Powerzone Oil Refinery Pvt. Ltd.

Transforming Power into Oil

www.powerzoneoil.com

POWERZONE® Transformer Oil IS : 335 : 1993

Powerzone Transformer Oil –ISI marked.

POWERZONE Transformer Oil finds extensive usage in power transformers, oil immersed circuit breakers and switchgears etc. We are counted among the top Manufacturers, Exporters and Suppliers of Transformer Oil from Haryana, India. Our Transformer Oil is regularly tested at our fully equipped laboratory and is also periodically checked at reputed independent laboratories recognized by the Government.

The Transformer Oil that we offer confirms various standards such as IEC -296 Class I, BS 148 Class I, VDEO 370, DIN 57370 : 1978 Class A, IFC 296 Class II, BS 148 Class II, ASTM d 3487 Type – I and **IS : 335 : 1993.**

POWERZONE Transformer Oil - ISI marked approved by "Bureau of Indian standard and conform to IS-335:1993". The company have got recognition from almost all the electricity utilities throughout the country like State Electricity Boards, Transformer Manufacturers, Giant Industries, Mahanadi Coal Fields Limited, Delhi Jal Board, NTPC, Cordite Factory Niligris Ministry of Defence, Tamilnadu, IVRI, Izzatnagar, IAF, AAI, JNU, JNPT Mumbai, NTPC, SECL, WCL and many more utilities.

Note :- The above data is indicated of recent overage values only. Minor variation which does not affect product performance of quality may be expected in manufacture.

Properties :-

- Good dielectric properties resulting in minimum power loss.
- High resistively gives better insulation values between windings.
- High flash point resulting in low evaporation losses due to high thermal stability.
- Excellent interfacial tension for quick water separation.
- Proven resistance to electrical stresses.
- High electrical strength.

- Low viscosity improves cooling.
- Remarkably low sludge & acidity formation in both ageing & oxidation tests.
- Gives longer life to oil and equipment during storage and service.

❖ Applications :

- POWERZONE Transformer oil are widely used in Transformers, oil immersed circuit breakers and switchgears.
- POWERZONE transformer oil are widely used in special transformers designed to operate at elevated temperatures and in low maintenance free transformers designed to operate for longer periods.
- **Supply : POWERZONE Transformer oil are available in a variety of packing options to suit customer needs, ranging from Cans, Drums, Tank Trucks, ISO Tank Containers and Flexi Bags, Bulk transportation is done via a wholly owned dedicated fleet of stainless steel and elicited tankers to ensure prompt delivery and reliability.**

Technical Specification :

Guaranteed Technical Data Sheet

Transformer oil IS-335:1993 IV Rev. Reaffirmed 2005

SL.	CHARACTERISTICS	STANDARD VALUE AS PER IS-335:93	TYPICAL VALUE	TEST METHODS
1.	Appearance	The oil shall be clear and transparent and free from suspended matter and sediments	The oil is clear transparent and free from suspended matter and sediments	A representative sample of oil shall be examined in 100mm thick layer at 20°C
2.	Density g/cm; at 29.5 °.C , Max	0.89	**0.830 MAX**	**IS:1448 P-16**
3.	Kinematic viscosity, cst. , Max. at 27 ° C at 40° C	27 under consideration	**13.0 MAX** **--**	**IS:1448 P-25**
4.	Interfacial tension, N/M at 27° C, Min.	0.04	**0.048**	**IS:6104-1970**
5.	Flash Point, Pensky-Marten (Closed).°C, Min.	140	**145 MIN**	**IS:1448 P-21**
6.	Pour point, ° C Max.	-6	**-15**	**IS:1448 P-10**
7.	Neutralization Value, Max. (a) Total Acidity, mg. KOH/gm (b) Inorganic acidity/ alkalinity	 0.03 Nil	 **0.03 MIN** **NIL**	**IS:1448 P-2**
8.	Corrosive Sulphur Copper strips, 19 hrs at 140 °C,	Non corrosive	**Non-Corrosive**	**Annex.B IS:335**
9.	Electric Strength (Breakdown Voltage), KV (rms) (a) New unfiltered Oil (b) After filtration	 30 The oil shall be filtered if above value not attained to 60 kv	 **50** **62**	**IS:6792-1972**
10.	Dielectric dissipation factor (tan Delta) at 90°C Max..	0.002	**0.0007**	**IS:6262-1971**
11.	Specific resistance (resistivity) , ohm-cm, (a) At 90°C , min (b) At 27° C , min	 $35X10^{12}$ $1500X10^{12}$	 **$105X10^{12}$** **$1840X10^{12}$**	**IS:6103-1971**
12.	Oxidation Stability: (a) Neutrilization value , after oxidation for 164 Hrs at 100 Deg. C mg KOH/gm, max. (b) Total sludge, 164 Hrs at 100° C wt. %, max.	 0.40 0.10	 **0.10** **0.02**	**ANNEX C OF IS:335**
13.	Accelerated ageing test (open beaker Method with copper catalyst) 96 Hrs at 115°C (a) Specific resistance (resistivity) ohm-cm at 27° C , Min (b) Specific resistance (resistivity) ohm-cm at 90° C , Min (c) Dielectric dissipation factor (tan delta) at 90° C , Max (d) Total acidity, mg KOH/gm , Max (e) Total Sludge value % wt. , Max	 $2.5X10^{12}$ $0.2X10^{12}$ 0.20 0.05 0.05	 **$2.96X10^{12}$** **$.81X10^{12}$** **0.10** **NIL** **NIL**	 **IS:6103** **IS:6103** **IS:6262** **IS:1448 P-2** **IS:12172**
14.	Presence of oxidation inhibitor	Oil shall not contain any antioxidant additives	**Not present**	**IS:13631:1992**
15.	Water content, ppm, Max	50	**17**	**IS:13567:1992**

Remarks: Materials is conform to IS-335:1993 Reaffirmed 2005

Note: The above is guaranteed and may vary batch to batch but it will be within IS specification