

Product Data

Prepreg Systems



Epoxy tooling prepreg system

RP800

50°C Cure

Applications

- Composite tooling

TDS0002





Introduction

RP800 is an epoxy tooling prepreg system capable of withstanding temperatures up to 190°C after full post cure.

RP800 is available in carbon and glass woven fabrics from 200 - 800 g/m² impregnated with epoxy resin. RP800 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.

Features

- Initial cure from 50°C
- Post cure: 170°C
- Autoclave processing
- Excellent surface finish

Shelf life

STORAGE TEMPERATURE	SHELF LIFE
-18°C	12 months
20°C	Tack life: 4 days Out life: 5 days

Material types

FIBRE TYPE	WEAVE STYLE	WEIGHT	THICKNESS/PLY	WIDTH
Carbon	2/2 twill	200 g/m ²	0.23 mm	1250 mm
Carbon	2/2 twill	645 g/m ²	0.72 mm	1250 mm
Glass	8H Satin	300 g/m ²	0.25 mm	1250 mm
Glass	2/2 twill	800 g/m ²	0.70 mm	1250 mm

Other fabrics available on request



Curing

Heat ramp up rate: 1.0 - 2.0°C/minute up to temperature, under 6-7 bar pressure and >0.9 bar vacuum.

Preferred initial cure can be either of the following:

50°C for 8 hours

60°C for 4 hours

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 full Material Safety Datasheet before use.

Find out what PRF can do for your business

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Important Notice

All values are nominal.

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.

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Prepreg



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