

Nytro Libra is an uninhibited transformer oil that conforms to IEC 60296:2003. Developed and formulated to deliver solid resistance to oil degradation, Nytro Libra provides good oxidation stability thanks to its natural inhibitors. This increases the possibilities for a longer transformer life with less maintenance.

Designed for heavy duty

This product has been specially developed for use in oil-filled electrical equipment – including power and distribution transformers, rectifiers, circuit breakers and switchgears.

Performance and benefits

Good heat transfer. Thanks to low viscosity and viscosity index, this standard grade offers extremely good heat transfer characteristics, ensuring heat is efficiently removed from core and windings.

Reliable oxidation stability. Developed and formulated to deliver good resistance to oil degradation, this grade also provides good oxidation stability for enhanced transformer life and minimum maintenance.

Very good low temperature properties. Naphthenic characteristics allow the transformer to start at the lowest possible temperature – without using pour point depressants.

High dielectric strength. This insulating oil both meets and exceeds the toughest demands on dielectric strength – when stored and handled correctly.

Product description

Nytro Libra fulfils the requirements for IEC 60296:3 uninhibited oil. Nynas classify this product as a standard grade.

Nytro Libra is rigorously analysed and passes the following corrosion tests:

- ASTM D1275 method B
- IEC 62535
- DIN 51353

PCB: Not detectable according to IEC 61619:1997

DBDS: Not detectable according to method using GC-AED.

There's more to us than this

We're delighted you chose one of our transformer oils. If you have any questions about other products and services, get in touch with your local Nynas contact. Besides top quality oils, we offer a wide range of services, including rapid delivery worldwide, sample analysis, training, seminars and much more. All you have to do is ask. Find out more at www.nynas.com

Nytro Libra

PROPERTY	UNIT	TEST METHOD IEC	GUARANTEED DATA		TYPICAL DATA
			MIN	MAX	
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	-53
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			10
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
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
Oxidation stability					
At 120°C, 164 h		IEC 61125 C			
Total acidity	mg KOH/g			1,2	0,50
Sludge	Wt %			0,8	0,15
DDF/90°C				0,500	0,080
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

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

Severely Hydrotreated Insulating Oil
Issuing date: 2010-03-24

