



Lithium-Ion Batteries: Dangers and Fire Prevention

PLUG INTO SAFETY.

Lithium-ion batteries are rechargeable. They are used in many personal electronics such as **laptops**, **tablets**, **cell phones**, **electric toothbrushes**, **tools**, **hoverboards**, **scooters**, **vaping devices** and for **solar power backup** storage.





Hazards

- Chemicals (carbon monoxide, hydrogen, carbon dioxide) can leak from damage.
- Explosion dangers, with rapid-fire growth.
- Pocket-sized items (e-cigs) can catch fire inside the pocket, burning the owner.

Causes of Damage

- Overcharging the battery
- Physical damage (dents, punctures)
- Temperatures above 130°F and below 32°F

** Remove lithium-powered devices and batteries from the charger once they are fully charged. **

Prevention

- Follow the manufacturer's instructions for using, charging, storing, maintaining, and disposing.
- Only buy batteries from a reputable manufacturer and only use a manufacturer-approved charger.
- Inspect batteries when first installed and after use. If you notice damage, do not recharge it.
- Do not overcharge batteries. Do not charge them on furniture, your bed, or under a pillow.
- When storing an item with a lithium-ion battery, remove the battery from the item (if possible). Store in a cool, dry location.
- Do not dispose of these batteries in household garbage or recycling bins.

Warning Signs of a Potential Lithium-Ion Battery Fire

NOISE

<u>ODOR</u>

SMOKE

Failing batteries have been reported to make hissing, cracking, or popping sounds.

If you notice a strong or unusual odor coming from the battery, this is a bad sign. These batteries emit toxic fumes when they fail.

If your device is smoking, a fire may have already started.

RECYCLING BATTERIES EPA



