



LUBRICANTS

AN HF SINCLAIR BRAND

TECH DATA

LUMINOL™ LV

LOW VISCOSITY ELECTRICAL INSULATING OIL

INTRODUCTION

LUMINOL™ Outperforms Naphthenic Electrical Insulating Oils

Petro-Canada™ Lubricants' LUMINOL family represents a breakthrough in electrical insulating oils technology. Unlike naphthenic mineral oils, LUMINOL uses Petro-Canada Lubricants' ultra-pure severely hydrotreated iso-paraffin base oils to help minimize power loss and maximize productivity. These oils contain no corrosive sulphur that may lead to transformer or equipment breakdown.

LUMINOL oils withstand energy spikes and hot and cold weather extremes, better than naphthenic electrical insulating oils. Thanks to a naturally high oxidation stability, LUMINOL oils resist breakdown longer and help provide extended service life. Therefore, less money is spent on routine transformer or equipment maintenance and fluid top-up, and less time worrying about efficiency.

LUMINOL LV has been designed specifically for SIEMENS X-ray equipment.

As usual, LUMINOL delivers worry-free, corrosive sulphur-free performance.

Environmental, Health & Safety Benefits

LUMINOL oils can help reduce disposal costs and the potential impact of spills, as well as answer possible community concerns about transformer oil toxicity. Petro-Canada Lubricants produces LUMINOL oils using ultra-refined isoparaffinic base oil. LUMINOL LV is ultimate biodegradable in natural environments. As well, it has low gassing tendency and its high flash point help reduce the risk of fire and explosion.

Facts about LUMINOL LV

LUMINOL LV is ideal for use in SIEMENS X-ray equipment:

- LUMINOL LV is designed for Type II applications.
- LUMINOL LV meets IEC 60296 General specification for fully inhibited high grade oil (Type A).

Demonstrated Characteristics Include:

- Excellent heat transfer capability to help enhance transformer performance.
- High dielectric impulse strength to improve performance in the presence of overvoltage conditions.
- Low power-factor (dielectric loss) to reduce thermal runaway under conditions of high electric stress.
- Low gassing to reduce the risk of failure from hydrogen gas bubbles.
- Full compatibility with existing naphthenic insulating oils, which enhances the performance of the combined oils.
- LUMINOL LV contains no corrosive sulphur compounds and do not require passivators.

TYPICAL PERFORMANCE DATA

Property	Test Method	Specification	LUMINOL LV
Density, (kg/L) @ 15°C	ASTM D4052	min. 0.83 max. 0.85	0.84
Viscosity, (cSt) @ 40°C	ASTM D445	min. 5.6 max. 7.0	6.1
Flash Point, COC (°C)	ASTM D92	min. 130	145
Total Acid Number, (mg/g)	ASTM D974	max. 0.01	<0.01
Corrosive Sulphur	DIN 51353	free of corrosive sulphur	Not Present
Dielectric Breakdown Voltage VDE Electrodes (2.03mm), (kV)	ASTM D1816	min. 35	48
Power Factor @ 60 Hz, 100°C	ASTM D924	max. 0.003	<0.001
Dielectric Breakdown Impulse, (kV)	ASTM D3300	min. 145	>300
Oxidation Stability 164h, Sludge Content, (%)	ASTM D2440	max. 0.06	<0.06
Oxidation Stability 164h, Neutralization Number, (mg/g)	ASTM D2440	max. 0.3	<0.3
Oxidation Stability 500h, Sludge Content, (%)	IEC 61125	max. 0.05	<0.01
Oxidation Stability 500h, Neutralization Number, (mg/g)	IEC 60296	max. 0.30	0.02
Oxidation Stability 500h, Dielectric Dissipation Factor @ 90°C	IEC 60247	max. 0.05	0.042
Colour/Appearance	ASTM D1500/ ASTM D1524	0.5 max / clear, free from sediment and suspended matter	<0.5 / Clear & Bright
Pour Point, (°C)	ASTM D5950	max. -40	-51
Water Content, Karl Fisher, (ppm)	ASTM D6304	max. 30	<20
Gassing Tendency, (µL/min)	ASTM D2300	max. 20	+12
Oxidation Inhibitor Content, (%)	IEC 60666	min. 0.18 max. 0.3	0.21

The values quoted above are typical of normal production. They do not constitute a specification.

Learn more about us: lubricants.petro-canada.com
Contact us: lubecsr@hfsinclair.com

Committed to the disciplined operation of our business.



Petro-Canada Lubricants Inc.
2310 Lakeshore Road W. Mississauga, Ontario, Canada L5J 1K2
lubricants.petro-canada.com

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IM-8126E (2023.07)