HMT317

NEWPORT FTP® TOWPREG TECHNOLOGY

250-300°F (121-149°C) Cure Hot-melt Towpreg

Typical applications
Marine
Medical
Industrial
Sporting goods

Out life
21 days at 70°F (21°C)

Shelf life
3 months at 40°F (4°C)
6 months at 0°F (-18°C)

Description
HMT317 is a 250°-300°F (121°-149°C) cure, hot melt towpreg, utilizing a semi-toughened, controlled flow epoxy resin matrix. Versatile processing, excellent mechanical properties, and long out time make HMT317 suitable for a variety of applications.

Benefits/features
- Environmentally friendly (solvent free, no release paper nor cover film)
- Consistent resin content, +/-3%
- Stable band width
- Easy de-spooling
- High tack (adjustable)
- Excellent mechanical properties
- Available on a wide range of standard, intermediate, and high modulus carbon fibers
- Compatible with many of our 250°F (121°C) to 300°F (149°C) cure epoxy systems

Application
Superior quality and general purpose applications make HMT317 well suited for filament winding process and/or fiber placement process in variety of structural applications in sporting goods, marine, medical, and industrial markets.

Recommended processing conditions
HMT317 can be cured at temperatures from 250°-300°F (121°-149°C) depending on part size and complexity. Low, medium, and high pressure molding techniques may be used to cure HMT317 resin. Recommended cure cycle is 50–100 psi (345–690 kPa), 3°F/min (1.7°C/min)
ramp to 275°F (135°C), hold for 60-90 minutes, cool to <140°F (60°C).

MITSUBISHI CHEMICAL CARBON FIBER AND COMPOSITES

Technical Data Sheet

Neat resin [values are average and do not constitute a specification]

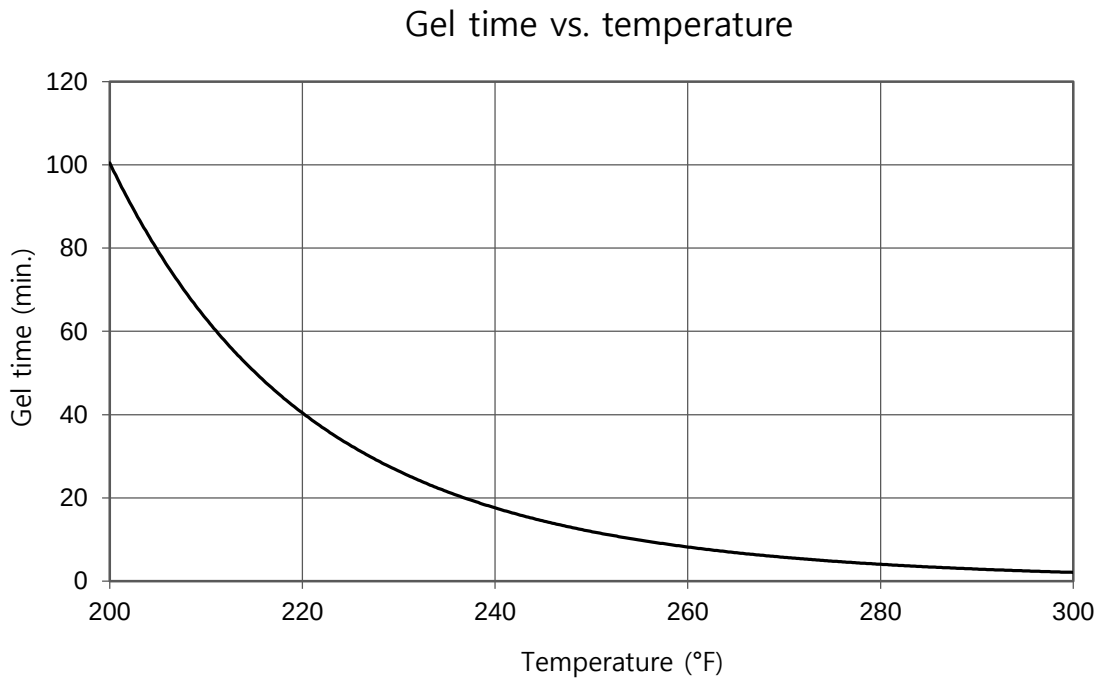
Property	Value
Gel time @ 275°F (135°C), minutes	4 - 6
Specific gravity	1.22
T_g (DMA, E'), °C (°F)	125 (257)

Mechanical data [values are average and do not constitute a specification]

34-700 33% RC, press cured, 25psi, 60 minutes at 275°F, as tested

Property	Test method	RT	200°F
0° Tensile strength, ksi (MPa)	ASTM D3039	300 (2070)	257 (1770)
0° Tensile modulus, Msi (GPa)		16 (110)	--
0° Compressive strength, ksi (MPa)	ASTM D695mod	138 (951)	135 (931)
0° Compressive modulus, Msi (GPa)		--	--
0° Flexural strength, ksi (MPa)	ASTM D790	238 (1640)	160 (1100)
0° Flexural modulus, Msi (GPa)		17.7 (122)	17.1 (118)
0° Short beam shear strength, ksi (MPa)	ASTM D2344	11.0 (75.8)	7.0 (48.3)

Gel curve



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