

HIGH GRADE  
**Nytro Lyra X**  
High performance insulating oil

An inhibited high-grade oil, Nytro Lyra X conforms to IEC 60296:03 – including the fulfilment of specific requirements for special applications. Developed and formulated to deliver strong resistance to oil degradation, Nytro Lyra X 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 Lyra X fulfils the requirements for IEC 60296:03 fully inhibited oil. Nynas classify this product as a high grade.

Nytro Lyra X has is 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](http://www.nynas.com)



PRODUCT DATA SHEET  
**Nytro Lyra X**

PROPERTY	UNIT	TEST METHOD IEC	GUARANTEED DATA		TYPICAL DATA
			MIN	MAX	
<b>Physical</b>					
Appearance		IEC 60296	Clear, free from sediment		complies
Density, 20°C	kg/dm <sup>3</sup>	ISO 12185		0.895	0.870
Viscosity, 40°C	mm <sup>2</sup> /s	ISO 3104		12.0	9.3
Viscosity, -30°C	mm <sup>2</sup> /s	ISO 3104		1800	926
Pour point	°C	ISO 3016		-40	-48
<b>Chemical</b>					
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
Sulphur content	%	ISO 14596		0.15	0.01
Aromatic content	%	IEC 60590			5
Antioxidant, phenols	Wt %	IEC 60666	0.08	0.4	0.38
Water content	mg/kg	IEC 60814		30	<20
Furfural content	mg/kg	IEC 61198		0.1	<0.1
<b>Electrical</b>					
Dielectric dissipation factor (DDF) at 90°C		IEC 60247		0.005	<0.001
Interfacial tension	mN/m	ISO 6295	40		50
Breakdown voltage					
- Before treatment	kV	IEC 60156	30		40-60
- After treatment	kV		70		>70
<b>Oxidation stability</b>					
At 120°C, 500 h		IEC 61125 C			
Total acidity	mg KOH/g			0.3	0.06
Sludge	Wt %			0.05	<0.02
DDF/90°C				0.050	0.020
<b>Health, safety and environment</b>					
Flash point, PM	°C	ISO 2719	135		152
DMSO extractable compounds	Wt %	IP 346		3	<3
PCB		IEC 61619	not detectable		not detectable

Nytro Lyra X is an inhibited insulating oil with extremely good electrical and excellent ageing properties meeting IEC 60296 (03), special applications.

Severely Hydrotreated Insulating Oil  
 Issuing date: 2011-11-14

