



CTD-1202 Polymer-Derived Ceramic Insulation

Electrical Insulation for Superconducting Magnet Applications

- A Polymer-Derived Ceramic (PDC) resin system for use in a wide range of service temperatures and conditions.
- Resin is first cured, or green staged, to form a polymer. Thereafter, pyrolysis converts the green polymer to a ceramic.
- Processing characteristics: low viscosity and long pot-life.
- High dielectric breakdown strength.
- Extremely low toxicity resin system. No harmful volatiles are evolved during pyrolysis.

Green Cure: 1 hour at 80°C; 2 hours at 150°C
Do not heat at rates exceeding 5°C/min
May be cured in a closed mold
Other cure schedules available upon request

Pyrolysis Schedule: Minimum Process Temperature 550°C
Do not pyrolyze in a closed mold
Contact CTD for application and atmosphere specific details.

Process Compatibilities: Prepreg (PP)
Filament Winding (FW)
Resin Transfer Molding (RTM)
Vacuum Pressure Impregnation (VPI)

Advantages:

- ▶ Wind-and-react insulation system
- ▶ Highly radiation resistant
- ▶ Easy to process
- ▶ Low viscosity resin, 10 cP at 25°C
- ▶ Long working life, >24 hours at 25°C