

Low temperature Cure Epoxy Prepreg System

RP442

Low temperature cure resin system 65 - 120°C

Applications

- Automotive
- Motorsport
- Marine
- Defence

Processing Methods

- Vacuum bag
- Autoclave
- Pressure moulding
- Tube rolling
- Pressure bag

TDS006





Description

RP442 epoxy prepreg system is designed to give an initial cure at low temperatures with enhanced toughness and higher service temperature, giving great flexibility in component manufacture. The system also has a longer out life for a low temperature system: up to 30 days at 20°C. RP442 can be supplied on a variety of PRF's high quality reinforcement fabrics.

Benefits

- Cure temperature as low as 65°C
- High service temperatures - as high as 125°C (DSC) after postcure
- Out life at 20°C: up to 30 days
- Storage life at -18°C: 12 months
- Solvent-free

Cure cycle

Initial cure 65°C at a ramp rate of up to 2°C and maintain for 16 hours, process under vacuum, pressing or autoclave. Post cure (where required for high Tg) 1 hour dwell at 120°C - maximum ramp rate of 20°C per hour. Resulting Tg: 125°C (DSC).

Alternative cure cycles and resulting Tg:

Cure (°C)	Time (hrs)	Tg(°C)
65	16	65
120	1	125



Mechanical Properties

Product: RP442C0452M01M421250

Fibre		Carbon
Fabric weave style		Twill 2/2
Fibre type		TR30S
Fabric weight (g/m ²)		204
Resin content (%)		42
Tensile Strength (MPa)	ASTM D3039	823.7
Tensile Modulus (GPa)	ASTM D3039	60.3
Flexural Strength (MPa)	ASTM D790	998.7
Flexural Modulus (GPa)	ASTM D790	65.8

All values are nominal.

Health and Safety - Refer to the full Material Safety Datasheet before use.

Find out what PRF can do for your business

Make an enquiry today at:

t: +44 (0) 1202 680022

e: enquiries@prfcomposites.com

www.prfcomposites.com

PRF Composite Materials

3 Upton Road

Poole

Dorset BH17 7AA

Important Notice

All statements, technical information and recommendations offered are only for consideration and evaluation. Whilst they are believed to be accurate they are not guaranteed and are provided without warranty of any kind. No undertaking is given that the goods/products supplied are fit for its particular purpose. The buyer/user shall assume all risks and liabilities in connection therewith.

RP442 ed. 2.0 Dec 2018 TDS006

