Mobilect™ 44

Mobil Industrial , Sweden

Electrical insulating oils

Product Description

Mobilect 44 is a high quality mineral inhibited insulating oil with very good dielectric properties and oxidation stability intended for transformers, switchgears and other electrical equipment.

Mobilect 44 is inhibited to ensure improved oxidation resistance and meets the specifications ASTM D3487 TYPE II and IEC 60296 – 04 Special Applications.

Features and Benefits

- Mobilect 44 has a high resistance to thermal and chemical degradation in the presence of iron and copper. This reduces tendencies to produce sludges and oil-soluble oxidation products. Mobilect 44 is inhibited with a phenolic anti-oxidant to increase the service life in applications operating with a significant exposure to air. When lower quality oils are used these may form deposits in the transformer and impede heat transfer by interfering with convection currents. In addition deposits may accelerate insulation defects and are often very difficult to remove without complete dismantling.
- Mobilect 44 is specifically treated during manufacture to remove moisture. Water will reduce the electrical insulating properties of the oil and promote oxidation. It is important to remember that a dry oil is hygroscopic and absorbs moisture from the air. It must therefore always be stored in dry conditions and well-closed containers. It is strongly recommend to dry product before use, or use it within short notice after purchasing to avoid long term storage.
- The dielectric strength of Mobilect 44 is a measure of the resistance of the oil to electric stress and is expressed in kV across a specified gap under test conditions. This is not a measure of the quality of the oil but of the absence of contaminants - especially moisture, fibres and polar chemicals.
- Mobilect 44 is free from wax even at low temperatures and thus circulates freely in outdoor applications. Its viscosity ensures readily heat transfer by mobile convection currents. Mobility is also essential to quick quenching of arcs in switchgear units.
- The low pour point of Mobilect 44 ensures a free flow in most conditions between the transformer and the conservator and maintains the reliability of tap changers at the lowest temperatures.

Applications

- Mobilect 44 is recommended for use in oil filled transformers and switchgears in which the oil is required as an insulation medium or as a heat transfer medium.
- Mobilect 44 is to be used in applications specifying ASTM D3487 TYPE II and IEC 60296 -04 Special Applications.
- Mobilect 44 is not suitable for use in oil filled cables, for special impregnation processes or for use in capacitors.

Specifications and Approvals

This product meets or exceeds the requirements of:
IEC 60296 :2012 Special Applications

Properties and Specifications

Property	
Breakdown Voltage, after Treatment, kV, IEC 60156	>70

Property	
Density @ 20 C, g/cm3, ASTM D4052	0.877
Dissipation Factor, after Oxidation, 90 C, IEC 60247	0.03
Flash Point, Pensky-Martens Closed Cup, °C, ASTM D93	146
Interfacial Tension, mN/m, ISO 6295	50
Kinematic Viscosity @ 40 C, mm2/s, ASTM D445	7.6
Oxidation Stability, Sludge, mass%, IEC 61125-METC	<0.02
Oxidation Stability, Total Acid Number, mgKOH/g, IEC 61125-METC	0.04
Pour Point, °C, ASTM D97	-63

Health and safety

Health and Safety recommendations for this product can be found on the Material Safety Data Sheet (MSDS) @ http://www.msds.exxonmobil.com/psims/psims.aspx

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