



WORKING PAPER

**DANGEROUS GOODS PANEL (DGP)
MEETING OF THE WORKING GROUP OF THE WHOLE**

Atlantic City, United States, 4 to 8 April 2011

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 2013-2014 Edition

2.3: Part 3 — Dangerous Goods List, Special Provisions and Limited and Excepted Quantities

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

(Presented by the Secretary)

SUMMARY

This working paper contains draft amendments to Part 3 of the Technical Instructions 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 fifth session (Geneva, 10 December 2010). It also reflects amendments agreed by DGP-WG10 (Abu Dhabi, United Arab Emirates, 7 to 11 November 2010).

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

Part 3

DANGEROUS GOODS LIST, SPECIAL PROVISIONS AND LIMITED AND EXCEPTED QUANTITIES

Chapter 1

GENERAL

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1.3 MIXTURES OR SOLUTIONS

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1.3.2 A mixture or solution [meeting the classification criteria of these Instructions](#) composed of a single predominant substance identified by name in Table 3-1 and one or more substances not subject to these Instructions and/or traces of one or more substances identified by name in Table 3-1 must be assigned the UN number and proper shipping name of the predominant substance named in Table 3-1, unless:

- a) the mixture or solution is specifically identified by name in Table 3-1 in which case this name must be applied; or

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1.3.4 A mixture or solution [meeting the classification criteria of these Instructions](#) that is not identified by name in Table 3-1 and that is composed of two or more dangerous goods must be assigned to an entry that has the proper shipping name, description, hazard class or division, subsidiary risk(s) and packing group that most precisely describe the solution or mixture.

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Chapter 2

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

See the appendix to this working paper for
amendments to Table 3-1

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Chapter 3

SPECIAL PROVISIONS

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

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Table 3-2. Special provisions

TIs	UN
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A21	<p>This entry only applies to vehicles and equipment which are powered by wet batteries, sodium batteries, <u>lithium metal batteries</u> or lithium <u>ion</u> batteries and <u>equipment powered by wet batteries or sodium batteries</u> which are transported with these batteries installed.</p> <p><u>For the purpose of this special provision, vehicles are self-propelled apparatus designed to carry one or more persons or goods.</u> Examples of such vehicles and equipment are electrically-powered cars, lawn mowers, motorcycles, scooters, three- and four-wheeled vehicles or motorcycles, e-bikes, wheelchairs, <u>lawn tractors, boats and aircraft</u> and other mobility aids. <u>Examples of equipment are lawnmowers, cleaning machines or model boats and model aircraft.</u></p> <p><u>Equipment powered by lithium metal batteries or lithium ion batteries must be consigned under the entries UN 3091 Lithium metal batteries contained in equipment or UN 3091 Lithium metal batteries packed with equipment or UN 3481 Lithium ion batteries contained in equipment or UN 3481 Lithium ion batteries packed with equipment, as appropriate.</u></p> <p>Vehicles or equipment that also contain an internal combustion engine must be consigned under the entries <u>UN 3166 Engines, internal combustion, flammable gas powered</u> or <u>UN 3166 Engines, internal combustion, flammable liquid powered</u> or <u>UN 3166 Vehicle, flammable gas powered</u> or <u>UN 3166 Vehicle, flammable liquid powered</u>, as appropriate. Hybrid electric vehicles powered by both an internal combustion engine and wet batteries, sodium batteries, <u>lithium metal batteries</u> or lithium <u>ion</u> batteries, transported with the battery(ies) installed, must be consigned under the entries <u>UN 3166 Vehicle, flammable gas powered</u> or <u>UN 3166 Vehicle, flammable liquid powered</u>, as appropriate.</p> <p>Vehicles or equipment powered by a fuel cell engine must be consigned under the entries <u>UN 3166 Vehicle, fuel cell, flammable gas powered</u> or <u>UN 3166 Vehicle, fuel cell, flammable liquid powered</u>, or <u>UN 3166 Engine, fuel cell, flammable gas powered</u> or <u>UN 3166 Engine, fuel cell, flammable liquid powered</u>, as appropriate.</p>
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A32	<p>Air bag inflators, air bag modules or seat-belt pretensioners installed in conveyances or in completed conveyance components <u>installed in vehicles, vessels or aircraft or in completed components</u> such as steering columns, door panels, seats, etc., which are not capable of inadvertent activation are not subject to these Instructions. The words "not restricted" and the special provision number A32 must be provided on the air waybill when an air waybill is issued.</p>
...	
A68	<p>(272) This substance must not be transported under the provisions of Division 4.1 unless specifically authorized by the appropriate national authority. (See UN 0143 <u>or UN 0150 as appropriate.</u>)</p>
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TIs UN

A94 Batteries or cells containing sodium must not contain dangerous goods other than ~~sodium, sulphur and/or polysulphides~~ sodium, sulphur or sodium compounds (e.g. sodium polysulphides and sodium tetrachloroaluminate). 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.

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A134 (312) Vehicles or machinery powered by a fuel cell engine must be consigned under the entries UN 3166 **Vehicle, fuel cell, flammable gas powered** or UN 3166 **Vehicle, fuel cell, flammable liquid powered**, or UN 3166 **Engine, fuel cell, flammable gas powered** or UN 3166 **Engine, fuel cell, flammable liquid powered**, as appropriate. These entries include hybrid electric vehicles powered by both a fuel cell and an internal combustion engine with wet batteries, sodium batteries ~~or lithium batteries~~, lithium metal batteries or lithium ion batteries, transported with the battery(ies) installed.

Other 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~~, lithium metal batteries or lithium ion batteries, transported with the battery(ies) installed.

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A146 (328) This entry applies to fuel cell cartridges 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 article that stores fuel for discharge into the fuel cell through a valve(s) that controls the discharge of fuel into the fuel cell. Fuel cell cartridges, including when contained in equipment, must be designed and constructed to prevent fuel leakage under normal conditions of transport.

Fuel cell cartridge design types 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, including fuel cell cartridges installed in or integral to a fuel cell system, must be shown to pass a 1.2 metre drop test onto an unyielding surface in the orientation most likely to result in failure of the containment system with no loss of contents.

When lithium metal or lithium ion batteries are contained in the fuel cell system, the consignment must be consigned under this entry and under the appropriate entries for UN 3091 **Lithium metal batteries contained in equipment** or UN 3481 **Lithium ion batteries contained in equipment**.

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A161 (338) Each fuel cell cartridge transported under this entry and designed to contain a liquefied flammable gas must:

- a) be capable of withstanding, without leakage or bursting, a pressure of at least two (2) times the equilibrium pressure of the contents at 55°C;
- b) not contain more than 200 mL of liquefied flammable gas, with a the vapour pressure of which must not exceeding 1 000 kPa at 55°C; and
- c) pass the hot water bath test prescribed in 6;5.4.1.

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TIs UN

A176 (356) Metal hydride storage system(s) installed in ~~conveyances~~ vehicles, vessels or aircraft or in completed ~~conveyance~~ components or intended to be installed in ~~conveyances~~ vehicles, vessels or aircraft must be approved by the appropriate national authority before acceptance for transport. The dangerous goods transport document must include an indication that the package was approved by the appropriate national authority or a copy of the appropriate national authority approval must accompany each consignment.

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A184 (304) This entry may only be used for the transport of non-activated batteries which contain dry potassium hydroxide and which are intended to be activated prior to use by the addition of an appropriate amount of water to the individual cells.

A185 (360) Vehicles only powered by lithium metal batteries or lithium ion batteries must be consigned under the entry UN 3171 **Battery-powered vehicle**.

A186 (361) This entry applies to electric double layer capacitors with an energy storage capacity greater than 0.3 Wh. Capacitors with an energy storage capacity of 0.3 Wh or less are not subject to these Instructions. Energy storage capacity means the energy held by a capacitor, as calculated using the nominal voltage and capacitance. All capacitors to which this entry applies, including capacitors containing an electrolyte that does not meet the classification criteria of any class or division of dangerous goods, must meet the following conditions:

a) capacitors not installed in equipment must be transported in an uncharged state. Capacitors installed in equipment must be transported either in an uncharged state or protected against short circuit;

b) each capacitor must be protected against a potential short circuit hazard in transport as follows:

i) when a capacitor's energy storage capacity is less than or equal to 10Wh or when the energy storage capacity of each capacitor in a module is less than or equal to 10 Wh, the capacitor or module must be protected against short circuit or be fitted with a metal strap connecting the terminals; and

ii) When the energy storage capacity of a capacitor or a capacitor in a module is more than 10 Wh, the capacitor or module must be fitted with a metal strap connecting the terminals;

c) capacitors containing dangerous goods must be designed to withstand a 95 kPa pressure differential;

d) capacitors must be designed and constructed to safely relieve pressure that may build up in use, through a vent or a weak point in the capacitor casing. Any liquid which is released upon venting must be contained by packaging or by equipment in which a capacitor is installed; and

e) capacitors must be marked with the energy storage capacity in Wh.

Capacitors containing an electrolyte not meeting the classification criteria of any class or division of dangerous goods, including when installed in equipment, are not subject to other provisions of these Instructions.

Capacitors containing an electrolyte meeting the classification criteria of any class or division of dangerous goods, with an energy storage capacity of 10 Wh or less are not subject to other provisions of these Instructions when they are capable of withstanding a 1.2 metre drop test unpackaged on an unyielding surface without loss of contents.

Capacitors containing an electrolyte meeting the classification criteria of any class or division of dangerous goods that are not installed in equipment and with an energy storage capacity of more than 10 Wh are subject to these Instructions.

Capacitors installed in equipment and containing an electrolyte meeting the classification criteria of any class or division of dangerous goods are not subject to other provisions of these Instructions provided the equipment is packaged in a strong outer packaging constructed of suitable material and of adequate strength and design in relation to the packaging's intended use and in such a manner as to prevent accidental functioning of capacitors during transport. Large robust equipment containing capacitors may be offered for transport unpackaged or on pallets when capacitors are afforded equivalent protection by the equipment in which they are contained.

Note.— Capacitors which by design maintain a terminal voltage (e.g. asymmetrical capacitors) do not belong to this entry.

TIs UN

[A187 (362) This entry applies to liquids, pastes or powders, pressurized with a propellant which meets the definition of a gas in 2;2.1.1 and 2;2.1.2 a) or b).

Note.— A chemical under pressure in an aerosol dispenser must be transported under UN 1950.

The following provisions must apply:

a) The chemical under pressure must be classified based on the hazard characteristics of the components in the different states:

_____ i) the propellant;

_____ ii) the liquid; or

_____ iii) the solid.

If one of these components, which can be a pure substance or a mixture, needs to be classified as flammable, the chemical under pressure must be classified as flammable in Division 2.1. Flammable components are flammable liquids and liquid mixtures, flammable solids and solid mixtures or flammable gases and gas mixtures meeting the following criteria:

_____ i) a flammable liquid is a liquid having a flashpoint of not more than 93 °C;

_____ ii) a flammable solid is a solid which meets the criteria in 2;4.2.2 of these Instructions;

_____ iii) a flammable gas is a gas which meets the criteria in 2;2.2.1 of these Instructions;

b) gases of Division 2.3 and gases with a subsidiary risk of 5.1 must not be used as a propellant in a chemical under pressure;

c) where the liquid or solid components are classified as dangerous goods of Division 6.1, Packing Groups II or III, or Class 8, Packing Groups II or III, the chemical under pressure must be assigned a subsidiary risk of Division 6.1 or Class 8 and the appropriate UN number must be assigned. Components classified in Division 6.1, Packing Group I, or Class 8, Packing Group I, must not be used for transport under this proper shipping name;

d) in addition, chemicals under pressure with components meeting the properties of: Class 1, explosives; Class 3, liquid desensitized explosives; Division 4.1, self-reactive substances and solid desensitized explosives; Division 4.2, substances liable to spontaneous combustion; Division 4.3, substances which, in contact with water, emit flammable gases; Division 5.1 oxidizing substances; Division 5.2, organic peroxides; Division 6.2, Infectious substances or Class 7, Radioactive material, must not be used for transport under this proper shipping name;

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TIs UN

A188 (363) This entry also applies to dangerous goods above the limited quantity amount specified in Table 3-1 in means of containment (other than vehicles or means of containment defined in Part 6 of these Instructions subject to Special Provision A107) integral to equipment or machinery (e.g. generators, compressors, heating units, etc) as part of their original design type. They must meet the following requirements:

- a) the means of containment must be in compliance with the construction requirements of the appropriate authority;
- b) any valves or openings (e.g. venting devices) in the means of containment containing dangerous goods must be closed during transport;
- c) the machinery or equipment must be loaded in an orientation to prevent inadvertent leakage of dangerous goods and secured by means capable of restraining the machinery or equipment to prevent any movement during transport which would change the orientation or cause it to be damaged;
- d) where the means of containment has a capacity of not more than 450 litres, the labelling requirements of 5:3 must apply and where the capacity is greater than 450 litres but not more than 1 500 litres the machinery or equipment must be labelled on all four external sides in accordance with 5:3;
- e) the requirement of 5:4 must apply.

No other provisions of these Instructions apply.

A189 (365) For manufactured instruments and articles containing mercury, see UN 3506.

A190 (366) Articles containing not more than 15 g of mercury are not subject to these Instructions.

A191 (359) Nitroglycerin solution in alcohol with more than 1 per cent but not more than 5 per cent nitroglycerin must be classified in Class 1 and assigned to UN 0144 if not all the requirements of Packing Instruction 371 are complied with.

[AXX (364) This article may only be transported under the provisions of 3:4 if, as presented for transport, the package is capable of passing the test in accordance with Test Series 6(d) of Part I of the UN Manual of Tests and Criteria as determined by the appropriate national authority.

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Chapter 4

DANGEROUS GOODS IN LIMITED QUANTITIES

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4.3 QUANTITY LIMITATIONS

4.3.1 The net quantity per package must not exceed the quantity specified in column 11 of Table 3-1 against the packing instruction number identified by the prefix letter "Y" in column 10.

4.3.2 The gross mass per package must not exceed 30 kg.

4.3.3 When different dangerous goods are contained in one outer packaging, the quantities of such dangerous goods must be so limited that:

DGP-WG/10-WP/37:

[a) for classes other than Classes 2 (except UN 2037, UN 3478 and UN 3479) and 9 (except UN 3316), the total net quantity in the package does not exceed the value of 1, where "Q" is calculated using the formula:

$$Q = \frac{n_1}{M_1} + \frac{n_2}{M_2} + \frac{n_3}{M_3} + \dots$$

where n_1, n_2 , etc., are the net quantities of the different dangerous goods and M_1, M_2 etc., are the maximum net quantities for these different dangerous goods shown in Table 3-1 against the relevant "Y" packing instructions; and

- b) for Classes 2 (except UN 2037, UN 3478 and UN 3479) and 9 (except UN 3316):
 - 1) when packed together without goods of other classes, the gross mass of the package does not exceed 30 kg; or
 - 2) when packed together with goods of other classes, the gross mass of the package does not exceed 30 kg and the total net quantity in the package of goods other than in Classes 2 (except UN 2037, UN 3478 and UN 3479) or 9 (except UN 3316) does not exceed the value of 1 when calculated according to a) above.
- c) carbon dioxide, solid (dry ice), UN 1845 may be packed together with goods of other classes, provided that the gross mass of the package does not exceed 30 kg. The quantity of dry ice does not need to be taken into account in the calculation of the "Q" value. However, the packaging containing the carbon dioxide, solid (dry ice) and the outer packaging must permit the release of carbon dioxide gas.

4.3.4 Where the different dangerous goods in the outer packaging consist only of those with the same UN number, packing group and physical state (i.e. solid or liquid), the calculation in 4.3.3 a) does not need to be made. However, the total net quantity in the package must not exceed the maximum net quantity according to Table 3-1.

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Chapter 5

DANGEROUS GOODS PACKED IN EXCEPTED QUANTITIES

Parts of this Chapter are affected by State Variation JP 23; see Table A-1

5.1 EXCEPTED QUANTITIES

5.1.3 Where dangerous goods in excepted quantities for which different codes are assigned are packaged together, the total quantity per outer packaging must be limited to that corresponding to the most restrictive Code.

5.1.4 Excepted quantities of dangerous goods assigned to codes E1, E2, E4 and E5 are not subject to these Instructions provided that:

- a) the maximum net quantity of material per inner packaging is limited to 1 ml for liquids and gases and 1 g for solids;
- b) the provisions of 3;5.2 are met, except that an intermediate packaging is not required if the inner packagings are securely packed in an outer packaging with cushioning material in such a way that, under normal conditions of transport, they cannot break, be punctured, or leak their contents; and for liquid dangerous goods, the outer packaging contains sufficient absorbent material to absorb the entire contents of the inner packagings;
- c) the provisions of 3;5.3 are complied with; and
- d) the maximum net quantity of dangerous goods per outer packaging does not exceed 100 g for solids or 100 ml for liquids and gases.

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APPENDIX

PROPOSED AMENDMENTS TO TABLE 3-1

Table 3-1. Dangerous Goods List - DRAFT

Name	UN No.	Class or division	Subsidiary risk	Labels	State variations	Special provisions	UN packing group	Excepted quantity	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	13
≠ Cartridges for weapons, inert projectile †	0012	1.4S		Explosive 1.4		[<u>AXX</u>]		E0	130 <u>Y1XX?</u>	25 kg <u>[5 kg]</u>	130	100 kg
≠ Cartridges, small arms †	0012	1.4S		Explosive 1.4		[<u>AXX</u>]		E0	130 <u>Y1XX?</u>	25 kg <u>[5 kg]</u>	130	100 kg
+ Cartridges for tools, blank †	0014	1.4S		Explosive 1.4		[<u>AXX</u>]		<u>E0</u>	<u>130</u> <u>Y1XX?</u>	<u>25 kg</u> <u>[5 kg]</u>	<u>130</u>	<u>100 kg</u>
≠ Cartridges for weapons, blank †	0014	1.4S		Explosive 1.4		[<u>AXX</u>]		E0	130 <u>Y1XX?</u>	25 kg <u>[5 kg]</u>	130	100 kg
≠ Cartridges, small arms, blank †	0014	1.4S		Explosive 1.4		[<u>AXX</u>]		E0	130 <u>Y1XX?</u>	25 kg <u>[5 kg]</u>	130	100 kg
≠ Cases, cartridge, empty, with primer †	0055	1.4S		Explosive 1.4		[<u>AXX</u>]		E0	136 <u>Y1XX?</u>	25 kg <u>[5 kg]</u>	136	100 kg
≠ Dimethyldichlorosilane	1162	3	8	Liquid flammable & Corrosive			II	<u>E0</u>	<u>FORBIDDEN</u>		377	5 L
≠ Ethyltrichlorosilane	1196	3	8	Liquid flammable & Corrosive			II	<u>E0</u>	<u>FORBIDDEN</u>		377	5 L
≠ Diesel fuel	1202	3		Liquid flammable		A3 <u>A188</u>	III	E1	355 Y344	60 L 10 L	366	220 L
≠ Gasoline	1203	3		Liquid flammable		A100 <u>A188</u>	II	E2	353 Y341	5 L 1 L	364	60 L
≠ Petrol	1203	3		Liquid flammable		A100 <u>A188</u>	II	E2	353 Y341	5 L 1 L	364	60 L
≠ Kerosene	1223	3		Liquid flammable		<u>A188</u>	III	E1	355 Y344	60 L 10 L	366	220 L
≠ Methyltrichlorosilane	1250	3	8	Liquid flammable & Corrosive	AU 1 CA 7 IR 3 NL 1 US 3		II	<u>E0</u>	<u>FORBIDDEN</u>		377	5 L
≠ Petroleum distillates, n.o.s.	1268	3		Liquid flammable		A3 <u>A188</u>	I II III	E3 E2 E1	351 353 Y341 355 Y344	1 L 5 L 1 L 60 L 10 L	361 364 366	30 L 60 L 220 L
≠ Petroleum products, n.o.s.	1268	3		Liquid flammable		A3 <u>A188</u>	I II III	E3 E2 E1	351 353 Y341 355 Y344	1 L 5 L 1 L 60 L 10 L	361 364 366	30 L 60 L 220 L
≠ Trimethylchlorosilane	1298	3	8	Liquid flammable & Corrosive			II	<u>E0</u>	<u>FORBIDDEN</u>		377	5 L

Chapter 2

3-2-3

Name	UN No.	Class or division	Subsidiary risk	Labels	State variations	Special provisions	UN packing group	Excepted quantity	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	13
≠ Vinyltrichlorosilane	1305	3	8	Liquid flammable & Corrosive	AU 1 CA 7 IR 3 NL 1 US 3		II	E0	FORBIDDEN		377	5 L
≠ <u>Thallium compound, n.o.s.*</u>	1707	6.1		Toxic	US 4	A6	II	E4	669 Y644	25 kg 1 kg	676	100 kg
≠ <u>Iodine monochloride, solid</u>	1792	8		Corrosive	AU 1 CA 7 IR 3 NL 1 US 3	A1	II	E0	FORBIDDEN		863	50 kg
≠ Fuel, aviation, turbine engine	1863	3		Liquid flammable		A3 A188	I II III	E3 E2 E1	351 353 Y341 355 Y344	1 L 5 L 1 L 60 L 10 L	361 364 366	30 L 60 L 220 L
≠ Dimethyl disulphide	2381	3	6.1		A 223			E0	FORBIDDEN		FORBIDDEN	
≠ <u>Alkylsulphuric acids</u>	2571	8		Corrosive			II	E2	851 Y840	1 L 0.5 L	855	30 L
≠ Mercury	2809	8	6.1	Corrosive & Toxic	US 4	A189	III	E0	868	35 kg	868	35 kg
≠ Chlorosilanes, flammable, corrosive, n.o.s.	2985	3	8	Liquid flammable & Corrosive			II	E0	FORBIDDEN		377	5 L
≠ Batteries, dry, containing potassium hydroxide solid, electric storage †	3028	8		Corrosive		A183 A184		E0	871	25 kg G	871	230 kg G
≠ Nitroglycerin solution in alcohol with more than 1% but not more than 5% nitroglycerin	3064	3		Liquid flammable	BE 3	A191	II	E0	FORBIDDEN		371	5 L
≠ Lithium metal batteries contained in equipment (including lithium alloy batteries) †	3091	9		Miscellaneous	US 2 US 3	A48 A99 A154 A164 A181 A185	II	E0	see 970		see 970	
≠ Lithium metal batteries packed with equipment (including lithium alloy batteries) †	3091	9		Miscellaneous	US 2 US 3	A99 A154 A181 A185	II	E0	see 969		see 969	

Name	UN No.	Class or division	Subsidiary risk	Labels	State variations	Special provisions	UN packing group	Excepted quantity	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	13
# <u>Nitriles, liquid, toxic, n.o.s.</u>	3276	6.1		Toxic		A3 A4 A137	I II III	E5 E4 E1	652	1 L	658	30 L
									654	5 L	662	60 L
									Y641	1 L	663	220 L
									655	60 L		
Y642	2 L											
# <u>Organophosphorus compound, liquid, toxic, n.o.s.</u>	3278	6.1		Toxic		A3 A4 A6 A137	I II III	E5 E4 E1	652	1 L	658	30 L
									654	5 L	662	60 L
									Y641	1 L	663	220 L
									655	60 L		
Y642	2 L											
# <u>Organometallic compound, liquid, toxic, n.o.s.</u>	3282	6.1		Toxic		A3 A4	I II III	E5 E4 E1	652	1 L	658	30 L
									654	5 L	662	60 L
									Y641	1 L	663	220 L
									655	60 L		
Y642	2 L											
# <u>Chlorosilanes, toxic, corrosive, n.o.s.*</u>	3361	6.1	8	Toxic & Corrosive			II	E0	FORBIDDEN		681	30 L
# <u>Chlorosilanes, toxic, corrosive, flammable, n.o.s.*</u>	3362	6.1	3 8	Toxic & Liquid flammable & Corrosive			II	E0	FORBIDDEN		681	30 L
# <u>Toxic by inhalation liquid, n.o.s.* with an LC₅₀ lower than or equal to 200 ml/m³ and saturated vapour concentration greater than or equal to 500 LC₅₀</u>	3381	6.1							FORBIDDEN		FORBIDDEN	
# <u>Toxic by inhalation liquid, n.o.s.* with an LC₅₀ lower than or equal to 1 000 ml/m³ and saturated vapour concentration greater than or equal to 10 LC₅₀</u>	3382	6.1							FORBIDDEN		FORBIDDEN	
# <u>Toxic by inhalation liquid, flammable, n.o.s.* with an LC₅₀ lower than or equal to 200 ml/m³ and saturated vapour concentration greater than or equal to 500 LC₅₀</u>	3383	6.1	3						FORBIDDEN		FORBIDDEN	
# <u>Toxic by inhalation liquid, flammable, n.o.s.* with an LC₅₀ lower than or equal to 1 000 ml/m³ and saturated vapour concentration greater than or equal to 10 LC₅₀</u>	3384	6.1	3						FORBIDDEN		FORBIDDEN	
# <u>Toxic by inhalation liquid, water-reactive, n.o.s.* with an LC₅₀ lower than or equal to 200 ml/m³ and saturated vapour concentration greater than or equal to 500 LC₅₀</u>	3385	6.1	4.3						FORBIDDEN		FORBIDDEN	

Name	UN No.	Class or division	Subsidiary risk	Labels	State variations	Special provisions	UN packing group	Excepted quantity	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	13
≠ Toxic by inhalation liquid, water-reactive, n.o.s.* with an LC ₅₀ lower than or equal to 1 000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀	3386	6.1	4.3						FORBIDDEN		FORBIDDEN	
≠ Toxic by inhalation liquid, oxidizing, n.o.s.* with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀	3387	6.1	5.1						FORBIDDEN		FORBIDDEN	
≠ Toxic by inhalation liquid, oxidizing, n.o.s.* with an LC ₅₀ lower than or equal to 1 000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀	3388	6.1	5.1						FORBIDDEN		FORBIDDEN	
≠ Toxic by inhalation liquid, corrosive, n.o.s.* with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀	3389	6.1	8						FORBIDDEN		FORBIDDEN	
≠ Toxic by inhalation liquid, corrosive, n.o.s.* with an LC ₅₀ lower than or equal to 1 000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀	3390	6.1	8						FORBIDDEN		FORBIDDEN	
≠ Nitriles, solid, toxic, n.o.s.	3439	6.1		Toxic		A3 A5	I II	E5 E4	666 669 Y644 670 Y645	5 kg 25 kg 1 kg 100 kg 10 kg	673 676 677	50 kg 100 kg 200 kg
≠ Organophosphorus compound, solid, toxic, n.o.s.	3464	6.1		Toxic		A3 A5 A6	I II III	E5 E4 E1	666 669 Y644 670 Y645	5 kg 25 kg 1 kg 100 kg 10 kg	673 676 677	50 kg 100 kg 200 kg
≠ Organometallic compound, solid, toxic, n.o.s.	3467	6.1		Toxic		A3 A5	I II III	E5 E4 E1	666 669 Y644 670 Y645	5 kg 25 kg 1 kg 100 kg 10 kg	673 676 677	50 kg 100 kg 200 kg
≠ Ethanol and motor spirit mixture, with more than 10% ethanol	3475	3		Liquid flammable		A156 A188	II	E2	353 Y341	5 L 1 L	364	60 L
≠ Ethanol and petrol mixture, with more than 10% ethanol	3475	3		Liquid flammable		A156 A188	II	E2	353 Y341	5 L 1 L	364	60 L

Name	UN No.	Class or division	Subsidiary risk	Labels	State variations	Special provisions	UN packing group	Excepted quantity	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	13
≠ Lithium ion batteries contained in equipment (including lithium ion polymer batteries)	3481	9		Miscellaneous		A48 A99 A154 A164 A181 <u>A185</u>	II	E0	see 967		see 967	
≠ Lithium ion batteries packed with equipment (including lithium ion polymer batteries)	3481	9		Miscellaneous		A88 A99 A154 A164 A181 <u>A185</u>	II	E0	see 966		see 966	
≠ Toxic by inhalation liquid, flammable, corrosive, n.o.s.* with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀	3488	6.1	3 8						FORBIDDEN		FORBIDDEN	
≠ Toxic by inhalation liquid, flammable, corrosive, n.o.s.* with an LC ₅₀ lower than or equal to 1 000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀	3489	6.1	3 8						FORBIDDEN		FORBIDDEN	
≠ Toxic by inhalation liquid, water-reactive, flammable, n.o.s.* with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀	3490	6.1	3 4.3						FORBIDDEN		FORBIDDEN	
≠ Toxic by inhalation liquid, water-reactive, flammable, n.o.s.* with an LC ₅₀ lower than or equal to 1 000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀	3491	6.1	3 4.3						FORBIDDEN		FORBIDDEN	
v <u>UN 3492 (delete)</u>												
v <u>UN 3493 (delete)</u>												
+ Iodine monochloride, liquid	<u>3498</u>	8		Corrosive			II	E2	851	1.0 L	855	30 L
+ Capacitor, electric double layer (with an energy storage capacity greater than 0.3 Wh)	<u>3499</u>	9		Miscellaneous		<u>A186</u>		E0	971	No limit	971	No limit
+ Chemical under pressure, n.o.s.*	<u>3500</u>	2.2		Gas non-flammable		<u>A187</u>		E0	[see 218]?		[see 218]?	
+ Chemical under pressure, flammable, n.o.s.*	<u>3501</u>	2.1		Gas flammable		<u>A187</u>		E0	[see 218]?		[see 218]?	
+ Chemical under pressure, toxic, n.o.s.*	<u>3502</u>	2.2	6.1	Gas non-flammable & Toxic		<u>A187</u>		E0	[see 218]?		[see 218]?	

Chapter 2

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Name	UN No.	Class or division	Subsidiary risk	Labels	State variations	Special provisions	UN packing group	Excepted quantity	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	13
+ Chemical under pressure, corrosive, n.o.s.*	3503	2.2	8	Gas non-flammable & Corrosive		A187		E0	[see 218]?		[see 218]?	
+ Chemical under pressure, flammable, toxic, n.o.s.*	3504	2.1	6.1	Gas flammable & Toxic		A187		E0	[see 218]?		[see 218]?	
+ Chemical under pressure, flammable, corrosive, n.o.s.*	3505	2.1	8	Gas flammable & Corrosive		A187		E0	[see 218]?		[see 218]?	
≠ Mercury contained in manufactured articles	3506	8	6.1	Corrosive & Toxic		A48 A69	III	E0	869	No limit	869	No limit