



**DIVYOL Transformer Oil as per IS-335:1993 Reaffirmed 2005 & Inhibited Transformer Oil as per IS-12463:1998 Reaffirmed 2008**

Sr. No.	Characteristics	Unit	Test Method	Specifications	
				DIVYOL TO 335	DIVYOL TO 12463
1.	Appearance		A Representative sample of the oil shall be examined in a 100 mm thick layer at 27 °C	The Oil shall be clear, transparent and free from suspended matter or sediments	The Oil shall be clear, transparent and free from suspended matter or sediments
2.	Density at 29.5 °C (Max)	g / ml	IS 1448 P 16 - 1997	0.89	0.89
3.	Kinematic Viscosity at 27 °C (Max)	cSt	IS 1448 P 25 - 1996	27	27
4.	Inter Facial Tension at 27 °C (Min)	N / m	IS 6104 - 1971	0.04	0.04
5.	Flash Point, PMCC (Min)	°C	IS 1448 P 21 - 1970	140	140
6.	Pour Point (Max)	°C	IS 1448 P 10 - 1970	-6	-6
7.	Neutralization Value	mg KOH/ gm	IS 1448 P 2 - 1967		
	a) Total Acidity (Max)			0.03	0.03
	b) Inorganic Acidity/Alkalinity			Nil	Nil
8.	Corrosive Sulphur Copper Strip, at 140 °C, for 19 hrs.		IS 335 Annexure B	Non-corrosive	Non-corrosive
9.	Electric Strength Breakdown Voltage (BDV)		IS 6792 - 1972		
	a) New Unfiltered oil (Min)	kV		30	30
	b) After Filtration (Min)	kV		60	60
10.	Dielectric Dissipation Factor tan δ at 90 °C (Max)		IS 6262 - 1971	0.002	0.002
	Specific Resistance (Resistivity)		IS 6103 - 1971		
11.	a) at 90 °C (Min)	ohm - cm		35 x 10 <sup>12</sup>	35 x 10 <sup>12</sup>
	b) at 27 °C (Min)	ohm - cm		1500 x 10 <sup>12</sup>	1500 x 10 <sup>12</sup>
12.	Oxidation Stability at 100 °C, for 164 hrs.		IS 335 Annexure C		
	a) Total Acidity (Max)	mg KOH/ gm		0.4	0.4
	b) Total Sludge (Max)	%		0.1	0.1
13.	Ageing characteristics after accelerated ageing (open beaker method with copper catalyst)		IS 12177 – 1987 Method A		
	a) Specific Resistance (Resistivity) at 27 °C (Min)	ohm - cm		2.5 x 10 <sup>12</sup>	2.5 x 10 <sup>12</sup>
	at 90 °C (Min)	ohm - cm		0.2 x 10 <sup>12</sup>	0.2 x 10 <sup>12</sup>
	b) Dielectric Dissipation Factor tan δ at 90 °C (Max)			0.20	0.20
	c) Total Acidity (Max)	mg KOH/ gm		0.05	0.05
	d) Total Sludge (Max)	%		0.05	0.05
14.	Presence of Oxidation Inhibitor (Max)	%	IS 13631 – 1982	The oil shall not contain antioxidant additive	0.3
15.	Water Content (Max)	ppm	IS 13567 – 1992	50	50
16.	Oxidation Stability, (Rotating Bomb Test) (Min)	Minutes		N.A.	195