

# OHBA Safety Pages: Lithium-Ion Battery Safety

---

**Introduction:** Lithium-ion batteries power many of our handheld tools and devices because they are lightweight, powerful, and rechargeable. However, if they are damaged, overheated, improperly charged, or poorly stored, they can catch fire or explode. Lithium battery fires burn extremely hot and are difficult to extinguish, which can lead to serious injuries, equipment damage, and property loss.

## **Common Hazards:**

### **1. Overheating and Fire**

Lithium-ion batteries can overheat due to overcharging, using the wrong charger, physical damage, or exposure to high temperatures.

### **2. Physical Damage**

Dropping tools, crushing batteries, or puncturing battery packs can cause internal short circuits and lead to thermal runaway (a rapid chain reaction causing fire or explosion).

### **3. Improper Charging**

Using non-approved chargers, charging on flammable surfaces, or charging unattended can increase the risk of fire.

### **4. Improper Storage and Transport**

Storing batteries in hot vehicles, near combustible materials, or loose in toolboxes with metal objects can create fire and shock hazards.

## **Safe Work Practices:**

### **Use Only Approved Equipment**

- Use manufacturer-approved batteries and chargers.
- Do not mix brands or use counterfeit batteries.

### **Inspect Before Use**

- Check batteries for swelling, cracking, leaking, or unusual odors.
- Do not use damaged batteries, remove them from service immediately.

### **Charge Safely**

- Charge batteries on a non-flammable surface away from combustible materials.
- Do not cover chargers or batteries while charging.
- Never charge unattended or overnight unless manufacturer instructions allow it.

### **Store and Transport Properly**

- Store batteries in a cool, dry place away from direct sunlight.

- Keep terminals covered or in original cases to prevent short circuits. - Do not store batteries in vehicles where temperatures can become extreme.

### **Handle With Care**

- Do not drop, crush, puncture, or modify battery packs.

- Keep batteries away from water unless specifically rated for wet conditions.

---

### **If a Battery Overheats, Smokes, or Catches Fire**

- Move people away from the area immediately.
  - Do not touch the battery or device.
  - Use a Class ABC fire extinguisher if trained and safe to do so.
  - Call emergency services if the fire cannot be controlled.
- 

### **Employee Responsibilities**

- Follow all manufacturer instructions and company safety policies.
  - Report damaged or malfunctioning batteries and chargers.
  - Do not attempt to repair lithium-ion batteries.
  - Participate in safety training and toolbox talks.
- 

### **Key Takeaways**

- Lithium-ion batteries are safe when used correctly, but dangerous when damaged or misused.
  - Always use approved chargers and batteries.
  - Inspect, charge, store, and transport batteries safely.
  - Report and remove damaged batteries immediately.
- 



The information we provide is not intended to include all possible safety measures and controls. In addition, the safety information we provide does not relieve the Members of its own duties and obligations with regard to safety concerns, nor does Oregon Home Builders Association guarantee to the Members or others that the Member's property, job sites and/or operations are safe, healthful, or in compliance with applicable laws, regulations or standards. The Members remain responsible for their own operations, safety practices and procedures and should consult with legal counsel as they deem appropriate.

Employer: \_\_\_\_\_ Project: \_\_\_\_\_

Date: \_\_\_\_\_ Time: \_\_\_\_\_ Shift: \_\_\_\_\_

Number in crew: \_\_\_\_\_ Number attending: \_\_\_\_\_

Safety or Health issues discussed. Include recent accident investigations and hazards involving tools, equipment, the work environment, work practices and any Safety or Health recommendations:

---



---



---



---

Follow up on recommendations from last safety meeting:

---



---

Record of those attending:

Name: (please print)	Signature:	Company:
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		

Supervisor's remarks: \_\_\_\_\_

Supervisor: \_\_\_\_\_ (Print) \_\_\_\_\_ (Signature)