

# Inclusion of Dangerous Goods is prohibited in international postal services

Dangerous goods covered by the “Recommendations on Transport of Dangerous Goods” (drawn up by the United Nations) and the Technical Instructions (International Civil Aviation Organization (ICAO)) and Dangerous Goods Regulations (International Air Transport Association (IATA)) are in general prohibited for transport by the post (surface, SAL, air, and EMS).

## Examples of dangerous goods prohibited for air transport:

**1. Explosives**

- Fireworks
- Crackers
- Ammunition
- Gunpowder
- Flares
- Warning flares



**2. Compressed Gases**

- Butane lighter fuel
- Diving tanks
- Camping gas
- Butane gas
- Sprays
- Extinguishers



**3. Flammable Liquids**

- Oil lighters
- Lighter fuels
- Oil paints
- Adhesion bonds
- Flammable perfumes



**4. Flammable Substances**

- Matches
- Charcoals



**5. Oxidizing Substances**

- Oxygen generator chemicals
- Peroxides/Bleaching powders



**6. Toxic and Infectious Substances**

- Pesticides
- Agricultural chemicals
- Mercury compounds
- Bacterias
- Viruses

**\* Note**



**7. Radioactive Materials**

**\* Note**



**8. Corrosives**

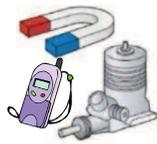
- Wet batteries
- Mercury
- Hydrochloric acid



**9. Miscellaneous Dangerous Goods**

- Magnetized goods
- Engines
- Solid carbon dioxide (dry ice)
- Lithium batteries

**\* Note**



**\* Note: Except those that are admissible by the provisions of the UPU Acts.**

**Postal items cannot be accepted if the descriptions of the contents do not make it clear that they do not contain dangerous goods.**

| Examples of descriptions with which postal items cannot be accepted   | Reason why unacceptable   | Examples of descriptions with which postal items can be accepted |
|---|---|--|
| No descriptions or vague descriptions such as “miscellaneous goods”, “daily commodity”, and “precision instruments”.<br>Product serial numbers instead of descriptions. | Contents are unknown.   | Wallets, accessories, compact discs                              |
| Household goods   | Possible to contain <b>spray can</b> or <b>compressed gas cylinder</b>            | Food, cloth  |
| Sporting goods  | Possible to contain <b>aerosol</b> .  | Racket, ball, shoes  |
| Camping goods   | Possible to contain <b>gas cylinder</b>   | Tent, sleeping bag   |
| Diving goods  | Possible to contain a <b>tank</b>   | Wet suit, hydroscope, snorkel                                    |
| Medical drugs   | Possible to contain <b>medical alcohol</b>  | Cold medicine, digestive medicine                                |
| Cosmetics   | Possible to contain <b>flammable perfume, manicure goods, nail-polish remover</b> | Soap, lip rouge  |
| Automobile components   | Possible to contain <b>flammable fuel additives, aerosols, compressed gas</b>     | Mirror, seat cover   |
| Toys  | Possible to contain <b>batteries</b>  | Toy building blocks  |

**Examples of unacceptable articles**

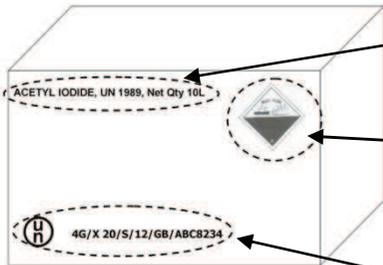


No package having any of the following labels or markings is admissible by the international post unless it has been confirmed that no dangerous goods are contained and that the labels/markings have been deleted (except certain exceptions).

| Dangerous Goods Labels and Markings  |   |  |
|--|---|--|
| <p><b>Explosive</b></p>  <p>Minimum dimensions:<br/>100 x 100 mm</p>  | <p><b>Explosive</b></p>  <p>Minimum dimensions:<br/>100 x 100 mm</p>   | <p><b>Flammable Gas</b></p>  <p>Minimum dimensions:<br/>100 x 100 mm</p>  |
| <p><b>Non-flammable, non-toxic gas</b></p>  <p>Minimum dimensions:<br/>100 x 100 mm</p>                                     | <p><b>Toxic gas</b></p>  <p>Minimum dimensions:<br/>100 x 100 mm</p>   | <p><b>Flammable liquid</b></p>  <p>Minimum dimensions:<br/>100 x 100 mm</p>   |
| <p><b>Flammable solid</b></p>  <p>Minimum dimensions:<br/>100 x 100 mm</p>  | <p><b>Substance liable to combust spontaneously</b></p>  <p>Minimum dimensions:<br/>100 x 100 mm</p>   | <p><b>Substance that emit a flammable gas when in contact with water</b></p>  <p>Minimum dimensions:<br/>100 x 100 mm</p> |
| <p><b>Oxidizing substance</b></p>  <p>Minimum dimensions:<br/>100 x 100 mm</p>   | <p><b>Organic peroxide</b></p>  <p>Minimum dimensions:<br/>100 x 100 mm</p>   | <p><b>Toxic substance</b></p>  <p>Minimum dimensions:<br/>100 x 100 mm</p>   |
| <p><b>Infectious substance</b></p>  <p>Minimum dimensions:<br/>100 x 100 mm</p> <p>For small packages,<br/>50 x 50 mm</p> | <p><b>Radioactive material<br/>(Category I, Category II, Category III)</b></p>  <p>Minimum dimensions:<br/>100 x 100 mm</p>  | <p><b>Corrosive</b></p>  <p>Minimum dimensions:<br/>100 x 100 mm</p>  |
| <p><b>Excepted quantity package marking</b></p>  <p>Minimum dimensions:<br/>100 x 100 mm</p>                              | <p><b>Lithium battery label</b></p>  <p>Note: A postal item on which a "Lithium Battery Label" is affixed is not admissible.</p> <p>Minimum dimensions:<br/>120 x 110 mm</p> |  <p>Minimum dimensions:<br/>100 x 100 mm</p>  |

|   |   |  |   |
|---|---|--|---|
|   | Keep away from the heat   | Cryogenic Liquids  | Cargo Aircraft Only   |
|   |  <p>Minimum dimensions:<br/>74 x 105 mm</p>  |  <p>Minimum dimensions:<br/>75 x 105 mm</p>   |  <p>Minimum dimensions:<br/>120 x 110 mm</p>   |
|   | Magnetized material   | Limited quantities   | Environmentally hazardous   |
|   |  <p>Minimum dimensions:<br/>110 x 90 mm</p>  |  <p>Minimum dimensions:<br/>100 x 100 mm<br/>For small packages,<br/>50 x 50 mm</p>   |  <p>Minimum dimensions:<br/>100 x 100 mm</p>   |
| <b>Admissible by the post only<br/>under certain conditions</b> | Infectious substance (Note 1)   | Miscellaneous dangerous good (Note 2)  | Radioactive substance, excepted package (Note 3)  |
|   |  <p>Minimum dimensions:<br/>50 x 50 mm</p> <p>Note 1. This illustrated mark shall be displayed on the external surface of the outer packaging containing an infectious substance stipulated in Article RL130 of the Letter Post Regulations. If this mark is displayed on an item other than that containing an admissible infectious substance, the sender shall black it out before posting it.</p> |  <p>Minimum dimensions:<br/>100 x 100 mm</p> <p>Note 2. If solid carbon dioxide (dry ice) is used as a refrigerant for an infectious substance, this marking shall be displayed on the external surface of the package. If this mark is displayed on an item other than that containing dry ice for that purpose, the sender shall black it out before posting it.</p> |  <p>Minimum dimensions:<br/>74 x 105 mm</p> <p>Note 3. This label shall be attached to an item containing radioactive material stipulated in Article RL131 of the Letter Post Regulations. If this label is attached to an item other than that containing a radioactive material, the sender shall black it out before posting it.</p> |

## Examples of labelling and marking



### Marking of UN Number:

UN or ID (identification) number that is assigned to the article or substance under the United Nations classification system is displayed. It is prefixed by the letters "UN" followed by a 4-digit number.

### Dangerous Goods label

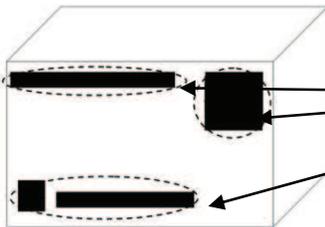
### UN Specification Markings:

The United Nations packaging symbol is indicated on the outer package followed by packaging marking, it consists of the code number of the packaging type, packaging group, year of manufacture, state of manufacture and so on.



UN Packing  
Symbol

## How to black out labels/markings

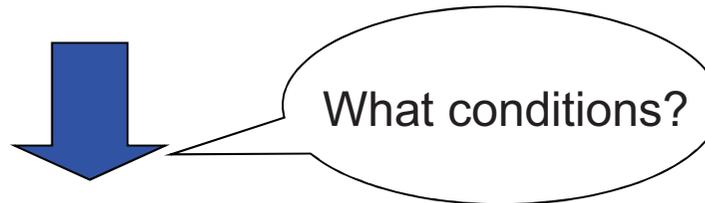


Sufficiently blacked out so that no part of the labels/markings can be seen.

# Acceptance of Postal Items containing Lithium Cells/Batteries

Lithium batteries installed (contained) in equipment can be accepted by the post under certain conditions

Currently, lithium batteries, except button batteries, cannot be sent by the international mail (letter-post items, parcels and EMS). The relevant provisions of the Universal Postal Convention were amended, and lithium cells and batteries installed (contained) in equipment can be accepted under certain conditions by the post from (TBD).



## ■ Conditions for acceptance (summary)

1. Conditions about cells and batteries
2. Conditions about installing and packaging
3. Conditions specified by destination countries

## 1. Conditions for batteries (1)

**Lithium cells and batteries satisfying all of the following TECHNICAL CONDITIONS can be accepted by the post.**

A. The lithium content or the watt-hour rating does not exceed the specified value.

Notes: - For a lithium metal or lithium alloy cell, the lithium content shall not be more than 1g, and for a lithium ion cell, the

watt-hour rating shall not be more than 20 Wh.

- For a lithium metal or lithium alloy battery, the aggregate lithium content shall not be more than 2g, and for a lithium ion battery, the watt-hour rating shall not be more than 100 Wh. (Please see Article 16 of the Universal Postal Convention.)

B. A maximum of **four lithium cells** or **two lithium batteries** installed in equipment.

C. Each cell and battery shall be of the type proved to meet the requirements of each test in the United Nations Manual of Tests and Criteria, Part III, sub-section 38.3.

D. Lithium cells and batteries shall not be those that are identified by the manufacturer as being defective for safety reasons.

E. Lithium cells and batteries shall not be those that have been damaged.

F. Lithium cells and batteries shall not be those that have the potential for producing a dangerous emission of heat or fire or for short circuiting.

## 1. Conditions for batteries (2)

**IN PRACTICE, the following equipment is in general acceptable.**

|   |   |   |   |
|---|---|---|---|
| Video cameras   | Walkie talkies (2 way radio)  | GPS devices   | Radio controlled toys   |
|    |    |    |    |
| Cameras   | Scanner   | Cellular Phones   | MP3 players   |
|    |    |    |    |
| Bluetooth headsets  | Smartphones/mobiles   | Laptop computers  | Shavers   |
|   |   |   |   |
| Power Drills  | Tablets   | Portable DVD players  | Measuring equipment   |
|  |  |  |  |

**Note:** This is a representative listing of common electronic devices containing 4 or fewer lithium cells or 2 or fewer lithium batteries therefore complying with postal requirements. Acceptance for lodgement as post is not exclusive to these items.

## 1. Conditions for batteries (3)

IN GENERAL, the following equipment is **NOT ACCEPTABLE** since it uses lithium batteries exceeding the Watt-hour rating, lithium content, or does not meet the conditions for acceptance by post.

| Electric bicycles   | Laptops with external battery  | Electric wheelchairs  | Small in-house power generators   |
|---|--|---|---|
|    |    |    |    |
| Batteries not installed in a handset  | 160 watt-hour lithium ion batteries loose or installed in equipment                  | Loose 3.0 Wh batteries not installed in equipment                                     | Automatic external defibrillators (AEDs)  |
|  |  |  |  |

**Note:** Lithium batteries packed alone or those packed with equipment are not acceptable in international mail.

## 2. Conditions about installation and packaging

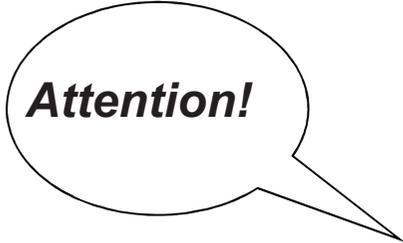
Lithium batteries shall be adequately packed in accordance with ICAO Packing Instructions 967 and 970, in particular, to prevent accidental activation leading to heat, fire or short circuits during transport.

| Required conditions                        |  |
|--|--|
| Conditions about installation in equipment | <ul style="list-style-type: none"><li>- Lithium cells and batteries shall be protected so as to prevent short circuits. This includes protection against contact with conductive materials within the same packaging that could lead to a short circuit.</li><li>- Equipment must be equipped with an effective means of preventing accidental activation.</li><li>- The equipment must be packed in a strong outer packaging constructed of suitable materials of adequate strength and design in relation to the packaging's capacity and its intended use, unless the cell or battery is afforded equivalent protection by the equipment in which it is contained.</li></ul>                                  |
| Conditions about packaging                 | <ul style="list-style-type: none"><li>- Equipment containing lithium cells or batteries must be assembled and closed when prepared for transport so as to prevent any loss of contents which might be caused under normal conditions of transport, by vibration or by changes in temperature, humidity or pressure (due to altitude, for example). The equipment must be packed, secured or cushioned in an outer packaging in such a way that it does not break under normal conditions of transport.</li><li>- Equipment containing lithium cells or batteries must be secured against movement within the outer packaging and be packed so as to prevent accidental operation during air transport.</li></ul> |

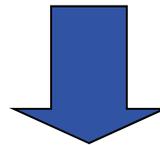
### 3. Conditions of destination countries

**Some destination countries might not accept equipment containing lithium batteries sent by the post.**

*Note: A list of destination countries that do not accept lithium batteries sent by the post will be advised as soon as such information has been provided from the UPU International Bureau.*

A white speech bubble with a black outline and a tail pointing towards the bottom right. Inside the bubble, the word "Attention!" is written in a bold, black, sans-serif font.

**Attention!**



Please check with **the list of prohibited articles** by destination country.

## 4. Operational Flow for Accepting Lithium Batteries (Summary)

### 1. At the time of acceptance at the post office

**Check as to whether the content meets the following conditions from the information filled on the customs declaration or from the sender's declaration.**

**- Whether the content is equipment containing acceptable lithium batteries.**

Note: The following equipment may contain unacceptable batteries. Therefore, please do not accept it with explaining the reason to the sender, unless otherwise proved.

- electric bicycle, power-operated wheel, AED, in-house power generator, industrial instrument

**- Whether lithium cells or batteries are installed in the said equipment.**

Note: Lithium cells and batteries alone or those packed with equipment cannot be accepted by the post.

**- Whether equipment containing lithium cells or batteries must be properly packed so as not to be damaged.**

**- Whether the destination country does not accept the batteries.**

### 2. At the outward exchange office

**- Check that description in the CN22/CN23 does not indicate dangerous goods.**

**- Any items identified by the appropriate detection devices (e.g. X-ray) as being suspiciously containing unacceptable dangerous goods must be further examined.**

## Frequently Asked Questions and Answers

|   |   |  |
|---|---|--|
| 1 | <p>What is the difference between a lithium cell and a lithium battery?</p>   | <p>A lithium cell is a single enclosed electrochemical unit consisting of one positive and one negative electrode that exhibits a voltage differential across the two terminals. A lithium battery is one or more cells electrically connected. A single cell battery is considered to be a cell and not a battery.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Cell (Examples)</p>  </div> <div style="text-align: center;"> <p>Battery (Examples)</p>  </div> </div> |
| 2 | <p>(1) What are lithium metal batteries?<br/>(2) What are lithium alloy batteries?<br/>(3) What are lithium ion batteries?</p>  | <p>(1) Lithium metal batteries are those in which the metallic lithium is used for the negative electrode.<br/>(2) Lithium alloy batteries are those in which the lithium alloy is used for the negative electrode.<br/>(3) Lithium ion batteries are those in which oxidized metallic lithium is used for the positive electrode, and lithium ions move from the negative electrode to the positive electrode during discharge.</p> <p>Lithium metal batteries and lithium alloy batteries are generally non-rechargeable (primary batteries) and lithium ion batteries are rechargeable (secondary batteries).</p>   |
| 3 | <p>What is the basis for defining the scope of lithium batteries acceptable by the post?</p>  | <p>Lithium batteries that do not require a “Lithium Battery Label” according to the ICAO Technical Instructions, namely, those that meet all of the conditions specified in Part II of its Packing Instruction 967 and Packing Instruction 970, are acceptable by the post.</p>  |
| 4 | <p>What are the reasons for lithium batteries packed with equipment not being accepted by the post while the same type and quantity of lithium batteries installed in equipment are accepted?</p> | <p>The scope of lithium batteries that do not require a lithium battery label is defined by the International Civil Aviation Organization (ICAO) as being that the equipment itself provides the required protection to prevent damage to or short-circuiting of the lithium batteries while loose batteries or batteries packed with equipment have a greater risk of short-circuiting.</p>   |
| 5 | <p>Will all lithium batteries installed in equipment be accepted by the post?</p>   | <p>In general, lithium cells and batteries used in most equipment marketed to consumers could be accepted by the post. The following equipment may contain lithium cells or batteries that are beyond the limitation and will not be accepted:</p> <ul style="list-style-type: none"> <li>- Cameras used at broadcasting stations, electric bicycles, electric wheelchairs, automatic external defibrillators (AED), in-house power generators, and industrial instruments.</li> </ul>   |
| 6 | <p>Is the amount of metallic lithium contained in the lithium metal cells or batteries clearly indicated on them?</p>   | <p>In general, the amount is not indicated. Most lithium metal cells are a type of coin called the “CR” type and they in general meet the specified condition for the post, except those used in automatic external defibrillators (AED).</p>  |

|   |   |   |
|---|---|---|
| 7 | How do I determine the watt-hour rating for a particular lithium ion battery? Is it indicated on the battery itself?  | <p>The watt-hour (Wh) rating is a measure by which lithium ion batteries are regulated. You can calculate the number of watt-hours your battery provides if you know the battery's nominal voltage (V) and the capacity in ampere-hours (Ah) as follows:</p> <p style="text-align: center;"><b>(V) x (Ah) = Wh</b></p> <p>If only the milli-ampere-hours (mAh) are marked on the battery then divide that number by 1000 to get ampere-hours (Ah) (i.e. 4000 mAh/1000 = 4.4 Ah).</p> <p>Lithium ion batteries manufactured after January 1, 2009 are required to be marked with the watt-hour rating.</p> |
| 8 | Can a laptop computer and a mobile phone be sent in one package by the post?  | <p>Most equipment marketed to consumers contains one lithium battery. The watt-hour rating of the lithium battery used for a laptop computer is in general below 100 Wh and that for a mobile phone is very small. Therefore, a laptop computer and a mobile phone can be sent by the post in one postal item.</p>  |
| 9 | Is a "Lithium Battery Handling Label" specified in the ICAO Technical Instructions necessary to be attached on a postal item containing lithium batteries installed in equipment? | <p>No. If a "lithium battery handling label" is attached, the item may be regarded as containing lithium batteries that are not accepted by the post.</p>   |

# Incident Reporting

In the event of dangerous goods being detected or of the occurrence of incidents staff should report through local management of the post office/sort centre/exchange office to the regional bureau/headquarters using the established reporting systems.

The following information should be available for all staff members concerned such as by displaying in the office:

- description of the reporting system
- contact details of managers concerned within the postal operator
- contact details of the postal security manager
- contact details of the nearest police, ambulance and fire services