
HMT317

Description:

Newport 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 Newport HMT317 suitable for a variety of applications.

Application:

Superior quality and general purpose applications make Newport 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.

Benefits/Features:

- Environmentally friendly (Solvent free, No release paper nor cover film)
- Consistent Resin Content, +/-3%
- Stable band width
- Easy de-spooling
- > 21 days at 70°F (21°C)
- High tack (adjustable)
- Excellent mechanical properties
- Available on a wide range of standard, intermediate, and high modulus carbon fibers
- Compatible with any of Newport's 250°F (121°C) to 300°F (149°C) cure epoxy systems

Recommended Processing Conditions:

- Newport 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 Newport 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).

Physical Properties:

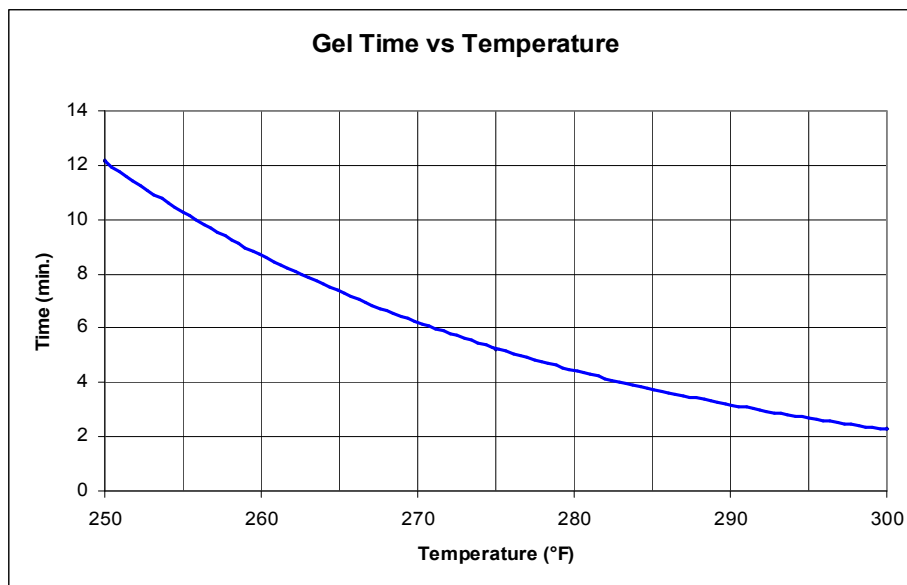
Gel Time (275°F):	4-6 minutes
Specific Gravity:	1.22 g/cc
Tg (DMA, E')	125°C (257°F)

Mechanical Properties:

The mechanical properties listed in the following table are average values obtained from HMT317 with standard modulus carbon fiber at 33% RC. All values are based using a press cure at 275° F for 60 minutes and 25psi pressure. Results are as tested, not normalized.

HMT317 (34-700 fiber)	Test Method	RT*	200°F*
0° Tensile strength, ksi	ASTM D-3039	300	257
0° Tensile modulus, Msi		16	—
0° Compressive strength, ksi	ASTM D-695 mod.	138	135
0° Compressive modulus, Msi		—	—
0° Flexural strength, ksi	ASTM D-790	238	160
0° Flexural modulus, Msi		17.7	17.1
0° Short Beam Shear strength, ksi	ASTM D-2344	11.0	7.0

* Values are average and do not constitute a specification

Gel Curve of Newport HMT317


Towpreg Storage:

- Material can be stored at 40°F (4°C) for 3 months.
- Material can be stored at 0°F (-18°C) for 6 months.
- Out time is 21 days at room temperature 70°F (21°C).

Availability:

Newport HMT317 is available on a wide variety of carbon fibers. Some product characteristics such as resin content, gel time can be tailored within reason to meet specific requirements.

Contact Newport about any specialty fibers or requirements.

For orders, pricing, availability, technical assistance or other inquiries please contact:

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