KNIGHTTEK

EFFECTIVE | SAFE | SUSTAINABLE

THERMAL STOP + THERMAL SHIELD EXTINGUISHERS

Dual-Agent System to Combat and Contain Lithium-Ion Battery Fires

Lithium-ion battery failures are fast, violent, and unpredictable—and traditional suppression methods often fall short. The Thermal Stop + Thermal Shield Dual-Agent System delivers a complete, field-tested solution from first spark to final containment. Thermal Stop, a rapid-response liquid agent, penetrates battery cells to halt thermal runaway in under 30 seconds. Once extinguished, Thermal Shield, a high-performance gel barrier, locks down compromised batteries, preventing reignition and trapping toxic gases during transport or storage. Together, they provide first responders the tools to fight this new class of fire, safely and effectively.

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Thermal Stop Extinguishes Fires

Thermal Stop is the only extinguishing agent purpose-built to stop thermal runaway in lithium-ion batteries. Instead of relying on prolonged cooling, it penetrates deep into compromised cells to halt the thermal runaway chain reaction in as little as 30 seconds.

Its all-natural, non-hazardous formulation delivers a threefold advantage: rapid endothermic cooling to absorb heat instantly, chemical disruption to end the reaction at its source, and PFAS encapsulation to trap harmful compounds and prevent toxic off-gassing.

Easy to deploy yet powerful enough to control large-scale incidents, Thermal Stop is certified to NFPA 18 standards and requires minimal volume and cleans up easily. With its patent pending design, it sets a new standard in lithium-ion fire suppression.

Thermal Shield Prevents Reignition

Extinguishing the flames doesn't mean the danger is gone. Thermal Shield is the only gel suppressant proven to prevent reignition during the high-risk transport and storage phases. Applied directly to damaged battery packs, it delivers instant surface cooling, seals breaches to stop chemical activity, and traps hazardous PFAS vapors before they can escape.

This all-natural, non-hazardous gel is certified to NFPA 18 standards and goes on easily, requiring only a small amount for full containment. Quick to clean up and engineered for safety, Thermal Shield's patent-pending formulation keeps compromised batteries stable, secure, and under control until they can be safely disposed of or repaired.

SDS Info

Learn More

Q&A

Q: How do you get Thermal Stop into the batteries?
Responding fire departments typically arrive on scene within 5-8 minutes. By that time, the battery has often burned through the floorboard. Handle the situation as a normal vehicle fire—suppress the flames, and once knocked down, inject Thermal Stop's patented plant-based solution into the burned area. Less than 5 gallons of Thermal Stop has been proven to stop EV thermal runaway.

Q: How can we handle runoff after contact with hazardous materials?
Thermal Stop's efficiency means that typically 5 gallons or less is needed to handle EV thermal runaway events. Standard absorbents carried on fire apparatus will be more than enough for cleanup.

Q: Can Thermal Stop be used in engine AB tanks?
Absolutely. As EVs become more common and regulations phase out internal combustion vehicles, fire departments may want to designate or add a "C" tank for Thermal Stop. It can also be used in your existing A or B tanks as EV demographics shift across the U.S.

Features

- Non-conductive solutions protect firefighters from electrical shock
- Plant-based solution is environmentally friendly
- Non-toxic, non-corrosive and will not damage pumps, sprinkler systems, or other equipment (lab-tested on brass, copper, stainless steel, and ferrous metals)
- Neutral pH
- Pre-measured extinguisher refills available—pour in and recharge, no mixing or measuring required
- 5-year shelf life

KnightTEK, LLC
6532 SW 44th Street
Oklahoma City, OK 73179
(405) 416-1920
knightfiretek.com