



Nynas transformer oils  
product guide



# Nynas product range of transformer oils

Property, unit	Test method	SUPER GRADE	HIGH GRADE	STANDARD GRADE	SPECIAL GRADES		
		NYTRO® 10XN	NYTRO® Gemini X	NYTRO® Libra	Property, unit	Testmethod ASTM	Typical data
<b>1 - Function</b>					<b>NYSWITCHO™ 3X</b>		
Viscosity, 40°C, mm²/s	ISO 3104	7.7	9.2	9.4	Viscosity, 40°C, mm²/s	ISO 3104	3.3
Viscosity, -30°C, mm²/s	ISO 3104	730	820	1050	Flash Point, PM, °C	ISO 2719	98
Pour point, °C	ISO 3016	-63	-54	-51	Pour Point, °C	ISO 3016	<-70
Water content, mg/kg	IEC 60814	<20	<20	<20	<b>NYHIB™ 10</b>		
Breakdown voltage: Before treatment, kV	IEC 60156	40-60	40-60	40-60	Antioxidant, phenols, Wt %	IEC 60666	9.8
Breakdown voltage: After treatment, kV	IEC 60296	>70	>70	>70	Dielectric dissipation factor at 90°C	IEC 60247	0.001
Density, 20°C, kg/dm³	ISO 12185	0.874	0.869	0.876	<b>NYPASS™</b>		
DDF at 90°C	IEC 60247	<0.001	<0.001	<0.001	Density, 20°C, kg/dm³	ISO 12185	0.894
<b>2 - Refining/stability</b>					Viscosity, 40°C, mm²/s	ISO 3104	11.0
Appearance	IEC 60296	complies	complies	complies	Dielectric dissipation factor at 90°C	IEC 60247	0.01
Acidity, mg KOH/g	IEC 62021	<0.01	<0.01	<0.01	<b>3 - Performance</b>		
Interfacial tension, mN/m	EN 14210	49	49	47	Oxidation stability at 120°C,	IEC 61125 C	500 h
Total sulphur content, %	ISO 14596	<0.01	0.01		Total acidity, mg KOH/g		0.05
Corrosive sulphur	DIN 51353	non-corrosive	non-corrosive	non-corrosive	Sludge, wt %		<0.01
Potentially corrosive sulphur	IEC 62535	non-corrosive	non-corrosive	non-corrosive	DDF at 90°C		0.010
Corrosive sulphur	ASTM D 1275	non-corrosive	non-corrosive	non-corrosive	<b>4 - Health, safety and environment (HSE)</b>		
DBDS, mg/kg	IEC 62697-1	not detectable	not detectable	not detectable	Flash point, PM, °C	ISO 2719	142
Antioxidant, wt %	IEC 60666	0.28	0.38	not detectable	PCA, wt %	IP 346	<3
Metal passivator additives, mg/kg	IEC 60666	not detectable	not detectable	not detectable	PCB	IEC 61619	not detectable
2-Furfural and related compounds content, mg/kg	IEC 61198	<0.05	<0.05	<0.05			
Aromatic content, %	IEC 60590	6	3	9			

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