

Zeal Elect Oil N-42 Un-inhibited Oils

High Quality Naphthenic Transformer Oil



Product Data Sheet

Product Description

Zeal Elect Oil N-42 Un-inhibited Transformer oils are severely refined hydro-cracked / hydro-treated virgin un-inhibited Naphthenic 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.

Features & 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.

Application

Zeal Elect Oil N-42 Un-inhibited Transformer oils are highly suitable for all grades of

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

Specifications

- **Zeal Elect Oil N-42 Un-inhibited Transformer oils** conforms to and exceed the requirements of ASTM D 3487 Type I, IEC 60296:2012 (U) (superseding IEC 296:1982) & BS 148:1998

Typical Characteristics

Zeal Elect Oil N-42 Un-inhibited Transformer Oil				
No.	Characteristics	Specification	Method	Results
A	FUNCTION			
1	Kinematic Viscosity @ 40°C, mm ² /s	12 (Max)	ISO 3104	8.2
	Kinematic Viscosity @ -30°C, mm ² /s	1800 (Max)	ISO 3104	348.2
2	Pour Point, °C	<= -40	ISO 3016	-42
3	Water Content ppm	< 40	IEC 60814	
	Bulk Delivery	30 (Max)		
	Drum Delivery	40 (Max)		9.75
4	Break down voltage, KV(IEC -296)		IEC 60156	
	(a) As Delivered (kv)	30 (Min)		75
	(b) After Treatment (kv) (IEC-296)	70 (Min)		
5	Density @20°C, kg/dm ³	0.895 (Max)	ISO 3675	0.8405
6	Dielectric dissipation factor (tan Delta)at 90°C	0.005 (Max)	IEC 60247	0.0006

B REFINING / STABILITY				
1	Appearance	Clear Odourless Liquid free from suspended impurities	Visual	Clear Odourless Liquid free from suspended impurities
2	Neutralization value/ Acidity, mg KOH/g	0.01 (Max)	IEC:62021-1/ EC:62021-2	0.0015
3	Interfacial Tension, mN/m	40 (Min)	ISO 6295	48
4	Total Sulphur Content, % Max	No general	IP 373/ISO 14596	No general
5	Corrosive Sulphur			
	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
6	DBDS, mg/kg	Not detectable	IEC 62697-1	Not detectable
7	Anti-oxidant Additives,%	Not detectable	IEC 60666	Not detectable
	Metal Passivators, mg/kg	Not detectable		Not detectable
8	2-Furfural Content, mg/kg	0.1 (Max)	IEC 61198	Not detectable
9	Carbon Type Analysis			
	CA (Aromatic)	To report	IEC 590: 1977	0%
	CP (Paraffinic)	To report		55.45%
	CN (Naphthenic)	42% Min		44.55%
C PERFORMANCE				
1	Oxidation Stability, 164hrs		IEC61125 METHOD - C	
	a)Total Acidity, mg KOH/g	1.2 (Max)		0.032
	b)Total sludge, % by mass	0.8 (Max)		0.023
	c)Dielectric Dissipation Factor (tan delta)@90°C	0.5 (Max)	IEC 60247	0.004
D HEALTH,SAFETY AND ENVIRONMENT(HSE)				
1	Flash Point,°C (PMCC)	135 (Min)	ISO 2719	156
2	Polycyclic Aromatics %mass	3 (Max)	IP: 346	0.35
3	Total PCB content, mg/kg	Not Detectable	IEC 61619	Not Detectable

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

Packaging Options:

Zeal Elect Oil N-42 Un-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 Zeal Elect Oil N-42 Un-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.