

# Home Fire Safety

## FACT SHEET



Tasmania Fire Service

### Lithium-ion Batteries

#### Charge it, monitor it, unplug it.

When lithium-ion batteries fail they can get very hot very fast. They can burst violently, hiss and release toxic, flammable and explosive gases. This can cause a very intense fire that is difficult to put out.



## What is a lithium-ion battery?

Lithium-ion batteries are a type of rechargeable battery that can store a large amount of energy in a smaller space than traditional batteries.

Lithium-ion batteries come in a variety of shapes and sizes for use in many portable devices, including:

- Light Electric Vehicles (LEVs) such as e-bikes, e-scooters, electric mobility devices and hoverboards
- Toys, drones and cameras
- Power tools
- Laptops, mobile phones, tablets and smart watches
- Vapes and e-cigarettes
- Electric and hybrid vehicles
- Home energy storage systems (home solar batteries).

Lithium-ion batteries may have some form of marking, such as 'lithium-ion', 'Li-ion', 'li-po', 'lithium-polymer' or 'Li+'.

## Why do lithium-ion batteries catch fire?

Lithium-ion batteries are highly flammable. They can catch fire if they are:

- Overcharged
- Charged using a charger that doesn't meet Australian Standards
- Left somewhere very hot
- Damaged
- Not working properly.



Look for these symbols when buying electrical goods, including chargers.



**If a battery or device is smoking, flaming or melting, get out and call Triple Zero (000) immediately!**

## Light Electric Vehicles (LEV)

Light electric vehicles (LEV) include electric bikes (e-bikes), electric scooters (e-scooters), electric mobility scooters and items such as hoverboards, electric skateboards and monoboards.

When you charge the Lithium-ion batteries for your vehicle:

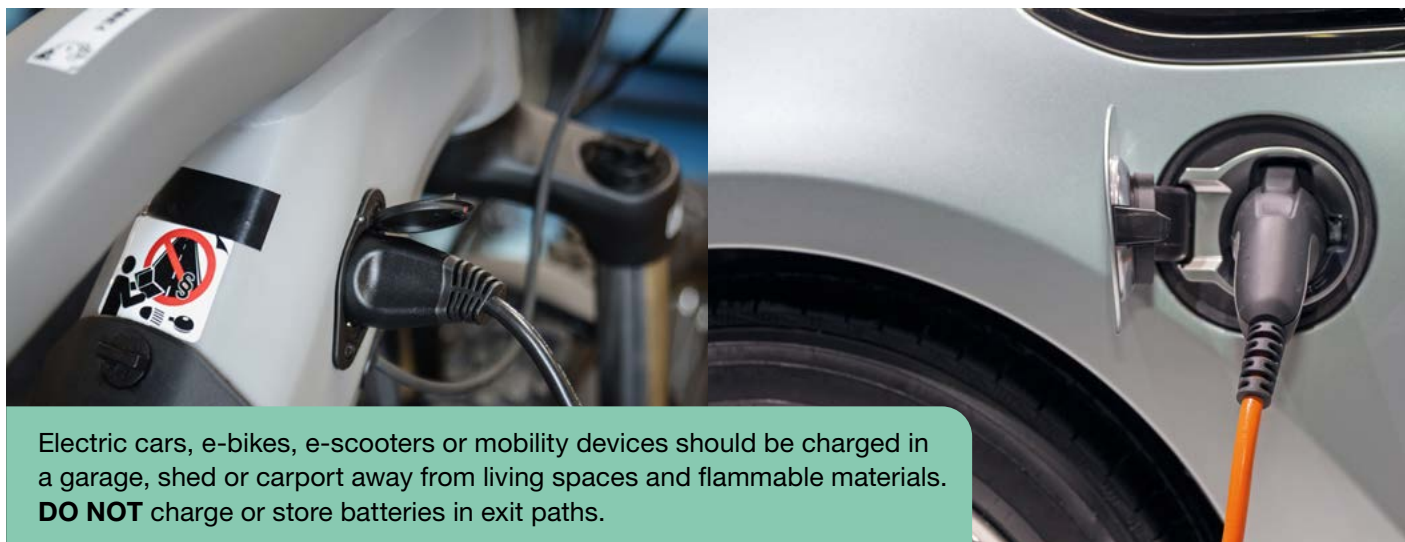
- Only use battery chargers that are recommended by the manufacturer
- Check that your charger has the Regulatory Compliance Mark to show that it has met the relevant Australian Standards
- Don't leave batteries or LEVs unattended
- Once the battery is fully charged disconnect it from the charger
- Allow time for batteries to cool down after use and before recharging



- Don't charge your batteries or LEVs in living areas
- Batteries and LEVs should be charged in a well-ventilated area such as outside in a garage or a car port
- Don't store batteries or LEVs in areas where they may get hot or wet
- Don't charge batteries or LEVs on bedding or lounges - only charge on solid, non flammable surfaces
- Don't charge batteries or LEVs in direct sunlight or anywhere hot
- Don't leave batteries or LEV in parked vehicles where they can quickly build up heat
- Never charge a battery or LEV that is showing signs of damage or is hot.

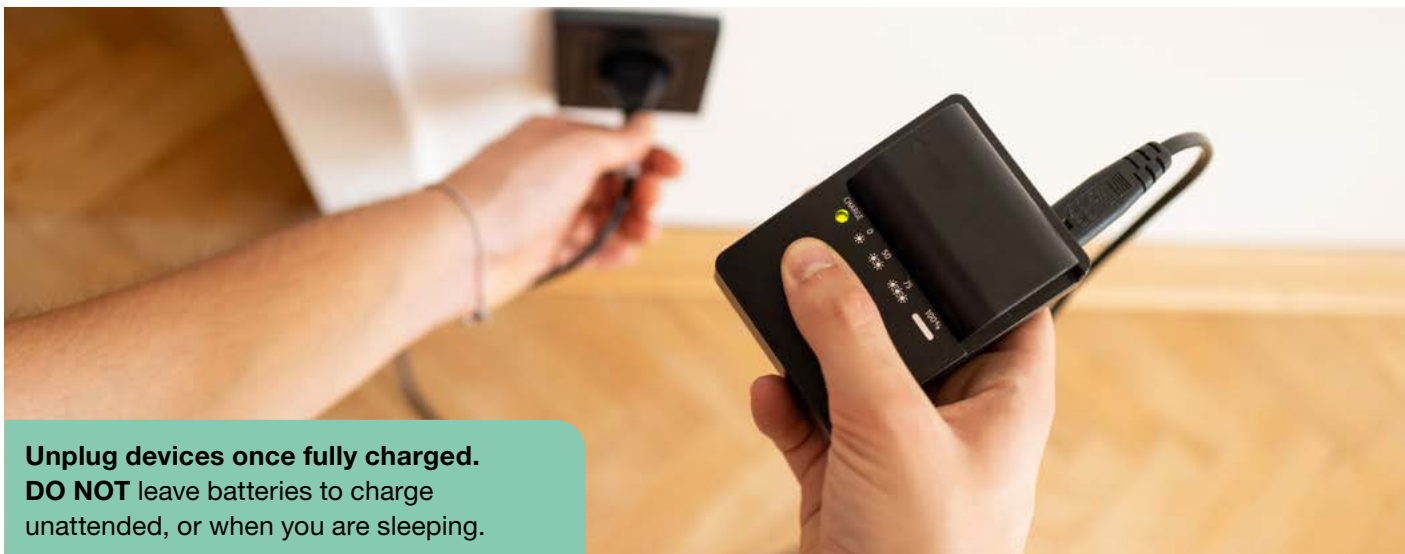


**If you charge batteries or LEVs in a garage or shed, make sure you have a working smoke alarm installed.**



Electric cars, e-bikes, e-scooters or mobility devices should be charged in a garage, shed or carport away from living spaces and flammable materials. **DO NOT** charge or store batteries in exit paths.

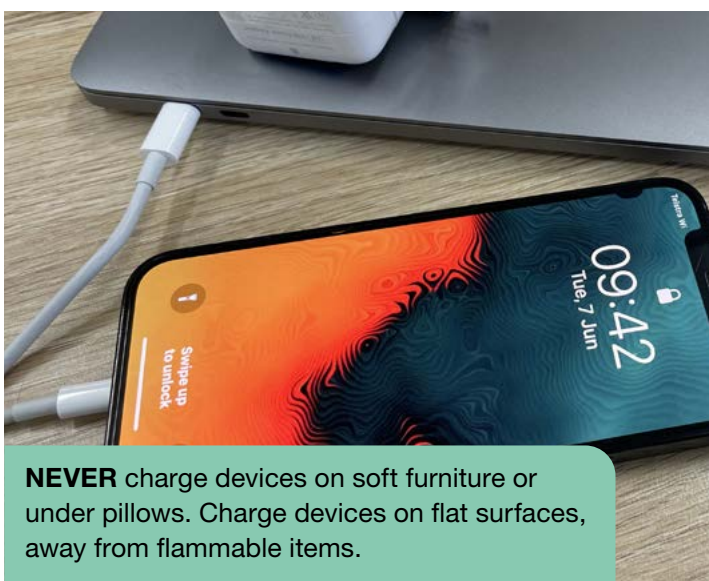
# Lithium-ion Batteries



**Unplug devices once fully charged. DO NOT** leave batteries to charge unattended, or when you are sleeping.







**Only use supplied batteries and chargers,** or alternatives recommended by the manufacturer that meet Australian Standards.



**NEVER** charge devices on soft furniture or under pillows. Charge devices on flat surfaces, away from flammable items.

## Hot tips

-  Ensure working smoke alarms are installed in areas where batteries are charged and stored.
-  Be aware of cheap imitations. Only buy lithium-ion batteries and chargers that meet Australian Standards from reputable suppliers.
-  Allow time for large batteries to cool down after use and before recharging.
-  **DO NOT** use batteries that show signs of swelling, bulging, leaking, overheating, or damage (e.g. cracked, dented, punctured, or crushed). Treat them with caution when handled or moved.



**DO NOT** dispose of batteries or devices in waste or recycling bins. Contact your local council for instructions for where and how to dispose of or recycle batteries.