ERGON | HyVolt Dielectric Fluids

HyVolt II C50B

Dielectric Fluid Marketing Specification

This dielectric fluid is produced from a severly hydrotreated naphthenic oil to meet the specification requirements defined in CAN/CSA-C50-14 (Class B) and Type II of ASTM D3487-24 standards. 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	IEC 61868		6000	4333
Viscosity, cSt at 0°C	ASTM D445		76.0	64.5
Viscosity, cSt at 40°C	ASTM D445		12.0	9.8
Viscosity, cSt at 100°C	ASTM D445		3.0	2.4
Specific Gravity, 15.6°C	ASTM D4052		0.9060	0.8829
Flash Point, COC, °C	ASTM D92	145		156
Color, ASTM	ASTM D6045		0.5	0.1
Pour Point, °C	ASTM D5950		-40	-58
Interfacial Tension, 25°C, dynes/cm	ASTM D971	40		47
Visual Examination, 25°C	ASTM D1524	PASS		PASS
Electrical Properties				
Dielectric Breakdown at 60 Hz, Disk electrodes, kV	ASTM D877	30		42
Dielectric Breakdown at 60 Hz, VDE, kV (2.0-mm) gap	ASTM D1816	35		47
Dielectric Breakdown at 60 Hz, VDE, kV (2.0-mm) gap, After	ASTM D1816	56		59
Impulse Breakdown Voltage, kV at 25°C	ASTM D3300	145		>300
Dissipation Factor at 60 Hz, 25°C, %	ASTM D924		0.05	0.006
Dissipation Factor at 60 Hz, 100°C, %	ASTM D924		0.30	0.035
Chemical Properties				
Oxidation Stability, 110°C	ASTM D2440			
164 hr: Sludge, % by mass			0.05	0.01
Total Acid Number, mg KOH/g			0.20	0.01
Oxidation Stability (Pressure Vessel), minutes	ASTM D2112	195		302
Oxidation Inhibitor Content, wt%	ASTM D2668	0.08	0.30	0.26
Metal Passivators, ppm	IEC 60666	Not Detected (<5)		Not Detected
Corrosive Sulfur	ASTM D1275	Noncorrosive		Noncorrosive
Potentially Corrosive Sulfur	IEC 62535	Noncorrosive		Noncorrosive
Water Content, ppm	ASTM D1533		35	14
Neutralization Number, mg KOH/g	ASTM D974		0.03	0.01
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	0.67
Modified Ames Assay, MI	ASTM E1687		1	0
FDA Regulation	21 CFR 178.3620 (C)	PASS		PASS

HyVolt II C50B is a product of Ergon Refining, Inc.
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