

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
Function		MIN	MAX	
Viscosity, mm ² /s at 40°C	ISO 3104		12.0	9.2
Viscosity, mm ² /s at -30°C	ISO 3104		1800	924
Pour Point, °C	ISO 3016		-40	-65
Water Content, mg/kg	IEC 60814		30	13
Breakdown Voltage, kV, before treatment	IEC 60156	30		57
Breakdown Voltage, kV, after treatment	IEC 60156	70		73
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	ERTM-2	PASS		PASS
Acidity, mg KOH/g	IEC 62021-1		0.01	<0.01
Interfacial Tension, mN/m	ASTM D 971	40		48
Corrosive Sulfur	DIN 51353	Noncorrosive		Noncorrosive
Corrosive Sulfur	ASTM D 1275, B	Noncorrosive		Noncorrosive
Corrosive Sulfur	IEC 62535	Noncorrosive		Noncorrosive
DBDS	IEC 62697-1	Not detected (<5mg/kg)		Not detected
Inhibitors of IEC 60666	IEC 60666	0.08	0.40	0.37
Metal Passivator Additives of IEC 60666	IEC 60666	Not detected (<5mg/kg)		Not detected
Other Additives		See ^a		
Sulfur, wt%	ISO 14596		0.15	0.008
Furfural Content, mg/kg	IEC 61198	Not detected (<0.05mg/kg)		Not detected
Carbon Type Analysis, %	IR-Brandes			
Ca				9
Cn				44
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	0.02
DDF at 90°C			0.050	0.013
Health, Safety and Environment				
Flash Point, PMCC, °C	ISO 2719	135		141
PCA Content, %	BS 2000 Part 346		3	<3
PCB Content	IEC 61619	Not detected (<2mg/kg)		Not detected