



BATTERY BASICS

Fire Safety Tips Lithium-Ion Batteries

Lithium-ion (Li-ion) batteries are everywhere. The most popular rechargeable battery comes in multiple sizes and shapes and powers everything from smartphones, laptops and tablets to handheld power tools and toys.

Li-ion batteries, however, store a large amount of energy in a small space and are more easily damaged than other batteries. **If damaged or improperly stored, charged or disposed of, they can catch fire or explode.** This is called thermal runaway. See the diagram on the right.

BATTERY WARNING SIGNS!

Look for these warning signs to avoid potential battery fires!

- OVERHEATING
- DAMAGE
- SWELLING
- LEAKING

Avoid using the device and store away from flammables.

BATTERY FIRES!

Battery fires pose dangerous and unique hazards including:

- Intense heat;
- Rapid spreading;
- Toxic emissions; and
- The risk of re-ignition.

DO NOT attempt to extinguish a battery fire yourself. **Call 911!**

7 Safety Tips to Avoid Battery Fires

- 1. Always follow the battery manufacturer's instructions.**
- 2. Store properly.**
Keep batteries out of sight and reach of children in a cool, dry place.
- 3. Don't use batteries that are damaged.**
- 4. Always charge your device where you can see it.**
- 5. Do not overcharge devices or charge on a bed or under a pillow.**
Batteries may overheat, explode, and catch fire.
- 6. Check toys and devices regularly.**
Ensure batteries are secure and in good condition.
- 7. Never put Li-ion batteries in your garbage or recycling cart.**
Recycle them at participating drop-off sites.

Thermal Runaway Cycle

Thermal runaway happens when increased heat accelerates the battery's chemical reaction until it gets too hot, starting a fire.

