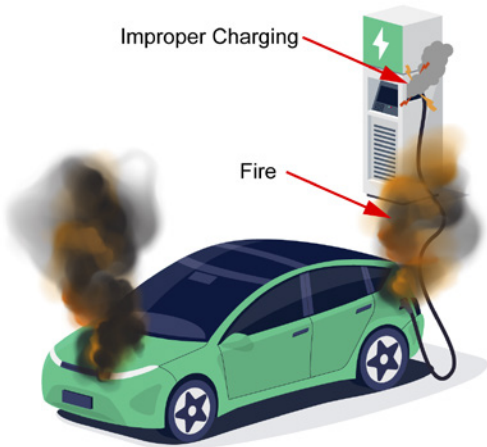


Lithium-Ion Battery Safety

eLearning courses designed to increase productivity and profits



Learning Made Simple, Visual, and Interactive

The THORS *Lithium-Ion Battery Safety* course introduces learners to potential noncritical and critical hazards, providing insights into troubleshooting strategies and emergency responses. This course also covers the battery safety measures, emphasizing the importance of robust management systems, manual service disconnects, and personal protective equipment to ensure safe battery use. Presented in THORS' highly visual and interactive learning format, this course equips learners with foundational knowledge on the safe usage and maintenance of batteries.

Credit Hours **3**

Learning Objectives

- 💡 Identify common noncritical battery hazards such as heavy battery lifting, water ingress, high magnetic field, and high current.
- 💡 Recognize the critical battery hazards such as cell venting, electric shock, arc flash, and fire.
- 💡 Describe the importance of a robust Battery Management System (BMS), Manual Service Disconnect (MSD), and High Voltage Interlock Loop (HVIL) for safe battery operation.
- 💡 Explain the proper use of Personal Protective Equipment (PPE) for electric shock and arc flash.
- 💡 Understand safe battery transportation requirements to ensure safe handling.

Table of Contents

I. Noncritical Hazards

- Heavy Battery Lifting
 - ▣ Occurrence
 - ▣ Prevention
- Water Ingress
 - ▣ Occurrence
 - ▣ Troubleshooting
 - ▣ Prevention
- High Magnetic Field
 - ▣ Occurrence
 - ▣ Troubleshooting
 - ▣ Prevention
- High Current

I. Noncritical Hazards (continued)

- ▣ Occurrence
- ▣ Troubleshooting
- ▣ Prevention

II. Critical Hazards

- Cell Venting
 - ▣ Occurrence
 - ▣ Emergency Response
 - ▣ Prevention
- Electric Shock
 - ▣ Occurrence

II. Critical Hazards (continued)

- ▣ Emergency Response
- ▣ Prevention
- Arc Flash
 - ▣ Occurrence
 - ▣ Emergency Response
 - ▣ Prevention
- Fire
 - ▣ Occurrence
 - ▣ Emergency Response
 - ▣ Prevention

III. Safety Measures

- Engineering Controls
 - ▣ Battery Management System (BMS)
 - ▣ High Voltage Interlock Loop (HVIL)
 - ▣ Manual Service Disconnect (MSD)
- Personal Protective Equipment (PPE)
 - ▣ Electric Shock PPE
 - ▣ Arc Flash PPE
- Safe Battery Transportation

