More practical information – Lithium batteries

What are lithium batteries?

Lithium batteries are mainly of two types: **lithium metal batteries** and **lithium ion batteries**. Basically, the difference between them is that lithium metal batteries are those that are not rechargeable, thus, primary, and lithium ion batteries are those that can be recharged. As an example, your laptop or cell phone is likely to have a lithium ion battery, whereas your watch may have a lithium metal battery.

What are the risks?

If damaged, short-circuited, heated, or sometimes because of a bad design, batteries may catch fire and explode. This is a particularly dangerous situation that must be avoided at all cost during the flight.

How to understand which ones are allowed

You are allowed to carry portable electronic devices (such as watches, cameras, phones, laptops…) that contain lithium metal or ion cells or batteries for your personal use under the following conditions:

- They should be carried in your carry-on luggage, although they may be in your checked baggage if needed as long as you take measures to prevent unintentional activation.
- The battery must not exceed a **Watt-hour (Wh)** rating of 100 Wh or 2 grams of lithium content (the first limit is for rechargeable lithium-ion batteries and the second for lithium metal batteries, which are usually not rechargeable). To calculate Watt-hours, just multiply the battery voltage by the Amp hours (Ah), as the Wh rating is not marked on them.
- If the Wh is higher than 100 but not higher than 160, you will need an approval from the operator to carry the item. It is not allowed to transport any item which battery exceeds 160 Wh.

You may also carry **spare batteries** or a **power bank** for these devices for your personal use. However, these may never be in your checked baggage and they must be individually protected to prevent short circuits (with insulating the terminals with tape, putting each battery in a plastic bag, or using any other appropriate way). The limits in terms of Wh and lithium content are the same as above.

Also, spare batteries, including power banks, **should not be recharged while on board the aircraft**. Additionally, power banks should **not be connected or providing power** to a device while on board the aircraft.

All batteries must have been **properly tested** in accordance with the United Nations Manual of Test and Criteria. To ensure this, buy all your batteries from original retailers and avoid purchasing cheap articles from untrustworthy sources.

When you hand your bag at the gate to be put on the hold, please remember to take all your spare batteries and electronic devices out.

How to identify and react if something happens

The fact that a battery is swollen, too hot or producing smoke is a clear sign that something is wrong with it. If you notice anything different in your battery during the flight or in the airport, you should immediately contact a cabin crew member or a member of the airport's staff. The temperatures that the battery may reach are quite high. Batteries are usually made of more than one cell. If one of the cells of the battery catches fire, it might spread to adjacent cells, provoking unexpected explosions and unforeseen flames. Do not try to put out the fire yourself, as you may worsen the situation or get hurt. Allow cabin crew to do their job.

Should you lose your device or battery during the flight, immediately call a cabin crew member and do not operate your seat. Moving your seat can damage or crash the battery in the device and this can start a fire.