HyVolt Insulating Oils

ERGON

HyVolt C50A

Electrical Insulating Oil Marketing Specification

This electrical insulating oil is produced from a severely hydrotreated naphthenic oil to meet the specification requirements defined by CSA C50-14 Class A, Type II and IV. HyVolt products have very low pour points and excellent oxidation stability.

TEST DESCRIPTION	TEST METHOD	SPECIFICATIONS		TYPICAL VALUES
Physical Properties		**MIN**	**MAX**	
Viscosity, cSt at -40°C	ASTM D445		2500	1799
Viscosity, cSt at 0°C	ASTM D445		75.0	46.5
Viscosity, cSt at 40°C	ASTM D445		10.0	8.4
Relative Density, 15°C	ASTM D1298		0.9060	0.8836
Flash Point, COC, °C	ASTM D92	145		156
Color, ASTM	ASTM D6045		0.5	L0.5
Pour Point, °C	ASTM D5950		-46	-54
Interfacial Tension, 25°C, dynes/cm	ASTM D971	40		49
Visual Examination, 25°C	ASTM D1524	PASS		PASS
Electrical Properties				
Dielectric Breakdown at 60 Hz, Disk electrodes, kV	ASTM D877	30		43
Dielectric Breakdown at 60 Hz, VDE, kV (2.0-mm) gap	ASTM D1816			
Unprocessed Oil		24		46
After filtering, drying and degasification		56		60
Impulse Breakdown Voltage, kV at 25°C	ASTM D3300	145		>300
Dissipation (Power) Factor at 60 Hz, 25°C, %	ASTM D924		0.05	0.009
Dissipation (Power) Factor at 60 Hz, 100°C, %	ASTM D924		0.50	0.080
Gassing Tendency, µL/min	ASTM D2300		0	-8
Chemical Properties				
Oxidation Stability at 120°C, 500 hours*	IEC 61125, C			
Total Acidity, mg KOH/g			1.2	0.01
Sludge, %			0.8	0.01
Dissipation Factor at 90°C			0.5	0.1
Oxidation Stability (Pressure Vessel), minutes	ASTM D2112	195		300
Oxidation Inhibitor Content, wt%	ASTM D2668	0.08	0.40	0.36
Metal Passivators, ppm	IEC 60666	Not Detected (<5)		Not Detected
Corrosive Sulfur	ASTM D1275	Noncorrosive		Noncorrosive
Potentially Corrosive Sulfur	IEC 62535	Noncorrosive		Noncorrosive
Neutralization Number, mg KOH/g	ASTM D974		0.03	<0.01
Strong Acids	ASTM D974	Not Detected		Not Detected
Water Content, ppm	ASTM D1533		35	13
PCB Content, ppm	ASTM D4059	Not Detected (<2)		Not Detected
DBDS, ppm	IEC 62697-1	Not Detected (<5)		Not Detected
2-furaldehyde, ppb	ASTM D5837		100	1
Health and Safety Properties (not an ASTM D3487 requirement)				
Polycyclic Aromatic Compounds, wt%	IP 346		3	<3
Modified Ames Assay, MI	ASTM E1687		1	<1
FDA Regulation	21 CFR 178.3620 (C)	PASS		PASS

HyVolt C50A is a product of Ergon Refining, Inc.
*Product meets Type II ASTM D2440 Oxidation Stability requirements
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