

# FACT SHEET: Lithium-Ion Battery Safety

## Safe Use and Handling



Lithium-ion batteries supply power to many kinds of devices including smart phones, laptops, scooters, e-cigarettes, smoke alarms, toys, and even cars. Take care when using them. In rare cases, they can cause a fire or explosion.

### ✓ SAFETY TIPS:

- Purchase and use devices that are listed by a qualified testing laboratory.
- **ALWAYS** follow the manufacturer's instructions.
- Only use the battery that is designed for the device.
- Put batteries in the device the right way.
- Only use the charging cord that came with the device.
- **DO NOT** charge a device under your pillow, on your bed or on a couch.
- Keep batteries at room temperature.
- **DO NOT** place batteries in direct sunlight or keep them in hot vehicles.
- Store batteries away from anything that can catch fire.

### WHY ARE LITHIUM-ION BATTERIES UNSAFE?

- These batteries store a large amount of energy in a small amount of space.
- Sometimes batteries are not used the right way; batteries not designed for a specific use can be dangerous.
- Like any product, a small number of these batteries are defective. They can overheat, catch fire, or explode.

### HANDLING LITHIUM-ION BATTERIES SAFELY:

- Only use batteries that are designed for the device in use. Check the manual or the manufacturer website the size and type of batteries to use.
- Avoid charging your device around flammable materials, such as a bed, couch or on paper.
- Charge your device with the power cord that came with it. Never keep lithium-ion batteries near heat sources or in high temperatures, such as direct sunlight, radiators or laptops.
- If you notice signs that the battery has a problem, such as overheating, odor, leaks, bulging, or change in color/shape, shut off the device and move it away from anything that can catch on fire.
- Never throw lithium-ion batteries in the trash. This causes pollution and can be a fire hazard. Used lithium-ion batteries should be taken to a battery recycling location, hazardous waste roundup, or contact your local waste management service provider for disposal instructions.

### ! SIGNS OF A PROBLEM:

Stop using the battery if you notice these problems:

- Odor
- Too much heat
- Leaking, odd noises
- Change in color
- Change in shape

If it is safe to do so, move the device away from anything that can catch fire. Call 911.

### 📱 MORE INFO:



### BATTERY DISPOSAL:

- Do not put lithium-ion batteries in the trash.
- Recycling is always the best option.
- Take them to a battery recycling location or contact your community for disposal instructions.
- Do not put discarded batteries in piles.

### ADDITIONAL RESOURCES:

- FDNY: [Dangers of Lithium-Ion Batteries](#)
- Battery University: [Lithium-ion Safety Concerns](#)
- OSHA: [Preventing Fire and/or Explosion Injury from Small and Wearable Lithium Battery Powered Devices](#)