Epoxy tooling prepreg system

**RP802**
Overnight Cure

**Applications**
- Composite tooling

TDS010
**Description**

RP802 is an epoxy tooling prepreg system capable of withstanding temperatures up to 190°C after full post cure.

RP-802 is available in carbon and glass woven fabrics from 200 - 800 g/m² impregnated with epoxy resin. RP-802 prepreg allows high quality tooling laminates to be produced directly from a low temperature master model permitting a wide choice of master model materials. Using a low temperature vacuum bag and autoclave process for initial cure, the tool laminate can then be demoulded for freestanding post cure.

**Key Features & Benefits**

- Initial cure from 60°C to 70°C
- Post cure: 170°C
- Autoclave processing
- Excellent surface finish

**Shelf life**

<table>
<thead>
<tr>
<th>Storage Temperature</th>
<th>Shelf life</th>
</tr>
</thead>
<tbody>
<tr>
<td>-18°C</td>
<td>12 months</td>
</tr>
<tr>
<td>20°C</td>
<td>Tack life: 10 days</td>
</tr>
<tr>
<td></td>
<td>Out life: 12 days</td>
</tr>
</tbody>
</table>

**Material Types**

<table>
<thead>
<tr>
<th>Fibre Type</th>
<th>Weave Style</th>
<th>Weight</th>
<th>Thickness/Ply</th>
<th>Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon</td>
<td>Twill 2/2</td>
<td>200 g/m²</td>
<td>0.23 mm</td>
<td>1250 mm</td>
</tr>
<tr>
<td>Carbon</td>
<td>Twill 2/2</td>
<td>645 g/m²</td>
<td>0.72 mm</td>
<td>1250 mm</td>
</tr>
<tr>
<td>Glass</td>
<td>8HS</td>
<td>300 g/m²</td>
<td>0.25 mm</td>
<td>1250 mm</td>
</tr>
<tr>
<td>Glass</td>
<td>Twill 2/2</td>
<td>800 g/m²</td>
<td>0.70 mm</td>
<td>1250 mm</td>
</tr>
</tbody>
</table>

Other fabric styles available
Cure Cycle

Preferred initial cure can be either of the following:

60°C for 16 hours
70°C for 8 hours

Heat ramp up rate: 0.5-1.0°C/minute up to temperature, under 6-7 bar pressure and >0.9 bar vacuum.

Ensure even heat in the autoclave and make sure that temperature does not exceed over 5°C of the component initial cure temperature.

When the entire component has reached the initial curing temperature, hold for the specified time.

Cool the laminate under pressure to room temperature (or <30°C) at 3°C per minute (max). Tooling can be demoulded from the master after this cure.

For post cure, the tool must rest on a level surface to prevent possible deformation. The recommended post cure cycle is as follows:

- From initial cure temperature, ramp up at 1°C per minute up to 170°C and cure for >2.5 hours, then cool naturally. This will provide a Tg >170°C (DSC).
- Post cure > 4h @ 170°C provides a Tg of 190°C (DSC).

The maximum heat ramp up rate at each stage is 1°C/minute.

Health and Safety: Refer to the 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.

RP802 ed. 1.1 Dec 2018 TDS010

Plastic Reinforcement Fabrics Ltd