Epoxy tooling prepreg system

**RP801**

**Applications**
- Composite tooling

TDS023
Description

RP801 is an epoxy tooling prepreg system capable of withstanding temperatures up to 190°C after full post cure.

RP801 is available in carbon and glass woven fabrics from 200 - 800 g/m² impregnated with epoxy resin. RP-801 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>
</tbody>
</table>
| 20°C                | Tack life: 5 days  
                          Out life: 7 days |

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 8 hours
- 70°C for 4 hours

**Heat ramp up rate:** 1.0°C/minute up to temperature, under 7 bar pressure and >0.9 bar vacuum. Cool naturally. Tooling can be removed 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

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