

1.0 SCOPE

This specification covers the technical properties of epoxy bonded Filament wound Fiber Glass Cylinders used as Electrical Insulation in transformers as winding cylinders, core supports, edge blocks, Guard rings & Tap changers.

2.0 MATERIAL

Fiber Reinforced Plastic Cylinder is made from Fiber Glass Roving bonded with Thermal class F Epoxy resin system.

3.0 PROPERTIES

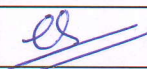
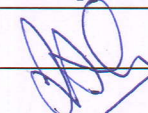
Sr no.	Technical Parameters		Standards	Unit	Specific Value
A : Physical Properties					
1	Apparent Density	@ 25°C	ASTM D 792	g/cc	2.0
2	Water Absorption (max)	@ 25°C	ASTM D 570	%	0.04
3	Glass Content (min)		BS 2782 Pt 10	%	65-70
4	Glass Transition Temperature (T _g)		IEC 61006	°C	120
5	Shrinkage	Ageing at 120 °C	--	%	0.5
B : Mechanical Properties					
6	Flexural strength		ASTM D 790	N/mm ²	71
7	Tensile strength	Axial	ASTM D 638	N/mm ²	70
		Radial		N/mm ²	250
8	Compressive Strength	Circumferential	ASTM D 695	N/mm ²	250
C : Electrical Properties					
9	Electrical Strength in oil	@90 °C, Edgewise, Across 25 mm	IEC 60243 Pt1	--	10kV/ 5 min
10	Comparative Tracking Index		IEC 60112	V	> 600
11	Dielectric dissipation factor	@250V / 50 Hz/ 90°C	ASTM D 150	--	< 0.005
12	Insulation Resistance	@25 °C, 500V DC, 60 sec	ASTM D 257	Ohms	1.3 X 10 ¹³
13	Surface Resistivity	@25 °C, 500V DC, 60 sec	ASTM D 257	Ohms	2 X 10 ¹⁴

FINISH: Chemical Resistant Polyurethane Clear Lacquer.

DIMENSIONAL RANGE:

Diameter: Up to 2200 mm

Height: Up to 3500 mm

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