



ELECTRICAL OIL SERVICES

Comparison of EOS® Premium with IEC 60296:2020 Ed.5 - Mineral Insulating oil Standards

EOS® Premium - Regenerated Mineral Insulating Oil

Regenerated Transformer Oil (EOS® Premium) produced from **carefully selected used insulating oil** meets the requirements of **BS148:2020** and the performance requirements set out in **IEC 60296:2020**. This Premium Grade Regenerated Insulating Oil is readily useable as an alternative to Unused (New) Mineral Insulating oil in all **oil filled transformer and switchgear maintenance activities**. An inhibited option is also available for specific requirements.

Property		EOS® Premium (typical values)	IEC60296:2020 (Type B)
Kinematic viscosity mm ² /s	40 °C -30 °C	≤ 11.5 ≤ 1,100	≤ 12 ≤ 1,800
Flash point, °C		≥ 150	≥ 135
Pour point, °C		≤ -40	≤ -40
Colour (ISO 2049) Appearance		L 1.5 Clear, free from sediment and suspended matter	Max 1.5 Clear, free from sediment and suspended matter
Density	kg/dm ³ at 20°C	≤ 0.876	≤ 0.895
Acidity	mg KOH per g of oil	≤ 0.01	≤ 0.01
Interfacial tension	mN/m	≥ 40	≥ 40
Potentially/Corrosive sulfur		Not corrosive	Not corrosive
DBDS		Not detectable (<5 mg/kg)	Not detectable (<5 mg/kg)
Inhibitor content	% by mass	(U) Not detectable (<0.01)	(U) Not detectable (<0.01)
Passivator content	<5 mg/kg	Not detectable (<5 mg/kg or as agreed with the purchaser)	Not detectable (<5 mg/kg) or as agreed with the purchaser
Anti-oxidant additives		Not detectable (<0.01 %)	Not detectable (<0.01 %)
Water content, mg/kg	bulk delivery drum delivery	≤ 10 (<10ppm typical) ≤ 20 (<20ppm typical)	≤ 30 (<10ppm typical) ≤ 40 (<10ppm typical)
Oxidation stability	164 h		
-total acidity	mg KOH per g of oil	≤ 0.6	≤ 1.2
-sludge	% by mass	≤ 0.6	≤ 0.8
-DDF		≤ 0.500	Max. 0.500
Breakdown voltage	as delivered, kV	≥ 60 kV (typical 60kV+)	Min. 30 kV (typical 60kV+)
Dielectric dissipation factor @ 90°C and 40 Hz to 62 Hz		≤ 0.001	≤ 0.005
Total PCB content	(ppm)	Not detectable (<2 mg/kg)	Not detectable (<2 mg/kg)
Total furans	(ppm)	Not detectable (<0.05mg/kg) for each individual compound	Not detectable (<0.05 mg/kg) for each individual compound
PCA content (IP346)		<2%	<3%

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