

High Ignition Point Transformer Oil

Description

High ignition point transformer oil serves as an ideal choice for enhancing safety and fire prevention in power equipment. It is well-suited for various equipment utilizing insulating oil, especially in sectors with stringent fire prevention requirements such as petrochemical, chemical, paper-making, and building materials industries.

Box-type substations, characterized by transformer bodies, switches, and power factor correction banks immersed in oil, can benefit from high ignition point transformer oil installation in areas with high fire and explosion-proof requirements, including hospitals, subways, shopping malls, residential areas, and buildings.

Transformers operating under high temperatures or experiencing continuous and intermittent overload operations require the use of high ignition point transformer oil to ensure safety. For instance, in residential areas where electrical loads vary significantly daily and increase with additional household appliances, transformer oil temperatures can soar. Similarly, in rural areas with fluctuating electricity loads, transformers often operate under overload conditions during peak times, making high ignition point transformer oil essential to mitigate potential security risks. Suitable for a wide range of applications, from small unidirectional distribution transformers to large 40MVA/110kV substation transformers.

Features

- Good safety characteristics, ignition point above 300°C, showcasing high explosion-proof characteristics akin to high ignition point oils
- High insulation strength, with a breakdown voltage exceeding 45kV, far surpassing the ASTM standard of 30kV.
- Low viscosity for efficient cooling; low density to curtail ice formation in transformers during winter, promoting safety in operations.
- Excellent oxidation stability and thermal stability to ensure the transformer oil remains resistant to aging and deterioration even under prolonged high-temperature conditions, thereby extending equipment lifespan.
- Environmentally friendly, non-toxic, and recyclable. The raw materials comply with food-grade white oil standards, posing no harm. Devoid of carcinogenic polycyclic aromatic hydrocarbons, with zero content of monocyclic aromatic hydrocarbons, it poses no harm to humans, soil, or water sources. Comprising entirely of saturated hydrocarbon compounds easily biodegradable by soil and aquatic microorganisms.

Properties

Items	Specification	Test value	Test method
Appearance	Transparent without impurity	Transparent without impurity	Visual
Colour	2.5	0.5	D1500
Density (20°C) kg/m3	≤906	853	GB/T1885, GB/T1884
Kinematic viscosity, cSt 0°C 40°C 100°C	≤2500 ≤130 ≤14	790.00 99.79 11.75	GB/T265
Pour point, °C	≤-21	-24	GB/T3535
Flash point, °C	≥265	275	GB/T3536
Fire Point, °C	≥300	305	GB/T3536
Acid number, mgKOH/g	≤0.03	0.01	GB/T264
Corrosive Sulfur	Non- corrosive	Non -corrosive	SH/T0304
Oxidation stability, 164h Acid number, mgKOH/g Sludge, %	≤0.4 ≤0.2	0.28 0.06	ASTMD2440
Breakdown voltage (2.5mm)	≥30	55	GB/T507
Dielectric dissipation factor (90°C)	≤0.002	0.001	GB/T5654
Interfacial Tension, mN/m	≥40	46	GB/T6541
Water content, mg/kg	200	40	GB/T7600-2014
Gassing Tendency, p I/min	≤+30	+20	GB/T11142(D2300B)
PCB Content, ppm	Nil	Nil	
Volume resistivity 90°C G Ω m	-	1.80 x 1012	DL 421-91

Meets US ASTM D5222 standards and NEC 450-23 national electrical standards.