



## MAKER BIO ELECTRA SYNTH

### Description

Dielectric transformer oil based on synthetic esters, manufactured using raw materials specially selected to obtain a very high performance fluid. It has excellent oxidative stability and a very low pour point, so it is well suited to cold climates.

The high flash point of the oil allows its use in areas with security restrictions regarding the flammability of the oil.

### Properties

- High oxidative stability
- Highly biodegradable
- Wide range of working temperatures
- Exceptional performance at very low temperatures
- Fire-resistant: fire point above 300 °C

### Quality levels, approvals and recommendations

- Classified as a K3 liquids according to IEC 61100
- IEC: 61099



## MAKER BIO ELECTRA SYNTH

## Technical specifications

	UNIT	METHOD	VALUE
PHYSICAL PROPERTIES:			
Colour	Hazen	ISO 2211	30
Appearance	-	Visual	B & T
Density at 20 °C	g/cm3	ISO 12185	0.969
Kinematic viscosity at 40 °C	cSt	ASTM D445	27.4
Kinematic viscosity at - 20 °C	cSt	ASTM D445	1,196
Flash point, closed cup	°C	ASTM D93	255
Fire point	°C	ASTM D92	308
Freezing point	°C	ISO 3016	-54
CHEMICAL PROPERTIES:			
Water content	mg/kg	IEC 60814	<60
Acidity (neutralisation index)	mg KOH/g	ISO 6618	0,01
Oxidation stability			
- Soluble acidity	mg KOH/g	IEC 61125	0,04
- Volatile acidity	mg KOH/g	IEC 61125	0,01
- Total acidity	mg KOH/g	IEC 61125	0,05
- Total sludge	% in weight	IEC 61125	<0.01
DIELECTRICAL PROPERTIES:			
Dielectric strength	kV	IEC 60156	77
Dielectric loss factor at 90 °C		IEC 60247	0,005
	G Ohm.m	IEC 60247	7.4
ENVIRONMENTAL PROPERTIES:			
Biodegradability - 28 days	%	OECD 301B	72
Ecotoxicity in aquatic environment	mg/L	OECD 201, 202 y 203	>1,000

The above mentioned characteristics are typical values and should not be considered product specifications.