

# LITHIUM-ION BATTERY SAFETY



## Damaged Batteries

A damaged battery can cause severe injuries such as burns or electric shock, start a fire, and expose you to toxic and flammable vapours.

Signs of a damaged battery include:

- » Unusual smells or odour
- » Unusual noises (crackling and hissing)
- » Overheating, especially while charging
- » Changes shape (bulging or swelling)
- » Discolouration or blistering of the case
- » Leaking fluids

If it's safe, unplug the device and move it outside away from other flammable items. Call Triple Zero (000) for emergency help.

Keep damaged batteries outside, in a well-ventilated area at least 10 metres away from any other flammable items until they can be safely disposed of. Contact your local council or visit [bcycle.com.au](http://bcycle.com.au) to find out how.

## Disposing of lithium-ion batteries

Do not dispose of batteries with general household waste, recycling, or in public or industrial bins. They can start fires that could severely injure rubbish collection workers, trucks, and facilities, and passersby.

If the battery is undamaged, it can be recycled through battery drop-off points available throughout Australia.

- » Put electrical tape or sticky tape over the battery terminals.
- » Keep in a cool, dry place away from heat sources and children until you drop them off for recycling.
- » Contact your local council or visit [bcycle.com.au](http://bcycle.com.au) for more information and drop-off locations.



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[www.qfes.qld.gov.au](http://www.qfes.qld.gov.au)

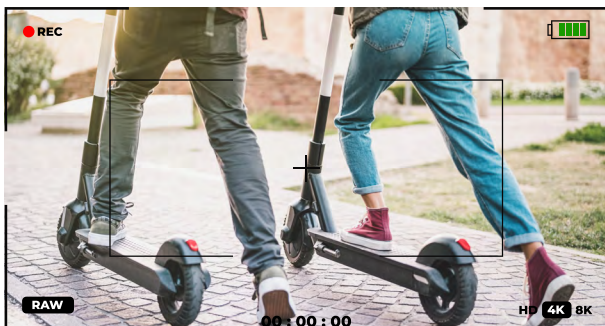
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Technology is soaring ahead, fuelled by rechargeable lithium-ion batteries. They are lighter, smaller, and last longer than traditional batteries. Nearly all rechargeable devices in our homes are powered by these batteries. While they are safe if treated correctly, they are fast becoming a common cause of fires.



### Why do lithium-ion batteries start fires?

A fire can start from a lithium-ion battery when:

- » It's been overcharged – left on to charge even though the battery is full
- » The incorrect charger is used
- » The device or battery has been damaged – dropped, crushed, pierced
- » It overheats
- » There is a system fault or product defect.

A fire that starts from a lithium-ion battery cannot be easily put out with water or a fire extinguisher. These fires are self-sustaining and can make toxic fumes and flammable explosive gas. A battery fire can easily re-ignite once it has been put out.



### What can I do to prevent a fire?

- » Only buy and use products from trusted suppliers. If you buy a second-hand device, check the instructions before using it.
- » Follow the instruction manual for charging your device and only use a charger recommended by the manufacturer.
- » Make sure the charger has the Regulatory Compliance Mark, to show that it meets Australian Standards.
- » Only charge devices until the battery is full and then unplug from the power supply.
- » Never leave batteries and devices on charge when you go out or go to sleep.
- » Charge your devices and batteries on hard surfaces. Never charge them on beds, couches, blankets, or in direct sunlight.
- » Allow the battery to cool down after use and before plugging it in to charge.
- » Keep batteries or devices in a cool dry place. Avoid places where they might get wet or hot, such as in parked vehicles.
- » Never charge a battery that shows signs of damage.
- » Never charge a battery or device in an escape path, hallway or doorway. It could trap you if there is a fire.



### Does my device have a lithium-ion battery?

Lithium-ion batteries come in a range of shapes and sizes, so they fit easily into many different types of products. Most products will have labels printed on them such as lithium-ion, Li-ion, li-po, lithium-polymer or Li+. You can often find them in:

- » Mobile phones
- » Wearables - smart watches, fitness trackers, wireless headphones
- » Laptops and tablet devices
- » Cameras
- » Cordless power tools and garden tools
- » Cordless vacuum cleaners
- » Electric scooters and bikes
- » Children's toys and gel blasters
- » Personal care items - toothbrushes, shavers, hair straighteners.

What to do if fire, smoke or white vapour cloud is coming from the device or battery, or you hear a popping and hissing sound.

- » Alert everyone in the home and evacuate to a safe location.
- » Do not breathe in the air near the device as it's likely to contain toxic vapours.
- » Do not touch the device. It could cause severe burns.
- » Call Triple Zero (000) immediately and wait for emergency services to arrive.

