



OPUS LUBRICANTS PRODUCT DATA

TRANSFORMER & ELECTRICAL INSULATING FLUID

OPUS Transformer & Electrical Insulating Fluid is an uninhibited transformer oil that conforms to IEC 60296 Edition 4.0. Developed and formulated to deliver solid resistance to oil degradation, OPUS Transformer Oil provides good oxidation stability thanks to its natural inhibitors. This increases the possibilities for a longer transformer life with less maintenance.

Benefits

- Good heat transfer.
- Low viscosity and viscosity index.
- Reliable oxidation stability.
- Very good low temperature properties.
- High dielectric strength.

PROPERTY	UNIT	TEST METHOD	GUARANTEED DATA		TYPICAL DATA
			MIN	MAX	
<u>Physical</u>					
Appearance		IEC 60296	Clear, free from sediment		Pass
Density, 20°C	kg/dm ³	ISO 12185		0,895	0,887
Viscosity, 40	mm ² /s	ISO 3104		12.0	9.5
Viscosity, -30	mm ² /s	ISO 3104		1800	1100
Pour Point	°C	ISO 3016		-40	-51
<u>Chemical</u>					
Acidity	mgKOH/g	IEC 62021		0.01	<0.01
Corrosive Sulphur		DIN 51353	non corrosive		non corrosive
Corrosive Sulphur		ASTM D1275-B	non corrosive		non corrosive
Aromatic content	%	IEC 60590			11
Antioxidant, phenols	Wt%	IEC 60666	not detectable		Pass
Water content	mg/kg	IEC 60814		30	<20
Furfural content mg/kg		IEC 61198	0.1		<0.1
<u>Electrical</u>					
Dielectric Dissipation Factor (DDF) at 90°C		IEC 60247		0.0005	<0,001
Interfacial tension	nM/m	ISO 6295	40		49
Breakdown voltage					
- Before treatment	kV	IEC 60156	30		40-60
- After treatment	kV	IEC 60296/60156	70		>70

PROPERTY	UNIT	TEST METHOD	MIN	GUARANTEED DATA		TYPICAL DATA
				MAX		

Oxidation Stability

At 120°C, 164h		IEC 61125 C				
Total acidity	mgKOH/g			1.2		0.40
Sludge	Wt %			0.8		0.12
DDF/90°C				0.5		0.050

Health, safety and environment

Flash point, PM	°c	ISO 2719		135		148
DMSO extractable					3	<3
Compounds (PCA)	Wt %	IP 346		not detectable		Pass

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