



SUPER GRADE

NYTRO® 10XN

Maximum performance insulating oil

NYTRO 10 XN is an inhibited super grade that conforms to both ASTM D3487-16 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, NYTRO 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

NYTRO 10 XN is an inhibited oil and fulfils the requirements for ASTM D 3487-16 Type II. Nynas classify this product as a super grade.

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

- ASTM D 1275
- 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



Property	Unit	Test Method	Specification Limits		Typical Data
			Limit Min	Limit Max	
1 - Physical					
Aniline Point	°C	ASTM D611			78
Colour		ASTM D1500			< 0.5
Flash Point, COC	°C	ASTM D92			150
Interfacial tension at 25°C	mN/m	ASTM D971			49
Pour Point	°C	ASTM D97 / ASTM D5950			-63
Relative Density at 15°C/15°C		ASTM D 1298 / D 4052			0.877
Viscosity, 100°C	mm ² /s (cSt)	ASTM D445			2.07
Viscosity, 40°C	mm ² /s (cSt)	ASTM D445			7.75
Viscosity, 0°C	mm ² /s (cSt)	ASTM D445			48
Visual Examination		ASTM D1524	Clear and bright		Clear and bright
2 - Electrical					
Breakdown voltage at 60 Hz		ASTM D1816			
- VDE electrodes, As processed*	kV	1 mm gap			> 40
- VDE electrodes, As processed*	kV	2 mm gap			> 50
- VDE electrodes, As received	kV	2 mm gap			> 70
Dielectric breakdown voltage, impulse conditions, negative polarity point	kV	ASTM D3300			> 300
Gassing tendency, Hydrogen	µL/min	ASTM D2300			+ 34
Dielectric dissipation factor at 60 Hz		ASTM D924			
DDF at 100°C	%	ASTM D924			< 0.1
DDF at 25°C	%	ASTM D924			0.001
3 - Chemical					
Oxidation stability at 110°C		ASTM D2440			
- 72 h, sludge	wt %	ASTM D2440			< 0.01
- 72 h, total acid number	mg KOH/g	ASTM D2440			< 0.01
- 164 h, sludge	wt %	ASTM D2440			< 0.01
- 164 h, total acid number	mg KOH/g	ASTM D2440			< 0.01
Pressure vessel test	minutes	ASTM D2112			410
Oxidation inhibitor content	wt %	ASTM D2668			0.28
Corrosive sulphur		ASTM D1275	Non-Corrosive		Non-Corrosive



Product Data Sheet
NYTRO® 10XN

Corrosive sulphur - Copper		ASTM D1275	Non-Corrosive		Non-Corrosive
Corrosive sulphur - Silver		ASTM D1275	Non-Corrosive		Non-Corrosive
Water content	mg/kg	ASTM D1533			< 20
Neutralization number	mg KOH/g	ASTM D974			< 0.01
Furanic compounds, per compound	µg/L	ASTM D5837			< 25
PCB	mg/kg	ASTM D4059	Not Detectable		Not Detectable

NYTRO 10XN is an inhibited insulating oil meeting ASTM D3487-16 type II, excluding gassing tendency, and IEC 60296 Ed.4 (2012) special applications.

Severely hydrotreated insulating oil
Issuing Date: 05-19-2020

*As per definition given by ASTM D 3487-16 appendix X2.2.1.1, processing involves filtering, dehydration and degassing.