Step Change in Safety

Lithium Battery Fires – Are We Prepared?

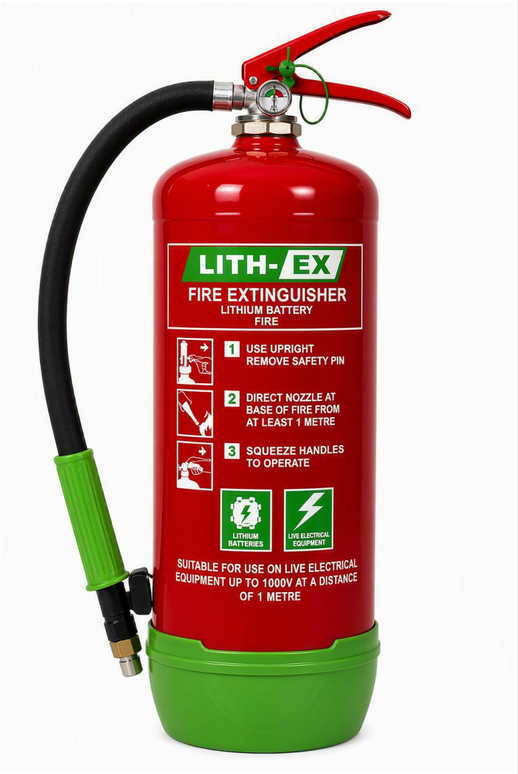
Background

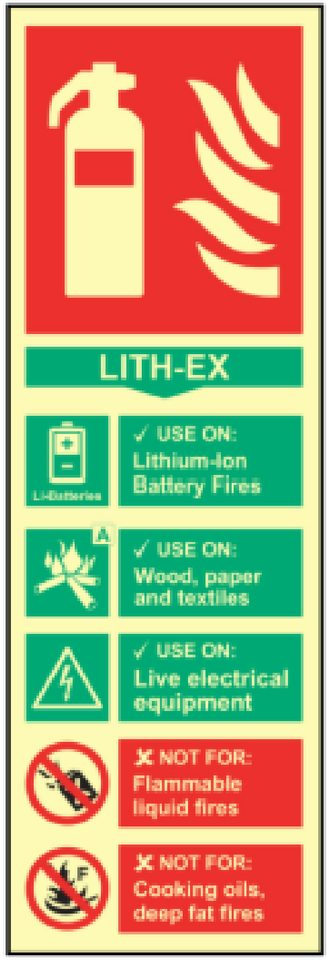
Safety Moment

During a Safety Rep meeting, concerns were raised about lithium battery fire risks and the **lack of suitable firefighting media on site**, specifically **Lithium (Lith-Ex) fire extinguishers.**

This highlights a broader industry opportunity for awareness and improvement.

Having the correct equipment and awareness can prevent escalation and protect lives.





Lithium battery fires - Hazards

Safety Moment

Lithium battery fires present unique hazards:

- They can **ignite rapidly and without warning**
- Standard fire extinguishers (e.g. water, foam, CO_2) may be **ineffective or worsen the situation**
- Fires can **reignite even after appearing extinguished**
- They produce **toxic gases and intense heat**

Lithium battery fires – Key risks

Safety Moment

- Battery-powered tools and equipment (e.g. drills, inspection devices, maintenance tools)
- Portable and rechargeable plant (e.g. monitoring equipment, gas detection units, drones)
- Energy storage systems and backup power units (including lithium-ion storage installations)
- Personal electronic devices (phones, tablets, radios)
- Charging stations and temporary charging setups in workshops, cabins, or control rooms
- Warehousing and logistics areas where batteries are stored or transported
- Waste streams involving damaged, defective, or end-of-life batteries
- Confined or enclosed spaces where heat build-up and toxic gases can escalate risk

Lithium battery fires – What good looks like

Safety Moment

- Availability and awareness of positions of specialist extinguishers (e.g. Lith-Ex) designed for lithium battery fires
- Transport and store spare batteries and portable electronic devices in a battery bag
- Clear emergency response procedures for battery fires
- Safe charging arrangements (away from flammable materials and waste and supervised where reasonably practicable)
- Awareness of early warning signs (heat, swelling, odour, smoke)

Lithium battery fires – Are we prepared?

Safety Moment

Discuss

- Do we have the right extinguishers available on site?
- Where are they?
- How are lithium batteries stored, charged, and managed? Is this safe?
- What would we do if a battery ignited today?

Using the correct extinguisher for the right type of fire

Never attempt to put out a fire unless you have been trained to do so
Choosing the right extinguisher can prevent property damage and save lives

FIRE TYPE & CLASS	WATER	FOAM	POWDER	CO_2	WET CHEMICAL	LITH-EX
A — Safe for use on: Wood, paper & fabric fires	✓	✓	✓	✗	✓	✓
B — Safe for use on: Flammable liquid fires	✗	✓	✓	✓	✗	✗
C — Safe for use on: Gaseous fires	✗	✗	✓	✗	✗	✗
Safe for use on: Electrical fires	✗	✗	✓	✓	✗	✓
F — Safe for use on: Cooking oils & fats	✗	✗	✗	✗	✓	✗
L — Safe for use on: Lithium-ion battery fires	✗	✗	✗	✗	✗	✓

This sign is for guidance only and should not be used as a substitute for recognised training

Verification of learnings shared and feedback

Safety Moment

To ensure this learning leads to meaningful improvement, follow the Plan Do Check Act process and provide your feedback to Step Change in Safety.

Plan

Review the learning and assess how it applies to your organisation, work area or tasks.

Identify any risks, gaps, or required changes to current procedures.

Do

Implement necessary actions - communicate changes, update procedures, and ensure everyone affected understands their responsibility.

Check

Monitor the effectiveness of the changes. Observe work practices, gather feedback, and verify that the learnings have been understood and applied correctly.

Act

Make any needed adjustments based on what you've learned.

Share lessons with your team, document improvements and feedback to Step Change in Safety.

Share your learnings and feedback. **Your proactive engagement helps create a safer workplace for everyone.**

Feedback Form

Link to Resource Feedback Form