

RECOGNITION OF UNDECLARED DANGEROUS GOODS

Reference: Part 7;6.1 of the ICAO Technical Instructions (IATA Dangerous Goods Regulations Section 2.2)

With the aim of preventing passengers from taking on board those dangerous goods which they are not permitted to have in their baggage (or on their person), information about:

- a) general descriptions that are often used for items in cargo or in passengers' baggage which may contain dangerous goods;
- b) other indications that dangerous goods may be present (e.g. labels, markings); and
- c) those dangerous goods which may be carried by passengers in accordance with the provisions for passengers and crew,

must be provided to passenger reservations and sales staff and passenger reservations and sales staff and passenger check-in staff as appropriate and must be readily available to such staff.

The following pages are an acceptable means of providing passenger reservations and sales staff and passenger check-in staff with such information.

Notes:

Details of the dangerous goods permitted for passengers and crew may be substituted with Table 2.3A of the IATA Dangerous Goods Regulations if preferred.

The information may be provided by any means (e.g. in paper form or via computer terminals) so long as the information is readily available and personnel know how to access it. Personnel would not be expected to leave their workstation in order to access the information.

The information may be reformatted providing it remains legible; however, labels are expected to be depicted in colour.

Any queries regarding the requirement to provide information to passenger reservations and sales staff and to passenger check-in staff should be directed to: dgo@caa.co.uk.

RECOGNITION OF UNDECLARED DANGEROUS GOODS

Personnel who deal with passengers must be alert to indications that prohibited dangerous goods are carried by passengers or within their baggage. The following is a list of general descriptions that are often used for items in cargo or in passengers' baggage and the types of dangerous goods that may be included in any item bearing that description.

Aircraft on ground (AOG) spares — may contain explosives (flares or other pyrotechnics), chemical oxygen generators, unserviceable tire assemblies, cylinders of compressed gas (oxygen, carbon dioxide or fire extinguishers), fuel in equipment, wet or lithium batteries, matches.

Automobile parts/supplies (car, motor, motorcycle) — may include engines, including fuel cell engines, carburettors or fuel tanks that contain or have contained fuel, wet batteries, compressed gases in tyre inflation devices and fire extinguishers, air bags, flammable adhesives, paints, sealants and solvents, etc.

Battery-powered devices/equipment — may contain wet or lithium batteries.

Breathing apparatus — may indicate cylinders of compressed air or oxygen, chemical oxygen generators or refrigerated liquefied oxygen.

Camping equipment — may contain flammable gases (butane, propane, etc.), flammable liquids (kerosene, gasoline, etc.) or flammable solids (hexamine, matches, etc.).

Chemicals — may contain items meeting any of the criteria for dangerous goods, particularly flammable liquids, flammable solids, oxidisers, organic peroxides, toxic or corrosive substances.

Cryogenic (liquid) — indicates refrigerated liquefied gases such as argon, helium, neon, nitrogen, etc.

Cylinders — may contain compressed or liquefied gas.

Dental apparatus — may contain flammable resins or solvents, compressed or liquefied gas, mercury and radioactive material.

Diagnostic specimens — may contain infectious substances.

Diving equipment — may contain cylinders of compressed gas (e.g. air or oxygen). May also contain high intensity diving lamps that can generate extreme heat when operated in air. In order to be carried safely, the bulb or battery should be disconnected.

Drilling and mining equipment — may contain explosive(s) and/or other dangerous goods.

Dry shipper (vapour shipper) — may contain free liquid nitrogen. Dry shippers are only not subject to these Instructions when they do not permit the release of any free liquid nitrogen irrespective of the orientation of the packaging.

Electrical/electronic equipment — may contain magnetised materials, mercury in switch gear, electron tubes, wet or lithium batteries or fuel cells or fuel cell cartridges that contain or have contained fuel.

Electrically-powered apparatus (wheelchairs, lawn mowers, golf carts, etc.) — may contain wet or lithium batteries or fuel cells or fuel cell cartridges that contain or have contained fuel.

Expeditionary equipment — may contain explosives (flares), flammable liquids (gasoline), flammable gas (camping gas) or other dangerous goods.

Film crew and media equipment — may contain explosive pyrotechnic devices, generators incorporating internal combustion engines, wet or lithium batteries, fuel, heat-producing items, etc.

Frozen embryos — may be packed in refrigerated liquefied gas or dry ice.

Frozen fruit, vegetables, etc. — may be packed in dry ice (solid carbon dioxide).

Fuel control units — may contain flammable liquids.

Hot-air balloon — may contain cylinders with flammable gas, fire extinguishers, engines (internal combustion), batteries, etc.

Household goods — may contain items meeting any of the criteria for dangerous goods. Examples include flammable liquids such as solvent-based paint, adhesives, polishes, aerosols (those not permitted under the provisions for passengers and crew), bleach, corrosive oven or drain cleaners, ammunition, matches, etc.

Instruments — may conceal barometers, manometers, mercury switches, rectifier tubes, thermometers, etc. containing mercury.

Laboratory/testing equipment — may contain items meeting any of the criteria for dangerous goods, particularly flammable liquids, flammable solids, oxidisers, organic peroxides, toxic or corrosive substances, lithium batteries, cylinders or compressed gas, etc.

Machinery parts — may contain flammable adhesives, paints, sealants and solvents, wet and lithium batteries, mercury, cylinders of compressed or liquefied gas, etc.

Magnets and other items of similar material — may individually or cumulatively meet the definition of magnetised material (see ICAO 2;9.2.1 d or IATA 3.9.2.2).

Medical supplies/equipment — may contain items meeting any of the criteria for dangerous goods, particularly flammable liquids, flammable solids, oxidisers, organic peroxides, toxic or corrosive substances, lithium batteries.

Metal construction material — may contain ferro-magnetic material which may be subject to special stowage requirements due to the possibility of affecting aircraft instruments (see ICAO 2;9.2.1 d or IATA 3.9.2.2).

Metal fencing — may contain ferro-magnetic material which may be subject to special stowage requirements due to the possibility of affecting aircraft instruments (see ICAO 2;9.2.1 d or IATA 3.9.2.2).

Metal piping — may contain ferro-magnetic material which may be subject to special stowage requirements due to the possibility of affecting aircraft instruments (see ICAO 2;9.2.1 d or IATA 3.9.2.2).

Passengers' baggage — may contain items meeting any of the criteria for dangerous goods not permitted under the provisions for passengers and crew.

Pharmaceuticals — may contain items meeting any of the criteria for dangerous goods, particularly radioactive material flammable liquids, flammable solids, oxidisers, organic peroxides, toxic or corrosive substances.

Photographic supplies/equipment — may contain items meeting any of the criteria for dangerous goods, particularly heat-producing devices, flammable liquids, flammable solids, oxidisers, organic peroxides, toxic or corrosive substances, lithium batteries.

Racing car or motorcycle team equipment — may contain engines, including fuel cell engines, carburettors or fuel tanks that contain fuel or residual fuel, wet and lithium batteries, flammable aerosols, nitromethane or other gasoline additives, cylinders of compressed gases, etc.

Repair kits — may contain organic peroxides and flammable adhesives, solvent-based paints, resins, etc.

Samples for testing — may contain items meeting any of the criteria for dangerous goods, particularly infectious substances, flammable liquids, flammable solids, oxidisers, organic peroxides, toxic or corrosive substances.

Semen — may be packed with dry ice or refrigerated liquefied gas (see also dry shipper).

Sporting goods/sports team equipment — may contain cylinders of compressed or liquefied gas (air, carbon dioxide, etc.), lithium batteries, propane torches, first aid kits, flammable adhesives, aerosols, etc.

Swimming pool chemicals — may contain oxidising or corrosive substances.

Switches in electrical equipment or instruments — may contain mercury.

Tool boxes — may contain explosives (power rivets), compressed gases or aerosols, flammable gases (butane cylinders or torches), flammable adhesives or paints, corrosive liquids, lithium batteries, etc.

Torches — micro torches and utility lighters may contain flammable gas and be equipped with an electronic starter. Larger torches may consist of a torch head (often with a self-igniting switch) attached to a container or cylinder of flammable gas.

Unaccompanied passengers' baggage/personal effects — may contain items meeting any of the criteria for dangerous goods not permitted in the provisions for passengers and crew.

Note: Excess baggage consigned as cargo by or on behalf of a passenger may contain dangerous goods permitted within checked baggage as specified by the provisions for passengers and crew. All applicable conditions of the provisions must be met and the excess baggage must be marked with the words "Excess baggage contained as cargo".

Vaccines — may be packed in dry ice (solid carbon dioxide).

GHS/CHIP CONSUMER LABELLING

Many everyday household items bear consumer warning labels which may or may not indicate they are classified as dangerous goods in air transport. If consumer labelling causes suspicion that an item may be dangerous, check that the item is permitted for carriage by passengers - if not, the item must be refused carriage.

There are currently two systems of consumer supply labelling, GHS and CHIP as detailed below:

GHS Labels

Products bearing the following GHS labels ARE classified as dangerous goods:



Note: A product bearing the GHS corrosive label (depicted far right above) is NOT classified as dangerous goods if the signal word 'Danger' **and** hazard statement 'causes serious eye damage' applies.





Products bearing the following GHS labels are NOT classified as dangerous goods:







CHIP Labels











CHIP labels are represented below together with indications of how goods bearing such labels may be classified for transport purposes.

Physicochemical


Symbol	Abbreviation	Hazard	Description of hazard	Transport classification
	E	explosive	Chemicals that explode.	All substances and preparations classified in Class 1. Organic peroxides of Division 5.2 which require an "EXPLOSIVE" subsidiary risk label.
	O	oxidising	Chemicals that react exothermically with other chemicals.	All substances and preparations classified in Division 5.1. All organic peroxides of Division 5.2 other than those which require an "EXPLOSIVE" subsidiary risk label.
	F+	extremely flammable	Chemicals that have an extremely low flash point and boiling point, and gases that catch fire in contact with air.	Gases of Division 2.1 and Division 2.3 gases with a subsidiary risk of Division 2.1. All substances and preparations classified in Class 3 Packing Group I.
	F	highly flammable	Chemicals that may catch fire in contact with air, only need brief contact with an ignition source, have a very low flash point or evolve highly flammable gases in contact with water.	<u>Most</u> substances and preparations classified as Class 3 Packing Group II. <u>Some</u> solids classified in Division 4.1. All substances and preparations classified in Division 4.2. All substances and preparations classified as Division 4.3.
No pictogram	No abbreviation	flammable	Substances and preparations with a flashpoint equal to or greater than 21°C and less than or equal to 55°C.	<u>Some</u> substances and preparations classified as Class 3 Packing Group II and <u>most</u> substances and preparations classified in Class 3 Packing Group III.

Health

Symbol	Abbreviation	Hazard	Description of hazard	Transport classification
	T+	very toxic	Chemicals that at very low levels cause damage to health.	Substances and preparations classified in Division 6.1 Packing Group I, and some substances and preparations classified in Division 6.1 Packing Group II.
	T	toxic	Chemicals that at low levels cause damage to health.	Substances and preparations classified in Division 6.1 Packing Group II other than those classified above, and <u>some</u> substances and preparations classified in Division 6.1 Packing Group III.
	Carc Cat 1	category 1 carcinogens	Chemicals that may cause cancer or increase its incidence.	Substances and preparations <u>may</u> be classified in any Class or Division of Classes 1 to 9 (though normally in Division
	Carc Cat 2	category 2 carcinogens		

Symbol	Abbreviation	Hazard	Description of hazard	Transport classification
	Carc Cat 3	category 3 carcinogens		6.1) but <u>may</u> , however, be not subject to the Technical Instructions.
	Muta Cat 1	category 1 mutagens	Chemicals that induce heritable genetic defects or increase their incidence.	
	Muta Cat 2	category 2 mutagens		
	Muta Cat 3	category 3 mutagens		
	Repr Cat 1	category 1 reproductive toxins	Chemicals that produce or increase the incidence of birth defects, which may be severe, and/or impairment in reproductive functions or capacity.	
	Repr Cat 2	category 2 reproductive toxins		
	Repr Cat 3	category 3 reproductive toxins		
	Xn	harmful	Chemicals that may cause damage to health.	Substances and preparations classified in Division 6.1 Packing Group III other than those classified above, and <u>some</u> substances and preparations which are not subject to the Technical Instructions.
	C	corrosive	Chemicals that may destroy living tissue on contact.	The vast majority of substances and preparations which are classified as Class 8.
	Xi	irritant	Chemicals that may cause inflammation to the skin or other mucous membranes.	<u>Some</u> organic peroxides of Division 5.2. Otherwise, substances and preparations are not subject to the Technical Instructions.

Environmental

Symbol	Abbreviation	Hazard	Description of hazard	Transport classification
	N	dangerous for the environment	Chemicals that may present an immediate or delayed danger to one or more components of the environment.	Substances designated as severe marine pollutants ^(a) , marine pollutants ^(b) , and aquatic pollutants ^(c) . Substances and preparations may be classified in any Class or Division of Classes 1 to 8, and UN 3077 and UN 3082 in Class 9.

NOTES

- Substances and preparations designated as "PP" in the International Maritime Dangerous Goods Code.
- Substances and preparations designated as "P" in the International Maritime Dangerous Goods Code.
- Substances and preparations designated as aquatic pollutants in ADR.
- The above table does not apply to substances and preparations of Division 6.2 and Class 7 which are not subject to the CHIP Regulations.

- e) CHIP labels for mixtures (preparations) will be replaced by the Globally Harmonized System (GHS) of labelling on 1 June 2015. Information on CHIP should be removed after 1 June 2017 once transitional arrangements cease to apply.

LABELLING OF DANGEROUS GOODS PACKAGES

Packages containing dangerous goods (offered as cargo) can be identified by labels indicating the hazard of the goods by their class or division; these are:

Note: *When these labels or similar ones are seen on items carried by passengers, it is often an indication that they do contain such goods. Forbidden dangerous goods in passengers' baggage must not be loaded and reporting procedures must be implemented.*

CLASS 1 – EXPLOSIVE

Class 1 (with exploding bomb symbol) - explosives generally not permitted on an aeroplane.

Class 1 (without exploding bomb symbol) - explosives usually permitted on an aeroplane (only ammunition of Division 1.4S is permitted within passengers' checked baggage).



* Class number
** Division and compatibility group



* Class number
*** Compatibility group



CLASS 2 – GASES

Flammable gas (Division 2.1)



* Class number

Non-flammable, non-toxic gas (Division 2.2)



* Class number

Toxic gas (Division 2.3)



* Class number

CLASS 3 – FLAMMABLE LIQUID



* Class number

CLASS 4 – FLAMMABLE SOLIDS

Flammable solid
(Division 4.1)



* Class number

Substance liable to spontaneous combustion (Division 4.2)



* Class number

Substance which, in contact with water, emits flammable gas (Division 4.3)



* Class number

CLASS 5 – OXIDISING SUBSTANCES & ORGANIC PEROXIDES

Oxidising substance
(Division 5.1)



Organic peroxide (Division 5.2) (flame may be black or white)



CLASS 6 – TOXIC AND INFECTIOUS SUBSTANCES

Toxic substance
(Division 6.1)



Infectious substance
(Division 6.2)



CLASS 7 – RADIOACTIVE MATERIAL

Category I



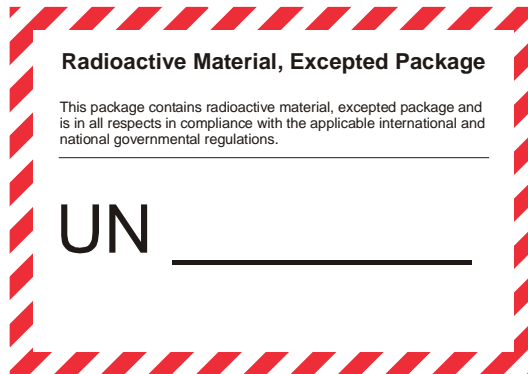
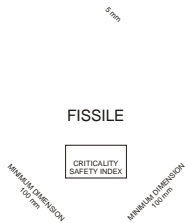
Category II



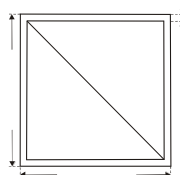
Category III



Criticality safety index label



CLASS 8 – CORROSIVE



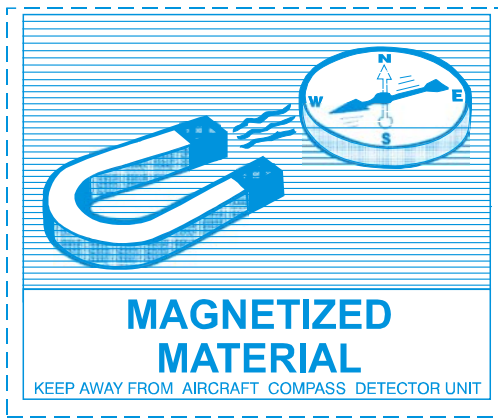
CLASS 9 – MISCELLANEOUS



HANDLING LABELS

Packages of dangerous goods may also bear labels providing handling information; these are:

Magnetized material



Cargo aircraft only



Cryogenic liquid label



Lithium Battery Handling Label



EXCEPTED QUANTITIES LABEL/MARKING

Packages containing excepted quantities of dangerous goods can be identified from the following:



Hatching and symbol of the same colour, black or red, on white or suitable contrasting background.

- * Place for class or, when assigned, the division number(s).
- ** Place for name of shipper or consignee, if not shown elsewhere on the package.

LIMITED QUANTITIES MARKING

Packages containing limited quantities of dangerous goods can be identified from the following:



Packages containing limited quantities of dangerous goods can be identified from the presence of a diamond-shaped mark (see opposite). When presented for carriage by air, the mark additionally includes a "Y".

NOTE: The marking seen opposite but without the 'Y' indicates that the package contains dangerous goods in limited quantities as permitted by surface transport regulations (ADR/IMDG). A package bearing any limited quantities marking should be queried.

ENVIRONMENTALLY HAZARDOUS SUBSTANCES MARKING



ITEMS THAT MAY BE CARRIED BY PASSENGERS AND CREW

International standards permit the carriage of the dangerous goods listed below by passengers or crew members either as or in carry-on baggage or checked baggage or on their person. Additional restrictions implemented by countries in the interests of aviation security may, however, limit or forbid the carriage of some of these items. The particular operator's policy must be adhered to where items listed are permitted only with the operator's approval.

Note: Should it be necessary to transfer carry-on baggage to the hold (e.g. due to the size of the baggage preventing proper stowage in the cabin) it is necessary to verify that the baggage contains no dangerous goods that are permitted for carriage in carry-on baggage only (e.g. spare lithium batteries, heat producing articles etc).

Items or articles	Location			Approval of the operator(s) is required	The pilot-in-command must be informed	Restrictions
	Checked baggage	Carry-on baggage	On the person			
Medical necessities						
1) Small gaseous oxygen or air cylinders required for medical use	Yes	Yes	Yes	Yes	Yes	a) no more than 5 kg gross mass per cylinder; b) cylinders, valves and regulators, where fitted, must be protected from damage which could cause inadvertent release of the contents; and c) the pilot-in-command must be informed of the number of oxygen or air cylinders loaded on board the aircraft and their loading location(s).
Devices containing liquid oxygen	No	No	No	n/a	n/a	Devices containing liquid oxygen are forbidden in carry-on baggage, checked baggage or on the person.
Empty air cylinders for other purposes, such as scuba diving	Yes	Yes	n/a	No	No	May only be carried if empty.
2) Cylinders of a non-flammable, non-toxic gas worn for the operation of mechanical limbs	Yes	Yes	Yes	No	No	Spare cylinders of a similar size are also allowed, if required, to ensure an adequate supply for the duration of the journey.
3) Non-radioactive medicinal articles (including aerosols)	Yes	Yes	Yes	No	No	a) no more than 0.5 kg or 0.5 L total net quantity per single article; b) release valves on aerosols must be protected by a cap or other suitable means to prevent inadvertent release of the contents; and c) no more than 2 kg or 2 L total net quantity of all articles mentioned in 3), 10) and 13) (e.g. four aerosol cans of 500 mL each) per person.
4) Radioisotopic cardiac pacemakers or other medical devices, including those powered by lithium batteries	n/a	n/a	Yes	No	No	Must be implanted into a person or fitted externally as the result of medical treatment.
Radio-pharmaceuticals contained within the body of a person	n/a	n/a	Yes	No	No	Must be as the result of medical treatment.

Items or articles	Location			Approval of the operator(s) is required	The pilot-in-command must be informed	Restrictions
	Checked baggage	Carry-on baggage	On the person			
5) Mobility aids (e.g. wheelchairs) powered by non-spillable wet batteries or batteries which comply with Special Provision A123, for use by passengers whose mobility is restricted by either a disability, their health or age, or a temporary mobility problem (e.g. broken leg)	Yes	No	No	Yes	(see 5 d) iv))	<p>a) non-spillable wet batteries must comply with Special Provision A67 or the vibration and pressure differential tests of Packing Instruction 872;</p> <p>b) the operator must verify that:</p> <ul style="list-style-type: none"> i) the battery is securely attached to the mobility aid; ii) the battery terminals are protected from short circuits (e.g. by being enclosed within a battery container); and iii) electrical circuits have been isolated; <p><i>To do this, place the device into drive mode (i.e. not freewheel mode), see if the mobility aid will power up and if so whether use of the joystick results in the mobility aid moving. It must also be verified that the circuits of supplemental motorised systems such as seating systems have been inhibited to prevent inadvertent operation, e.g. by the separation of cable connectors. If an electric mobility aid has not been made safe for carriage, it must not be loaded.</i></p> <p>c) mobility aids must be carried in a manner such that they are protected from being damaged by the movement of baggage, mail, stores or other cargo;</p> <p>d) where the mobility aid is specifically designed to allow its battery(ies) to be removed by the user (e.g. collapsible):</p> <ul style="list-style-type: none"> i) the battery(ies) must be removed; the mobility aid may then be carried as checked baggage without restriction; ii) the removed battery(ies) must be carried in strong, rigid packaging which must be stowed in the cargo compartment; iii) the battery(ies) must be protected from short circuit; and iv) the pilot-in-command must be informed of the location of the packed battery; <p>e) it is recommended that passengers make advance arrangements with each operator.</p>

Items or articles	Location			Approval of the operator(s) is required	The pilot-in-command must be informed	Restrictions
	Checked baggage	Carry-on baggage	On the person			
6) Mobility aids (e.g. wheelchairs) powered by spillable batteries, for use by passengers whose mobility is restricted by either a disability, their health or age, or a temporary mobility problem (e.g. broken leg)	Yes	No	No	Yes	Yes	<p>a) where possible, the mobility aid must be loaded, stowed, secured and unloaded always in an upright position. The operator must verify that:</p> <ul style="list-style-type: none"> i) the battery is securely attached to the mobility aid; ii) battery terminals are protected from short circuits (e.g. by being enclosed within a battery container); and iii) electrical circuits have been isolated; <p><i>To do this, place the device into drive mode (i.e. not freewheel mode), see if the mobility aid will power up and if so whether use of the joystick results in the mobility aid moving. It must also be verified that the circuits of supplemental motorised systems such as seating systems have been inhibited to prevent inadvertent operation, e.g. by the separation of cable connectors. If an electric mobility aid has not been made safe for carriage, it must not be loaded.</i></p> <p>b) if the mobility aid cannot be loaded, stowed, secured and unloaded always in an upright position, the battery(ies) must be removed and carried in strong, rigid packagings, as follows:</p> <ul style="list-style-type: none"> i) packagings must be leak-tight, impervious to battery fluid and be protected against upset by securing them to pallets or by securing them in cargo compartments using appropriate means of securement (other than by bracing with freight or baggage) such as by the use of restraining straps, brackets or holders; ii) batteries must be protected against short circuits, secured upright in these packagings and surrounded by compatible absorbent material sufficient to absorb their total liquid contents; and iii) these packagings must be marked "Battery, wet, with wheelchair" or "Battery, wet, with mobility aid" and be labelled with a "Corrosive" label (Figure 5-22) and with package orientation labels (Figure 5-26) as required by 5;3; <p>The mobility aid may then be carried as checked baggage without restriction;</p> <p>c) mobility aids must be carried in a manner such that they are protected from being damaged by the movement of baggage, mail, stores or other cargo;</p> <p>d) the pilot-in-command must be informed of the location of the mobility aid with an installed battery or the location of a packed battery;</p> <p>e) it is recommended that passengers make advance arrangements with each operator; also, unless batteries are non-spillable they should be fitted, where feasible, with spill-resistant vent caps.</p>

Items or articles	Location			Approval of the operator(s) is required	The pilot-in-command must be informed	Restrictions
	Checked baggage	Carry-on baggage	On the person			
7) Mobility aids (e.g. wheelchairs) powered by lithium ion batteries, for use by passengers whose mobility is restricted by either a disability, their health or age, or a temporary mobility problem (e.g. broken leg)	Yes	(see 7 d))	No	Yes	Yes	<p>a) the batteries must be of a type which meets the requirements of each test in the UN <i>Manual of Tests and Criteria</i>, Part III, subsection 38.3;</p> <p>b) the operator must verify that:</p> <ul style="list-style-type: none"> i) the battery is securely attached to the mobility aid; ii) the battery terminals are protected from short circuits (e.g. by being enclosed within a battery container); and iii) electrical circuits have been isolated; <i>To do this, place the device into drive mode (i.e. not freewheel mode), see if the mobility aid will power up and if so whether use of the joystick results in the mobility aid moving. It must also be verified that the circuits of supplemental motorised systems such as seating systems have been inhibited to prevent inadvertent operation, e.g. by the separation of cable connectors. If an electric mobility aid has not been made safe for carriage, it must not be loaded.</i> <p>c) mobility aids must be carried in a manner such that they are protected from being damaged by the movement of baggage, mail, stores or other cargo;</p> <p>d) where the mobility aid is specifically designed to allow its battery(ies) to be removed by the user (e.g. collapsible):</p> <ul style="list-style-type: none"> i) the battery(ies) must be removed and carried in the passenger cabin; ii) the battery terminals must be protected from short circuit (by insulating the terminals, e.g. by taping over exposed terminals); iii) the battery must be protected from damage (e.g. by placing each battery in a protective pouch); iv) removal of the battery from the mobility aid must be performed by following the instructions of the manufacturer or device owner; v) the battery must not exceed 300 Wh; and vi) a maximum of one spare battery not exceeding 300 Wh or two spares not exceeding 160 Wh each may be carried; <p>e) the pilot-in-command must be informed of the location of the lithium ion battery(ies);</p> <p>f) it is recommended that passengers make advance arrangements with each operator.</p>
8) Portable medical electronic devices (automated external defibrillators (AED), nebulizer, continuous positive airway pressure (CPAP), etc.) containing lithium metal or lithium ion cells or batteries						

Items or articles	Location			Approval of the operator(s) is required	The pilot-in-command must be informed	Restrictions
	Checked baggage	Carry-on baggage	On the person			
Portable medical electronic devices containing lithium metal cells or batteries not exceeding 2 grams or lithium ion cells or batteries not exceeding 100 Wh	Yes	Yes	Yes	No	No	a) carried by passengers for medical use; b) each installed or spare battery: — must be of a type which meets the requirements of each test in the UN Manual of Tests and Criteria, Part III, subsection 38.3; c) spare batteries must be individually protected so as to prevent short circuits (by placement in original retail packaging or by otherwise insulating terminals, e.g. by taping over exposed terminals or placing each battery in a separate plastic bag or protective pouch); and d) no more than two spare batteries exceeding 2 grams lithium content for lithium metal or a watt-hour rating of 100 Wh for lithium ion may be carried by a passenger.
Spare batteries for portable medical electronic devices containing lithium metal cells or batteries not exceeding 2 grams or lithium ion cells or batteries not exceeding 100 Wh	No	Yes	Yes	No	No	
Portable medical electronic devices containing lithium metal batteries exceeding 2 grams but not exceeding 8 grams or lithium ion batteries exceeding 100 Wh but not exceeding 160 Wh	Yes	Yes	Yes	Yes	No	
Spare batteries for portable medical electronic devices containing lithium metal batteries exceeding 2 grams but not exceeding 8 grams or lithium ion batteries exceeding 100 Wh but not exceeding 160 Wh	No	Yes	Yes	Yes	No	
9) Small medical or clinical thermometer which contains mercury	Yes	Yes	Yes	No	No	a) no more than one per person; b) must be for personal use; and c) must be in its protective case.
Articles used in dressing or grooming						
10) Toiletry articles (including aerosols)	Yes	Yes	Yes	No	No	a) the term “toiletry articles (including aerosols)” is intended to include such items as hair sprays, perfumes and colognes; b) no more than 0.5 kg or 0.5 L total net quantity per single article; c) release valves on aerosols must be protected by a cap or other suitable means to prevent inadvertent release of the contents; and d) no more than 2 kg or 2 L total net quantity of all articles mentioned in 3), 10) and 13) (e.g. four aerosol cans of 500 mL each) per person.
11) Hair curlers containing hydrocarbon gas	Yes	Yes	Yes	No	No	a) no more than one per person; b) the safety cover must be securely fitted over the heating element; and c) gas refills for such curlers must not be carried.

Items or articles	Location			Approval of the operator(s) is required	The pilot-in-command must be informed	Restrictions
	Checked baggage	Carry-on baggage	On the person			
Consumer articles						
12) Alcoholic beverages containing more than 24 per cent but not more than 70 per cent alcohol by volume	Yes	Yes	Yes	No	No	a) must be in retail packagings; b) no more than 5 L per individual receptacle; and c) no more than 5 L total net quantity per person for such beverages. <i>Note.— Alcoholic beverages containing not more than 24 per cent alcohol by volume are not subject to any restrictions.</i>
13) Aerosols (non-flammable, non-toxic), with no subsidiary risk, for sporting or home use	Yes	No	No	No	No	a) no more than 0.5 kg or 0.5 L total net quantity per single article; b) release valves on aerosols must be protected by a cap or other suitable means to prevent inadvertent release of the contents; and c) no more than 2 kg or 2 L total net quantity of all articles mentioned in 3), 10) and 13) (e.g. four aerosol cans of 500 mL each) per person.
14) Securely packaged cartridges in Division 1.4S (UN 0012 or UN 0014 only);	Yes	No	No	Yes	No	a) no more than 5 kg gross mass per person for that person's own use; b) must not include ammunition with explosive or incendiary projectiles; and c) allowances for more than one person must not be combined into one or more packages.
15) Small packet of safety matches	No	No	Yes	No	No	a) no more than one per person; and b) intended for use by an individual.
“Strike anywhere” matches	No	No	No	n/a	n/a	Forbidden.
Small cigarette lighter	No	No	Yes	No	No	a) no more than one per person; b) intended for use by an individual; and c) does not contain unabsorbed liquid fuel (other than liquefied gas).
Lighter fuel and lighter refills	No	No	No	n/a	n/a	Forbidden.
Premixing burner lighter (e.g. lighters producing a blue flame) with a means of protection against unintentional activation	No	No	Yes	No	No	a) no more than one per person; b) intended for use by an individual; and c) does not contain unabsorbed liquid fuel (other than liquefied gas).
Premixing burner lighter (e.g. lighters producing a blue flame) without a means of protection against unintentional activation	No	No	No	n/a	n/a	Forbidden.
16) Battery-powered equipment capable of generating extreme heat, which could cause a fire if activated (e.g. underwater high intensity lamps)	Yes	Yes	No	Yes	No	a) the heat-producing component and the battery are isolated from each other by the removal of the heat-producing component, the battery or another component (e.g. fuse); and b) any battery which has been removed must be protected against short circuit (by placement in original retail packaging or by otherwise insulating terminals, e.g. by taping over exposed terminals or placing each battery in a separate plastic bag or protective pouch).

Items or articles	Location			Approval of the operator(s) is required	The pilot-in-command must be informed	Restrictions
	Checked baggage	Carry-on baggage	On the person			
17) Avalanche rescue backpack containing a cylinder of compressed gas of Division 2.2	Yes	Yes	No	Yes	No	<ul style="list-style-type: none"> a) no more than one per person; b) may contain a pyrotechnic trigger mechanism which must not contain more than 200 mg net of Division 1.4S; c) the backpack must be packed in such a manner that it cannot be accidentally activated; and d) the airbags within the backpack must be fitted with pressure relief valves.
18) Small cartridges fitted into a self-inflating personal safety device such as a life-jacket or vest	Yes	Yes	Yes	Yes	No	<ul style="list-style-type: none"> a) no more than one personal safety device per person; b) the personal safety device must be packed in such a manner that it cannot be accidentally activated; c) limited to carbon dioxide or another suitable gas in Division 2.2; d) must be for inflation purposes; e) the device must be fitted with no more than two small cartridges; and f) no more than two spare cartridges.
----- Small cartridges for other devices	Yes	Yes	Yes	Yes	No	<ul style="list-style-type: none"> a) no more than four small cartridges of carbon dioxide or other suitable gas in Division 2.2, without subsidiary risk, per person; and b) the water capacity of each cartridge must not exceed 50 mL. <p><i>Note.— For carbon dioxide, a gas cartridge with a water capacity of 50 mL is equivalent to a 28 g cartridge.</i></p>

Items or articles	Location			Approval of the operator(s) is required	The pilot-in-command must be informed	Restrictions
	Checked baggage	Carry-on baggage	On the person			
19) Portable electronic devices (such as watches, calculating machines, cameras, cellular phones, laptop computers, camcorders)						
Portable electronic devices (including medical devices) containing lithium metal or lithium ion cells or batteries (articles containing lithium metal or lithium ion cells or batteries the primary purpose of which is to provide power to another device must be carried as spare batteries in accordance with the item below)	Yes	Yes	Yes	No	No	<ul style="list-style-type: none"> a) carried by passengers or crew for personal use; b) should be carried as carry-on baggage; c) each battery must not exceed the following: <ul style="list-style-type: none"> — for lithium metal batteries, a lithium content of not more than 2 grams; or — for lithium ion batteries, a Watt-hour rating of not more than 100 Wh; d) if devices are carried in checked baggage, measures must be taken to prevent unintentional activation; and e) batteries and cells must be of a type which meets the requirements of each test in the <i>UN Manual of Tests and Criteria</i>, Part III, subsection 38.3.
Spare batteries for portable electronic devices (including medical devices) containing lithium metal or lithium ion cells or batteries	No	Yes	Yes	No	No	<ul style="list-style-type: none"> a) carried by passengers or crew for personal use; b) must be individually protected so as to prevent short circuits (by placement in original retail packaging or by otherwise insulating terminals, e.g. by taping over exposed terminals or placing each battery in a separate plastic bag or protective pouch); c) each battery must not exceed the following: <ul style="list-style-type: none"> — for lithium metal batteries, a lithium content of not more than 2 grams; or — for lithium ion batteries, a Watt-hour rating of not more than 100 Wh; and d) batteries and cells must be of a type which meets the requirements of each test in the <i>UN Manual of Tests and Criteria</i>, Part III, subsection 38.3.
Portable electronic devices containing lithium ion batteries exceeding a Watt-hour rating of 100 Wh but not exceeding 160 Wh	Yes	Yes	Yes	Yes	No	<ul style="list-style-type: none"> a) carried by passengers or crew for personal use; b) should be carried as carry-on baggage; and c) batteries and cells must be of a type which meets the requirements of each test in the <i>UN Manual of Tests and Criteria</i>, Part III, subsection 38.3.
Spare batteries for portable electronic devices containing lithium ion batteries exceeding a Watt-hour rating of 100 Wh but not exceeding 160 Wh	No	Yes	Yes	Yes	No	<ul style="list-style-type: none"> a) carried by passengers or crew for personal use; b) no more than two individually protected spare batteries per person; c) must be individually protected so as to prevent short circuits (by placement in original retail packaging or by otherwise insulating terminals, e.g. by taping over exposed terminals or placing each battery in a separate plastic bag or protective pouch); and d) batteries and cells must be of a type which meets the requirements of each test in the <i>UN Manual of Tests and Criteria</i>, Part III, subsection 38.3.

Items or articles	Location			Approval of the operator(s) is required	The pilot-in-command must be informed	Restrictions
	Checked baggage	Carry-on baggage	On the person			
20) Fuel cells used to power portable electronic devices (for example, cameras, cellular phones, laptop computers and camcorders)	No	Yes	Yes	No	No	a) fuel cell cartridges may only contain flammable liquids, corrosive substances, liquefied flammable gas, water reactive substances or hydrogen in metal hydride; b) refuelling of fuel cells on board an aircraft is not permitted except that the installation of a spare cartridge is allowed;
Spare fuel cell cartridges	Yes	Yes	Yes	No	No	c) the maximum quantity of fuel in any fuel cell or fuel cell cartridge must not exceed: <ul style="list-style-type: none"> — for liquids 200 mL; — for solids 200 grams; — for liquefied gases, 120 mL for non-metallic fuel cell cartridges or 200 mL for metal fuel cell or fuel cell cartridges; and — for hydrogen in metal hydride, the fuel cell or fuel cell cartridges must have a water capacity of 120 mL or less; d) each fuel cell and each fuel cell cartridge must conform to IEC 62282-6-100 Ed. 1, including Amendment 1, and must be marked with a manufacturer's certification that it conforms to the specification. In addition, each fuel cell cartridge must be marked with the maximum quantity and type of fuel in the cartridge; e) fuel cell cartridges containing hydrogen in metal hydride must comply with the requirements in Special Provision A162; f) no more than two spare fuel cell cartridges may be carried by a passenger; g) fuel cells containing fuel are permitted in carry-on baggage only; h) interaction between fuel cells and integrated batteries in a device must conform to IEC 62282-6-100 Ed. 1 including Amendment 1. Fuel cells whose sole function is to charge a battery in the device are not permitted; i) fuel cells must be of a type that will not charge batteries when the portable electronic device is not in use and must be durably marked by the manufacturer: "APPROVED FOR CARRIAGE IN AIRCRAFT CABIN ONLY" to so indicate; and j) in addition to the languages which may be required by the State of Origin for the markings specified above, English should be used.
21) Dry ice	Yes	Yes	No	Yes	No	a) no more than 2.5 kg per person; b) used to pack perishables that are not subject to these Instructions; c) the package must permit the release of carbon dioxide gas; and d) when carried in checked baggage, each package must be marked: <ul style="list-style-type: none"> — "DRY ICE" or "CARBON DIOXIDE, SOLID"; and — the net weight of dry ice or an indication that the net weight is 2.5 kg or less.

Items or articles	Location			Approval of the operator(s) is required	The pilot-in-command must be informed	Restrictions
	Checked baggage	Carry-on baggage	On the person			
22) A mercurial barometer or mercurial thermometer	No	Yes	No	Yes	Yes	a) must be carried by a representative of a government weather bureau or similar official agency; and b) must be packed in a strong outer packaging, having a sealed inner liner or a bag of strong leakproof and puncture-resistant material impervious to mercury, which will prevent the escape of mercury from the package irrespective of its position.
23) Instruments containing radioactive material (i.e. chemical agent monitor (CAM) and/or rapid alarm and identification device monitor (RAID-M))	Yes	Yes	No	Yes	No	a) the instruments must not exceed the activity limits specified in Table 2-15 of these Instructions; b) must be securely packed and without lithium batteries; and c) must be carried by staff members of the Organization for the Prohibition of Chemical Weapons (OPCW) on official travel.
24) Energy efficient lamps	Yes	Yes	Yes	No	No	a) when in retail packaging; and b) intended for personal or home use.
25) Permeation devices for calibrating air quality monitoring equipment	Yes	No	No	No	No	Must comply with Special Provision A41.
26) Portable electronic equipment containing a non-spillable battery meeting the requirements of Special Provision A67	Yes	Yes	No	No	No	a) the battery must not have a voltage greater than 12 volts and a Watt-hour rating of not greater than 100 Wh; and b) the equipment must be either protected from inadvertent activation, or the battery disconnected and exposed terminals insulated.
Spare non-spillable batteries meeting the requirements of Special Provision A67	Yes	Yes	No	No	No	a) the battery must not have a voltage greater than 12 volts and a Watt-hour rating of not greater than 100 Wh; b) the battery must be protected from short circuit by the effective insulation of exposed terminals; and c) no more than two individually protected batteries per person.
27) Internal combustion engines or fuel cell engines	Yes	No	No	No	No	Must comply with Special Provision A70.
28) Non-infectious specimens	Yes	Yes	No	No	No	Must comply with Special Provision A180.
29) Insulated packagings containing refrigerated liquid nitrogen	Yes	Yes	No	No	No	Must comply with Special Provision A152.
Security-type equipment						

Items or articles	Location			Approval of the operator(s) is required	The pilot-in-command must be informed	Restrictions
	Checked baggage	Carry-on baggage	On the person			
30) Security-type equipment, such as attaché cases, cash boxes, cash bags, etc., incorporating dangerous goods as part of this equipment, for example, lithium batteries or pyrotechnic material	Yes	No	No	Yes	No	<p>a) the equipment must be equipped with an effective means of preventing accidental activation;</p> <p>b) if the equipment contains an explosive or pyrotechnic substance or an explosive article, this article or substance must be excluded from Class 1 by the appropriate national authority of the State of Manufacture in compliance with Part 2;1.5.2.1;</p> <p>c) if the equipment contains lithium cells or batteries, these cells or batteries must comply with the following restrictions:</p> <ul style="list-style-type: none"> — for a lithium metal cell, the lithium content is not more than 1 g; — for a lithium metal battery, the aggregate lithium content is not more than 2 g; — for lithium ion cells, the Watt-hour rating (see the Glossary of Terms in Attachment 2) is not more than 20 Wh; — for lithium ion batteries, the Watt-hour rating is not more than 100 Wh; — each cell or battery is of the type proven to meet the requirements of each test in the UN <i>Manual of Tests and Criteria</i>, Part III, subsection 38.3; <p>d) if the equipment contains gases to expel dye or ink:</p> <ul style="list-style-type: none"> — only 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 allowed; — the release of gas must not cause extreme annoyance or discomfort to crew members so as to prevent the correct performance of assigned duties; and — in case of accidental activation, all hazardous effects must be confined within the equipment and must not produce extreme noise; and <p>e) security type equipment that is defective or that has been damaged is forbidden for transport.</p>