## Nytro Libra SA-GX

High performance insulating oil

Specially formulated for the South African market, Nytro Libra SA-GX is an inhibited high-grade oil. Conforming to ESKOM 240-75661431 Rev 1 and developed to deliver strong resistance to oil degradation, Nytro Libra SA-GX provides excellent oxidation stability 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

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

Excellent oxidation stability. Developed and formulated to deliver superb resistance to oil degradation, this grade provides excellent 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 SA-GX fulfils the requirements for ESKOM 240-75661431 Rev 1. Nynas classify this product as a high grade.

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

- ASTM D1275
- IEC 62535

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 are proud to provide you with the transformer oil for your operation. If you need more information about this, or other products and services, please contact your local Nynas representative. Besides top quality oils, we offer a wide range of services, including rapid delivery worldwide, sample analysis, training, seminars and much more.

Learn more about the full scope at www.nynas.com



# Nytro Libra SA-GX

PROPERTY	UNIT	TEST METHOD	SPECIFICATION LIMITS		TYPICAL DATA	
			MIN	MAX		
1 - Function						
Viscosity, 40°C	mm²/s	ISO 3104		11.0	9.3	
Pour point	°C	ISO 3016		-40	-57	
Water content	mg/kg	IEC 60814				
- Prior transportation				10	<10	
- On delivery				20	<20	
Breakdown voltage	kV	IEC 60156				
- Prior transportation			70		>70	
- On delivery			60		>60	
Density, 20°C	kg/dm <sup>3</sup>	ISO 12185		0.895	0.884	
DDF at 90°C		IEC 60247		0.005	<0.001	
Number of particles per 100 ml	μm	IEC 60970				
- On delivery				130000 particles >6 16000 particles >14 or 17/14 (ISO rating)	≤130000 particles >6 ≤16000 particles >14 or 17/14 (ISO rating)	
Silicone content	ppm	ASTM D 6595		not detectable	not detectable	
2 - Refining/stability						
Appearance		IEC 60296	Clear, free from sediment		complies	
Acidity	mg KOH/g	IEC 62021		0.01	<0.01	
Interfacial tension	mN/m	EN 14210	40		45	
Corrosive sulphur		DIN 51353	non-corrosive		non-corrosive	
Potentially corrosive sulphur		IEC 62535	non-corrosive		non-corrosive	
Corrosive sulphur		ASTM D 1275 B	non-corrosive		non-corrosive	
DBDS	mg/kg	IEC 62697-1		not detectable	not detectable	
Antioxidant	wt %	IEC 60666		0.4	<0.4	
Metal passivator additives	mg/kg	IEC 60666		not detectable	not detectable	
2-Furfural and related compounds content	mg/kg	IEC 61198		0.05	<0.05	
Aromatic content	%	IEC 60590			12	
3 - Performance						
Gassing Tendency	microl/min	IEC 60628		+5	+1	
Rotating bomb	minutes	ASTM D2112	220		300	
4 - Health, safety and environm	ent (HSE)					
Flash point, PM	°C	ISO 2719	140		149	
PCA	wt %	IP 346		3	<3	
PCB		IEC 61619	not detectable	not detectable not detectable		

Nytro Libra SA-GX is an inhibited insulating oil, meeting ESKOM 240-75661431 Rev 1. An additive is used to achieve gassing tendency requirements.

Severely Hydrotreated Insulating Oil Issuing date: 2018-11-01

