

HyVolt III

Electrical Insulating Oil Marketing Specification

The inhibited electrical insulating oil, HyVolt III, is produced from a severely hydrotreated naphthenic oil to meet the specification requirements defined in IEC 60296, ed. 4, 2012, special applications.

TEST DESCRIPTION	TEST METHOD	SPECIFICATIONS		TYPICAL VALUES
		MIN	MAX	
Function				
Viscosity, mPa·s at 40°C	ISO 3104		12.0	9.7
Viscosity, mPa·s at -30°C	ISO 3104		1800	1092
Pour Point, °C	ASTM D5950		-40	-55
Water Content, mg/kg	IEC 60814		30	5
Breakdown Voltage, kV, Before treatment, 2.5 mm	IEC 60156	30		57
Breakdown Voltage, kV, After treatment, 2.5 mm	IEC 60156	70		75
Density at 20°C, g/ml	ISO 12185		0.895	0.875
DDF at 90°C	IEC 60247		0.005	0.001
Refining/Stability				
Appearance	IEC 60296	PASS		PASS
Acidity, mg KOH/g	IEC 62021-1		0.01	<0.01
Interfacial Tension, mN/m	ASTM D971	40		48
Corrosive Sulfur	DIN 51353		Noncorrosive	Noncorrosive
Corrosive Sulfur	ASTM D1275		Noncorrosive	Noncorrosive
Corrosive Sulfur	IEC 62535		Noncorrosive	Noncorrosive
DBDS, mg/kg	IEC 62697-1		Not detected(5)	Not detected
Inhibitors, %	IEC 60666	0.08	0.40	0.36
Metal Passivator Additives, mg/kg	IEC 60666		Not detected(5)	Not detected
Other Additives	IEC 60296		See ^a	
Sulfur, wt%	ISO 14596		0.05	0.0008
Furfural Content, mg/kg	IEC 61198		Not detected(0.05)	Not detected
Carbon Type Analysis, %				
Ca				6
Cn				47
Cp				47
Performance				
Oxidation Stability at 120°C, 500 hours	IEC 61125, C			
Total Acidity, mg KOH/g			0.30	0.01
Sludge, %			0.05	0.01
DDF at 90°C			0.050	0.013
Health, Safety and Environment				
Flash Point, PMCC, °C	ISO 2719	135		144
PCA Content, %	IP 346		3	<3
PCB Content, mg/kg	IEC 61619		Not detected(2)	Not detected

HyVoltIII is a product of Ergon Refining, Inc.

^a As per IEC 60296, ed. 4, 2012, this product contains no undeclared additives.

October 30, 2015

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