Michigan Technological University

Lithium-ion Batteries in Research
Fact Sheet

Scope These are guidelines that apply to research that uses research device **Lithium-ion batteries** and/or research on or with standalone **Lithium-ion** batteries or battery packs. This program applies to all campus and university-owned properties and associated events where research using research device **Lithium-ion batteries** is conducted and/or research on or with standalone **Lithium-ion** batteries or battery packs are used, handled, charged, maintained, stored, or collected for disposal.

The Responsibilities for the successful implementation of and adherence to these guidelines are as follows:

Principal Investigator (PI), Faculty, Staff, or student

1. Implementation of all applicable provisions of these guidelines.
2. Obtain and review the battery manufacturer's Safety Data Sheet (SDS), Technical Specification sheet(s), and/or other documents available.
3. As appropriate, ensure that all Safety Data Sheets (SDSs) are in the University SDS Database, SDSONLINE database.
4. Review and follow the manufacturer's recommendations for charging, using, storing and disposal of **Lithium-ion batteries**.
5. Perform job hazard analysis (JHA) to understand the various failure modes and hazards associated with the proposed configuration and type(s) and number of batteries used.
6. Ensure that written standard operating procedures (SOPs) for Li-ion and LiPo powered research devices are developed and include methods to safely mitigate possible battery failures that can occur during assembly, charging, deployment, data acquisition, transportation, storage, and disassembly/disposal.
7. It is university policy that no research devices or standalone **Lithium-ion** batteries or battery packs be charged if it is unattended in a vacant room. Exceptions can be granted after discussion and agreement with the Lab Inspections team (labinspections@mtu.edu).
8. Ensure that at the conclusion of testing, the battery assemblies are disposed of properly or left in a safe condition for storage.
9. Contact EHS at ehs-help@mtu.edu for shipment of **Lithium-ion batteries** or **equipment containing Lithium-ion batteries.**.

Environment, Health, & Safety (EHS)

1. Maintain this Guidance.
2. Assist in training and communicating safety requirements to university personnel.
3. Assist in development of, and in the review of, JHAs.
4. Identify and oversee maintenance of appropriate portable fire extinguishers.
5. Provide guidance on hazardous waste management of damaged or leaking batteries. Batteries that have reached the "end of life" or are no longer in service can be disposed of through the Facilities Battery Recycling program.
6. Manage shipments of **Lithium-ion batteries**.
7. Assist in the investigation of incidents involving **Li-ion/LiPo batteries**.