

ELECTRA 3X PLUS

INDUSTRY

Lubricants



Description

Inhibited dielectric oil for special applications. Formulated with isoparaffinic base stock highly hydrogenated. Recommended for use in electrical equipment when high oxidation resistance and very low sulphur content is required.

Properties

- High oxidation stability.
- High resistance to sludge and deposit formation.
- Very low sulphur content.
- High dielectric strength.
- Excellent cooling properties.

Quality levels

- According to IEC 60296 standard for mineral insulating oils for transformers, including section 7.1: "Higher oxidation stability and low sulphur content".

Technical specifications

Physical properties	UNIT	METHOD	GUARANTEED VALUE	TYPICAL VALUE
Appearance		Visual	Bright and transparent	
Density at 20 °C	g/ml	ISO 12185	< 0.895	0.820
Kinematic viscosity:				
	at 100 °C	cSt	ISO 3104	3.0
	at 40 °C	cSt	ISO 3104	< 12
	at -30 °C	cSt	ISO 3104	< 1800
Viscosity index	-	ASTM D2270		130
Pour point	°C	ISO 3016	< -40	-65
Chemical properties	UNIT	METHOD	GUARANTEED VALUE	TYPICAL VALUE
Acidity	mgKOH/g	IEC 62021-2	< 0.01	< 0.01
Corrosive sulphur	-	IEC 62535	Non-corrosive	
Total sulphur content	%	ASTM D2622	< 0.05	< 0.0001
Water content (1)	mg/kg	IEC 60814	< 30	11.5
Phenolic antioxidants	% weight	IEC 60666	< 0.4	0.3
DBDS	mg/kg	IEC 62697-1	Undetectable	
Furfural content	mg/kg	IEC 61198	Undetectable for each component	

A safety data sheet is available on request.

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Technical data sheet for Lubricants. Revision 1. August 2016.

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Oxidative stability (IEC 61125, Method C, 500 h)	UNIT	METHOD	GUARANTEED VALUE	TYPICAL VALUE
Total sludge	% weight	IEC 61125	< 0.05	Undetectable
Total acidity	mgKOH/g	IEC 61125	< 0.3	0.161
Soluble acidity	mgKOH/g	IEC 61125		0.101
Dielectric dissipation factor at 90 °C	-	IEC 61125	< 0.05	0.0002

Dielectrical properties	UNIT	METHOD	GUARANTEED VALUE	TYPICAL VALUE
Dielectric Breakdown Voltage (Untreated)	kV	IEC 60156	> 30	63
Dielectric Breakdown Voltage (Treated)	kV	IEC 60156	> 70	> 70
Dielectric dissipation factor. Tangent at 90 °C		IEC 60247	< 0.005	0.0004
Interfacial tension	mN/m	UNE 21320	> 40	42

Health, safety, and environment	UNIT	METHOD	GUARANTEED VALUE	TYPICAL VALUE
Flash point	°C		> 135	193
PCA content	% weight	IP 346	< 3	0.8
PCB content	% weight	IEC 61619	Exempt	Undetectable

(1) Value guaranteed for bulk supplies

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