

Energy storage perfluorohexanone fire extinguishing device

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.

Does a plunger type perfluorohexanone (C₆F₁₂O) fire extinguishing device work?

In this study, a plunger type perfluorohexanone (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.

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.

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 long does perfluorohexanone spray take to extinguish a fire?

The fire was extinguished within 9 s after the release of the extinguishing agent,which was faster than that of Test 6. 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.

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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Perfluorohexanone microcapsule fire-extinguishing technology provides an important technical solution to

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solve the problem of fire in small confined spaces. 14-19 Perfluorohexanone, with its non-conductive, volatile, non-residual, easy photolysis, zero ozone depletion, low global warming potential, and other excellent performance, is considered to be the best alternative to halon fire ...

In this study, a plunger type perfluorohexanone (C6F12O) fire extinguishing device was developed, and key components such as gas generating device and puncture valve were improved. The 271 Ah ...

Perfluorohexanone fire extinguishing agent responds when TR occurs in LIBs, taking a submerged approach with asphyxiation and chemical inhibition, which can quickly extinguish open fires and reduce smoke concentration; the mixed flame retardant, while playing a fire extinguishing role, can act quickly with the free radicals $\cdot\text{H}$ and $\cdot\text{OH}$ that ...

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In this study, a plunger type perfluoro-rohexanone (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.

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This device is the world's first mass-produced fire-extinguishing equipment designed according to fire-extinguishing standards for maximizing the performance of perfluorohexanone. The device solves the safety problem caused by a fire in a small space. Perfluorohexanone is currently the most efficient, safe, and clean fire extinguishing medium in the world.

Web: <https://roomme.pt>