

TRANSOL *Synth*

efficient | safe | eco-friendly

Synthetic Ester Based Dielectric Fluid



TECHNICAL DATA OF TRANSOL SYNTH 100

Property	Test method	Requirement as per IEC 61099 : 2010/ IS 16081 : 2013	Typical values for Transol Synth.100
Physical			
Colour	ISO 2211	Max. 200 Hazen	100 Hazen
Appearance	Visual	Clear, Free from water and suspended matter and sediment	Clear, Free from water and suspended matter and sediment
Density at 20 °C (kg/dm ³)	ISO 3675 or ISO 12185	Max. 1	0.96
Kinematic viscosity (mm ^{2/s}) at 40°C at -20°C	ISO 3104	Max. 35 Max. 3000	32 1400
Flash-point (°C)	ISO 2719	Min. 250	265
Fire-point (°C)	ISO 2592	Min. 300	315
Pour-point (°C)	ISO 3016	Max. -45	-57
Chemical			
Water content (mg/kg)	IEC 60814	Max. 200	< 50
Acidity (mg KOH/g)	IEC 62021-1 or IEC 62021-2	Max. 0.03	< 0.02
Oxidation stability Test duration 164 h at 1200C	IEC 61125, Method C		
Total acidity (mg KOH/g)		Max. 0.3	< 0.2
Total sludge (% mass)		Max. 0.01	< 0.005
Electrical			
Breakdown voltage (kV)	IEC 60156	Min. 45	> 70
Dielectric dissipation factor (tan δ) at 90 °C and 50 Hz	IEC 60247 or IEC 61620	Max. 0.03	< 0.02
DC resistivity at 90 °C (GΩ.m)	IEC 60247	Min. 2	> 7

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Transol-Synth.100 – A Synthetic Ester Dielectric Fluid Developed For Robust Design and Long life performance of Transformers

Transol-Synth.100, a unique formulation developed by our R&D team, is a transformer designer's ready and automatic choice for meeting most of the stringent needs of the end-users. Our synthetic ester is a K-class fluid and has been developed to meet the specifications laid down in IEC 61099 / IS 16081.

Transol.Synth 100 answers several unanswered questions of end-users such as – Can it withstand high temperatures? Is it user-friendly? Is it maintenance-free? Can it be used in free-breathing transformers? Can it prevent transformer resins which occur frequently? Is it environment-friendly? Can it combine all the above advantages with enhancement in asset life or higher loading capability? The answer to all the above questions is a reassuring Yes.

Yes, Transol Synth.100 has got unique features of re-safety, environmental friendliness and superior performance characteristics in comparison to conventional mineral oil based fluids. Our synthetic ester is an ideal alternative to silicones, mineral oils and dry type transformers.

Besides the above advantages, it also protects the solid paper insulation and significantly slows down its long-term deterioration which accounts for considerable enhancement of transformer asset life. This feature translates to cost savings in the long term.

Unique Technical Features of Transol-Synth.100 crucial for designing a Robust Transformer:

Fire-Safety:

By virtue of its superior fire point, Transol-Synth.100 has the potential to eliminate or minimize fire accidents caused by malfunctioning of transformers. In this respect Transol-Synth.100 filled transformers could be a very viable option as compared to Silicone fluid-filled or dry type transformers.

Environmental Friendliness:

Our synthetic ester fluid is readily biodegradable and therefore eliminates damage to environment. Hence, costs of handling the fluid if any accidental spillage takes place are quite low compared to mineral oils or silicone fluids.

Performance:

Transol synth-100 has very high moisture tolerance which helps in enhancing the life of cellulose paper insulation. The high moisture tolerance coupled with enhancement of paper life by Transol-Synth.100 enables higher loading of transformers and reduction of size of a transformer.

Design advantage:

The very high oxidative stability of Transol-Synth.100 makes it possible to design/operate transformers with or without free breathing systems.

Installation in Cold Climates:

Transol- Synth.100 has very low pour point (-57°C) making it an ideal choice for installation in cold climates.

Transol Synth.100 complies with all specifications laid down under the international standard IEC 61099 and the corresponding Indian standard IS: 16081

Transol-Synth.100 has been type-tested at a reputed Dielectric fluid Testing laboratory as per IEC 61099/IS 16081

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