

HYTRANS® 61

TYPE II INHIBITED TRANSFORMER OIL



HYTRANS® 61 is a specially processed, inhibited, naphthenic transformer oil made in the U.S.A. It's severely hydrotreated using wax-free, ultra-low sulfur feedstocks and **the latest technology**.



It does not contain corrosive sulfur or harmful polychlorinated biphenyls (PCBs). The special processing and the low moisture content of HYTRANS® 61 insures **high electrical resistance** and both thermal and oxidative stability.

HYTRANS® 61 is highly stable and noncorrosive to copper. Its low pour point and low viscosity provides **excellent conductive heat transfer** under all operating conditions.

Performance Features

- Meets or exceeds the performance requirements of ASTM D3487, CSA-C50 Class B standards and DOBLE TOPS specifications.
- HYTRANS® 61 is colorless, odorless, non-carcinogenic and non-hazardous.
- Designed for Type II applications.
- High oxidation stability limits the formation of sludges, deposits and soluble compounds which break down the electrical properties of the oil in extended service conditions.
- High dielectric strength and low dissipation factor provides excellent insulating characteristics.
- Excellent conductive heat transfer properties improve cooling of transformer components prolonging life.
- Rapid quenching of arcs reduces contact erosion.
- Contains no corrosive sulfur and does not require passivators.
- Full compatibility with existing naphthenic insulating oils.

Applications

HYTRANS® 61 is recommended for use in arc-forming apparatus such as:

Switches
Oil-immersed
transformers
Circuit breakers

Electrical reclosures
Fuses
Oil filled capacitors
Tap changers



PROPERTY	ASTM Test Method	CSA-C50 Class B TYPE II	ASTM D3487 TYPE II	HYTRANS® 61
Appearance	Visual	N/A	Clear & Bright	Clear & Bright
Color	D1500	0.5 max	0.5 max	L0.5
Specific Gravity at 15 °C	D1298	0.906 max	0.91 max	0.8890
Kinematic Viscosity				
at 100 °C, cSt	D445	N/A	3.0 max	2.31
at 40 °C, cSt	D445	12 max	12.0 max	9.63
at 0 °C, cSt	D445	76 max	76 max	62.0
at -40 °C, cSt	D445	6000 max	N/A	3874.5
Pour Point in °C	D5950	-40 max	-40 max	-60
Interfacial Tension at 25 °C, dynes/cm	D971	40 min	40 min	51
Flash Point in °C	D92	145 min	145 min	156
CHEMICAL PROPERTIES				
Neutralization Number in mg KOH/g	D974	0.03 max	0.03 max	<0.01
Water Content in ppm	D1533	35 max	35 max	15
Corrosive Sulfur	D1275B	Non-corrosive	Non-corrosive	Non-corrosive
PCB Content in ppm	D4059	2 max	Not detectable	<1ppm
Oxidation Stability				
wt.% Sludge at 72h	D2440	N/A	0.1 max	0.01
wt.% Sludge at 164h	D2440	0.05 max	0.2 max	0.01
Neut # mg KOH/g at 72h	D2440	N/A	0.3 max	<0.01
Neut # mg KOH/g at 164h	D2440	0.2 max	0.4 max	<0.01
Inhibitor Content in wt.%	D2668	> 0.08 - 0.40	> 0.08 - 0.30	0.22
Rotary Pressure Vessel Oxidation Test, min	D2112	195 min	195 min	280
ELECTRICAL PROPERTIES				
Dielectric Breakdown Voltage at 60Hz Disk Electrode, min, kV	D877	30 min	30 min	55
Dielectric Breakdown Voltage at 60Hz 1 mm gap, min, kV	D1816	24 min *	20 min	44
2 mm gap, min kV		56 min **		
Dielectric Breakdown Impulse, kV	D3300	145 min	145 min	> 300
Gassing Tendency, uL/min	D2300	N/A	+30 max	+22
Power Factor				
at 60Hz, 100 °C, ppm (w%)	D924	0.005 max	(0.30 max)	0.038
at 60Hz, 25 °C, ppm (w%)	D924	0.0005 max	(0.05 max)	0.001

The figures above are typical production tolerances and do not constitute a specification.

* Following transport (unprocessed oil)

** After filtering, drying and degasification (new processed oil)

