

**Laboratory** Transgear Electrical Services, # 40/3, J C Industrial Layout,  
Yelachenahalli, Kanakapura Road, Bangalore, Karnataka

**Accreditation Standard** ISO/IEC 17025: 2005

**Certificate Number** TC-6358 (in lieu of T-2005)

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**Validity** 26.10.2017 to 25.10.2019

Last Amended on --

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
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**ELECTRICAL TESTING**

I.	<b>ELECTRICAL MATERIALS--LIQUID DIELECTRIC MATERIALS</b>			
1.	<b>Transformer Oil (Mineral Insulating Oil)</b>	Inter Facial Tension (IFT)	IS 6104	0.015 N/m to 0.090 N/m
		Acidity (Neutralization Value)	IS 1448 (Part 2)	0 to 1.0 mg KOH/g
		Sludge/Sediment	IS 1866 (Clause 4.3, Annexure A)	0.01 mg to 2 gm
		Water (Moisture) Content	IS 13567	4 mg/kg to 500 mg/kg
		Flash Point	IS 1448 (Part 21)	27 °C to 360 °C
		Dissolved Gas Analysis (Carbon monoxide, Carbon dioxide, Ethane, Methane, Ethylene, Acetylene, Hydrogen, Oxygen, Nitrogen)	IS 9434 IS 10593	1 µl/L to 9000 µl/L
		Breakdown voltage	IS 6792	1 kV to 100 kV
		Tan Delta (Dielectric Dissipation Factor)	IS 6262	0.0002 to 10
		Resistivity (Specific Resistance)	IS 6103	10 <sup>7</sup> Ωcm to 10 <sup>15</sup> Ωcm
		Appearance	IS 335	Qualitative (Free from suspended particles)
	Density	IS 1448 (Part 16)	0.80 g/cm <sup>3</sup> to 1.00 g/cm <sup>3</sup>	