Example Dangerous Goods Manual for an RPAS carrying samples and pharmaceuticals related to Covid-19.

Revision History

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# SECTION X DANGEROUS GOODS

**Editorial Note 1:** References to EU regulations in this document are to those regulations as retained (and amended in UK domestic law) under the European Union (Withdrawal) Act 2018.

**Editorial Note 2:** Editorial notes within the following text indicate where the operator needs to add text to describe their specific operation. The editorial notes must be replaced with the operator’s own text before submission to the CAA.

## X.1 Policy on the Transport of Dangerous Goods

### X.1.1 **Approval for the Transport of Dangerous Goods**

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.

**Editorial Note:** *Insert Text* ***[Operator Name]* hasbeen granted an approval in accordance with the Air Navigation (Dangerous Goods) Regulations for the transport of UN3373, Biological substance, category B ONLY. *This does not include UN1845 Carbon dioxide, solid (dry ice).***

### X.1.2 **General Exceptions**

#### X.1.2.1 **Airworthiness and Operational Items**

An approval is not required for dangerous goods which are required to be aboard the aircraft for airworthiness or operational reasons, for example lithium batteries used to power the aircraft. However, the limited approval held by ***[Operator Name]*** does not permit the carriage of replacement items which meet the criteria of dangerous goods (e.g. spare batteries).

## X.2 Duties of all Personnel Involved

### X.2.1 **Detailed Assignments of Responsibilities**

**Editorial Note 1:** Operators need to assign the key responsibilities associated with the carriage of dangerous goods. For example, it may be intended for RPAS crew to physically inspect packages before loading and after unloading. Duties associated with the carriage of dangerous goods for an operator holding approval only for the carriage of UN3373 include:

|  |  |
| --- | --- |
| Person Nominated as Responsible for Operator’s Dangerous goods Approval | * Ensuring that the operator remains in compliance with the applicable dangerous goods requirements. * Oversight and control of the carriage of dangerous goods. * Ensuring all necessary permissions, approvals and exemptions are held. * Generation (or acceptance) of relevant procedures. * Responding to queries regarding the carriage of dangerous goods. * Ensuring staff are trained commensurate with their responsibilities |
| 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 appropriate Authority (see X.5). |
| Operations Personnel | * If there is a dangerous goods incident or accident, or if undeclared dangerous goods are detected, a report is made to the appropriate Authority (see X.5). * Recognition of undeclared dangerous goods. |
| Flight Crew | * Recognition of undeclared dangerous goods. * If there is a dangerous goods incident or accident, or if undeclared dangerous goods are detected a report is made to the appropriate Authority (see X.5). |
| 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:** If another agency carries out some or all of the functions related to the carriage of cargo, they must be provided with sufficient information to enable the operator’s policies and procedures to be followed.

## X.3 Guidance on the Requirements for Acceptance, Handling and Stowage

### X.3.1 **Package marks**

Packages containing UN3373 must not be accepted for carriage unless they are marked with the following:

1. “Biological Substance, Category B” in letters at least 6mm high;
2. The name and address of the shipper and consignee;
3. The name and telephone number of a person responsible; and
4. This mark which must be at least 50mm x 50mm:

A close up of a logo

Description automatically generated

X.3.2 **Inspection of packages**

A package or overpack containing UN3373 must not be loaded onto an aircraft unless it has been inspected immediately prior to loading and found free from evidence of leakage or damage. Such packages or overpacks must also be inspected for signs of damage or leakage upon unloading from the aircraft.

**X.4 Recognition of undeclared/hidden dangerous goods**

X.4.1 Approval has only been granted to carry UN3373. Consequently, if packages bearing indications they contain other types of dangerous goods are detected, they must not be loaded on an aircraft and reporting procedures must be implemented (see X.5).

There are a number of indications of the presence of dangerous goods:

1. A “UN number”, which consists of a four-digit number preceded by the letters “UN” (articles and substances meeting the dangerous goods classification criteria are assigned a ‘UN Number’ under the United Nations classification system);
2. Any of the following:

|  |  |
| --- | --- |
| 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, SUBSTANCES LIABLE TO SPONTANEOUS COMBUSTION; SUBSTANCES WHICH, IN CONTACT WITH WATER, EMIT FLAMMABLE GASES | | |
| 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) | |
|  | **5.2** |

|  |  |  |
| --- | --- | --- |
| CLASS 6 – TOXIC AND INFECTIOUS SUBSTANCES | | |
| Toxic substance (Division 6.1) | Infectious substance (Division 6.2) | |
|  | The bottom part of the label will 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 | | |
|  | Class 9 label for fully regulated lithium battery shipments  Image result for lithium battery class 9 label |

|  |  |  |  |
| --- | --- | --- | --- |
| 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 BATTERIES MARK | |
|  | This mark is applied to packages of lithium batteries which, whilst still regulated, are excepted from a number of the requirements.  It can range in size from 105mm x 74mm to 120mm x 100mm. |

|  |  |
| --- | --- |
| EXCEPTED QUANTITIES MARK | |
| 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 MARK | |
| *Packages containing limited quantities of dangerous goods can be identified from the following:* | |
| ***LQ_Air_label*** |  |

|  |  |
| --- | --- |
| ENVIRONMENTALLY HAZARDOUS SUBSTANCES MARK | |
|  | |
|  | Packages containing environmentally hazardous substances (UN Nos. 3077 and 3082) will be durably marked with the environmentally hazardous substance mark with the exception of packages containing a net quantity per single or inner packaging of 5 L or less for liquids or having a net mass per single or inner packaging of 5 kg or less for solids - such packages are not subject to the ICAO Technical Instructions other than specified packaging requirements. |

1. Safety Data Sheets - REACH (**R**egistration, **E**valuation, **A**uthorisation & restriction of **CH**emicals) 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.
2. GHS Consumer Labelling - Some everyday household items bear consumer warning labels which may or may not indicate they are classified as dangerous goods in air transport. Consequently, the UN created the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). The GHS has been implemented within Europe by the Regulation on Classification, Labelling and Packaging of Substances and Mixtures (known as the CLP Regulation). Products bearing the following GHS labels ARE classified as dangerous goods:

|  |
| --- |
| explos flamme bottle rondflam skull Aquatic-pollut-red acid_red |
| **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 (and none of the above) are NOT classified as dangerous goods:

|  |
| --- |
| exclam silhouete |

X.4.2 **‘Hidden’ Dangerous Goods**

Personnel must be alert to indications that undeclared dangerous goods are present within cargo or mail.

***NOTE: THE DISCOVERY OF UNDECLARED OR MIS-DECLARED DANGEROUS GOODS MUST BE REPORTED TO THE CAA – SEE X.5.***

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 the Technical 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 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.

*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.

*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.

*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 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.

*Vaccines* — may be packed in dry ice.

## X.5 Special Notification Requirements in the Event of an Accident or Occurrence When Dangerous Goods are Carried or Have Been Offered for Air Transport Without Having Been Prepared and Declared in Accordance with the ICAO Technical Instructions

X.5.1 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.

*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).*

X.5.2 An operator must also 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.

In addition to the requirements of the ICAO Technical Instructions for the reporting of dangerous goods occurrences (above), **any incident** which endangers or which, if not corrected, would endanger an aircraft, its occupants or any other person must be reported to **CAA Safety Data**. Dangerous goods occurrences reportable under the Mandatory Occurrence Reporting Scheme include:

* Leak or spill of UN3373
* Undeclared dangerous goods .

**NOTE:** Dangerous goods occurrences which also meet the definition of a dangerous goods accident or incident must be reported to CAA Safety Data within 72 hours, unless exceptional circumstances prevent this.

A dangerous goods accident or dangerous goods incident not reportable under the Mandatory Occurrence Reporting Scheme must be reported to the CAA Dangerous Goods Office 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.

**Editorial Note:** In accordance with UK Reg.(EU) No. 376/2014on the reporting, analysis and follow-up of occurrences in civil aviation, aircraft operators are required to store occurrence reports on a database capable of producing an output that is ECCAIRS compatible. Organisations need to submit Mandatory Occurrence Reports to the CAA in this format.

Dangerous goods occurrences not reportable under the Mandatory Occurrence Reporting Scheme are to be reported to dgo@caa.co.uk using the following forms:

**CAA Form** [SRG 2808](http://www.caa.co.uk/srg2808) may be used to report a dangerous goods occurrence involving cargo or unaccompanied baggage.

**CAA Form** [SRG 2809](http://www.caa.co.uk/srg2809) may be used to report a dangerous goods occurrence involving a passenger/crew member or their baggage.

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 hazard.
* 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 CAA INVESTIGATION.**

**Editorial Note:** Operators should describe their procedures for reporting dangerous goods incidents, accidents and undeclared dangerous goods to the CAA.

### **X.6 Removal of Contamination**

In the event of a spillage or leakage of undeclared dangerous goods within an aircraft, the position where the dangerous goods were 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.

**X.7 TRAINING SYLLABUS FOR TRANSPORT OF DANGEROUS GOODS**

**(OPERATIONS PERSONNEL INCLUDING CREW MEMBERS)**

### X.7.1 **Approval of Training Programmes**

*Insert Text* [‘Operator XXX’] hold approval for training programmes in the carriage of dangerous goods by air in accordance with the Air Navigation (Dangerous Goods) Regulations, 2002. 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) shall require prior approval by the competent authority and must be submitted together with a completed checklist (see [Checklist for a Dangerous Goods Training Programme](https://www.caa.co.uk/Commercial-industry/Airlines/Dangerous-goods/Dangerous-goods-training-requirements/)) to the assigned Inspecting Officer (Dangerous Goods).

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

### X.7.2 **General Requirements Applicable to Dangerous Goods Training Programmes**

To ensure that everyone involved is aware of their responsibilities in the transport of dangerous goods, 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 1-4 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 1-4.

Training must be provided or verified upon the employment of personnel. Recurrent training must be provided within 24 months of previous training in addition to the remainder of the month of completion to ensure knowledge is current. If recurrent training is completed within the final three months of validity of previous training, the period of validity shall extend from the month of completion until 24 months from the expiry month of that previous training.

As with other aviation qualifications 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.

### X.7.3 **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 1-4 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* | 7 | 10 |
| General philosophy | X | X |
| Limitations | X | X |
| Labelling and marking | X | X |
| Dangerous goods transport document and other relevant documentation | X |  |
| Recognition of undeclared dangerous goods | X | X |
| Provisions for passengers and crew | X | X |
| Emergency procedures | X | X |

**CATEGORY:**

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

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

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

### X7.4 **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 competent and their knowledge of the transport of dangerous goods by air remains current.

### X.7.5 **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.

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

X.7.6 Further information concerning training can be found in CAP 483: *Training in the Safe Transport of Dangerous Goods by Air (Part A)*.