

SUPER GRADE

# Nyro 10XN

Maximum performance insulating oil

Nyro 10 XN is an inhibited super grade that conforms to both ASTM D3487 and IEC 60296 Edition 4.0, including the fulfilment of specific requirements for special applications. Developed and formulated to deliver maximum resistance to oil degradation, Nyro 10 XN provides outstanding oxidation stability for a longer transformer life with less maintenance. This makes it a popular choice worldwide.

## 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

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

Outstanding oxidation stability. Developed and formulated to deliver maximum resistance to oil degradation, this grade provides outstanding 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

Nyro 10 XN is an inhibited oil and fulfils the requirements for ASTM D 3487 Type II. Nynas classify this product as a super grade.

Nyro 10 XN is rigorously analysed and passes the following corrosion tests:

- ASTM D 1275 method B
- IEC 62535
- DIN 51353

PCB: Not detectable according to ASTM D 4059

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)

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# Nyro 10XN

PROPERTY	UNIT	TEST METHOD ASTM	GUARANTEED DATA		TYPICAL DATA
			MIN	MAX	
<b>Physical</b>					
Appearance		D 1524	Clear and bright		complies
Density, 15 °C	kg/dm <sup>3</sup>	D 1298		0.910	0.880
Viscosity, 40 °C	mm <sup>2</sup> /s	D 445		12.0	7.6
Viscosity, 100 °C	mm <sup>2</sup> /s	D 445		3.0	2.1
Viscosity, 0 °C	mm <sup>2</sup> /s	D 445		76	48
Flash Point, COC	°C	D 92	145		150
Pour Point	°C	D 97		-40	-63
Aniline Point	°C	D 611	63		77
Colour		D 1500		0.5	<0.5
Interfacial tension at 25 °C	mN /m	D 971	40		50
<b>Chemical</b>					
Total acid No.	mg KOH/g	D 974		0.03	<0.01
Corrosive sulphur		D 1275 B	non-corrosive		non-corrosive
Antioxidant, phenols	Wt %	D 2668		0.3	<0.3
Water content	ppm	D 1533		35	<20
PCB Content	ppm	D 4059	not detectable		not detectable
<b>Electrical</b>					
Dielectric dissipation factor at 100 °C	%	D 924		0.3	<0.1
Breakdown voltage					
- As received	kV	D877	30		55
- As received	kV	D 1816 (0.08"gap)	35		50
- As processed	kV	D 1816 (0.08"gap)	56		>70
- Impulse breakdown	kV	D 3300	145		>300
Gassing tendency	µl /min	D 2300B			+35
<b>Oxidation Stability</b>					
After 72 h		D 2440			
- Sludge	Wt %			0.1	<0.01
- Neutralization No.	mg KOH/g			0.3	<0.01
After 164 h					
- Sludge				0.2	<0.01
- Neutralization No.				0.4	<0.01
Rotating Bomb test	minutes	D 2112	195		370
Sludge-free life	h	DOBLE	80		>88

Nyro 10XN is an inhibited insulating oil meeting ASTM D3487 type II, excluding gassing tendency, and IEC 60296 Ed.4 (2012) special applications.

Severely Hydrotreated Insulating Oil  
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