



COMPOSITE TECHNOLOGY DEVELOPMENT, INC.

ENGINEERED MATERIAL SOLUTIONS

CTD-528 "Super Tuff" for Cryogenic Applications

High Performance for Vacuum Impregnation and Wet-Winding Applications

Long Pot Life and Near Room Temperature Cure in Less than 24 hours

- A special "super tuff" formulation, with a primary amine cure, very low viscosity, low vapor pressure, and a high amine content.
- Ideally suited for applications where extended pot life and low to moderate exothermic heat of reaction is needed.
- Low viscosity, long pot-life, and near ambient temperature cure yields quick component processing.
- Non-carcinogenic resin system with very low toxicity. It is a non-solvent based system, and will not give off volatiles on cure.
- Wide range of properties and applications: can be used as a neat resin for fiber reinforcement, or with particulate fillers - physical properties (thermal expansion, thermal and electrical conductivities) can be tailored to meet differing requirements.

Cure: 2 Hrs. @ 80°C;
7 Days @ 25°C (>90% of properties will be obtained in 72 hours)

OPTIONAL POST CURE: 4 Hrs @ 125°C

Gel Time: Approximately 3 to 4 Hours in 3 Gallon Quantity
(Consult CTD for additional information)

Mix Proportions :	Part A (Parts By Weight)	Part B (Parts By Weight)
CTD-528	100	60
	Fillers can be added as needed	

Mixing Temperature: 20 - 30 °C (Room Temperature)

Process Compatibilities

Resin Transfer Molding (RTM)
Resin Injection Molding (RIM)
Filament winding (FW)
Vacuum Pressure Impregnation (VPI)
Casting with or without filler
Wet-winding

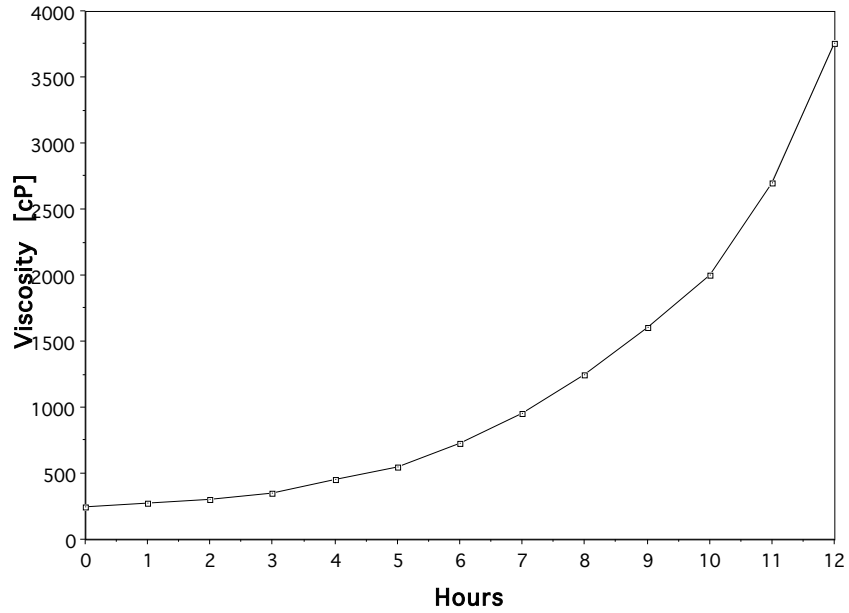
Advantages

- * Non-Carcinogenic
- * Low Toxicity
- * Long Pot-Life
- * Very Low Viscosity, <1000 cps @ 25°C
- * Excellent adhesion to fibers and fillers
- * Specific Gravity < 1.2 g/cc



CTD-528 Processing Characteristics

Viscosity Over Time



CTD-528 Properties

Compression:

54% vf E Glass

Temperature [K]

76

Strength [Ksi]

134.3

Short Beam Shear

54% vf E Glass

Temperature [K]

76

Strength [Ksi]

20.8