

Lotus Lubes™ Hyper Transformer Oil

PRODUCT DESCRIPTION

LOTUS Lubes™ Hyper Transformer Oil is a premium electrical insulating oil. It is produced from severely hydrotreated naphthenic oil to meet the industry requirements for Type II Inhibited Oil, as defined by ASTM D3487. **LOTUS Lubes™ Hyper Transformer Oil** has high dielectric strength, outstanding low-temp performance, excellent oxidation stability, is noncorrosive to copper and **does not** contain PCBs. **LOTUS Lubes™ Hyper Transformer Oil** is recommended for applications including; oil-immersed transformers and equipment, circuit breakers, fuses, switches and tap changers.

Physical Properties		MIN	MAX	TYPICAL
Viscosity, SUS @ 37.8 °C	ASTM D 445		66	60.1
Viscosity, SUS @ 98.9 °C	ASTM D 445		36	34.1
Viscosity, cSt @ 0°C	ASTM D 445		76	66.9
Viscosity, cSt @ 40°C	ASTM D 341		12	9.6
Viscosity, cSt @ 100°C	ASTM D 341		3	2.3
Specific Gravity, 15.6°C	ASTM D 4052		0.91	0.8865
Flash Point, COC, °C	ASTM D 92	145		154.L0.5
Color, ASTM	ASTM D 6045		0.05	-61
Pour Point, °C	ASTM D 5949		-40	50
Interfacial Tension, 25°, dynes/cm	ASTM D 971	40		

Electrical Properties

Dielectric Breakdown @ 60 Hz, Disk electrodes, kV	ASTM D 877	30		39
Dielectric Breakdown @ 60 Hz, VDE, kV (2.03-mm) gap	ASTM D 1816	35		45
Power Factor @ 60 Hz, 25°C, %	ASTM D 924		0.05	0.004
Power Factor @ 60 Hz, 100°C, %	ASTM D 924		0.3	0.084

Chemical Properties

Oxidation Stability	ASTM D 2440			
72 hr: Sludge, % by mass			0.1	<0.01
Total Acid Number, mg KOH/g			0.3	<0.01
164 hr: Sludge, % by mass			0.2	<0.01
Total Acid Number, mg KOH/g			0.4	<0.01
Oxidation Stability (Rotating Bomb Test), minutes	ASTM D 2112	195		226
Oxidation Inhibitor Content, wt %	ASTM D 2668	0.15	0.3	0.26
Corrosive Sulfur	ASTM D 1275 (B)	Noncorrosive		Noncorrosive
Water Content, ppm	ASTM D 1533		35	9
Neutralization Number, mg KOH/g	ASTM D 974		0.03	<0.01
Aniline Point, °C	ASTM D 611	63	84	76
PCB Content, ppm	ASTM D 4059		Not detected	Not detected

Health and Safety Properties (not an ASTM D 3487 requirement)

Polycyclic Aromatic Compounds, wt%	IP 346		3	<3
Modified Ames Assay	ASTM E 1687	PASS		PASS
FDA Regulation	21 CFR 178.3620©	PASS		PASS

CAUTION: To maintain optimum dielectric strength, oil must be kept clean and dry. A small amount of moisture contamination will significantly decrease the dielectric strength. Product should be stored indoors and protected from water, debris and dust contamination.