

HyVolt III

Dielectric Fluid Oil Marketing Specification

This Type A, TVAL inhibited dielectric fluid is produced from a severely hydrotreated naphthenic oil meeting the general specifications of Table 3 as defined in IEC 60296, ed. 5, 2020.

TEST DESCRIPTION	TEST METHOD	SPECIFICATIONS		TYPICAL VALUES
		MIN	MAX	
Function				
Viscosity, mm ² /s at 40°C	ISO 3104		12	9.6
Viscosity, mm ² /s at -30°C	ISO 3104		1800	787
Pour Point, °C	ISO 3016		-40	-49
Water Content, mg/kg	IEC 60814		30	14
Breakdown Voltage, kV, Before treatment, 2.5 mm	IEC 60156	30		57
Breakdown Voltage, kV, After treatment, 2.5 mm	IEC 60156	70		77
Density at 20°C, kg/m ³	ISO 12185		895	867
DDF at 90°C	IEC 60247		0.005	0.0004
Refining/Stability				
Color	ISO 2049		L0.5	L0.5
Appearance	IEC 60296	PASS		PASS
Acidity, mg KOH/g	IEC 62021-1		0.01	<0.01
Interfacial Tension, mN/m	IEC 62961	43		48
Sulfur content, wt%	ISO 14596		0.05	0.002
Corrosive Sulfur	DIN 51353	Noncorrosive		Noncorrosive
Corrosive Sulfur	ASTM D1275	Noncorrosive		Noncorrosive
Potentially Corrosive Sulfur	IEC 62535	Noncorrosive		Noncorrosive
DBDS, mg/kg	IEC 62697-1	Not detected (<5)		Not Detected
Inhibitors, %	IEC 60666	0.08	0.40	0.38
Metal Passivator Additives, mg/kg	IEC 60666	Not detected (<5)		Not Detected
Other Additives	IEC 60296	See ^a		Not Detected
Furfural Content, mg/kg	IEC 61198	Not detected (<0.05)		Not Detected
Stray Gassing	IEC 60296 Clause A.4 ^b			
Hydrogen, µl/l		Non-stray gassing (<50)		<5
Methane, µl/l		Non-stray gassing (<50)		<5
Ethane, µl/l		Non-stray gassing (<50)		<1
Performance				
Oxidation Stability at 120°C, 500 hours	IEC 61125			
Total Acidity, mg KOH/g			0.30	0.07
Sludge, %			0.05	0.01
DDF at 90°C			0.050	0.014
Health, Safety and Environment				
Flash Point, PMCC, °C	ISO 2719	135		145
PCA Content, %	IP 346		<3	<3
PCB Content, mg/kg	IEC 61619	Not detected (<2)		Not Detected

HyVolt III is a product of Ergon Refining, Inc.

^a As per IEC 60296, ed. 5, 2020, this product contains no undeclared additives.

^b Oil saturated with air in the presence of copper.

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