



# 11. LITHIUM BATTERY SAFETY

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Lithium Batteries are everywhere including cell phones, laptops, tablets, kindles, vapes, e-cigarettes, battery charging packs, cordless power tools, digital watches and electric vehicles

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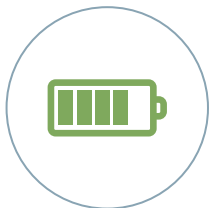
*While these batteries provide an effective and efficient source of power, the likelihood of them overheating, catching on fire, and even leading to explosions increases when they are damaged or improperly used, charged, or stored*





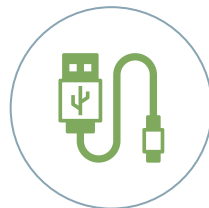
# Thermal Runaway

## 11. Lithium Battery Safety



### What Is It?

***When the lithium-ion cell enters an uncontrollable, self-heating state. Thermal runaway can result in ejection of gas, uncontrollable fires, toxic smoke and is nearly impossible to extinguish***



### Causes

- ***Internal short circuits***
- ***Overcharging***
- ***External heat***
- ***Electrolyte breakdown***
- ***Aging/wear***



### Preventatives

- ***Use compatible chargers***
- ***Don't leave devices unattended while charging***
- ***Don't overcharge***
- ***Store batteries in cool temps***
- ***Place near smoke alarm***



MORRIS COUNTY  
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# ONCE THERMAL RUNAWAY STARTS

- Isolate the battery from anything flammable
- Do not try to extinguish it. Immediately evacuate the area and call emergency services
- If you have a containment device, make sure it has passed the UL5800 standard

