MP ESTRAMOL S-23

SYNTHETIC ESTER TRANSFORMER OIL

Apyree Sdn. Bhd.

Distributed by:

POWER TRANSCOTEQ

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BUATAN MALAYSIA
MADE IN MALAYSIA

ESTRAMOL MP S-23

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Introduction

High-quality transformer oil is essential for the safe, reliable, and efficient operation of transformers. It must provide properties for both as an insulating medium and a coolant, helping to prevent electrical faults and overheating.

Using subpar oils can result in accelerated aging, increased maintenance costs, and a higher risk of transformer failures, ultimately impacting reliability and power quality.

ESTRAMOL S-23 is a high quality fully synthetic polyol-ester (POE) Transformer Fluid. It is specifically formulated for dielectric applications. **ESTRAMOL S-23** provides exceptional thermal-oxidative stability, superior hydrolytic stability and excellent lubricity properties. It is also highly suitable for applications in cold climates due to its very low pour point. **ESTRAMOL S-23** meets the IEC 61099 standards.

Application

- Used for Transformer oil and other dielectric-coolant applications
- Enhance protection of Transformer components and prolong asset lifespan

Features

- Fully synthetic polyol-ester oil and readily biodegradable
- Exceptional thermal-oxidative stability
- Excellent anti-wear and lubricity properties
- Very low-temperature fluidity
- High moisture tolerance versus natural esters

Delivery forms

- 190 kgs metal drum or 950 kgs IBC

Storage

- To be kept in a cool, dry, well-ventilated area away from direct sunlight and moisture.
- Ideally between 15°C - 35°C, to maintain stability and prevent degradation.

Technical Data of MP Estramol S-23

No.	Analysis	Standard	Reference/Requirement	Results
1	Colour (Hazen)	ISO 2211	200 (Max)	10
2	Appreance (Visual)	ISO 2211	Clear free from sediment & suspended matter	Clear free from sediment & suspended matter
3	Density at 20°C (g/cm^3)	ISO 12185	1.000 (Max)	0.968
4	Kinematic Viscosity at 40°C (mm^2/s)	ISO 3104	35 (Max)	28.5
5	Kinematic Viscosity at 100°C (mm^2/s)	ISO 3104	-	8.2
6	Kinematic Viscosity at -20°C (mm^2/s)	ISO 3104	3000 (Max)	1250.5
7	Flash Point (°C)	ISO 2719	250 (Min)	310
8	Fire Point (°C)	ASTM D92	300 (Min)	335
9	Pour Point (°C)	ISO 3016	-45 (Max)	-51
10	Water Content (mg/kg)	IEC 60814	200 (Max)	58
11	Neutralisation Value (mg KOH/g)	IEC 62021-1	0.03 (Max)	0.01
12	Neutralisation Value (mg KOH/g)	IEC 62021-2		0.02
13	Oxidation Stability (164H)	IEC 61125C		
	a) Total Acidity (mg KOH/g)	IEC 61125	0.3 (Max)	0.1821
	b) Total Sludge (%) mass	IEC 61125	0.01 (Max)	0.0069
14	Oxidation Stability (500H)	IEC 61125C		
	a) Total Acidity (mg KOH/g)	IEC 61125	0.3 (Max)	0.2912
	b) Total Sludge (%) mass	IEC 61125	0.05 (Max)	0.0262
15	AC Breakdown Voltage (kV) (Short Gap 1 mm, 2.5 mm, 3 mm, 4 mm	IEC 60156	45 (Min) - 2.5 mm	1 mm: 21.4 2.5 mm: 62.3 3 mm: 61.6 4 mm: 63.3
16	Dielectirc Dissipation Factor (DDF) at 90°C (Nos)	IEC 60247	0.03 (Max)	0.013
17	DC Resisitivity at 90°C (Nos)	IEC 60247	2 (Min)	12
18	Potentially Corrosive Sulphur	IEC 62535	-	Non Corrosive
19	Silver Corrosive Sulphur	DIN 51353	-	Non Corrosive
20	Silver Corrosive Sulphur (Ext. 72H)	ASTM D1275	-	Non Corrosive
21	Dibenzyl Disulfide (DBDS) (mg/kg)	IEC 62697-1	-	Not Detected
22	Total Addtives (%)	IEC 60666	-	<1
23	Polychlorinated Biphenyls (PCBs) (%)	IEC 61619	-	Not Detected
24	Relative Permitivitty at 20°C (Nos)	IEC 60247	-	3.1
25	Dieletric Breakdown Volttage, Impulse Conditions	ASTM D3300-20		
	a) Impulse Test at 25.4 mm Gap (kV)		-	131.3
	b) Impulse Behaviour (Lightning & Chop) for Short Gap 3.8 mm (kV)		-	Lightning Condition: 130.0 Chopping Condition: 160.2
26	Poly Cyclic Aromatic Compound (PCA) Content (%)	IP 346	-	0.84
27	Crystallization (Visual)	IS 16081	-	No Crystals

28	Nett Calorific Value (MJ/kg)	ASTM 240-02	-	34.105
29	Thermal Conductivity (W/mK)	ASTM D7896	-	0.152
30	Expansion Coefficient (K-1)	ASTM D1903	-	0.000734
31	Specific Heat Capacity at 20°C (J/gK)	ASTM E1269	-	1.93
32	Biodegradability (%)	OECD 301B	-	63.0
32	Winding Paper TUP DSDD degradation status after Ageing - Degree of Polymerization (120°C for 168H)	IEC 60450	-	Before Ageing: 1211 After Ageing: 1054

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