Low temperature Cure Epoxy Prepreg Sytem

**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:

<table>
<thead>
<tr>
<th>Cure (°C)</th>
<th>Time (hrs)</th>
<th>Tg(°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>65</td>
<td>16</td>
<td>65</td>
</tr>
<tr>
<td>120</td>
<td>1</td>
<td>125</td>
</tr>
</tbody>
</table>
# Mechanical Properties

<table>
<thead>
<tr>
<th>Product: RP442C0452M01M421250</th>
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</thead>
<tbody>
<tr>
<td><strong>Fibre</strong></td>
</tr>
<tr>
<td>Fabric weave style</td>
</tr>
<tr>
<td>Fibre type</td>
</tr>
<tr>
<td>Fabric weight (g/m²)</td>
</tr>
<tr>
<td>Resin content (%)</td>
</tr>
<tr>
<td>Tensile Strength (MPa)</td>
</tr>
<tr>
<td>Tensile Modulus (GPa)</td>
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<tr>
<td>Flexural Strength (MPa)</td>
</tr>
<tr>
<td>Flexural Modulus (GPa)</td>
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</tbody>
</table>

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

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