

# Samic Elect Oil IH Inhibited Oils

High Quality Transformer Oil

## Product Data Sheet



### Product Description

Samic Elect Oil IH 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 IH 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 IH Inhibited Transformer oils** conforms to and exceed the requirements of ASTM D 3487 Type II & IEC 60296:2012 (Table 2: I – High Grade requirements)

**Samic Elect Oil IH Inhibited Transformer oils** are High Grade Inhibited Transformer oil has superior oxidation stability – meeting the high grade requirements as specified in IEC 60296:2012, high dielectric strength and are used in equipment requiring operations at high elevated temperatures & greater oxidation resistance.

### Typical Physical Characteristics

Samic Elect Oil IH Inhibited Transformer Oil				
No.	Characteristics	Specification	Method	Results
A	FUNCTION			
1	Kinematic Viscosity @ 40°C, mm <sup>2</sup> /s	12 (Max)	ISO 3104	10.2
	Kinematic Viscosity @ -30°C, mm <sup>2</sup> /s	1800 (Max)	ISO 3104	760
2	Color		ASTM D 1500	L0.5
3	Pour Point, °C	<= -40	ISO 3016	-42
4	Water Content, ppm			
	Bulk Delivery	20 (Max)	IEC 60814	12
	Drum Delivery	30 (Max)		20

Samic Elect Oil IH Inhibited Transformer Oil				
<b>5</b>	Break down voltage, KV(IEC -296)			
	(a) As Delivered	30 (Min)	IEC 60156	50-65
	(b) After Treatment	70 (Min)		70-80
<b>6</b>	Density @20°C, g/ml	0.895 (Max)	ISO 12185/ISO 3675	0.821
<b>7</b>	Dielectric dissipation factor (tan Delta)at 90°C	0.005 (Max)	IEC 60247/IEC 61620	0.0005
<b>B</b>	<b>REFINING / STABILITY</b>			
<b>1</b>	Appearance	Transparent clear & odourless Liquid free from suspended impurities	Visual	Transparent clear & odourless Liquid free from suspended impurities
<b>2</b>	Neutralization value/ Acidity, mg KOH/g	0.01 (Max)	IEC:62021-1/ IEC:62021-2	<0.001
<b>3</b>	Interfacial Tension, mN/m	40 (Min)	EN 14210/ASTM D 971	48
<b>4</b>	Total Sulphur Content, %	0.05 (Max)	IP 373/ISO 14596	<0.01
<b>5</b>	Corrosive Sulphur			
	Silver strip@100°C, 18hrs	Non corrosive	DIN 51353	Non corrosive
	Cu strip & Kraft paper@150°C, 72hrs	Non corrosive	IEC 62535	Non corrosive
<b>6</b>	Dibenzylidisedulphide (DBDS)	IEC 61297-1	Not Detectable	Not Detected
<b>7</b>	Anti-oxidant Additives,% Max	0.3-0.40	IEC 60666	0.3
<b>8</b>	2-Furfural Content, mg/kg	0.05 (Max)	IEC 61198	Nil
<b>C</b>	<b>PERFORMANCE</b>			
<b>1</b>	Oxidation Stability, 500hrs		IEC61125 METHOD - C	
	a)Total Acidity, mg KOH/g	0.30 (Max)		0.02
	b)Total sludge, % by mass	0.05 (Max)		<0.01
	c)Dielectric Dissipation Factor (tan delta)@90°C	0.05 (Max)	IEC 60247	0.005
<b>D</b>	<b>HEALTH,SAFETY AND ENVIRONMENT(HSE)</b>			
<b>1</b>	Flash Point,°C	135 (Min)	ISO 2719	150
<b>2</b>	Polycyclic Aromatics (PCA) content, % by mass	3 (Max)	BS 2000 (IP: 346)	<1
<b>3</b>	Polychlorinated biphenyls (PCB) content, mg/kg	Not Detectable	IEC 61619	Not Detected
<b>E</b>	<b>Bio Degradability</b>			
	OECD 301 B, CO2 Evolution Test	-	OECD 301B	"Readily Biodegradable" (>60%)
<b>F</b>	<b>Conforms to Standards</b>			
	IEC 60296:2012 Table 2: I - High Grade requirements	✓		✓
	ASTM D3487 Type II	✓		✓

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

**Packaging Options:**

Samic Elect Oil IH 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 IH 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.