

Sending lithium batteries

The sender is responsible for the correct classification and the resulting requirements concerning packaging, markings and documentation according to the Transport of dangerous goods or TDG legislation applicable at the time.

Battery types

Lithium is a metal that produces explosive hydrogen gas when it reacts with water. In the transport regulations, lithium batteries (hereinafter referred to as "batteries") are divided into metal batteries and ion batteries. They both have their specific regulations based on the structure and the required security measures.

- Lithium metal batteries (UN 3090) are usually not rechargeable. A button battery (used in watches, calculators, etc.) is a typical example. Extinguishing lithium metal batteries in case of fire is more difficult than that of ion batteries.
- Lithium ion batteries (UN 3480) are usually rechargeable. The battery of a cell phone is a typical example. Larger batteries are used as power sources of different kinds of devices.
- Both battery types have been given second UN numbers to describe situations where the batteries are not sent alone, but rather are packed with or contained in equipment (UN 3091 and UN 3481).
- The legislation provides several reliefs concerning the shipping of consumer electronics, for example.

Terms and conditions of relief from the TDG regulations

A shipment may be exempted from TDG regulations if it meets all the hereafter described conditions concerning 1. volume/power, 2. packaging and 3. markings. If any of these conditions are not fulfilled, the shipment will be handled as a TDG shipment.

1. Small amount of lithium in the cell or the battery or low power

Small amount of lithium in the cell or the battery – the amount is considered small and the power low in the following cases:

- Lithium metal or lithium compound cell: maximum 1 g of lithium
- Lithium metal or lithium compound battery: maximum 2 g of lithium
- Lithium ion cell: nominal power 20 Wh
- Lithium ion battery: total nominal power 100 Wh

In practice, all lithium batteries used in consumer electronics are below these values, with the exception of especially powerful laptop batteries, for example. Devices intended for professional use usually exceed the power limit.

21.4.2017

2. Solid packaging

Different regulations apply to sending batteries *installed* in a device than to batteries sent separately from a device.

- A battery installed in a device is usually protected well, but the cells or batteries need to be protected against damage and short circuit in any case. In addition, the unintentional starting of the device must be prevented.
- Cells and batteries not installed in devices must be packed in an inner packaging, which fully protects the cell or the battery. In addition, a hard and robust enough outer packaging must be used. Additionally, short-circuiting of the device must be prevented.

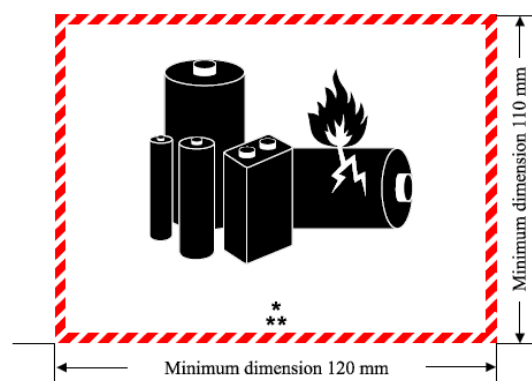
A package, which includes batteries without a device, can weigh up to 30kg at the maximum.

3. Appropriate markings

No markings are needed if the package contains button cells installed in devices (including circuit boards) or a maximum of four cells installed in devices or a maximum of two batteries installed in devices.

Each package containing unattached batteries or more than four cells installed in devices or more than two batteries installed in devices, must be marked with lithium battery mark.

If the shipment contains more than two packages containing a maximum of four cells installed in devices or a maximum of two batteries installed in devices, it needs to be marked.



* Place for UN number (s) ** Place for telephone number

Examples

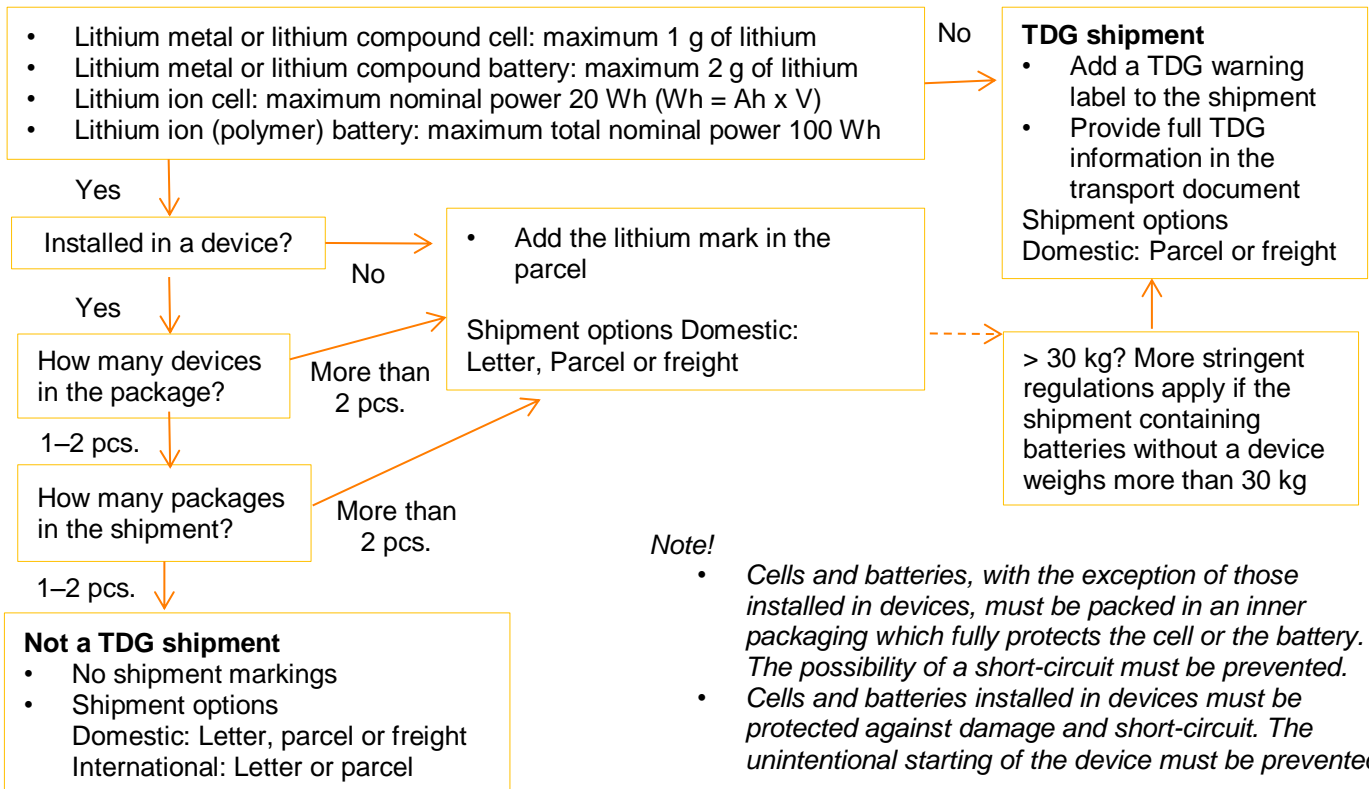
An individual phone containing a battery is exempted from the above marking. The phone can be sent domestically as a letter, a parcel or as freight and internationally as a letter or a parcel.

21.4.2017

A package containing a loose battery or a phone with the battery packaged with the phone (such as resale packaging) must be marked with a lithium battery mark. It can be sent domestically as a letter, a parcel or as freight. Please note that it is forbidden to send it as an international postal shipment (letter, postal parcel or EMS).

Quick instructions

What type of cell or battery?



More stringent TDG regulations apply to shipments exceeding the limit values stated in the instructions. Contact our advisor to agree on the transport of such shipments or the transport of batteries for destruction.

NOTE: Lithium batteries identified by the manufacturer as being defective for safety reasons, or that have been damaged, are forbidden for transport.

Further information

For further information on the shipping of dangerous goods, please contact your Posti contact person or TDG safety advisor Pauliina Auveri, tel. +358 20 452 0092, pauliina.auveri@posti.com or our customer service:

Customer service for consumers +358 200 71000, consumerservice@posti.com, Corporate Customer Service +358 200 77000, businesscustomerservice@posti.com.

* TDG (transport of dangerous goods)

Source

Legal code ADR 2017