CTD-415P Cyanate Ester/BMI Pre-Preg

General Description:

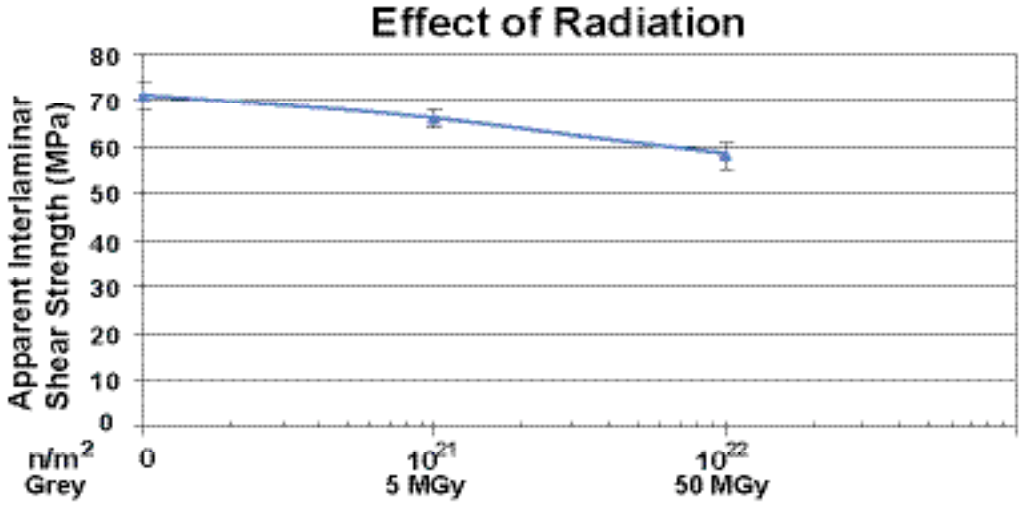
CTD-415P is a cyanate ester/bismaleimide blended resin hot-melt pre-preg system developed for use as electrical insulation in superconducting and fusion magnet systems. CTD-415P has excellent electrical and mechanical properties at both elevated and cryogenic temperatures, exceptional processing properties, and a radiation-resistance that exceeds standard epoxy resin systems.

Key Features:

- A hot-melt pre-preg resin system (solventless)
- Readily flows at 100°C
- Improved processing properties allow better containment of resin within part
- Radiation resistant with low outgassing
- Long out-life at room temperature
- Supplied as tape or broadcloth using any standard fiber reinforcement, such as glass or carbon fiber.

Mechanical and Electrical Properties:

Property	295 K	77 K	373 K
Short Beam Shear Strength (MPa)	55	68	53
Flexural Modulus (GPa)	19.5	23.0	18.5
Compressive Strength (MPa)	1010	1225	850
Compressive Modulus (GPa)	11.9	15.5	11.1
Tensile Strength (MPa)	605	770	575
Tensile Modulus (GPa)	35.0	43.5	35.5
Dielectric Strength (kV/mm) @ 0.5mm		83	



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Application:

- Electrical Insulation for Superconducting Magnets
- Structural Composite Material for Cryogenic Applications
- Structural Composite Material for Elevated Temperature Applications
- High Radiation Environments

Cure: 4 hours at 190ºC
Post-cure: 6 hours at 245ºC

Outlife: 3 weeks at 22ºC
6 months at 0ºC

Storage Guidelines:

- Store at 0°C or below for longest shelf life
- Protect from moisture during storage and while warming to room temperature

1/09