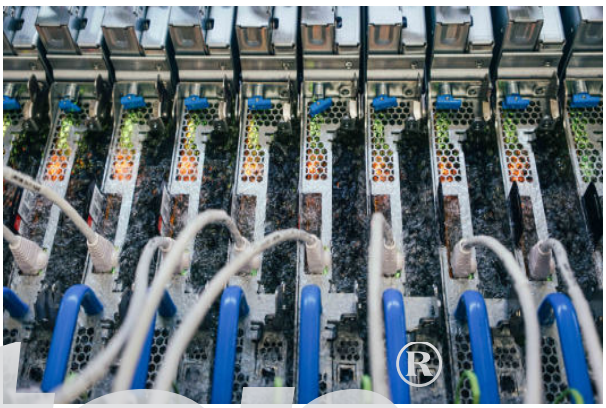
Dielectric cooling fluid(MTTSC)

Performance Overview

Maxtop MTTSC dielectric cooling liquid is made from highly refined hydrocarbons and proprietary multifunctional additives, free of heavy metals and aromatics, with excellent insulation and non-conductive properties. It can directly contact core components such as server motherboards, CPUs, GPUs, and memory, suitable for single-phase immersion or non-contact cooling systems. With high specific heat and fluidity, it efficiently removes heat, replacing air or water cooling, reducing energy consumption, fan noise, and dust impact while extending equipment lifespan. It meets the cooling demands of HPC, AI training, and cloud data centers, providing a key technology for low PUE, high-density deployment, and improved space utilization.



Features

01

It does not harden, become brittle, corrode or age when in long-term contact with wires and non-metallic materials. It maximally retains the original properties of non-metallic materials.

02

High dielectric protection, preventing static electricity and arc risks, with excellent electrical insulation properties.

03

The performance of the server has been enhanced by 40%, and the PUE (Power Usage Effectiveness) can be controlled within 1.1, thereby extending the service life of the server.

04

Long-lasting formula, does not change color, does not turn yellow, does not stink, does not form precipitates, does not produce acidic substances, and has excellent viscosity retention properties.

Application Scenario

Single-item immersion liquid cooling for data center servers, energy storage liquid cooling, charging pile liquid cooling, automotive power battery liquid cooling, game console liquid cooling, and mining machine liquid cooling.

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Typical data of dielectric cooling fluid(MTTSC)

Project	8#	10#	20#
Appearance	Clear and transparent, without impurities		
Density (20 ℃),kg/m3	804	808	835
Kinematic viscosity (40 ℃)，mm2/s	8.75	10.74	19.83
Kinematic viscosity (100 ℃)，mm2/s	2.51	2.96	4.19
Kinematic viscosity (-30 ℃)，mm2/s	920	1020	1580
Flash point (open)，℃	182	208	212
Flash point，℃	202	228	232
Pour point，℃	-48	-45	-45
Water content，（mg/kg）	12	15	30
Acid value，mgKOH/g	0.008	0.009	0.01
Breakdown voltage (spacing 2.5mm)，kV	65	65	65
Dielectric loss factor（90℃）	0.00018	0.00019	0.00062
Dielectric constant（25℃）	2.13	2.13	2.1
Dielectric constant（90℃）	2.07	2.07	2.07
Thermal conductivityw/m.k（25℃）	0.180	0.171	0.172
Specific heat J/g.k（25℃）	2.22	2.21	2.2

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