TOOLBOX TALK AWARENESS PACKAGES

HAZ-BAT · Lithium-ion Battery Safety Awareness

Product Overview

Audience: Workers who use, charge or store battery-powered tools, devices, vehicles and equipment, and their supervisors · Duration: 20–30 minutes

Version 1.0 · 22 November 2026

For anyone who uses, charges or stores battery-powered tools, devices and e-mobility: thermal runaway, the warning signs, safe charging and storage, damaged batteries, e-bikes and e-scooters, and what to do in a battery fire.

Lithium-ion batteries power cordless tools, phones, laptops, e-bikes and e-scooters, mobility aids, forklifts and battery storage. A damaged, faulty or overheated battery can go into thermal runaway: it heats itself, gives off flammable and toxic gases, and can burst into an intense fire that spreads quickly and can reignite hours later. Most battery fires start while charging or after a battery has been damaged.

This talk covers how thermal runaway happens, the warning signs, safe charging and storage, what to do with a damaged battery and how to dispose of it, e-bikes and e-scooters at work, and what to do in a battery fire: raise the alarm, get out, call the emergency number and tell the firefighters. It is awareness, not firefighting training or training to work on high-voltage vehicle batteries or battery storage systems.

Learning outcomes

By the end of the session participants will be able to:

- Explain what thermal runaway is and why lithium-ion battery fires are hard to put out and can reignite
- Recognise the warning signs of a failing battery: swelling, heat, hissing, smell, smoke or leaking
- Charge batteries safely: the right charger, the right place, never unattended where the site says not to
- Store batteries safely, and keep damaged batteries out of use and away from anything that burns
- Follow the site's rules for e-bikes, e-scooters and other personal batteries at work
- Respond to a battery fire: raise the alarm, get out, call the emergency number, and tell firefighters it is a battery fire

What it covers

Module	Covers
Why it matters	Where lithium-ion batteries are at work; Thermal runaway; Warning signs
Controls that work	Charging; Storage; Damaged batteries and disposal
Your part	E-bikes and e-scooters; What to do in a battery fire; Report it

Activities

- Spot the risk: workers look at four charging and storage set-ups and decide what is wrong and how to fix it

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- What would you do: workers decide what to do in four battery situations, from a swollen tool battery to smoke from an e-scooter on charge

What is in the package

Item	File
Editable PowerPoint presentation with speaker notes, plus PDF	02_TRAINING_PRESENTATION/Training Presentation.pptx and .pdf
Facilitator guide with a running sheet, discussion prompts and model answers	03_FACILITATOR_GUIDE/Facilitator Guide.docx and .pdf
Participant handout with the key points to take away	04_PARTICIPANT_HANDOUT/Participant Handout.docx and .pdf
Attendance record form, to capture who attended, when, and who facilitated	06_RECORDS/Attendance Record.docx and .pdf
Excel attendance register	06_RECORDS/Attendance Register.xlsx
Multiple-choice theory assessment, to record understanding if your business wants to	05_ASSESSMENT/Theory Assessment.docx and .pdf
Answer key for the assessment	05_ASSESSMENT/Assessment Answer Key.docx and .pdf
Certificate template	06_RECORDS/Certificate Template.docx
Start here: Read Me First, Product Overview, Permitted Use Terms, Version Information	01_START_HERE/ (four PDFs)

What you need to deliver it

- A facilitator such as a supervisor, leading hand or WHS adviser who has read the facilitator guide and knows your site's arrangements for the topic
- A screen or projector, or printed slides or handouts: it works in a crib room, site office or on a video call
- Your own site procedures for the topic, to point to during the session

Questions

Does it tell us which extinguisher to use on a battery fire? No, on purpose. Advice on fighting lithium-ion battery fires is still developing and depends on the battery and the setting. The talk tells workers to raise the alarm, get out, call the emergency number and tell firefighters it is a battery fire, and asks you to add your own site procedure and your fire service's current advice. It is not firefighting training.

Can we add our own site procedures and photos? Yes. The slides, handout and guide are editable, and the facilitator guide marks the places to add your own procedures, contacts and photos of your workplace.

Do we have to use the assessment? No. It is there if your business wants a record that each worker understood the key points. The attendance record on its own shows who attended and when.

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TOOLBOX TALK

Lithium-ion Battery Safety Awareness

Charging, storing and spotting a failing battery, and what to do if one catches fire

20–30 minutes · Workers who use, charge or store battery-powered tools, devices, vehicles and equipment, and their supervisors

[Company name] · [Date] · [Facilitator name]

BAT

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What this talk is, and is not

This talk covers

- ✓ Thermal runaway and warning signs
- ✓ Charging and storage
- ✓ Damaged batteries and disposal
- ✓ E-bikes, e-scooters and battery fires

This talk is not

- ✕ Firefighting training
- ✕ High-voltage vehicle battery work
- ✕ Battery storage system work
- ✕ Our procedure: **[Our charging procedure]**

Awareness only. High-voltage battery work and battery storage systems need specific training and, for some work, a licence.

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Why lithium-ion batteries matter

Small batteries store a lot of energy. When they fail, they fail fast.

- Tools, phones, laptops, radios and scanners
- E-bikes, e-scooters and mobility aids
- Forklifts, floor cleaners and plant
- Battery storage in buildings and vehicles
- Most fires start on charge or after damage

A composite example

- A tool battery is dropped off a scaffold. It looks fine, so it goes back on the charger in the site shed.
- That night it overheats, catches fire and burns the shed and every tool in it.

A dropped or damaged battery can fail hours or days later.

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Duties under health and safety laws

The business must

- Manage the risk of battery fires
- Provide safe chargers and charging areas
- Have an emergency plan that covers them
- Train workers in charging and reporting

You must

- Use the right charger in the right place
- Follow the site's charging rules
- Take damaged batteries out of use
- Report hazards and near misses

Most health and safety laws give these duties. Check the law where you work (in Australia, WHS or OHS laws).

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The order of controls for batteries

1. **Elimination** No charging of personal batteries on site where it is not needed
2. **Substitution** Quality batteries and chargers matched by the maker
3. **Isolation** A charging area away from exits, people and anything that burns
4. **Engineering** Smoke alarms, timers that cut power, fire-resistant storage
5. **Administrative** Charging rules, inspections, out-of-use tags, training
6. **PPE** Gloves and eye protection when handling a damaged battery

HIGHER ORDER

Higher order controls remove or control the hazard at the source, or put a barrier between people and the hazard.

LOWER ORDER

Lower order controls rely on people to do a thing or wear a thing, every time, tired, distracted or rushed.

Behaviours are not on the hierarchy, but behaviours and culture decide whether every control on it actually works.

A charging area clear of exits and combustibles is a control. 'Be careful' is not.

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TOOLBOX TALK · HAZ-BAT

Lithium-ion Battery Safety Awareness

Participant handout · keep this

Lithium-ion batteries fail fast. Prevent the fire before it starts. Keep this page.

The order of controls

1. No personal battery charging where not needed
2. Quality batteries and matched chargers
3. A charging area clear of exits and combustibles
4. Smoke alarms and timers
5. Charging rules, checks and tags
6. Gloves and eye protection, last

Warning signs: out of use

- ■ Swelling, heat, hissing or popping
- ■ A strange smell, smoke, vapour or leaking

Never

- ■ Charge a damaged battery
- ■ Put batteries in the bin

Before you charge

- ☐ Is the battery undamaged: no swelling, cracks, heat or smell?
- ☐ Am I using the charger made for this battery?
- ☐ Am I charging in the charging area, on a hard surface?
- ☐ Is it clear of exits and anything that burns?
- ☐ Will it be unplugged when it is full, as the site says?

Battery fire

- ■ Raise the alarm, get out, close doors, call your local emergency number (000 in Australia)
- ■ Tell firefighters it is a battery fire

Where and who

- ■ **[Charging area]; [Damaged battery place]**
- ■ **[Battery fire procedure]; [Who to report to here]**

Charge it right, store it right, and report a damaged battery.

This is awareness training. It is not a licence, a ticket, a permit or a competency. It is not firefighting or high-voltage battery training.

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