

Property	Unit	Test Method	Specification Limits		Typical Data
			Min	Max	
1 - Function					
Viscosity, 40°C	mm ² /s (cSt)	ISO 3104		12	9.5
Viscosity, -30°C	mm ² /s (cSt)	ISO 3104		1800	895
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
- After treatment	kV	IEC 60296	70		> 70
Density, 20°C	kg/dm ³	ISO 12185		0.895	0.861
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		48
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	Not Detectable		Not Detectable
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			5
Stray gassing under 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	0.05
- Sludge	wt %	IEC 61125		0.05	< 0.01
- DDF at 90°C		IEC 61125		0.050	0.006
4 - Health, safety and environment (HSE)					
Flash Point, PM	°C	ISO 2719	135		148
PCA	wt %	IP 346		< 3.0	< 3.0
PCB	mg/kg	IEC 61619	Not Detectable		Not Detectable

*this product contains no undeclared additives

NYTRO LYRA X is an inhibited insulating oil meeting IEC 60296 Ed. 5 (2020) Type A, TVAL and it is 100% recyclable. Breakdown voltage after treatment as per definition in IEC 60296, section 6,4

Severely hydrotreated insulating oil

Issuing date: 18-05-2021

Property	Unit	Test Method	Specification Limits		Typical Data
			Min	Max	
1 - Function					
Viscosity, 40°C	mm ² /s (cSt)	ISO 3104		11	8.1
Viscosity, -30°C	mm ² /s (cSt)	ISO 3104		1800	835
Pour point	°C	ISO 3016		-45	-57
Water content	mg/kg	IEC 60814		30	< 20
Breakdown voltage	kV	IEC 60156			
- Before treatment	kV	IEC 60156	30		40-60
- After treatment	kV	IEC 60296	70		> 70
Density, 20°C	kg/dm ³	ISO 12185		0.895	0.877
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		47
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	Not Detectable		Not Detectable
Antioxidants	wt %	IEC 60666	0.30	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			5
Stray gassing under 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	0.08
- Sludge	wt %	IEC 61125		0.05	< 0.01
- DDF at 90°C		IEC 61125		0.050	0.015
4 - Health, safety and environment (HSE)					
Flash Point, PM	°C	ISO 2719	135		145
PCA	wt %	IP 346		< 3.0	< 3.0
PCB	mg/kg	IEC 61619	Not Detectable		Not Detectable

*this product contains no undeclared additives

NYTRO 11GX is an inhibited insulating oil meeting IEC 60296 Ed. 5 (2020) and is Type A, TVAI and it is 100% recyclable. Breakdown voltage after treatment as per definition in IEC 60296, section 6,4

Severely hydrotreated insulating oil

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