

Fire safety for E-bikes, e-scooters and other light electric vehicles (LEV)

Electric bicycles (e-bikes), electric scooters (e-scooters), electric mobility (e-mobility) scooters, and self-balancing scooters (hoverboards), known as “micromobility” devices or “light electric vehicles (LEV)”, are growing in popularity.

LEVs commonly contain lithium-ion batteries. They are light-weight, energy dense and long lasting but can be more volatile than traditional batteries.

Risk: Lithium-ion Batteries can be a fire risk.

If a Lithium-ion Battery is improperly charged, handled, stored or disposed of, there is a risk of overheating, catching fire or explosion. This also increases the risk of a house fire, garage fire or personal injury.



Photo credit Fire Rescue New South Wales



Photo credit Fire Rescue New South Wales

Safety Advice

- Purchase products from a reputable supplier and follow the manufacturer's instructions
- Only use chargers and cords that are originally supplied with that device. Using chargers with incorrect power delivery (voltage and current) can cause damage to the battery or overheating that can lead to fires.
- Only use batteries that are designed for that device.
- Check that chargers have the Regulatory Compliance Mark, to show that they meet the relevant Australian Standards.
- Avoid charging LEV batteries overnight or leaving devices unattended while charging. Once the indicator shows that a device or battery has been fully charged, disconnect it from the charger.
- Devices should always be charged on non-combustible surfaces.



- Avoid locations such as couches, beds and carpets.
- Where possible, LEVs should be stored and charged away from living spaces. Keep them away from any exit doors, escape routes, and other combustible materials. We recommend installation of a smoke alarm where LEVs are charged.
- Only have device repair, battery replacement or upgrades performed by a qualified professional.
- Never store or leave LEV batteries or devices in areas where they can be exposed to heat or moisture. Do not leave devices in direct sunlight or in parked vehicles where they can quickly heat up. Let batteries cool before recharging.
- Don't use LEV batteries or devices that show signs of swelling or bulging, leaking, overheating, or signs of mechanical damage (cracked, dented, punctured, or crushed). Don't touch leaking or damaged batteries (use gloves) and clean up any spilled material carefully. If safe to do so remove the battery away from anything that can catch fire, preferably outside, and follow disposal instructions below.

Warning Indicators:

Stop using the battery if you notice strong odours, colour change, extreme heat, change in shape, leaking or unusual sounds (for example popping or hissing). If safe to do so remove the device away from anything that can catch fire.

If your battery catches fire ring 000 immediately and wait in a safe location for firefighters to arrive.

Lithium-ion Battery Disposal

There are risks if Lithium-ion batteries are not disposed of correctly. Proper disposal avoids damage or puncture by heavy machinery during transport or processing which may lead to fires.

FRV supports safe Lithium-ion battery disposal, for more information on where and how to dispose of used batteries please use the below links:

B-cycle www.b-cycle.com.au/drop-off

Plant Ark www.recyclingnearyou.com.au/batteries