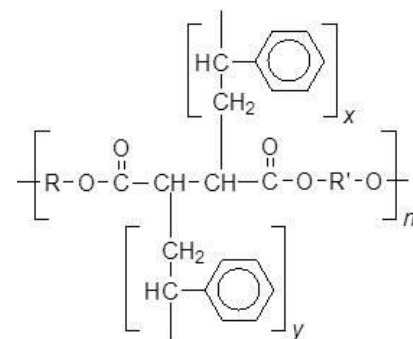


## Polyester Resin Composite (High Temperature Resin/Fabric)

### SPECIFICATIONS

| Property                          | Units             | Value     |
|-----------------------------------|-------------------|-----------|
| Specific Gravity                  | g/cm <sup>3</sup> | 1.25      |
| Swell in water (wall thickness)   | %                 | <0.1      |
| Rockwell Hardness                 | M scale           | 107       |
| Tensile Strength*                 | MPa               | 58-60     |
| Compressive Strength\$            |                   |           |
| Normal to laminate                | MPa               | 330-358   |
| Parallel to laminate              | MPa               | 110-103   |
| Modulus of Elasticity             | MPa               | 3600      |
| Coefficient of Friction           | μ                 | 0.12-0.17 |
| Max Operating Temperature         | °C                | 250       |
| Short Duration Temperature Spikes | °C                | 287       |
| Color                             |                   | Yellow    |

\*=compressive & tensile strength test results are loads at failure, and may vary due to resin selection and solid lubricants incorporated within the resin.



### DESCRIPTION

MTC02 is a polyester resin composite with hardness 107 Rockwell M and comprised of high temperature resin and fabric. Fabric reinforced composite materials are engineered from liquid thermosetting resins impregnated in fabric and subsequently cured to form solid shapes. Various thermosetting resins are available for use as bushings and bearing as unsaturated polyester. Within each category there are numerous resins to choose from. Prudent selection of a resin depends upon its viscosity, desired thermal, chemical or mechanical properties. Unsaturated polyester resin is most commonly used. Vinyl ester resin has higher mechanical properties and better chemical and temperature resistance than unsaturated polyester resin. Phenolic resins are cured very differently and are used for high temperature, high pressure and flame resistant applications. Thermoset composite materials have highly cross linked molecular networks. As a result, they have much higher mechanical strength than thermoplastics.