

Typical Mechanical & Electrical Properties of GRP Rods & Tubes (Upto 31.8mm)

Unidirectional E Glass rovings

| | |
|---------------------------------------|---|
| Flexural Strength | 650MN/m ² |
| Flexural Modulus | 30GN/m ² |
| Tensile Strength | 500MN/m ² |
| Tensile Modulus | 27GN/m ² |
| Density | 1.8gm/cc |
| Water Absorption | 0.5% – 2% |
| Compressive Strength | 190MN/m ² |
| Coefficient of Thermal Expansion | 7.2 x 10 ⁻⁶ /K |
| Barcol Hardness | 40-70 |
| | |
| Heat Distortion Temp | 125-145°C |
| | |
| Electrical Surface Resistivity | 10 ¹² OHMS (Between 10 ¹⁰ - 10 ¹⁵) |
| Volume Resistivity | 10 ¹⁵ OHMS |
| Insulation Resistance | M Ohm 1000 |
| Dielectric Strength @ 90 ⁰ | Kv/mm 25 |
| Dielectric Strength @ 90 ⁰ | KV 75 |
| Permittivity @ 50 Hz | 5 |
| Dissipation Factor | 0.02 |
| Comparative Tracking | V 600 |
| Arc Resistance | s 300 |

Accuracy

Small Rod Tolerance up to 6mm

Polyester +0.05/-0.07

Vinyl Ester +0.05/-0.15

Calorific content of 811 resin 28mj/kg

30% glass 19 mj/kg

55%-60% glass 10-15mj/kg

