

Does a plunger type perfluoro-hexanone (C₆F₁₂O) fire extinguishing?

In this study, a plunger type perfluoro-hexanone (C₆F₁₂O) fire extinguishing device was developed, and key components such as gas generating device and puncture valve were improved. The 271 Ah lithium iron phosphate battery was used to verify the fire extinguishing efficiency and environmental adaptability of this device in extreme environments.

Is perfluorohexanone a fire extinguisher?

Perfluorohexanone is a fluorinated ketone compound. It is a colorless, odorless, and easily vaporized liquid fire extinguishing agent at room temperature. No residue is left after evaporation. The main fire extinguishing mechanism is chemical suppression and flame cooling. The relevant physical parameters are listed in Table 1.

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.

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 extinguish the 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 does perfluorohexanone work?

The device is in a storage pressure (perfluorohexanone) when it is not working, and it can be activated with a small current immediately when a fire signal is received. A pressure cavity is formed at the front end of the sealed cavity as a power source, and the perfluorohexanone is atomized by an atomizing nozzle.

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 residue is left after evaporation. The main fire extinguishing mechanism is chemical suppression and flame cooling.

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The perfluorohexane automatic fire extinguishing device has a small volume and is flexible and convenient to

install. ... energy storage systems, power exchange station, power charging ...

Even if LIBs fire can be rapidly extinguished, LIBs are easy to re-ignite without the continuous release of the extinguishing agent. For example, some researches have ...

Perfluorohexanone microcapsule fire-extinguishing technology provides an important technical solution to solve the problem of fire in small confined spaces. 14-19 Perfluorohexanone, with its non-conductive, volatile, ...

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In order to overcome the problems existing in the prior art, the utility model provides a non-pressure storage perfluorohexanone fire extinguishing device which can automatically and...

Experiment with a single burning energy storage battery. 4 kinds of fire extinguishing devices are heptafluoropropane, perfluorohexanone, hot aerosol, and water mist. The results are as ...

The application discloses a perfluorinated hexanone gas fire extinguishing method and system applied to an energy storage container, wherein the method comprises the following steps: the...

Fire extinguishing device refers to the equipment that sprays the internal fire extinguishing agent under the action of the internal pressure of the equipment to achieve a good fire extinguishing ...

The fire protection system of the energy storage ... adopts aerosol / perfluorohexanone automatic fire extinguishing system, composed of smoke temperature ...

In running the tests for the U.S. Air Force, New Mexico Engineering Research Institute used a mock-up consisting of a 75 square foot circular pan in which JP-4 jet fuel was floated on top of ...

The perfluorohexanone fire extinguishing agent is a high-efficiency, nontoxic, clean and environment-friendly fire extinguishing agent, has a boiling point of about 48 °C under the ...

The utility model relates to a fire extinguishing apparatus designs technical field, is about a non-store pressure

perfluor hexanone fire extinguishing apparatus, include: the device comprises a ...

Additionally, the fire extinguishing device 29 and fire extinguishing integrated system 30 of C 6 F 12 O were developed, and the application of C 6 F 12 O in suppressing the ...

The HFC227ea fire suppression system is divided into a piped system and a non-pipeline fire extinguishing device, with a wider range of application scenarios; in contrast, perfluorohexane ...

The fire extinguishing device automatic fire extinguisher for electrical room can quickly and effectively extinguish class A, CLASS B, class C, and Class E fires. It can be safely and ...

However, heat abuse conditions will lead to the thermal runaway of lithium batteries [7][8]. Perfluorohexanone (chemical formula: C 6 F 12 O) is a new type of clean fire ...

The Perfluorohexane fire extinguisher is a device that automatically extinguishes fires in power distribution cabinets and energy storage battery packs. It consists of a 304 stainless steel shell, gas-generating components, nozzles, a thermal ...

Web: <https://centrifugalslurrypump.es>