



**PURCHASE SPECIFICATION  
FIBRE GLASS REINFORCED ROD**

DEPT : Composites

SEC : EL/DIV/FRP/03

REV : 01

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1.0 Purpose : To manufacture Polymer composite Insulators by mould in place technology using the injection molding machine for products such as 25 kV railway traction & Long rod Insulators up to 400 kV for transmission lines using Silicone rubber compound and FRP rods. The material to be of electrical (ECR) Grade and Boron free glass

SI No	Test	Reference Specification	Specified Value
1	Verification of dimensions	As per approved drawing	As per drawing
2	Bending Tests	As per enclosed specification	210 Kgfm (min)
3	Dye Penetration	IEC:61109 (Cl. 5.4.1)	No dye penetration for 15 minutes (min)
4	Flammability	IEC:60707	Burning behavior to be checked
5	Percentage of glass content	ASTM D 2584	70% (min)
6	Hardness test (Barcol)	ASTM D 2583	50 min
7	Flexural strength	ASTM D 790 M.....	*11000 kgf/cm <sup>2</sup> (min)
8	Water absorption	IEC:61109, ASTM D 570	0.1% max
9	Brittle fracture resistance test		Should withstand
10	Specific gravity	ASTM D 792	1.9 to 2.1 gm/cc

\* For 38.5 mm rod only, others 9900 kgf/ sq cm

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