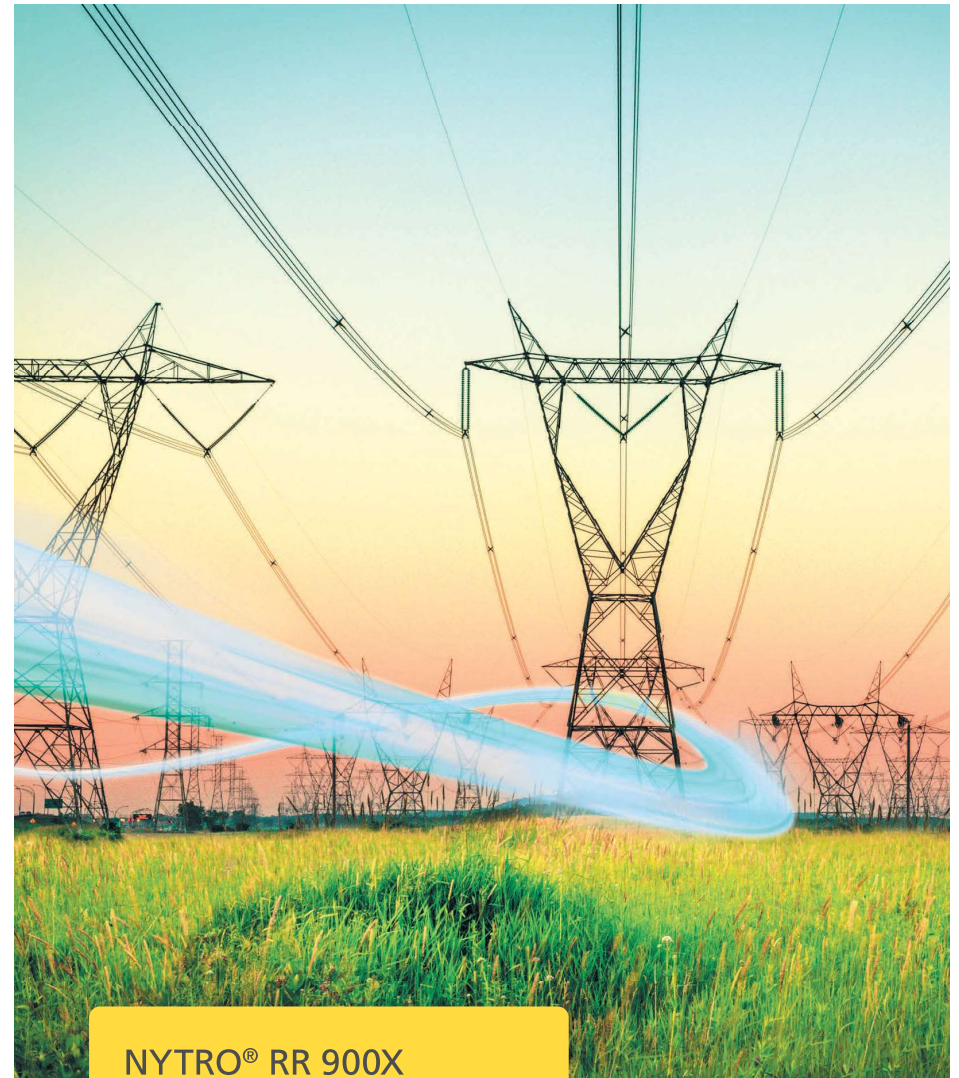
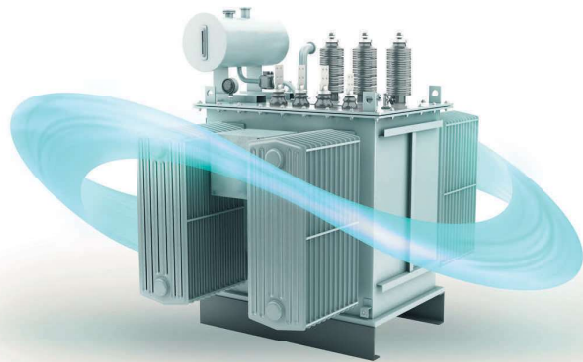


**Want to learn more about how you can join
the circular economy with NYTRO RR 900X?**

Get in touch with your local Nynas contact. Find out more at:
nynas.com/en/product-areas/transformer-oils



NYTRO® RR 900X
circular transformer fluid

Join the circular economy™

NYTRO® RR 900X circular transformer fluid Join the circular economy™

NYTRO RR 900X is a circular transformer oil based on the most powerful and effective re-refining technology. It contributes to sustainable development and raw material efficiency by reusing end-of-life transformer oil.

By collecting and converting transformer oils currently in the grid, Nynas enables the electrical industry to join the circular economy with a high-performance insulating fluid that complies with the most demanding quality standards and is capable of powering new transformers.

At a recycling rate of 100%, over its lifetime NYTRO RR 900X produces a reduction of at least 70% in greenhouse gas emissions compared to a virgin transformer oil.

NYTRO RR 900X contributes to sustainable development

- › Raw material efficiency by reusing end-of-life transformer oil
- › Nynas' refining process recovers valuable molecules that are no longer fit for service in their present form

NYTRO RR 900X has excellent performance characteristics

- › Readily suitable for the most demanding of electrical applications
- › Retains the dielectric behaviour of traditional naphthenic fluids
- › Equal, if not superior, to other high-performance transformer oils
- › Complies with the IEC 60296 standard

NYTRO RR 900X has a lower carbon footprint compared to virgin transformer oils

- › A lifetime reduction of at least 70% in greenhouse gas emissions

Property	Unit	Test Method	Specification Limits		Typical Data
1. Function			Min	Max	
Viscosity, 40°C	mm/s² (cSt)	ISO 3104		12	8.7
Viscosity, -30°C	mm/s² (cSt)	ISO 3104		1800	656
Pour point	°C	ISO 3016		- 40	- 48
Water content	mg/kg	IEC 60814		30	< 20
Breakdown voltage	kV	IEC 60156			
– Before treatment	kV	IEC 60156	30		40-60
– Before treatment	kV	IEC 60296	70		> 70
Density, 20°C	kV/dm³	ISO 12185		0.895	0.859
DDF at 90°C		IEC 60247		0.005	< 0.001
2. Refining/stability					
Colour		ISO 2049		0.5	< 0.5
Appearance at 15°C		IEC 60296	Clear, free from sediment		Clear, free from sediment
Acidity	mg KOH/g	IEC 62021		0.01	< 0.01
Interfacial tension at 25°C	mN/m	IEC 62961	43		49
Total sulphur content	%	ISO 14596		0.05	< 0.01
Corrosive sulphur		DIN 51353	Non-corrosive		Non-corrosive
Potentially corrosive sulphur		IEC 62535	Non-corrosive		Non-corrosive
Corrosive sulphur		ASTM D1275	Non-corrosive		Non-corrosive
DBDS	mg/kg	IEC 62697-1	Non-corrosive		Non-corrosive
Antioxidants	wt %	IEC 60666	0.08	0.40	0.38
Metal passivator additives	mg/kg	IEC 60666	Not detectable		Not detectable
Other additives *			None		None
2-Furfural and related compounds content	mg/kg	IEC 61198		0.05	< 0.05
Aromatic content	%	IEC 60590			4
Stray gassing thermo-oxidative stress		IEC 60296			
– Hydrogen	µl/l	clause A.4		50	< 5
– Methane	µl/l	clause A.4		50	< 1
– Ethane	µl/l	clause A.4		50	< 1
3. Performance					
Oxidation stability at 120°C, 500 h		IEC 61125			
– Total acidity	mg KOH/g	IEC 61125		0.3	0.1
– Sludge	wt %	IEC 61125		0.05	< 0.01
– DDF at 90°C		IEC 61125		0.050	0.010
4. Health, safety and environment (HSE)					
Flash point, PM	°C	ISO 2719	135		153
PCA	wt %	IP 346		3.0	< 3.0
PCB	mg/kg	IEC 61619	Not detectable		Not detectable

*this product contains no undeclared additives

NYTRO RR 900X is a re-refined, inhibited insulating oil that complies with IEC 60296 Ed. 5 (2020) and Type A, TRAI and it is 100% recyclable. Breakdown voltage after treatment as per definition in IEC 60296, section 6.4

Severely hydrotreated re-refined insulating oil
Date issued: 12-08-2022