



ASSOCIATION STATEMENT

Lithium-Ion Battery Fire Safety

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Manufacturers' Association

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The Growing Lithium-Ion Battery Fire Challenge

Lithium-ion batteries have become an integral part of everyday life, powering products and equipment ranging from key fobs, cell phones, tablets, and laptops to power tools, scooters, bicycles, vehicles, and backup power sources. As the use of lithium-ion batteries continues to expand, reports of fires involving these batteries have also increased.

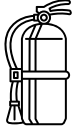
Lithium-ion batteries do not burn in the traditional sense. When a battery experiences certain conditions, it can enter a process called thermal runaway, an uncontrollable, self-heating chain reaction that can result in catastrophic cell failure and the rapid release of stored energy. Thermal runaway can also produce dangerous Class B flammable gases and create an electrical shock hazard.



Fire Safety Considerations

Lithium-ion battery fires present unique challenges for fire response. Although emerging tools, equipment, and procedures are available to professional firefighters, these fires can create significant hazards for individuals who are not trained and do not have appropriate personal protective equipment.

For this reason, individuals should not attempt to approach or fight an established lithium-ion battery fire when doing so would place them at risk. Fire safety planning should prioritize early detection, appropriate protection of surrounding areas, and safe evacuation.



Portable Fire Extinguishers and Lithium-Ion Battery Hazards

Portable fire extinguishers are intended for use on early-stage, or incipient, fires. In some situations, they can be an important tool for protecting surrounding property or creating a path of egress while emergency responders are being contacted.

However, it is important to recognize the current limitations of portable fire extinguisher classifications and listings for lithium-ion battery fires.

There is currently no Class L (lithium-ion battery) classification for portable fire extinguishers in NFPA 10, *Standard for Portable Fire Extinguishers*. [1]

The NFPA 312 Committee has also stated, “Nor is there any known listing by a recognized testing laboratory for portable fire extinguishers that utilize encapsulating agents for extinguishing fires involving lithium-ion batteries or lithium-ion energy storage systems.” The Committee went on to state that “There presently is no Class-L (lithium-ion battery) classification for portable fire extinguishers in NFPA 10.” [2]



Association Position

The Fire Equipment Manufacturers’ Association supports the use of appropriately listed and certified portable fire extinguishers to protect against fires *in the areas surrounding* a lithium-ion battery hazard. Portable extinguishers can play an important role in addressing incipient fires and supporting safe egress.

At the same time, lithium-ion battery fires present unique hazards that must be recognized in fire-safety planning and response. Portable fire extinguishers should not be represented as a substitute for appropriate emergency response, nor should products be represented as specifically listed or approved for lithium-ion battery fires when no applicable listing or classification exists.

The Association supports continued research, testing, and standards development to improve understanding of lithium-ion battery fire hazards and the effectiveness of fire-protection measures.



References

[1] National Fire Protection Association, *NFPA 10, Standard for Portable Fire Extinguishers*: <https://www.nfpa.org/codes-and-standards/nfpa-10-standard-development/10>

[2] National Fire Protection Association, NFPA 312 Committee Public Input Responses, 2025 cycle: https://docinfofiles.nfpa.org/files/AboutTheCodes/312/312_A2025_SHI_AAA_PIResponses.pdf