HELLENIC CAA	FLIGHT STANDARDS DIVISION **INFORMATION BULLETIN**	**FSD/OPS/IB 05/2013** **ΕΚΔΟΣΗ 3η Amedt. 3 18/12/2014**
	Αποδέκτες: **ΕΛΛΗΝΕΣ ΑΕΡΟΜΕΤΑΦΟΡΕΙΣ** ΚΑΙ ΑΙΤΟΥΝΤΕΣ ΑΟC	

Subject	**Example Operations Manual Entry for an EASA Fixed-Wing Operator NOT Approved to Carry Dangerous Goods as Cargo**

SCOPE

This Information Bullettin provides to the Operators, which have NOT the Approval to carry Dangerous Goods acoording to EASA Regulations, all the necessary information which has to be included in their Operations Manual (Part A/D).

Note: The operator can include the following text as it is by replacing only the (highlighted) "Editorial Notes" with the operator's own text before submission to the HCAA. Editorial Notes indicate where the operator need to add text to describe its specific operation.

The paragraph numbering is this of a standard Operations Manual, but can be changed according to an Opeartor's own OM numbering.

SECTION 9 DANGEROUS GOODS AND WEAPONS

9.1 Policy on the Transport of Dangerous Goods

9.1.1 **Approval for the Transport of Dangerous Goods (CAT.GEN.MPA.200, SPA.DG.105)**

Dangerous goods can only be carried according to the International Civil Aviation Organization's Technical Instructions for the Safe Transport of Dangerous Goods by Air (Technical Instructions), irrespective of whether the flight is wholly or partly within or wholly outside the territory of a State. An approval must be granted by the State of the Operator before dangerous goods can be carried on an aircraft, except as identified in 9.1.3 below.

Editorial Note: *Insert Text* ***[Operator Name] does NOT hold an EASA approval for the transport of dangerous goods by air.***

9.1.2 **Reserved**

9.1.3 **General Exceptions**

9.1.3.1 **Airworthiness and Operational Items (CAT.GEN.MPA.200 (b)(1))**

An approval is not required for dangerous goods which are required to be aboard the aircraft such as:

a) items for airworthiness or operating reasons or for the health of passengers or crew, such as batteries, fire extinguishers, first-aid kits, insecticides, air fresheners, life rafts, escape slides, life-saving appliances, portable oxygen supplies, tritium signs, smoke hoods, passenger service units;

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

c) dry ice intended for use in food and beverage service aboard the aircraft; and

d) electronic devices such as electronic flight bags, personal entertainment devices, credit card readers, containing lithium metal or lithium ion cells or batteries and spare lithium batteries for such devices carried aboard an aircraft by the operator for use on the aircraft during the flight or series of flights, provided that the batteries meet the provisions applicable to the carriage of portable electronic devices containing lithium or lithium ion cells or batteries by passengers (see the entry for 'consumer articles' in the table produced at 9.1.5). Spare lithium batteries must be individually protected so as to prevent short circuits when not in use.

Editorial Note: Conditions for the carriage and use of these electronic devices and for the carriage of spare batteries must be provided in the operations manual and/or other appropriate manuals as will enable flight crew, cabin crew and other employees to carry out their responsibilities. Operators should either explain these conditions or specify that spares may not be carried.

Note: Dangerous goods intended as replacements for those referred to in 9.1.3.1 a and b above may not be carried without the approval referred to in 9.1.1 and unless consigned and accepted for transport in accordance with the ICAO Technical Instructions.

9.1.3.2 **Veterinary Aid (CAT.GEN.MPA.200 (b)(1))**

An approval is not required for dangerous goods which are carried for use in flight as veterinary aid or as a humane killer for an animal. Such dangerous goods must be stowed and secured during take-off and landing and at all other times when deemed necessary by the pilot-in-command. The dangerous goods

must be under the control of trained personnel during the time when they are in use on the aircraft.

Dangerous goods may be carried on a flight made by the same aircraft before or after a flight for which they are required as veterinary aid or as a humane killer for an animal, when it is impracticable to load or unload the dangerous goods immediately before or after the flight, subject to the following conditions:

a) the dangerous goods must be capable of withstanding the normal conditions of air transport;

b) the dangerous goods must be appropriately identified (e.g. by marking or labelling);

c) the dangerous goods may only be carried with the approval of the operator;

d) the dangerous goods must be inspected for damage or leakage prior to loading;

e) loading must be supervised by the operator;

f) the dangerous goods must be stowed and secured in the aircraft in a manner that will prevent any movement in flight which would change their orientation;

g) the pilot-in-command must be notified of the dangerous goods loaded on board the aircraft and their loading location. In the event of a crew change, this information must be passed to the next crew;

h) all personnel must be trained commensurate with their responsibilities; and

i) the provisions of 11.10.2 (Dangerous Goods Accident and Incident Reports) apply.

9.1.3.3 **Medical Aid for a Patient (CAT.GEN.MPA.200 (b)(1))**

An approval is not required for dangerous goods which:

a) are placed on board an aircraft with the approval of the operator; or

b) form part of the permanent equipment of the aircraft when it has been adapted for specialised use, to provide, during flight, medical aid for a patient, such as gas cylinders, drugs, medicines, other medical material (e.g. sterilising wipes) and wet cell or lithium batteries, providing:

i) the gas cylinders have been manufactured specifically for the purpose of containing and transporting that particular gas;

ii) the drugs and medicines and other medical matter are under the control of trained personnel during the time when they are in use;

iii) the equipment containing wet cell batteries is kept, and when necessary secured, in an upright position to prevent spillage of the electrolyte; and

iv) proper provision is made to stow and secure all the equipment during take-off and landing and at all other times when deemed necessary by the commander in the interests of safety.

These dangerous goods may also be carried on a flight made by the same aircraft to collect a patient or after that patient has been delivered when it is impracticable to load or unload the goods at the time of the flight on which the patient is carried.

Note: The dangerous goods carried may differ from those identified above due to the needs of the patient. These provisions apply both to dedicated air ambulances and to temporarily modified aircraft.

9.1.3.4 **Excess baggage being sent as cargo**

An approval is not required for dangerous goods contained within items of excess baggage being sent as cargo provided that:

i) the excess baggage has been consigned as cargo by or on behalf of a passenger;
ii) the dangerous goods may only be those that are permitted by and in accordance with 9.1.5 to be carried in checked baggage; and
iii) the excess baggage is marked with the words “Excess baggage consigned as cargo”.

With the aim of preventing dangerous goods, which a passenger is not permitted to have, from being taken aboard an aircraft in excess baggage consigned as cargo, any organization or enterprise accepting excess baggage consigned as cargo should seek confirmation from the passenger, or a person acting on behalf of the passenger, that the excess baggage does not contain dangerous goods that are not permitted and seek further confirmation about the contents of any item where there are suspicions that it may contain dangerous goods that are not permitted.

9.1.4 **Reserved**

9.1.5 **Items That May Be Carried by Passengers and Crew (CAT.GEN.MPA.200 (b)(2))**

Editorial Note 1: 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.

Editorial Note 2: Certain items listed are permitted only with the operator’s approval. Requirements apply to some items regarding the means by which they are prepared for transport (e.g. wheelchairs and battery-powered mobility devices) or the professional status of the passenger (e.g. Chemical Agent Monitoring Equipment). The operator’s policy towards the carriage of items listed as requiring operator’s approval should be established. This should include details of how passengers are expected to declare their intention to carry an item, how its proper preparation will be confirmed and how details will be passed to ground handlers (as required). If case-by-case consideration is considered appropriate for items requiring operator approval, the person or role within the

operation that may grant approval for the carriage of such items and the basis upon which approvals will be granted should be stated.

An approval is not required for those dangerous goods which, according to the Technical Instructions, can be carried by passengers or crew members as per the following table:

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 for cabin crew to verify that the baggage contains no dangerous goods that are permitted for carrriage in carry-on baggage only (e.g. spare lithium batteries, heat producing articles etc).

Editorial Note: The provisions for passengers and crew are replaced in tabular form.

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 implanted into a person	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))	a) non-spillable wet batteries must comply with Special Provision A67 or the vibration and pressure differential tests of Packing Instruction 872; b) the operator must verify that: 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; *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.* 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; d) where the mobility aid is specifically designed to allow its battery(ies) to be removed by the user (e.g. collapsible): 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 packagings 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; e) it is recommended that passengers make advance arrangements with each operator.

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	a) where possible, the mobility aid must be loaded, stowed, secured and unloaded always in an upright position. The operator must verify that: 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; *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.* 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: 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; The mobility aid may then be carried as checked baggage without restriction; 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; 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; 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.

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	a) the batteries 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; b) the operator must verify that: 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; *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.* 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; d) where the mobility aid is specifically designed to allow its battery(ies) to be removed by the user (e.g. collapsible): 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; e) the pilot-in-command must be informed of the location of the lithium ion battery(ies); f) it is recommended that passengers make advance arrangements with each operator.
8) Portable medical electronic devices (automated external defibrilators (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: Checked baggage	Location: Carry-on baggage	Location: On the person	Approval of the operator(s) is required	The pilot-in-command must be informed	Restrictions
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. *Note.— Alcoholic beverages containing not more than 24 per cent alcohol by volume are not subject to any restrictions.*
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	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	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 accidently 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	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. *Note.— For carbon dioxide, a gas cartridge with a water capacity of 50 mL is equivalent to a 28 g cartridge.*

	Items or articles	Location: Checked baggage	Location: Carry-on baggage	Location: On the person	Approval of the operator(s) is required	The pilot-in-command must be informed	Restrictions
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 carried as spare batteries in accordance with the item below)	Yes	Yes	Yes	No	No	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: — 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 UN *Manual of Tests and Criteria*, Part III, subsection 38.3.
	Spare batteries for portable electronic devices containing lithium metal or lithium ion cells or batteries	No	Yes	Yes	No	No	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: — 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 UN *Manual of Tests and Criteria*, 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	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 UN Manual of Tests and Criteria, 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	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 UN *Manual of Tests and Criteria*, Part III, subsection 38.3.
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; c) the maximum quantity of fuel in any fuel cell or fuel cell cartridge must not exceed: — 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.
	Spare fuel cell cartridges	Yes	Yes	Yes	No	No	

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: — "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.
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						
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	a) the equipment must be equipped with an effective means of preventing accidental activation; 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; c) if the equipment contains lithium cells or batteries, these cells or batteries must comply with the following restrictions: — 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 *Manual of Tests and Criteria*, Part III, subsection 38.3; d) if the equipment contains gases to expel dye or ink: — 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 e) security type equipment that is defective or that has been damaged is forbidden for transport.

9.1.6 **Provision of Information to Passengers (CAT.GEN.MPA.200 (f))**

Editorial Note: An operator must ensure that information on the types of dangerous goods which a passenger is forbidden to transport aboard an aircraft is presented at the point of ticket purchase or, if this is not practical, made available in another manner to passengers prior to the check-in process. Information provided via the Internet must be in text or pictorial form but should be such that ticket purchase cannot be completed until the passenger, or a person acting on their behalf, has been presented with this information and indicated that they have understood the restrictions on dangerous goods in baggage.

An operator or the operator's handling agent and the airport operator must ensure that notices warning passengers of the types of dangerous goods which they are forbidden to transport aboard an aircraft are prominently displayed, in sufficient number, at each of the places at an airport where tickets are issued, passengers are checked in and aircraft boarding areas are maintained, and at any other location where passengers are checked in. These notices must include visual examples of dangerous goods forbidden from transport aboard an aircraft.

An operator, of passenger aircraft, should have information on those dangerous goods which may be carried by passengers made available prior to the check-in process on their websites or other sources of information.

When provision is made for the check-in process to be completed remotely (e.g. via the Internet), the operator must ensure that information on the types of dangerous goods which a passenger is forbidden to transport aboard an aircraft is presented to passengers. Information may be in text or pictorial form but must be such that the check-in process cannot be completed until the passenger, or a person acting on their behalf, has been presented with this information and indicated that they have understood the restrictions on dangerous goods in baggage

When provision is made for the check-in process to be completed at an airport by a passenger without the involvement of any other person (e.g. automated check-in facility), the operator or the airport operator must ensure that information on the types of dangerous goods which a passenger is forbidden to transport aboard an aircraft is presented to passengers. Information must be in pictorial form and must be such that the check-in process cannot be completed until the passenger has been presented with this information and indicated that they have understood the restrictions on dangerous goods in baggage.

Editorial Note: Operators should describe the means of promulgating such information to passengers.

9.1.7 Marking and Labelling of Packages

Articles and substances meeting the dangerous goods classification criteria are assigned a 'UN Number' under the United Nations classification system. This consists a four-digit number preceded by the capital letters 'UN'. Packages of dangerous goods must be marked with the UN Number(s) applicable to their contents.

Packages containing dangerous goods can also be identified by labels indicating the hazard of the goods by their class or division or by the presence of certain handling labels/markings.

Note 1: As no approval for the transport of dangerous goods is held, dangerous goods bearing any UN Number, hazard label; the radioactive material, excepted package handling label; the lithium battery handling label; the environmentally hazardous substances marking; or the excepted or limited quantities marking must not be loaded on an aircraft (except as identified in 9.1.3).

Note 2: When dangerous goods markings or labels are seen on items not declared as dangerous goods it is often an indication that they do contain such goods. Undeclared dangerous goods must not be loaded on an aircraft and reporting procedures must be implemented (see 11.10.2).

CLASS 1 – EXPLOSIVE

* Division and compatibility group

** Compatibility group

CLASS 2 – GASES

Flammable gas (Division 2.1)

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

Toxic gas (Division 2.3)

CLASS 3 – FLAMMABLE LIQUID

CLASS 4 – FLAMMABLE SOLIDS

Flammable solid (Division 4.1)

Substance liable to spontaneous combustion (Division 4.2)

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

CLASS 5 – OXIDISING SUBSTANCES AND 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)

The bottom part of the label should bear the inscription:

"INFECTIOUS SUBSTANCE — In case of damage or leakage immediately notify public health authority"

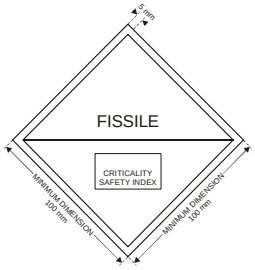
CLASS 7 – RADIOACTIVE MATERIAL

Category I

Category II

Category III

Criticality safety index label



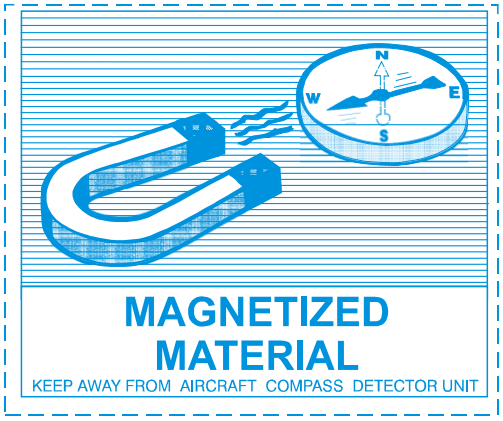
CLASS 8 – CORROSIVE

CLASS 9 – MISCELLANEOUS

HANDLING LABELS

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

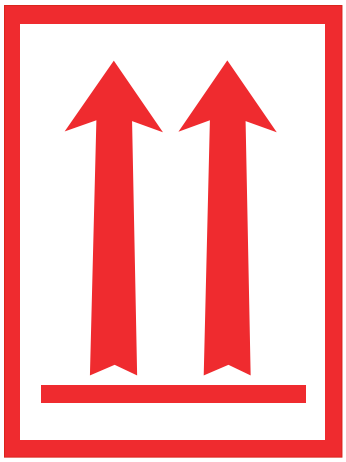
Magnetized material



Cargo aircraft only

Cryogenic liquid label

Package orientation



(red or black)

Keep away from heat

Lithium Battery Handling Label

Application of the lithium battery handling label to a consignment of lithium batteries (of any type) indicates that the Shipper has determined specific requirements have been met. Such consignments do not need to be accompanied by a dangerous goods transport document (Shipper's Declaration) and no acceptance check is required. Consignments bearing the lithium battery label must be accompanied with a document such as an air waybill with:

— an indication that the package contains lithium metal cells or batteries;

— an indication that the package must be handled with care and that a flammability hazard exists if the package is damaged;

— an indication that special procedures should be followed in the event the package is damaged, to include inspection and repacking if necessary;

— a telephone number for additional information; and

— when an air waybill is issued the applicable Packing Instruction must be stated together with the words 'not restricted'; and 'lithium ion batteries' or 'lithium metal batteries' as applicable.

EXCEPTED QUANTITIES 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:

Many dangerous goods when in reasonably limited quantities present a reduced hazard during transport and can safely be carried in good quality packagings that have not been tested and marked as is required for UN Specification packagings required for larger quantities of dangerous goods. Packages containing limited quantities of dangerous goods must be marked with a diamond shaped mark. When presented for carriage by air, the mark must additionally include a "Y" which indicates compliance with the provisions of the ICAO Technical Instructions, some of which are more stringent than those of the UN Model Regulations and of other modes of transport.

NOTE: The marking depicted here but without the 'Y' indicates that the package contains dangerous goods in limited quantities as permitted by surface transport regulations (ADR/IMDG) which may not be acceptable for air transport. A package so marked and offered for transport in the absence of a dangerous goods transport document must be reported to the appropriate authority where the goods are discovered as a discovery of undeclared dangerous goods (the HCAA if discovered within Greece).

ENVIRONMENTALLY HAZARDOUS SUBSTANCES MARKING

Packages containing environmentally hazardous substances (UN Nos. 3077 and 3082) must be durably marked with the environmentally hazardous substance mark with the exception of single packagings and combination packagings containing inner packagings with contents of 5 L or less for liquids; or contents of 5 kg or less for solids. ALL packages containing environmentally hazardous substances must bear a Class 9 hazard label.

9.2 Duties of all Personnel Involved

9.2.1 Detailed Assignments of Responsibilities (CAT.GEN.MPA.200 (d))

Editorial Note 1: Operators need to assign the key responsibilities associated with the carriage of dangerous goods. For example, it may be intended for the checking in of passengers to be conducted by suitably trained ground staff of the operator or alternatively by a designated handling agent. Duties associated with the carriage of dangerous goods for an operator not holding approval for their carriage as cargo include:

Cargo Department/ Cargo Sales Agents	• Ensuring procedures are implemented to ensure dangerous goods as cargo are not carried. • Recognition of undeclared dangerous goods. • Ensuring that notices, giving information about the transport of dangerous goods, are displayed in sufficient number and prominence at cargo acceptance points.
Persons receiving or handling general cargo, mail and stores	• Recognition of undeclared dangerous goods. • Dealing with dangerous goods that are found damaged or leaking during processing for transport. • If there is a dangerous goods incident or accident, or if undeclared dangerous goods are detected, a report is made to the HCAA (see 11.10.2).
Reservations	• Ensuring that information is provided with the passenger ticket or in another manner such that prior to or during the check-in process the passenger receives the information. • Considering passenger requests for approval of the operator for items of dangerous goods requiring such approval.
Persons handling passengers	• Ensuring that the provisions concerning passengers and dangerous goods are complied with. • Ensuring that notices are displayed in sufficient number and prominence at each of the places at an airport where tickets are issued, passengers checked in and aircraft boarding areas maintained, and at any other location where passengers are checked in. • With the aim of preventing dangerous goods which passengers are not permitted to have from being taken on board an aircraft in their baggage, seeking confirmation from a passenger about the contents of any item where there are suspicions that it may contain dangerous goods. • Ensuring that the discovery of prohibited dangerous goods (after a passenger has checked in) is reported to the HCAA (see 11.10.2).

Cabin Crew	• Ensuring that the provisions concerning passengers and dangerous goods are complied with. • Responding to a dangerous goods incident or accident in the cabin. • Ensuring that a dangerous goods incident or accident in the cabin, or the discovery of prohibited dangerous goods (after a passenger has boarded), is reported to the HCAA (see 11.10.2).
Operations Personnel	• If there is a dangerous goods incident or accident, or if undeclared dangerous goods are detected, a report is made to the HCAA (see 11.10.2).
Trainers	• Provision of initial and recurrent dangerous goods training commensurate with the responsibilities of the personnel concerned.
Compliance Monitoring Manager, Auditors and Safety Manager	• Ensuring that activities are monitored for compliance with dangerous goods requirements and that these activities are carried out properly under the supervision of the relevant head of functional area. Ensuring the initiation and follow-up of internal occurrence / accident investigations.

Editorial Note 2: In practice, a ground handling agent may carry out some or all of the functions related to the carriage of cargo, passengers and their baggage. Ground handling agents must be provided with sufficient information to enable the operator's policies and procedures to be followed. Operators should specify whether they utilise suitably qualified personnel of the operator or of a handling agent at the various aerodromes of the operation.

9.3 Reserved

9.4 Recognition of Undeclared / Hidden Dangerous Goods (CAT.GEN.MPA.200(e))

9.4.1 'Hidden' Dangerous Goods

Personnel must be alert to indications that undeclared dangerous goods are present within cargo, mail or stores. Personnel interfacing with passengers must be alert to indications that prohibited dangerous goods are carried by passengers or within their baggage.

NOTE: THE DISCOVERY OF UNDECLARED OR MIS-DECLARED DANGEROUS GOODS OR THE DISCOVERY OF DANGEROUS GOODS FORBIDDEN FOR CARRIAGE BY PASSENGERS (DISCOVERED AFTER THE CHECK-IN PROCESS) MUST BE REPORTED TO THE HCAA – SEE 11.10.2.

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 tyre 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 or lithium 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.).

Cars, car parts — see automobile parts, 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.

Consolidated consignments (groupages) — may contain any of the defined classes of dangerous goods.

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 (solid carbon dioxide).

Frozen fruit, vegetables, etc. — may be packed in dry ice.

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 (for passengers, those not permitted under ICAO Technical Instructions 8;1.1.2), 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 of 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.

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 bateries.

Metal construction material — may contain ferro-magnetic material which may be subject to special stowage requirements due to the possibility of affecting aircraft instruments.

Metal fencing — may contain ferro-magnetic material which may be subject to special stowage requirements due to the possibility of affecting aircraft instruments.

Metal piping — may contain ferro-magnetic material which may be subject to special stowage requirements due to the possibility of affecting aircraft instruments.

Passengers' baggage — may contain items meeting any of the criteria for dangerous goods. Examples include fireworks, flammable household liquids, corrosive oven or drain cleaners, flammable gas or liquid lighter refills or camping stove cylinders, matches, ammunition, bleach, aerosols not permitted (toxic, etc.).

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 bateries.

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.

Refrigerators — may contain liquefied gases or an ammonia solution.

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 bateries, 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 for carriage by passengers and crew

Note: Excess baggage carried as cargo may contain certain dangerous goods (see 9.1.3.4).

Vaccines — may be packed in dry ice.

9.4.1.1 Identification of Dangerous Goods Through X-Ray Screening

Persons conducting security screening of cargo should be alert to the presence of dangerous goods within packages that are not marked and labelled as dangerous goods and/or not accompanied by a Shipper's Declaration. In particular, items such as aerosols, ammunition, gas cylinders (camping gas, cylinders attached to life-jackets, etc.), cigarette lighters and wet acid batteries can be readily identified from x-ray images. Information provided on an air waybill or marked on a package often indicates that a consignment contains no dangerous goods. In the absence of such annotation by the shipper, should suspicions be raised by the size and shape of the contents of a package, consideration should be given to opening and hand-searching the consignment to verify that no undeclared dangerous goods are present.

9.4.1.2 Safety Data Sheets

REACH (Registration, Evaluation, Authorisation & restriction of CHemicals) is a European Union regulation controlling chemicals in Europe. REACH requires for many substances and mixtures, a Safety Data Sheet (SDS) to be provided either before or at the time of first delivery. Section 14 of the EU format SDS provides basic classification information, i.e. UN number, proper shipping name, Class/Division and Packing Group.

9.4.1.3 Consumer Labelling (Overview)

Some everyday household items bear consumer warning labels which may or may not indicate they are classified as dangerous goods in air transport. All over the world there are different laws on how to identify the hazardous properties of chemicals (called 'classification') and how information about these hazards is then passed to users (through consumer supply labels and safety data sheets for workers). This can be confusing because the same chemical can have different hazard descriptions in different countries. For example, a chemical could be labelled for supply as 'toxic' in one country, but not in another. For this reason, the UN brought together experts from different countries to create the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Within Europe the Regulation on Classification, Labelling and Packaging of Substances and Mixtures (known as the CLP Regulation) provides a transitional period to allow a gradual migration to the GHS regime. The Regulation already applies to the classification of substances and will apply to mixtures from 1 June 2015. In the meantime, suppliers in Greece may continue to label goods according to the Chemicals (Hazard Information and Packaging for Supply) Regulations (CHIP). However, they may as an alternative choose to classify, label and package mixtures according to CLP. There are, therefore, two systems of consumer supply labelling that may indicate the presence of dangerous goods.

9.4.1.4 **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:

9.4.1.5 **CHIP Labels**

CHIP labels are represented below, together with indications of how goods bearing such labels may be classified for transport purposes. In the event that CHIP labels and associated risk phrases cause suspicion that a particular consignment contains undeclared dangerous goods, it will be necessary to refer to the Safety Data Sheet applicable to the product (see information above).

Physiochemical

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.

Symbol	Abbreviation	Hazard	Description of hazard	Transport classification
	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.	Most substances and preparations classified as Class 3 Packing Group II. Some solids classified in Division 4.1. All substances and preparations classified in Division 4.2. All substances and preparations classified as Division 4.3.
None	None	flammable	Substances and preparations with a flashpoint equal to or greater than 21°C and less than or equal to 55°C.	Some substances and preparations classified as Class 3 Packing Group II and most 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 some 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 may be classified in any Class or Division of Classes 1 to 9 (**though normally in Division 6.1**) but may, however, be not subject to the Technical Instructions and may not need to be declared as dangerous goods.
	Carc Cat 2	category 2 carcinogens		
	Carc Cat 3	category 3 carcinogens		
	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 an	

Symbol	Abbreviation	Hazard	Description of hazard	Transport classification
	Repr Cat 2	category 2 reproductive toxins	impairment in reproductive functions or capacity.	
	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 some 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.	Some 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:

(a) Substances and preparations designated as "severe marine pollutant" in the International Maritime Dangerous Goods Code.

(b) Substances and preparations designated as "marine pollutant" in the International Maritime Dangerous Goods Code.

(c) Substances and preparations designated as aquatic pollutants in ADR.

(d) 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 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.

9.5 Reserved

9.6 Conditions Under Which Weapons, Munitions of War and Sporting Weapons May Be Carried (CAT.GEN.MPA.155, CAT.GEN.MPA.160)

9.6.1 Need for Approval to Transport Munitions of War (CAT.GEN.MPA.155)

Weapons of war and munitions of war can only be carried provided an approval to do so has been granted by all the States concerned before a flight. They must be carried in the aircraft in a place which is inaccessible to passengers during flight and, in the case of firearms, unloaded, except as specified in 9.6.2 below.

Editorial Note 1: *Insert Text* ***[Operator Name holds/does not hold] HCAA approval for the transport of Munitions of War by air.***

9.6.2 Stowage Requirements for Munitions of War (EC Regulation 300/2008)

In exceptional circumstances, weapons of war and munitions of war may be carried other than in an inaccessible place on the aircraft and may be loaded, provided an approval to do so has been granted by all the States concerned before a flight. These exceptional circumstances are intended primarily to permit the carriage of law enforcement officers, protection officers, etc.

9.6.3 Notifying Commander of the Carriage of Munitions of War (CAT.GEN.MPA.155)

The commander must be notified before a flight if weapons of war or munitions of war are to be carried on the aircraft.

9.6.4 Carriage of Sporting Weapons When Inaccessible to Passengers During Flight (CAT.GEN.MPA.160)

Sporting weapons and ammunition for such weapons may be carried without an approval from an Authority, provided they are stowed in a place on the aircraft which is inaccessible to passengers during flight and, in the case of firearms, unloaded.

Editorial Note: Operators must take all reasonable measures to ensure that any sporting weapons intended to be carried by air are reported to them and operators should describe the measures in place to make passengers aware of the need to furnish the operator with details of any sporting weapon they intend to carry. For aircraft without inaccessible compartments, carriage should be prohibited unless alternative effective procedures for stowing the weapons in a place that is inaccessible to passengers are established.

NOTE: Ammunition is subject to the conditions set out in 9.1.5.

9.6.5 *"Not used"*

9.6.6 The passenger and operator (or his agent) must observe all regulations applicable to the export, import and transit of weapons and ammunition, applicable in the country of departure, transit and destination.

Editorial Note 1: Operators should consider all relevant legislation when formulating procedures for the carriage of weapons, munitions of war and sporting weapons.

11.10 Special Notification Requirements in the Event of an Accident or Occurrence When Dangerous Goods are Being Carried or Have Been Offered for Air Transport Without Having Been Prepared and Declared in Accordance with the ICAO Technical Instructions (CAT.GEN.MPA.200(e))

11.10.1 Reserved

11.10.2 Reserved

11.10.3 Reserved

11.10.4 Dangerous Goods Accident and Incident Reports (CAT.GEN.MPA.200(e))

Definitions:

Dangerous goods accident: An occurrence associated with and related to the transport of dangerous goods by air which results in fatal or serious injury to a person or major property or environmental damage.

Dangerous goods incident: An occurrence other than a dangerous goods accident associated with and related to the transport of dangerous goods by air, not necessarily occurring on board an aircraft, which results in injury to a person, property or environmental damage, fire, breakage, spillage, leakage of fluid or radiation or other evidence that the integrity of the packaging has not been maintained. Any occurrence relating to the transport of dangerous goods which seriously jeopardises an aircraft or its occupants is also deemed to be a dangerous goods incident.

Note: A dangerous goods accident or incident may also constitute an aircraft accident or incident as specified in ICAO Annex 13 — Aircraft Accident and Incident Investigation.

An operator must report dangerous goods accidents and incidents to the appropriate authorities of the State of the Operator and the State in which the accident or incident occurred in accordance with the reporting requirements of those appropriate authorities.

Note.— This includes incidents involving dangerous goods that are not subject to all or part of the ICAO Technical Instructions through the application of an exception or of a special provision (e.g. an incident involving the short circuiting of a dry cell battery that is required to meet short-circuit prevention conditions in a special provision of 3;3).

An operator must report any occasion when undeclared or misdeclared dangerous goods are discovered in cargo or mail. Such a report must be made to the appropriate authorities of the State of the Operator and the State in which this occurred**.**

An operator must report any occasion when dangerous goods that are not permitted are discovered in the baggage or on the person of passengers (after check-in) or crew members. Such a report must be made to the appropriate authority of the State in which this occurred.

In addition to the requirements of the ICAO Technical Instructions for the reporting of dangerous goods occurrences (above), ORO.GEN.160 requires that **any incident** which endangers or which, if not corrected, would endanger an aircraft, its occupants or any other person is reported to **HCAA**. Dangerous goods occurrences reportable under the Mandatory Occurrence Reporting Scheme include:

- Dangerous goods found not to have been secured to prevent movement
- Damage to packages of dangerous goods
- NOTOC errors where dangerous goods have not been stowed in accordance with loading instructions
- Failure to prepare electric wheelchairs in order to prevent accidental activation
- Electric wheelchairs found not to have been stowed and secured correctly
- Leakage of dangerous goods from passenger baggage

NOTE: Dangerous goods occurrences meeting the criteria of ORO.GEN.160 also meet the definition of a dangerous goods accident or incident (above), reportable in accordance with CAT.GEN.MPA.200(e). Accordingly, the report must be made to HCAA within 72 hours, unless exceptional circumstances prevent this.

A dangerous goods accident or dangerous goods incident not meeting the criteria of ORO.GEN.160 must be reported to the HCAA within 72 hours, unless exceptional circumstances prevent this. If necessary, a subsequent report shall be made as soon as possible giving all the details that were not known at the time the first report was sent. If a report has been made verbally, written confirmation shall be sent as soon as possible. Any type of accident or incident must be reported irrespective of whether the dangerous goods are in cargo, mail, stores, passengers' baggage or crew baggage.

Editorial Note: In accordance with Regulation (EU) No. 376/2014 on the reporting, analysis and follow-up of occurrences in civil aviation, by 15 November 2015 aircraft operators are required to store occurrence reports on a database capable of producing an output that is ECCAIRS compatible. Organisations will need to submit Mandatory Occurrence Reports to HCAA in this format. It is likely that the procedures for reporting non-MOR dangerous goods occurrences will be aligned to those for MOR.

Dangerous goods occurrences meeting the criteria of ORO.GEN.160 are to be reported using the standard Occurence Report Form the operator has prepared and included in its Operation Manual.

Dangerous goods occurrences (not meeting the criteria of ORO.GEN.160) may be reported using the HCAA form specially made for this.

The first and any subsequent report shall be as precise as possible and contain such of the following data that are relevant:

- Date of the incident or accident or the finding of undeclared or misdeclared dangerous goods.
- Location, the flight number and flight date.
- Description of the goods and the reference number of the air waybill, pouch, baggage tag, ticket, etc.
- Proper shipping name (including the technical name, if appropriate) and UN/ID number, when known.
- Class or division and any subsidiary risk.
- Type of packaging, and the packaging specification marking on it.
- Quantity of dangerous goods.
- Name and address of the shipper, passenger, etc.
- Any other relevant details.
- Suspected cause of the incident or accident.
- Action taken.
- Any other reporting action taken.
- Name, title, address and telephone number of the person making the report.

Copies of relevant documents and any photographs taken should be attached to a report.

NOTE: IF SAFE TO DO SO, THE DANGEROUS GOODS INVOLVED IN THE ACCIDENT OR INCIDENT SHOULD BE HELD PENDING HCAA INVESTIGATION.

Editorial Note: Operators should describe their procedures for reporting dangerous goods incidents, accidents and undeclared dangerous goods to the HCAA. Where applicable, this information should be provided to handling agents so that, as a minimum, they are advised to whom events should be submitted.

11.10.5 Removal of Contamination (SPA.DG.105)

In the event of a spillage or leakage of undeclared dangerous goods within an aircraft, the position where the dangerous goods or unit load device was stowed on the aircraft must be inspected for damage or contamination and any hazardous contamination removed. Persons responding in the event of damage to or leakage of dangerous goods from packages must:

- identify the hazards and wear appropriate protective clothing;
- avoid handling the package or keep handling to a minimum;
- inspect adjacent packages for contamination and put aside any that may have been contaminated;
- arrange for decontamination of the aircraft and equipment; and

- in the case of infectious material, inform the appropriate public health authority or veterinary authority, and provide information to any other countries of transit where persons may have been exposed to danger; and notify the shipper and/or the consignee.

If it is evident that a package containing radioactive material is damaged or leaking, or if it is suspected that the package may have leaked or been damaged, access to the package must be restricted and a qualified person must, as soon as possible, assess the extent of contamination and the resultant radiation level of the package. The scope of the assessment must include the package, the aircraft, the adjacent loading and unloading areas and, if necessary, all other material which has been carried in the aircraft. When necessary, additional steps for the protection of persons, property and the environment must be taken in accordance with provisions established by the relevant competent authority, to overcome and minimise the consequences of such leakage or damage.

SECTION D 2.4
TRAINING SYLLABUS FOR TRANSPORT OF DANGEROUS GOODS (OPERATIONS PERSONNEL INCLUDING CREW MEMBERS)

2.4.1 Approval of Training Programmes

Insert Text ['Operator XXX'] hold approval for training programmes in the carriage of dangerous goods by air in accordance with ORO.GEN.110(j). This training is identified and described in the following text. Any substantive changes to this training (or proposals for sourcing training from an alternative external company) must be submitted to the HCAA for the training approval to remain valid.

Editorial Note: Prior to outsourcing the provision of dangerous goods training, operators must establish that the proposed training materials are approved by the HCAA.

2.4.2 General Requirements Applicable to Dangerous Goods Training Programmes

To ensure that everyone involved is aware of their responsibilities in the transport of dangerous goods, no matter whether such goods are carried as cargo or are in the possession of passengers, training must be given so that an awareness is gained of the hazards associated with dangerous goods and how they should be dealt with in air transport. Personnel identified in the categories specified in Table 1-5 of the ICAO Technical Instructions (extract produced below) must be trained or training must be verified prior to the person performing any duty specified in Table 1-5.

Recurrent training must be provided within 24 months of previous training to ensure knowledge is current. However, if recurrent training is completed within the final three months of validity of previous training, the period of validity extends from the month on which the recurrent training was completed until 24 months from the expiry month of that previous training.

As with other aviation qualifications the expiry date of dangerous goods training is absolute and an offence against the regulations will be committed if staff continue to work after their training qualification has expired.

Editorial Note: Operators with a policy to provide recurrent dangerous goods training at periods of less than 24 months should state that policy.

A test to verify understanding must be undertaken following training and confirmation that the test has been completed satisfactorily is required. The records of training must be retained by the employer for a minimum period of 36 months from the most recent training completion month and must be made available upon request to the employee or the appropriate national authority.

2.4.3 Dangerous Goods Training Syllabus

The areas to be covered for various categories of personnel are listed within the table below; the depth of training required for each area is dependent on the

responsibilities of the individuals and varies from a general appreciation to in-depth knowledge so that decisions can be taken.

Editorial Note: The following table should be tailored to match the categories of personnel employed by the operator.

Extract from Table 1-5 of the ICAO Technical Instructions (Content of Training Courses)

	Categories of staff				
Aspects of transport of dangerous goods by air with which they should be familiar, as a minimum	13	14	15	16	17
General philosophy	X	X	X	X	X
Limitations	X	X	X	X	X
Labelling and marking	X	X	X	X	X
Dangerous goods transport document and other relevant documentation	X				
Recognition of undeclared dangerous goods	X	X	X	X	X
Provisions for passengers and crew	X	X	X	X	X
Emergency procedures	X	X	X	X	X

CATEGORY:

13 - Operator's staff accepting cargo or mail (other than dangerous goods).

14 - Operator's staff responsible for the handling, storage and loading of cargo or mail and baggage.

15 - Passenger-handling staff.

16 - Flight crew members, loadmasters, load planners and flight operations officer/flight dispatcher.

17 - Crew members (other than flight crew members).

Note 1: Depending on the responsibilities of the person, the aspects of training to be covered may vary from those shown in the table.

Note 2: The categories of personnel identified in Table 1-5 of the ICAO Technical Instructions (Content of Training Courses) are not all-encompassing. Personnel employed by or interacting with the aviation industry in areas such as passenger and cargo reservation centres, and engineering and maintenance, except when acting in a capacity identified in Table 1-5,

should be provided with dangerous goods training commensurate with their specific responsibilities. See ICAO Technical Instructions 4;2.1.

2.4.4 Instructor Qualifications

Instructors of initial and recurrent dangerous goods training programmes must have adequate instructional skills and have successfully completed a dangerous goods training programme in the applicable category, or Category 6 of Table 1-4 of the Technical Instructions (applicable to operator's staff accepting dangerous goods), prior to delivering such a dangerous goods training programme.

Instructors delivering initial and recurrent dangerous goods training programmes must at least every 24 months deliver such courses, or in the absence of this attend recurrent training.

Editorial Note 1: In addition to the above, operators should detail the experience and aptitudes considered appropriate for the selection of trainers.

Editorial Note 2: The above section does not apply to the exclusive use of Computer-Based Training (CBT) and other self-study materials for the delivery of dangerous goods training, i.e. where none of the training is delivered in person. There must, however, exist adequate means to ensure that persons creating and maintaining self-study training materials are competant and their knowledge of the transport of dangerous goods by air remains current.

2.4.5 Identification of Training and Testing Materials

Editorial Note 1: Operators should detail the dangerous goods training and testing materials that have been subjected to approval for each category of personnel, so that they may be readily identified by trainers. The titles and revision numbers of presentations, videos, study books, handouts, visual aids and tests to verify understanding should be included. Additionally, the mark required to achieve a pass and procedures to be applied in the event that personnel do not achieve or maintain the required standards must be established. If preferred, reference may be made to a separate controlled document where this information is maintained.

Editorial Note 2: Tests to verify understanding must be conducted in a controlled environment that prevents collaboration.

Ο Προϊστάμενος
Διεύθυνσης Πτητικών Προτύπων

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