



Finnexx Tornieria Oils

Electrical Transformer Oil

PRODUCT DESCRIPTION

Finnexx Tornieria Transformer Oil is a highly refined uninhibited transformer oil manufactured from mineral base oil with good electrical, low temperature properties and very good oxidation stability.

CUSTOMER BENEFITS

- High dielectric strength
- Excellent low temperature properties
- High oxidation stability, ensuring a long service life of the oil charge
- Through optimized degree of refining, the oil passes the 2006 Oil/Copper interactions Tests as described in ASTM D 1275B.
- Neutral behavior toward all types of insulating materials

APPLICATIONS

Finnexx Tornieria Transformer Oil is used as insulating oil in transformers, switchgear, inductors, condensers, transducers and similar equipment, also at low temperatures in outdoor use. It insulates current-carrying parts from each other and from ground, carries off heat, prevents glow discharges, extinguishes electric arcs in switchgear, and impregnates insulating materials.

PERFORMANCE

Transformer Oil Uninhibited meets the requirements of:

- IEC 60296 (03) Special applications
- BS 148 IIA (1998)
- LABORELEC LBE-specifications according to "Technical specifications Of unused mineral insulating oils for transformers, ed.4, 2005"
- This oil tested non-corrosive with CIGRE A2.32 preferred method.

PRODUCT MAINTENANCE AND HANDLING

In addition to good low temperature properties, dryness is essential in transformer oils. Finnexx Tornieria Transformer Oil is delivered with extremely low dissolved moisture levels, but any exposure of unsealed containers to air will result in rapid absorption of water. Ordering, storage and handling procedures must be such that exposure of the product to air and moisture is minimized.

TYPICAL TEST DATA

Characteristic	Test methods	
Appearance	IEC 60296	Clear
Colour	ISO 2049	<0.5
Density at 20°C	ISO 3675	0.871 kg/dm ³



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Density at 15°C	ISO 3675	0.872 kg/dm ³
Flash Point, PM	ISO 2719	150°C
Pour Point	ISO 3016	- 45°C
Interfacial Tension	ISO 6295	49mN/m
Kinematic Viscosity at 40°C	ISO 3104	10 mm ² /s
Kinematic Viscosity at -30°C	ISO 3104	1000 mm ² /s
Aniline Point	ASTM D611	82.7°C
Neutralization Value (Acidity)	IEC 62021	<0.01 mgKOH/g
Water Content	IEC 60814	<20 mg/kg or ppm
Furfural Content	IEC 61198	<0.1 mg/kg or ppm
Corrosive Sulphur	DIN 51353	Non corrosive
Corrosive Sulphur	ASTM D1275B	Non corrosive
Antioxidants, phenols	IEC 60666	none
PCA Content	IP 346	<3 %
PCB Content	IEC 61619	Not detectable
Dielectric dissipation factor at 90°C	IEC 60247	<0.001
Breakdown Voltage		
- Before Treatment	IEC 60156	40-60 kV
- After Treatment	IEC 60296/60156	>70 kV
Oxidation Stability (120°C/500h)	IEC 61125 C	
- Total Acidity		0.35 mgKOH/g
- Total Sludge		<0.10 wt %
- Dielectric dissipation factor at 90°C after the test		0.030

Values are typical of production but will be subject to variation.

Health & Safety Note – Always maintain good levels of personal hygiene when handling mineral oils. Wear protective clothing/gloves. Wash hands and skin areas where contact has occurred and avoid ingestion. See applicable Material Safety data Sheet for further information.