

The low-down on Lithium ion Battery safety

Lithium ion (or Li-ion) batteries are now powering everything from phones and laptops to homes, businesses and motor cars. They're generally safe, but if not handled correctly can catch fire or explode.



What are Lithium-ion batteries?

Li-ion batteries are rechargeable, and they pack a lot of energy for their size. They also don't lose a lot of their power through continual recharging – and are good at storing power when not used.

What are they made from?

Typically, Li-ion batteries consist of a series of cells that discharge energy through an electrochemical reaction between lithium compounds and other chemicals like graphite, lithium salt, and a flammable solvent. The cells are separated by dividers within the battery to protect them from damage.

Are they safe?

Generally speaking, yes. They often come with mechanical and electronic safety mechanisms to stop them overcharging and overheating which prevents pressure build up in the cells. That said, there are risks – lithium is a highly reactive and flammable substance and it can cause a fire risk if the battery leaks, for example.

What are the dangers?

Batteries overheating or overcharging, an internal short-circuit, external issues like faulty wiring or battery terminals that make contact with metallic items during storage or transport – these can cause the battery to leak, fire or explosion. If you notice overheating, strange odours or noises, or any changes to appearance – stop using it immediately and call 111 if in doubt.

What can you do to keep them safe?

Only use the chargers that came with the battery. Avoid using third party batteries, while cheaper, can be a much lower quality and may lack some safety features – it's not worth the risk. Also;

- Handle batteries carefully, avoid dropping them or knocking them about
- Don't expose batteries to excessive heat or get them wet
- Store them at room temperature away from direct sunlight
- Don't carry or store batteries with metal items to prevent short circuiting
- Keep away from sharp objects (in a tool box for example)
- Make sure you install the battery correctly
- Think twice before charging devices in your bedroom in case of fire risk.

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