Energy storage perfluorohexanone fire extinguishing system

What is perfluorohexanone fire extinguishing agent?

The perfluorohexanone fire extinguishing agent has attracted the attention of the industry because of its environmental friendliness and good performance in suppressing lithium-ion battery fires. Perfluorohexanone is used widely to protect spaces housing electrical systems [18,19].

What are the physical properties of perfluorohexanone?

Physical Parameters Perfluorohexanone is a fluorinated ketone compound. It is a colorless,odorless,and easily vaporized liquid fire extinguishing agent at room temperature. No resi-due is left after evaporation. The main fire extinguishing mechanism is chemical suppression and flame cooling.

Does perfluorohexanone fire extinguish lithium ion batteries?

Wang et al. have studied the fire extinguishing effects of perfluorohexanone on lithium-ion batteries. The study showed that perfluorohexanone could effectively extinguishthe fire of lithium-ion batteries,and extinguished the open flame within 30 s . Liu et al. tested the application of perfluorohexanone to single LIB cells.

How long does perfluorohexanone spray last?

The duration of perfluorohexanone spray was 45 s. The shorter time to extinguish the fire is mainly because of the rapid increase of internal pressure of fire extinguishing device under high temperature. After the extinguishing,the intervening ignition was carried out with an open flame,and there was no re-ignition phenomenon.

Perfluorohexanone (chemical formula: C 6 F 12 O) is a new type of clean fire extinguishing agent, ... Battery energy storage systems (BESSs), Li-ion batteries in particular, ... Finally, the thermal ...

Conclusion While Perfluorohexanone fire suppression technology presents a promising solution for enhancing the safety of energy storage systems, its real-world effectiveness requires ...

I. Introduction The power distribution system is the energy supply system in modern industrial, commercial, and residential buildings, supporting daily life and operational activities. ...

Experiments show that the perfluorohexanone fire extinguishing device has good fire extinguishing effect on the fire of lithium-ion batteries in extreme environments.

This study provides new ideas and methods for the design of fire extinguishing agents for lithium-ion batteries and holds significant guidance for the safety prevention and control of energy ...

Conclusion Perfluorohexanone (FK-5-1-12) is emerging as the fire suppressant of choice in new energy storage systems, thanks to its efficiency, environmental safety, and overall protection ...

Energy storage perfluorohexanone fire extinguishing system

The present disclosure provides a fire extinguishing system for an energy storage container, comprising: a fire control main engine; a cluster-level and cabin-level perfluorohexanone fire subsystem for ...

Abstract Thermal runaway (TR) in lithium-ion batteries (LIBs) has emerged as a critical factor limiting the safe advancement of energy storage technologies. Perfluorohexanone, an effective ...

At present, lithium-ion batteries (LIBs) with excellent performance have attracted the attention of the industry, but there are still many fire and explosion risks, threatening the safety of ...

The present disclosure provides a fire extinguishing system for an energy storage container which includes a fire control main engine, a cluster-level and cabin-level perfluorohexanone fire subsystem ...

Web: https://williamsandcopaintcontractors.co.za