other type of pallet must be identified to the operator and must allow the venting of the carbon dioxide gas to prevent a dangerous build-up of pressure.
- A152 Insulated packagings containing refrigerated liquid nitrogen fully absorbed in a porous material and intended for transport, at low temperature, of non-dangerous products are not subject to these Instructions provided the design of the insulated packaging would not allow the build-up of pressure within the container and would not permit the release of any refrigerated liquid nitrogen irrespective of the orientation of the insulated packaging.
- A153 Plastic aerosols of a capacity greater than 120 mL (IP.7C) are permitted only when the propellant is non-flammable and non-toxic and the contents are not dangerous goods in accordance with the provisions of the Technical Instructions.
- A154 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).

DGP-WG/07-WP/45:

A164 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) unintentional activation.

Editorial Note.— See DGP/21-WP/13 for discussion of proposed new Chapter 5 on Excepted Quantities and consequential amendments.

APPENDIX A

PROPOSED AMENDMENTS TO TABLE 3-1 — UN NUMBER ORDER

Table 3-1. Dangerous Goods List

Name	UN No.	Class or division	Subsidiary risk	Labels	State variations	Special provisions	UN packing group	Passenger aircraft		Cargo aircraft	
								Packing instruction	Max. net quantity per package	Packing instruction	Max. net quantity per package
1	2	3	4	5	6	7	8	9	10	11	12
+ Signals, distress, ship	0505	1.4G		Explosive 1.4				FORBIDDEN		135	75 kg
+ Signals, distress, ship	0506	1.4S		Explosive 1.4				135	25 kg	135	100 kg
+ Signals, smoke †	0507	1.4S		Explosive 1.4				135	25 kg	135	100 kg
+ 1-Hydroxybenzotriazole, anhydrous, dry or wetted with less than 20% water, by mass	0508	1.3C						FORBIDDEN		FORBIDDEN	
* Argon, compressed	1006	2.2		Gas non-flammable							
≠ Argon, compressed	1006	2.2		Gas non-flammable			A69	200	75 kg	200	150 kg
* Chlorine	1017	2.3	8		AU 1 CA 7 GB 3 IR 3 NL 1 US 3	A2		FORBIDDEN		FORBIDDEN	
≠ Chlorine	1017	2.3	5.1 8		AU 1 CA 7 GB 3 IR 3 NL 1 US 3	A2		FORBIDDEN		FORBIDDEN	
* Helium, compressed	1046	2.2		Gas non-flammable							
≠ Helium, compressed	1046	2.2		Gas non-flammable			A69	200	75 kg	200	150 kg
* Neon, compressed	1065	2.2		Gas non-flammable							
≠ Neon, compressed	1065	2.2		Gas non-flammable			A69	200	75 kg	200	150 kg
* Nitrogen, compressed	1066	2.2		Gas non-flammable							
≠ Nitrogen, compressed	1066	2.2		Gas non-flammable			A69	200	75 kg	200	150 kg

Name	UN No.	Class or division	Subsidiary risk	Labels	State variations	Special provisions	UN packing group	Passenger aircraft		Cargo aircraft	
								Packing instruction	Max. net quantity per package	Packing instruction	Max. net quantity per package
1	2	3	4	5	6	7	8	9	10	11	12
* Ethanol	1170	3		Liquid flammable		<input checked="" type="checkbox"/> A3 A58 A148	II III	305 Y305 309 Y309	5 L 1 L 60 L 10 L	307 310	60 L 220 L
≠ Ethanol	1170	3		Liquid flammable		A3 A58	II III	305 Y305 309 Y309	5 L 1 L 60 L 10 L	307 310	60 L 220 L
* Ethanol solution	1170	3		Liquid flammable		<input checked="" type="checkbox"/> A3 A58 A148	II III	305 Y305 309 Y309	5 L 1 L 60 L 10 L	307 310	60 L 220 L
≠ Ethanol solution	1170	3		Liquid flammable		A3 A58	II III	305 Y305 309 Y309	5 L 1 L 60 L 10 L	307 310	60 L 220 L
* Ethyl alcohol	1170	3		Liquid flammable		<input checked="" type="checkbox"/> A3 A58 A148	II III	305 Y305 309 Y309	5 L 1 L 60 L 10 L	307 310	60 L 220 L
≠ Ethyl alcohol	1170	3		Liquid flammable		A3 A58	II III	305 Y305 309 Y309	5 L 1 L 60 L 10 L	307 310	60 L 220 L
* Ethyl alcohol solution	1170	3		Liquid flammable		<input checked="" type="checkbox"/> A3 A58 A148	II III	305 Y305 309 Y309	5 L 1 L 60 L 10 L	307 310	60 L 220 L
≠ Ethyl alcohol solution	1170	3		Liquid flammable		A3 A58	II III	305 Y305 309 Y309	5 L 1 L 60 L 10 L	307 310	60 L 220 L

Name	UN No.	Class or division	Subsidiary risk	Labels	State variations	Special provisions	UN packing group	Passenger aircraft		Cargo aircraft	
								Packing instruction	Max. net quantity per package	Packing instruction	Max. net quantity per package
1	2	3	4	5	6	7	8	9	10	11	12
* Methyltrichlorosilane	1250	3	8	Liquid flammable & Corrosive	AU 1 CA 7 GB 3 IR 3 NL 1 US 3	A1	I	FORBIDDEN	FORBIDDEN	304	2.5 L
≠ Methyltrichlorosilane	1250	3	8	Liquid flammable & Corrosive	AU 1 CA 7 GB 3 IR 3 NL 1 US 3		II	306	1 L	304	5 L
* Vinyltrichlorosilane	1305	3	8	Liquid flammable & Corrosive	AU 1 CA 7 GB 3 IR 3 NL 1 US 3	A1	I	FORBIDDEN	FORBIDDEN	304	2.5 L
≠ Vinyltrichlorosilane	1305	3	8	Liquid flammable & Corrosive	AU 1 CA 7 GB 3 IR 3 NL 1 US 3		II	306	1 L	304	5 L
+ Picric acid, wetted with not less than 30% water, by mass	1344	4.1		Solid flammable	BE 3	A40	I	416	1 kg	412	15 kg
+ TNT, wetted with not less than 30% water, by mass	1356	4.1		Solid flammable	BE 3	A40	I	416	0.5 kg	416	0.5 kg
* Magnesium nitrate	1474	5.1		Oxidizer			III	516 Y516	25 kg 10 kg	518	100 kg
≠ Magnesium nitrate	1474	5.1		Oxidizer		A155	III	516 Y516	25 kg 10 kg	518	100 kg
* Alcohols, n.o.s.*	1987	3		Liquid flammable		A3 A148	II III	305 Y305 309 Y309	5 L 1 L 60 L 10 L	307 310	60 L 220 L
≠ Alcohols, n.o.s.*	1987	3		Liquid flammable		A3	II III	305 Y305 309 Y309	5 L 1 L 60 L 10 L	307 310	60 L 220 L

Name	UN No.	Class or division	Subsidiary risk	Labels	State variations	Special provisions	UN packing group	Passenger aircraft		Cargo aircraft	
								Packing instruction	Max. net quantity per package	Packing instruction	Max. net quantity per package
1	2	3	4	5	6	7	8	9	10	11	12
* Flammable liquid, n.o.s.*	1993	3		Liquid flammable		✓ A3 A148	I II III	302 305 Y305 309 Y309	1 L 5 L 1 L 60 L 10 L	303 307 310	30 L 60 L 220 L
≠ Flammable liquid, n.o.s.*	1993	3		Liquid flammable		A3	I II III	302 305 Y305 309 Y309	1 L 5 L 1 L 60 L 10 L	303 307 310	30 L 60 L 220 L
* Nitric acid, other than red fuming, with not more than 70% nitric acid	2031	8	✓	✓ Corrosive	AU 1 CA 7 GB 3 IR 3 NL 1 US 3	A1	II	FORBIDDEN		813	30 L
≠ Nitric acid, other than red fuming, with at least 65% but not more than 70% nitric acid	2031	8	5.1	Corrosive & Oxidizer	AU 1 CA 7 GB 3 IR 3 NL 1 US 3	A1	II	FORBIDDEN		813	30 L
+ Nitric acid, other than red fuming, with less than 65% nitric acid	2031	8		Corrosive			II	807 Y807	1 L 0.5 L	813	30 L
* Xenon	2036	2.2		Gas non-flammable		✓		200	75 kg	200	150 kg
≠ Xenon	2036	2.2		Gas non-flammable		A69		200	75 kg	200	150 kg
* Batteries, wet, filled with acid, electric storage †	2794	8		Corrosive		✓ A51		800	30 kg G	800	No limit
≠ Batteries, wet, filled with acid, electric storage †	2794	8		Corrosive		A51 A164		800	30 kg G	800	No limit
* Batteries, wet, filled with alkali, electric storage †	2795	8		Corrosive		✓ A51		800	30 kg G	800	No limit
≠ Batteries, wet, filled with alkali, electric storage †	2795	8		Corrosive		A51 A164		800	30 kg G	800	No limit

Name	UN No.	Class or division	Subsidiary risk	Labels	State variations	Special provisions	UN packing group	Passenger aircraft		Cargo aircraft	
								Packing instruction	Max. net quantity per package	Packing instruction	Max. net quantity per package
* Batteries, wet, non-spillable, electric storage	2800	8		Corrosive		A48 A67		806	No limit	806	No limit
≠ Batteries, wet, non-spillable, electric storage	2800	8		Corrosive		A48 A67 A164		806	No limit	806	No limit
* Radioactive material, excepted package — empty packaging	2908	7		None		A130		See Part 2;7			
≠ Radioactive material, excepted package — empty packaging	2908	7		None		A130		See Part 2;7			
* Radioactive material, excepted package — articles manufactured from natural uranium or depleted uranium or natural thorium	2909	7		None		A130		See Part 2;7			
≠ Radioactive material, excepted package — articles manufactured from natural uranium or depleted uranium or natural thorium	2909	7		None		A130		See Part 2;7			
* Radioactive material, excepted package — limited quantity of material	2910	7		None		A130		See Part 2;7			
≠ Radioactive material, excepted package — limited quantity of material	2910	7		None		A130		See Part 2;7			
* Radioactive material, excepted package — instruments or articles	2911	7		None		A130		See Part 2;7			
≠ Radioactive material, excepted package — instruments or articles	2911	7		None		A130		See Part 2;7			
* Radioactive material, surface contaminated objects (SCO-I or SCO-II), non-fissile or fissile excepted	2913	7		Radioactive	CA 1	A78 A139		See Part 2;7 and Part 4;9			
≠ Radioactive material, surface contaminated objects (SCO-I or SCO-II), non-fissile or fissile excepted	2913	7		Radioactive	CA 1	A78 A139 A159		See Part 2;7 and Part 4;9			

Name	UN No.	Class or division	Subsidiary risk	Labels	State variations	Special provisions	UN packing group	Passenger aircraft		Cargo aircraft	
								Packing instruction	Max. net quantity per package	Packing instruction	Max. net quantity per package
1	2	3	4	5	6	7	8	9	10	11	12
* Radioactive material, Type B(U) package , non-fissile or fissile excepted	2916	7		Radioactive	CA 1	<input checked="" type="checkbox"/> A78 A139			See Part 2;7	and Part 4;9	
≠ Radioactive material, Type B(U) package , non-fissile or fissile excepted	2916	7		Radioactive	CA 1	A78 A139 A160			See Part 2;7	and Part 4;9	
* Radioactive material, Type B(M) package , non-fissile or fissile excepted	2917	7		Radioactive	CA 1	<input checked="" type="checkbox"/> A78 A139			See Part 2;7	and Part 4;9	
≠ Radioactive material, Type B(M) package , non-fissile or fissile excepted	2917	7		Radioactive	CA 1	A78 A139 A160			See Part 2;7	and Part 4;9	
* Environmentally hazardous substance, solid, n.o.s.*	3077	9		Miscellaneous	CA 13 DE 5 US 4	<input checked="" type="checkbox"/> A97	III	911 Y911	400 kg 30 kg G	911	400 kg
≠ Environmentally hazardous substance, solid, n.o.s.*	3077	9		Miscellaneous	CA 13 DE 5 US 4	A97 A158	III	911 Y911	400 kg 30 kg G	911	400 kg
* Environmentally hazardous substance, liquid, n.o.s.*	3082	9		Miscellaneous	CA 13 DE 5 US 4	<input checked="" type="checkbox"/> A97	III	914 Y914	450 L 30 kg G	914	450 L
≠ Environmentally hazardous substance, liquid, n.o.s.*	3082	9		Miscellaneous	CA 13 DE 5 US 4	A97 A158	III	914 Y914	450 L 30 kg G	914	450 L
<input checked="" type="checkbox"/> * Lithium batteries †	3090	9		Miscellaneous	US 2 US 3	<input checked="" type="checkbox"/> A45 A88 A99 A154	II	903	5 kg G	903	35 kg G
≠ Lithium metal batteries (including lithium alloy batteries) †	3090	9		Miscellaneous	US 2 US 3	A45 A88 A99 A154 A164	II	903	5 kg G	903	35 kg G

Name	UN No.	Class or division	Subsidiary risk	Labels	State variations	Special provisions	UN packing group	Passenger aircraft		Cargo aircraft	
								Packing instruction	Max. net quantity per package	Packing instruction	Max. net quantity per package
1	2	3	4	5	6	7	8	9	10	11	12
<input checked="" type="checkbox"/> * Lithium batteries contained in equipment †	3091	9		Miscellaneous	US 2 US 3	<input checked="" type="checkbox"/> A45 A48 A154		see 912		see 912	
≠ Lithium metal batteries contained in equipment (including lithium alloy batteries) †	3091	9		Miscellaneous	US 2 US 3	A45 A48 A154 A164		see 912		see 912	
<input checked="" type="checkbox"/> * Lithium batteries packed with equipment †	3091	9		Miscellaneous	US 2 US 3	<input checked="" type="checkbox"/> A45 A154		see 918		see 918	
≠ Lithium metal batteries packed with equipment (including lithium alloy batteries) †	3091	9		Miscellaneous	US 2 US 3	A45 A154 A164		see 918		see 918	
* Battery-powered equipment	3171	9		Miscellaneous		<input checked="" type="checkbox"/> A21 A67 A87 A94		900	No limit	900	No limit
≠ Battery-powered equipment	3171	9		Miscellaneous		A21 A67 A87 A94 A164		900	No limit	900	No limit
* Battery-powered vehicle	3171	9		Miscellaneous		<input checked="" type="checkbox"/> A21 A67 A87 A94		900	No limit	900	No limit
≠ Battery-powered vehicle	3171	9		Miscellaneous		A21 A67 A87 A94 A164		900	No limit	900	No limit

Name	UN No.	Class or division	Subsidiary risk	Labels	State variations	Special provisions	UN packing group	Passenger aircraft		Cargo aircraft	
								Packing instruction	Max. net quantity per package	Packing instruction	Max. net quantity per package
1	2	3	4	5	6	7	8	9	10	11	12
* Polyester resin kit †	3269	3		Liquid flammable		☑ A66	II III	312 Y312 312 Y312	5 kg 1 kg 5 kg 1 kg	312 312	5 kg 5 kg
≠ Polyester resin kit †	3269	3		Liquid flammable		A66 A163	II III	312 Y312 312 Y312	5 kg 1 kg 5 kg 1 kg	312 312	5 kg 5 kg
* Chemical kit	3316	9		Miscellaneous		☑ A44		915 Y915	10 kg 1 kg	915	10 kg
≠ Chemical kit	3316	9		Miscellaneous		A44 A163		915 Y915	10 kg 1 kg	915	10 kg
* First aid kit	3316	9		Miscellaneous		☑ A44		915 Y915	10 kg 1 kg	915	10 kg
≠ First aid kit	3316	9		Miscellaneous		A44 A163		915 Y915	10 kg 1 kg	915	10 kg
* Radioactive material, low specific activity (LSA-II), non-fissile or fissile excepted	3321	7		Radioactive	CA 1	☑ A23 A78 A139				See Part 2;7 and Part 4;9	
≠ Radioactive material, low specific activity (LSA-II), non-fissile or fissile excepted	3321	7		Radioactive	CA 1	A23 A78 A139 A159				See Part 2;7 and Part 4;9	
* Radioactive material, low specific activity (LSA-III), non-fissile or fissile excepted	3322	7		Radioactive	CA 1	☑ A23 A78 A139				See Part 2;7 and Part 4;9	
≠ Radioactive material, low specific activity (LSA-III), non-fissile or fissile excepted	3322	7		Radioactive	CA 1	A23 A78 A139 A159				See Part 2;7 and Part 4;9	
* Radioactive material, low specific activity (LSA-II) fissile	3324	7		Radioactive	CA 1	☑ A76 A78				See Part 2;7 and Part 4;9	
≠ Radioactive material, low specific activity (LSA-II) fissile	3324	7		Radioactive	CA 1	A76 A78 A159				See Part 2;7 and Part 4;9	

Name	UN No.	Class or division	Subsidiary risk	Labels	State variations	Special provisions	UN packing group	Passenger aircraft		Cargo aircraft	
								Packing instruction	Max. net quantity per package	Packing instruction	Max. net quantity per package
1	2	3	4	5	6	7	8	9	10	11	12
* Radioactive material, low specific activity (LSA-III) fissile	3325	7		Radioactive	CA 1	A76 A78	<input checked="" type="checkbox"/>		See Part 2;7	and Part 4;9	
≠ Radioactive material, low specific activity (LSA-III) fissile	3325	7		Radioactive	CA 1	A76 A78 A159			See Part 2;7	and Part 4;9	
* Radioactive material, surface contaminated objects (SCO-I or SCO-II), fissile	3326	7		Radioactive	CA 1	A76 A78	<input checked="" type="checkbox"/>		See Part 2;7	and Part 4;9	
≠ Radioactive material, surface contaminated objects (SCO-I or SCO-II), fissile	3326	7		Radioactive	CA 1	A76 A78 A159			See Part 2;7	and Part 4;9	
* Radioactive material, Type B(U) package, fissile	3328	7		Radioactive	CA 1	A78	<input checked="" type="checkbox"/>		See Part 2;7	and Part 4;9	
≠ Radioactive material, Type B(U) package, fissile	3328	7		Radioactive	CA 1	A78 A160			See Part 2;7	and Part 4;9	
* Radioactive material, Type B(M) package, fissile	3329	7		Radioactive	CA 1	A78	<input checked="" type="checkbox"/>		See Part 2;7	and Part 4;9	
≠ Radioactive material, Type B(M) package, fissile	3329	7		Radioactive	CA 1	A78 A160			See Part 2;7	and Part 4;9	
+ Pentaerythritol tetranitrate mixture desensitized, solid, n.o.s.* with more than 10% but not more than 20% PETN, by mass	3344	4.1			BE 3			FORBIDDEN		FORBIDDEN	
+ PETN mixture desensitized, solid, n.o.s.* with more than 10% but not more than 20% PETN, by mass	3344	4.1			BE 3			FORBIDDEN		FORBIDDEN	
+ Hydrogen in a metal hydride storage system contained in equipment	3468	2.1		Gas flammable		A1 A143		FORBIDDEN		214	100 kg G
+ Hydrogen in a metal hydride storage system packed with equipment	3468	2.1		Gas flammable		A1 A143		FORBIDDEN		214	100 kg G
* Fuel cell cartridges containing flammable liquids	3473	3		Liquid flammable		A146		313	<input checked="" type="checkbox"/> 5 L	313	<input checked="" type="checkbox"/> 60 L
≠ Fuel cell cartridges containing flammable liquids	3473	3		Liquid flammable		A146		313	5 kg	313	50 kg
+ Fuel cell cartridges contained in equipment containing flammable liquids	3473	3		Liquid flammable		A146		313	5 kg	313	50 kg

Name	UN No.	Class or division	Subsidiary risk	Labels	State variations	Special provisions	UN packing group	Passenger aircraft		Cargo aircraft	
								Packing instruction	Max. net quantity per package	Packing instruction	Max. net quantity per package
1	2	3	4	5	6	7	8	9	10	11	12
+ Fuel cell cartridges packed with equipment containing flammable liquids	3473	3		Liquid flammable		A146		313	5 kg	313	50 kg
+ 1-Hydroxybenzotriazole, anhydrous, wetted with not less than 20% water, by mass	3474	4.1		Solid flammable		A40	I	416	0.5 kg	416	0.5 kg
+ Ethanol and motor spirit mixture, with more than 10% ethanol	3475	3		Liquid flammable		A156	II	305 Y305	5 L 1 L	307	60 L
+ Ethanol and gasoline mixture, with more than 10% ethanol	3475	3		Liquid flammable		A156	II	305 Y305	5 L 1 L	307	60 L
+ Ethanol and petrol mixture, with more than 10% ethanol	3475	3		Liquid flammable		A156	II	305 Y305	5 L 1 L	307	60 L
+ Fuel cell cartridges, containing water-reactive substances	3476	4.3		Danger if wet		A146 A157		436	[5 kg]	436	50 kg
+ Fuel cell cartridges contained in equipment, containing water-reactive substances	3476	4.3		Danger if wet		A146 A157		436	[5 kg]	436	50 kg
+ Fuel cell cartridges packed with equipment, containing water-reactive substances	3476	4.3		Danger if wet		A146 A157		436	[5 kg]	436	50 kg
+ Fuel cell cartridges, containing corrosive substances	3477	8		Corrosive		A146 A157		827	[5 kg]	827	50 kg
+ Fuel cell cartridges contained in equipment, containing corrosive substances	3477	8		Corrosive		A146 A157		827	[5 kg]	827	50 kg
+ Fuel cell cartridges packed with equipment, containing corrosive substances	3477	8		Corrosive		A146 A157		827	[5 kg]	827	50 kg
+ Fuel cell cartridges, containing liquefied flammable gas	3478	2.1		Gas flammable		A146 A161		[???	1 kg	215	15 kg
+ Fuel cell cartridges contained in equipment, containing liquefied flammable gas	3478	2.1		Gas flammable		A146 A161		[???	1 kg	215	15 kg
+ Fuel cell cartridges packed with equipment, containing liquefied flammable gas	3478	2.1		Gas flammable		A146 A161		[???	1 kg	215	15 kg
+ Fuel cell cartridges, containing hydrogen in metal hydride	3479	2.1		Gas flammable		A146 A162		215	1 kg	215	15 kg
+ Fuel cell cartridges contained in equipment, containing hydrogen in metal hydride	3479	2.1		Gas flammable		A146 A162		215	1 kg	215	15 kg

Name	UN No.	Class or division	Subsidiary risk	Labels	State variations	Special provisions	UN packing group	Passenger aircraft		Cargo aircraft	
								Packing instruction	Max. net quantity per package	Packing instruction	Max. net quantity per package
1	2	3	4	5	6	7	8	9	10	11	12
+ Fuel cell cartridges packed with equipment, containing hydrogen in metal hydride	3479	2.1		Gas flammable		A146 A162		215	1 kg	215	15 kg
+ Lithium ion batteries (including lithium ion polymer batteries)	3480	9		Miscellaneous		A45 A88 A99 A154	II	903	5 kg G	903	35 kg G
+ Lithium ion batteries contained in equipment (including lithium ion polymer batteries)	3481	9		Miscellaneous		A45 A48 A154	II	903	5 kg G	903	35 kg G
+ Lithium ion batteries packed with equipment (including lithium ion polymer batteries)	3481	9		Miscellaneous		A45 A88 A154	II	903	5 kg G	903	35 kg G

APPENDIX B

PROPOSED AMENDMENTS TO TABLE 3-1 — ALPHABETICAL ORDER

Table 3-1. Dangerous Goods List

Name	UN No.	Class or division	Subsidiary risk	Labels	State variations	Special provisions	UN packing group	Passenger aircraft		Cargo aircraft	
								Packing instruction	Max. net quantity per package	Packing instruction	Max. net quantity per package
1	2	3	4	5	6	7	8	9	10	11	12
* Alcohols, n.o.s.*	1987	3		Liquid flammable		☑ A3 A148	II III	305 Y305 309 Y309	5 L 1 L 60 L 10 L	307 310	60 L 220 L
≠ Alcohols, n.o.s.*	1987	3		Liquid flammable		A3	II III	305 Y305 309 Y309	5 L 1 L 60 L 10 L	307 310	60 L 220 L
* Argon, compressed	1006	2.2		Gas non-flammable		☑		200	75 kg	200	150 kg
≠ Argon, compressed	1006	2.2		Gas non-flammable		A69		200	75 kg	200	150 kg
* Batteries, wet, filled with acid, electric storage †	2794	8		Corrosive		☑ A51		800	30 kg G	800	No limit
≠ Batteries, wet, filled with acid, electric storage †	2794	8		Corrosive		A51 A164		800	30 kg G	800	No limit
* Batteries, wet, filled with alkali, electric storage †	2795	8		Corrosive		☑ A51		800	30 kg G	800	No limit
≠ Batteries, wet, filled with alkali, electric storage †	2795	8		Corrosive		A51 A164		800	30 kg G	800	No limit
* Batteries, wet, non-spillable, electric storage	2800	8		Corrosive		☑ A48 A67		806	No limit	806	No limit
≠ Batteries, wet, non-spillable, electric storage	2800	8		Corrosive		A48 A67 A164		806	No limit	806	No limit
* Battery-powered equipment	3171	9		Miscellaneous		☑ A21 A67 A87 A94		900	No limit	900	No limit
≠ Battery-powered equipment	3171	9		Miscellaneous		A21 A67 A87 A94 A164		900	No limit	900	No limit

Name	UN No.	Class or division	Subsidiary risk	Labels	State variations	Special provisions	UN packing group	Passenger aircraft		Cargo aircraft	
								Packing instruction	Max. net quantity per package	Packing instruction	Max. net quantity per package
1	2	3	4	5	6	7	8	9	10	11	12
* Battery-powered vehicle	3171	9		Miscellaneous		☑ A21 A67 A87 A94		900	No limit	900	No limit
≠ Battery-powered vehicle	3171	9		Miscellaneous		A21 A67 A87 A94 A164		900	No limit	900	No limit
* Chemical kit	3316	9		Miscellaneous		☑ A44		915 Y915	10 kg 1 kg	915	10 kg
≠ Chemical kit	3316	9		Miscellaneous		A44 A163		915 Y915	10 kg 1 kg	915	10 kg
* Chlorine	1017	2.3	☑ 8		AU 1 CA 7 GB 3 IR 3 NL 1 US 3	A2		FORBIDDEN		FORBIDDEN	
≠ Chlorine	1017	2.3	5.1 8		AU 1 CA 7 GB 3 IR 3 NL 1 US 3	A2		FORBIDDEN		FORBIDDEN	
* Environmentally hazardous substance, liquid, n.o.s.*	3082	9		Miscellaneous	CA 13 DE 5 US 4	☑ A97	III	914 Y914	450 L 30 kg G	914	450 L
≠ Environmentally hazardous substance, liquid, n.o.s.*	3082	9		Miscellaneous	CA 13 DE 5 US 4	A97 A158	III	914 Y914	450 L 30 kg G	914	450 L
* Environmentally hazardous substance, solid, n.o.s.*	3077	9		Miscellaneous	CA 13 DE 5 US 4	☑ A97	III	911 Y911	400 kg 30 kg G	911	400 kg
≠ Environmentally hazardous substance, solid, n.o.s.*	3077	9		Miscellaneous	CA 13 DE 5 US 4	A97 A158	III	911 Y911	400 kg 30 kg G	911	400 kg

Name	UN No.	Class or division	Subsidiary risk	Labels	State variations	Special provisions	UN packing group	Passenger aircraft		Cargo aircraft	
								Packing instruction	Max. net quantity per package	Packing instruction	Max. net quantity per package
1	2	3	4	5	6	7	8	9	10	11	12
* Ethanol	1170	3		Liquid flammable		<input checked="" type="checkbox"/> A3 A58 A148	II III	305 Y305 309 Y309	5 L 1 L 60 L 10 L	307 310	60 L 220 L
≠ Ethanol	1170	3		Liquid flammable		A3 A58	II III	305 Y305 309 Y309	5 L 1 L 60 L 10 L	307 310	60 L 220 L
+ Ethanol and gasoline mixture, with more than 10% ethanol	3475	3		Liquid flammable		A156	II	305 Y305	5 L 1 L	307	60 L
+ Ethanol and motor spirit mixture, with more than 10% ethanol	3475	3		Liquid flammable		A156	II	305 Y305	5 L 1 L	307	60 L
+ Ethanol and petrol mixture, with more than 10% ethanol	3475	3		Liquid flammable		A156	II	305 Y305	5 L 1 L	307	60 L
* Ethanol solution	1170	3		Liquid flammable		<input checked="" type="checkbox"/> A3 A58 A148	II III	305 Y305 309 Y309	5 L 1 L 60 L 10 L	307 310	60 L 220 L
≠ Ethanol solution	1170	3		Liquid flammable		A3 A58	II III	305 Y305 309 Y309	5 L 1 L 60 L 10 L	307 310	60 L 220 L
* Ethyl alcohol	1170	3		Liquid flammable		<input checked="" type="checkbox"/> A3 A58 A148	II III	305 Y305 309 Y309	5 L 1 L 60 L 10 L	307 310	60 L 220 L
≠ Ethyl alcohol	1170	3		Liquid flammable		A3 A58	II III	305 Y305 309 Y309	5 L 1 L 60 L 10 L	307 310	60 L 220 L
* Ethyl alcohol solution	1170	3		Liquid flammable		<input checked="" type="checkbox"/> A3 A58 A148	II III	305 Y305 309 Y309	5 L 1 L 60 L 10 L	307 310	60 L 220 L
≠ Ethyl alcohol solution	1170	3		Liquid flammable		A3 A58	II III	305 Y305 309 Y309	5 L 1 L 60 L 10 L	307 310	60 L 220 L

Name	UN No.	Class or division	Subsidiary risk	Labels	State variations	Special provisions	UN packing group	Passenger aircraft		Cargo aircraft	
								Packing instruction	Max. net quantity per package	Packing instruction	Max. net quantity per package
1	2	3	4	5	6	7	8	9	10	11	12
* First aid kit	3316	9		Miscellaneous		A44		915 Y915	10 kg 1 kg	915	10 kg
≠ First aid kit	3316	9		Miscellaneous		A44 A163		915 Y915	10 kg 1 kg	915	10 kg
* Flammable liquid, n.o.s.*	1993	3		Liquid flammable		A3 A148	I II III	302 305 Y305 309 Y309	1 L 5 L 1 L 60 L 10 L	303 307 310	30 L 60 L 220 L
≠ Flammable liquid, n.o.s.*	1993	3		Liquid flammable		A3	I II III	302 305 Y305 309 Y309	1 L 5 L 1 L 60 L 10 L	303 307 310	30 L 60 L 220 L
+ Fuel cell cartridges, containing corrosive substances	3477	8		Corrosive		A146 A157		827	[5 kg]	827	50 kg
* Fuel cell cartridges containing flammable liquids	3473	3		Liquid flammable		A146		313	5 L	313	60 L
≠ Fuel cell cartridges containing flammable liquids	3473	3		Liquid flammable		A146		313	5 kg	313	50 kg
+ Fuel cell cartridges, containing hydrogen in metal hydride	3479	2.1		Gas flammable		A146 A162		215	1 kg	215	15 kg
+ Fuel cell cartridges, containing liquefied flammable gas	3478	2.1		Gas flammable		A146 A161		[???	1 kg	215	15 kg
+ Fuel cell cartridges, containing water-reactive substances	3476	4.3		Danger if wet		A146 A157		436	[5 kg]	436	50 kg

Name	UN No.	Class or division	Subsidiary risk	Labels	State variations	Special provisions	UN packing group	Passenger aircraft		Cargo aircraft	
								Packing instruction	Max. net quantity per package	Packing instruction	Max. net quantity per package
1	2	3	4	5	6	7	8	9	10	11	12
+ Fuel cell cartridges contained in equipment, containing corrosive substances	3477	8		Corrosive		A146 A157		827	[5 kg]	827	50 kg
+ Fuel cell cartridges contained in equipment containing flammable liquids	3473	3		Liquid flammable		A146		313	5 kg	313	50 kg
+ Fuel cell cartridges contained in equipment, containing hydrogen in metal hydride	3479	2.1		Gas flammable		A146 A162		215	1 kg	215	15 kg
+ Fuel cell cartridges contained in equipment, containing liquefied flammable gas	3478	2.1		Gas flammable		A146 A161		[???	1 kg	215	15 kg
+ Fuel cell cartridges contained in equipment, containing water-reactive substances	3476	4.3		Danger if wet		A146 A157		436	[5 kg]	436	50 kg
+ Fuel cell cartridges packed with equipment, containing corrosive substances	3477	8		Corrosive		A146 A157		827	[5 kg]	827	50 kg
+ Fuel cell cartridges packed with equipment containing flammable liquids	3473	3		Liquid flammable		A146		313	5 kg	313	50 kg
+ Fuel cell cartridges packed with equipment, containing hydrogen in metal hydride	3479	2.1		Gas flammable		A146 A162		215	1 kg	215	15 kg
+ Fuel cell cartridges packed with equipment, containing liquefied flammable gas	3478	2.1		Gas flammable		A146 A161		[???	1 kg	215	15 kg
+ Fuel cell cartridges packed with equipment, containing water-reactive substances	3476	4.3		Danger if wet		A146 A157		436	[5 kg]	436	50 kg
* Helium, compressed	1046	2.2		Gas non-flammable			☑	200	75 kg	200	150 kg
≠ Helium, compressed	1046	2.2		Gas non-flammable		A69		200	75 kg	200	150 kg
+ Hydrogen in a metal hydride storage system contained in equipment	3468	2.1		Gas flammable		A1 A143		FORBIDDEN		214	100 kg G
+ Hydrogen in a metal hydride storage system packed with equipment	3468	2.1		Gas flammable		A1 A143		FORBIDDEN		214	100 kg G
+ 1-Hydroxybenzotriazole, anhydrous, dry or wetted with less than 20% water, by mass	0508	1.3C						FORBIDDEN		FORBIDDEN	
+ 1-Hydroxybenzotriazole, anhydrous, wetted with not less than 20% water, by mass	3474	4.1		Solid flammable		A40	I	416	0.5 kg	416	0.5 kg

Name	UN No.	Class or division	Subsidiary risk	Labels	State variations	Special provisions	UN packing group	Passenger aircraft		Cargo aircraft	
								Packing instruction	Max. net quantity per package	Packing instruction	Max. net quantity per package
1	2	3	4	5	6	7	8	9	10	11	12
+ Lithium ion batteries (including lithium ion polymer batteries)	3480	9		Miscellaneous		A45 A88 A99 A154	II	903	5 kg G	903	35 kg G
+ Lithium ion batteries contained in equipment (including lithium ion polymer batteries)	3481	9		Miscellaneous		A45 A48 A154	II	903	5 kg G	903	35 kg G
+ Lithium ion batteries packed with equipment (including lithium ion polymer batteries)	3481	9		Miscellaneous		A45 A88 A154	II	903	5 kg G	903	35 kg G
<input checked="" type="checkbox"/> * Lithium batteries †	3090	9		Miscellaneous	US 2 US 3	<input checked="" type="checkbox"/> A45 A88 A99 A154	II	903	5 kg G	903	35 kg G
≠ Lithium metal batteries (including lithium alloy batteries) †	3090	9		Miscellaneous	US 2 US 3	A45 A88 A99 A154 A164	II	903	5 kg G	903	35 kg G
<input checked="" type="checkbox"/> * Lithium batteries contained in equipment †	3091	9		Miscellaneous	US 2 US 3	<input checked="" type="checkbox"/> A45 A48 A154		see 912		see 912	
≠ Lithium metal batteries contained in equipment (including lithium alloy batteries) †	3091	9		Miscellaneous	US 2 US 3	A45 A48 A154 A164		see 912		see 912	
<input checked="" type="checkbox"/> * Lithium batteries packed with equipment †	3091	9		Miscellaneous	US 2 US 3	<input checked="" type="checkbox"/> A45 A154		see 918		see 918	
≠ Lithium metal batteries packed with equipment (including lithium alloy batteries) †	3091	9		Miscellaneous	US 2 US 3	A45 A154 A164		see 918		see 918	
* Magnesium nitrate	1474	5.1		Oxidizer		<input checked="" type="checkbox"/>	III	516 Y516	25 kg 10 kg	518	100 kg
≠ Magnesium nitrate	1474	5.1		Oxidizer		A155	III	516 Y516	25 kg 10 kg	518	100 kg

Name	UN No.	Class or division	Subsidiary risk	Labels	State variations	Special provisions	UN packing group	Passenger aircraft		Cargo aircraft	
								Packing instruction	Max. net quantity per package	Packing instruction	Max. net quantity per package
1	2	3	4	5	6	7	8	9	10	11	12
* Methyltrichlorosilane	1250	3	8	Liquid flammable & Corrosive	AU 1 CA 7 GB 3 IR 3 NL 1 US 3	A1	I	FORBIDDEN	FORBIDDEN	304	2.5 L
≠ Methyltrichlorosilane	1250	3	8	Liquid flammable & Corrosive	AU 1 CA 7 GB 3 IR 3 NL 1 US 3		II	306	1 L	304	5 L
* Neon, compressed	1065	2.2		Gas non-flammable				200	75 kg	200	150 kg
≠ Neon, compressed	1065	2.2		Gas non-flammable		A69		200	75 kg	200	150 kg
* Nitric acid, other than red fuming, with not more than 70% nitric acid	2031	8		Corrosive	AU 1 CA 7 GB 3 IR 3 NL 1 US 3	A1	II	FORBIDDEN	FORBIDDEN	813	30 L
≠ Nitric acid, other than red fuming, with at least 65% but not more than 70% nitric acid	2031	8	5.1	Corrosive & Oxidizer	AU 1 CA 7 GB 3 IR 3 NL 1 US 3	A1	II	FORBIDDEN	FORBIDDEN	813	30 L
+ Nitric acid, other than red fuming, with less than 65% nitric acid	2031	8		Corrosive			II	807 Y807	1 L 0.5 L	813	30 L
* Nitrogen, compressed	1066	2.2		Gas non-flammable				200	75 kg	200	150 kg
≠ Nitrogen, compressed	1066	2.2		Gas non-flammable		A69		200	75 kg	200	150 kg
+ Pentaerythritol tetranitrate mixture desensitized, solid, n.o.s.* with more than 10% but not more than 20% PETN, by mass	3344	4.1			BE 3			FORBIDDEN	FORBIDDEN	FORBIDDEN	FORBIDDEN
+ PETN mixture desensitized, solid, n.o.s.* with more than 10% but not more than 20% PETN, by mass	3344	4.1			BE 3			FORBIDDEN	FORBIDDEN	FORBIDDEN	FORBIDDEN
+ Picric acid, wetted with not less than 30% water, by mass	1344	4.1		Solid flammable	BE 3	A40	I	416	1 kg	412	15 kg

Name	UN No.	Class or division	Subsidiary risk	Labels	State variations	Special provisions	UN packing group	Passenger aircraft		Cargo aircraft	
								Packing instruction	Max. net quantity per package	Packing instruction	Max. net quantity per package
1	2	3	4	5	6	7	8	9	10	11	12
* Polyester resin kit †	3269	3		Liquid flammable		A66	II III	312 Y312 312 Y312	5 kg 1 kg 5 kg 1 kg	312 312	5 kg 5 kg
≠ Polyester resin kit †	3269	3		Liquid flammable		A66 A163	II III	312 Y312 312 Y312	5 kg 1 kg 5 kg 1 kg	312 312	5 kg 5 kg
* Radioactive material, excepted package — articles manufactured from natural uranium or depleted uranium or natural thorium	2909	7		None		A130			See Part 2;7		
≠ Radioactive material, excepted package — articles manufactured from natural uranium or depleted uranium or natural thorium	2909	7		None		A130			See Part 2;7		
* Radioactive material, excepted package — empty packaging	2908	7		None		A130			See Part 2;7		
≠ Radioactive material, excepted package — empty packaging	2908	7		None		A130			See Part 2;7		
* Radioactive material, excepted package — instruments or articles	2911	7		None		A130			See Part 2;7		
≠ Radioactive material, excepted package — instruments or articles	2911	7		None		A130			See Part 2;7		
* Radioactive material, excepted package — limited quantity of material	2910	7		None		A130			See Part 2;7		
≠ Radioactive material, excepted package — limited quantity of material	2910	7		None		A130			See Part 2;7		
* Radioactive material, low specific activity (LSA-II), non-fissile or fissile excepted	3321	7		Radioactive	CA 1	A23 A78 A139			See Part 2;7 and Part 4;9		
≠ Radioactive material, low specific activity (LSA-II), non-fissile or fissile excepted	3321	7		Radioactive	CA 1	A23 A78 A139 A159			See Part 2;7 and Part 4;9		

Name	UN No.	Class or division	Subsidiary risk	Labels	State variations	Special provisions	UN packing group	Passenger aircraft		Cargo aircraft	
								Packing instruction	Max. net quantity per package	Packing instruction	Max. net quantity per package
1	2	3	4	5	6	7	8	9	10	11	12
* Radioactive material, low specific activity (LSA-II) fissile	3324	7		Radioactive	CA 1	A76 A78	<input checked="" type="checkbox"/>		See Part 2;7	and Part 4;9	
≠ Radioactive material, low specific activity (LSA-II) fissile	3324	7		Radioactive	CA 1	A76 A78 A159			See Part 2;7	and Part 4;9	
* Radioactive material, low specific activity (LSA-III), non-fissile or fissile excepted	3322	7		Radioactive	CA 1	A23 A78 A139	<input checked="" type="checkbox"/>		See Part 2;7	and Part 4;9	
≠ Radioactive material, low specific activity (LSA-III), non-fissile or fissile excepted	3322	7		Radioactive	CA 1	A23 A78 A139 A159			See Part 2;7	and Part 4;9	
* Radioactive material, low specific activity (LSA-III) fissile	3325	7		Radioactive	CA 1	A76 A78	<input checked="" type="checkbox"/>		See Part 2;7	and Part 4;9	
≠ Radioactive material, low specific activity (LSA-III) fissile	3325	7		Radioactive	CA 1	A76 A78 A159			See Part 2;7	and Part 4;9	
* Radioactive material, surface contaminated objects (SCO-I or SCO-II), non-fissile or fissile excepted	2913	7		Radioactive	CA 1	A78 A139	<input checked="" type="checkbox"/>		See Part 2;7	and Part 4;9	
≠ Radioactive material, surface contaminated objects (SCO-I or SCO-II), non-fissile or fissile excepted	2913	7		Radioactive	CA 1	A78 A139 A159			See Part 2;7	and Part 4;9	
* Radioactive material, surface contaminated objects (SCO-I or SCO-II), fissile	3326	7		Radioactive	CA 1	A76 A78	<input checked="" type="checkbox"/>		See Part 2;7	and Part 4;9	
≠ Radioactive material, surface contaminated objects (SCO-I or SCO-II), fissile	3326	7		Radioactive	CA 1	A76 A78 A159			See Part 2;7	and Part 4;9	

Name	UN No.	Class or division	Subsidiary risk	Labels	State variations	Special provisions	UN packing group	Passenger aircraft		Cargo aircraft	
								Packing instruction	Max. net quantity per package	Packing instruction	Max. net quantity per package
1	2	3	4	5	6	7	8	9	10	11	12
* Radioactive material, Type B(M) package , non-fissile or fissile excepted	2917	7		Radioactive	CA 1	A78 A139			See Part 2;7	and Part 4;9	
≠ Radioactive material, Type B(M) package , non-fissile or fissile excepted	2917	7		Radioactive	CA 1	A78 A139 A160			See Part 2;7	and Part 4;9	
* Radioactive material, Type B(M) package, fissile	3329	7		Radioactive	CA 1	A78			See Part 2;7	and Part 4;9	
≠ Radioactive material, Type B(M) package, fissile	3329	7		Radioactive	CA 1	A78 A160			See Part 2;7	and Part 4;9	
* Radioactive material, Type B(U) package , non-fissile or fissile excepted	2916	7		Radioactive	CA 1	A78 A139			See Part 2;7	and Part 4;9	
≠ Radioactive material, Type B(U) package , non-fissile or fissile excepted	2916	7		Radioactive	CA 1	A78 A139 A160			See Part 2;7	and Part 4;9	
* Radioactive material, Type B(U) package, fissile	3328	7		Radioactive	CA 1	A78			See Part 2;7	and Part 4;9	
≠ Radioactive material, Type B(U) package, fissile	3328	7		Radioactive	CA 1	A78 A160			See Part 2;7	and Part 4;9	
+ Signals, distress, ship	0505	1.4G		Explosive 1.4				FORBIDDEN		135	75 kg
+ Signals, distress, ship	0506	1.4S		Explosive 1.4				135	25 kg	135	100 kg
+ Signals, smoke †	0507	1.4S		Explosive 1.4				135	25 kg	135	100 kg
+ TNT, wetted with not less than 30% water, by mass	1356	4.1		Solid flammable	BE 3	A40	I	416	0.5 kg	416	0.5 kg

Name	UN No.	Class or division	Subsidiary risk	Labels	State variations	Special provisions	UN packing group	Passenger aircraft		Cargo aircraft	
								Packing instruction	Max. net quantity per package	Packing instruction	Max. net quantity per package
1	2	3	4	5	6	7	8	9	10	11	12
* Vinyltrichlorosilane	1305	3	8	Liquid flammable & Corrosive	AU 1 CA 7 GB 3 IR 3 NL 1 US 3	A1	I	FORBIDDEN		304	2.5 L
‡ Vinyltrichlorosilane	1305	3	8	Liquid flammable & Corrosive	AU 1 CA 7 GB 3 IR 3 NL 1 US 3		II	306	1 L	304	5 L
* Xenon	2036	2.2		Gas non-flammable				200	75 kg	200	150 kg
‡ Xenon	2036	2.2		Gas non-flammable		A69		200	75 kg	200	150 kg