



**NEW GENERATION
TRANSFORMER OILS**

Nynas AB
PRODUCT DATA SHEET
Nyro Libra



Severely Hydrotreated Insulating Oil

Issuing date: 03/03/2008

Property	Unit	Test method IEC	Guaranteed data		Typical data
			Min	Max	
1. Physical					
Appearance		IEC 60296	Clear, free from sediment		complies
Density, 20°C	kg/dm ³	ISO 12185		0,895	0,879
Viscosity, 40°C	mm ² /s	ISO 3104		12,0	9,4
Viscosity, -30°C	mm ² /s	ISO 3104		1800	1100
Pour point	°C	ISO 3016		-40	-57
2. Chemical					
Acidity	mg KOH/g	IEC 62021		0,01	<0,01
Corrosive sulphur		DIN 51353	non-corrosive		non-corrosive
Corrosive sulphur		ASTM D 1275 B	non-corrosive		non-corrosive
Corrosive sulphur		IEC 62535	non-corrosive		non-corrosive
Aromatic content	%	IEC 60590			11
Antioxidant, phenols	Wt %	IEC 60666	not detectable		not detectable
Water content	mg/kg	IEC 60814		30	<20
Furfural content	mg/kg	IEC 61198		0,1	<0,1
3. Electrical					
Dielectric dissipation factor (DDF) at 90°C		IEC 60247		0,005	<0,001
Interfacial tension	mN/m	ISO 6295	40		48
Breakdown voltage					
- Before treatment	kV	IEC 60156	30		40-60
- After treatment	kV		70		>70
4. Oxidation stability					
At 120°C, 164 h		IEC 61125 C			
Total acidity	mg KOH/g			1,2	0,25
Sludge	Wt %			0,8	0,08
DDF/90°C				0,500	0,080
6. Health, safety and environment					
Flash point, PM	°C	ISO 2719	135		148
DMSO extractable compounds	Wt %	IP 346		3	<3
PCB		IEC 61619	not detectable		not detectable

Nyro Libra is an uninhibited insulating oil, meeting IEC 60296 (03) General specifications.