



Gulf Transformer Oil

Technical information

Product Description

Gulf Transformer oil is high performance uninhibited electrical insulating oil specially designed for use in transformers, switchgears and other electrical equipment. This oil is formulated with high quality severely refined hydro-cracked base oils and do not contain antioxidant or metal passivating additives. It offers good dielectric properties and heat transfer characteristics due to the low viscosity and is free from detrimental traces of water, dust and fibrous material to provide reliable operation with reduced down-time and improved service life.

Application

It is suitable as insulating and cooling oil for electrical transformers, switchgears, circuit breakers, capacitors and automotive ignition coils.

Features & Benefits

1. High dielectric strength ensures excellent insulation and quenching of electric arc between switchgear contacts when opening the switch.
2. Low power-loss contributes to overall efficiency
3. Free from traces of water, dust and fibrous material and hence has no detrimental effects on the electric properties of the oil leading to maximizing oil and equipment life.
4. Low viscosity and high interfacial tension ensures good wettability of oil and removal of air gaps to insulate windings and dissipate heat.
5. Effective long term protection from rust and corrosion to critical system components

Specifications & Typical Properties

Specification		
Conform and exceed IS 335:2005		
Typical Properties		
Test Parameters	Specification	Typical Values
Appearance	Clear and transparent	Clear and transparent
Viscosity @ 27 °C, cSt, max	16	14.61
Density @ 29.5 °C Kg/l, max	0.89	0.8204
Flash point Closed cup °C, min	140	154
Pour point , °C, max	-15	-24
Neutralization value		2.1
I) total acidity , mg KOH/g, max	0.03	00005
II) inorganic acidity / alkalinity	Nil	Nil

Properties mentioned above are typical only and minor variations which do not affect the product performance are to be expected in normal manufacturing. The above information is based on past history of the grade only and must not be construed as a guarantee of performance. Follow equipment manufacturer's recommendations for performance level and viscosity grade. The Material Safety Data Sheet for this product is available from your nearest Gulf Distributor and Office.

Corrosive sulfur	Non corrosive	Non corrosive
Electric strength breakdown voltage I) new unfiltered oil , min	30 kV (rms)	Avg 70 kV (rms)
Dielectric dissipation factor (tan delta)	0.002 @ 90 °C, max	0.0008
Specific resistance i) at 90 deg C , min ii) at 27 deg C, min	150 x 10 ¹² ohm-cm 3000 x 10 ¹² ohm-cm	392 x 10 ¹² ohm-cm 11390 x 10 ¹² ohm-cm
Oxidation stability i) neutralization value after oxidation max ii) total sludge after oxidation, max	0.15 mg KOH/g 0.03 % by wt	0.010 mg KOH/g 0.014 % by wt
Ageing characteristics after accelerated ageing I) specific resistance (resistivity) a) at 27 deg C, min b) at 90 deg C , min ii) dielectric dissipation factor (tan delta) iii) total acidity ,max iv) total sludge , max	27 x 10 ¹² ohm-cm 2 x 10 ¹² ohm-cm 0.1 at 90 deg C max 0.05 mg KOH/ g 0.05% by wt	800 x 10 ¹² ohm-cm 21 x 10 ¹² ohm-cm 0.001 0.005 0.005

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