Samic Elect Oil IA Inhibited Oils

High Quality Transformer Oil

Product Data Sheet

Product Description

Samic Elect Oil IA Inhibited Transformer oils are severely refined hydro-cracked / hydro-treated virgin inhibited insulating oils with highest degree of purity and stability. It is manufactured from judiciously selected blend of latest technology feed stocks, which is highly suitable for all grades of Power & distribution Transformers, Circuit Breakers, Oil filled switches and X-ray equipment.

Performance & Customer Benefits

- Very low sulphur and no DBDS.
- Low Pour point.
- High dielectric strength.
- Non corrosive as tested by all present methods, DIN & ASTM tests & New IEC 62535 method.
- Low viscosity oils offering excellent and fast heat transfer.
- Higher Flash point, resulting on Low evaporation losses and better safety
- Remarkably low sludge and acidity formation, in both ageing and oxidation tests, results in longer life of oil and equipment
- Compatible with transformer construction material.

Main Application

Samic Elect Oil IA Inhibited Transformer oils are highly suitable for all grades of

- Power Transformers, Distribution Transformers
- Circuit Breakers
- Oil filled switches
- X-ray equipment.

Specifications & Recommendations

Samic Elect Oil IA Inhibited Transformer oils conforms to and exceed the requirements of IS12463:03, IEC 296:82: Class IA, BS 148:98: Class IA & JS 2320 Class I IEC No. 2A.

Typical Physical Characteristics

TEST DESCRIPTION	TEST METHOD	SPECIFICATION LIMITS
Function		
Kinematic Viscosity	ISO 3104	
at 40° C mm^2/s, Max		16.5
at -15° C mm^2/s, Max		800
Pour Point °C, Max	ISO 3016	≤ -30
Water Content,	IEC 60814	
in Bulk, mg/kg, Max		30
in Drum & IBC mg/kg, Max		40
Break Down Voltage, kV, Min	IEC & BS 60156	
As Delivered		30
After treatment		70
Density at 20 °C, g/ml, Max	ISO 3675	0.895
DDF at 90 °C, Max	IEC 60247	0.005

The above figures are typical of blends with normal production tolerance and do not constitute a specification.

Refining/stability		
Appearance	Visual	Transparent Clear & odourless liquid free from suspended impurities
Colour, Max	ASTM D1500	0.5
Neutralisation Value / Acidity, mg KOH/g, Max	IEC 62021-1 BS 148 -1998	0.02
Interfacial tension, mN/m, Min	ISO 6295	40
Corrosive Sulphur, silver strip, 100°C, 18 hrs	DIN 51353	Non Corrosive
Cu Strip, 140°C, 19 hrs	BS 5680 / IS 335 Annex B	Non Corrosive
Cu Strip, 150°C, 48 hrs	ASTM D 1275 B	Non Corrosive
Cu Strip & Paper 150 °C, 72 hrs	IEC 62535 :08	Non corrosive
Antioxidant Additives, % Max	IEC60666 / BS5984	0.15 – 0.40
2-Furfural content, mg/kg, Max	IEC & BS 61198	0.10
Performance		
Oxidation Stability[1],164 hrs	IEC & BS 61125 METHOD –A / C	
- Total acidity, mg KOH/g, Max		0.25
- Sludge, %, Max		0.01
Oxidation Stability[1],500 hrs		
- Total acidity, mg KOH/g, Max		1.5
- Sludge, %, Max		1.0
- DDF at 90°C, Max	IEC 60247	-
Oxidation Stability – Induction period, hours	IEC 296.7.11.2	> 120
Gassing tendency at 50 Hz after 120 Min. mm³/min, Method A (Max)	BS 5797 / IEC 60628 A	+5
Health, safety and environment (HSE)		
Flash Point, PMCC, °C , Min	BS EN ISO 2719	140[2]
Polycyclic Aromatics (PCA) content, % Max	BS 2000 (P: 346)	3.00
Polychlorinated biphenyls (PCB) content	IEC 61619 / ASTM D4059	Not Detectable
Conforms to Standards		
IS12463:03[3]		✔
IEC 296:82:Class IA & BS 148:98: Class IA		✔
JS 2320 Class I IEC No.2A		✔

The above figures are typical of blends with normal production tolerance and do not constitute a specification

Note:

1. The Oxidation stability test is performed at 100'C & 120'C, or 110'C with O2 or Air, as per the prescribed procedure under IEC / BS or ASTM or IS.

2. Flash Point as per ASTM D 92, COC will be > 145'C

3. ELECT OIL IA will meet and surpass other tests as per IS 12463, including Specific Resistance & Ageing Characteristics

Note:

Samic Elect Oil IA Inhibited Transformer oils are High Grade Inhibited Transformer oil has superior oxidation stability – meeting the high grade requirements as specified in IEC 296:82, high dielectric strength and are used in equipment requiring operations at high elevated temperatures & greater oxidation resistance.

Packaging Options:

Samic Elect Oil IA Inhibited Transformer oils are offered in 200-210 litres of steel drums and also in bulk in Flexi bags or ISO tanks.

Storage Precautions:

Extreme care is taken while packing these products, including filling of drums in inert atmosphere, as Electrical Insulating oils / Transformer oils are very sensitive to very minute concentrations of contaminants, such as moisture, particulate matter, fibers, etc. Hence, care should be taken to store Samic Elect Oil IA Inhibited Transformer oil in a clean and dry condition. It is strongly recommended that all storage tanks / drums be maintained such that oil is not in contact with atmospheric air. Also these oils should always be stored indoors in climate controlled environments.