

Product Data

Prepreg Systems



Core Bondable Toughened Epoxy Prepreg

RP-522

Medium Temperature Cure Resin System

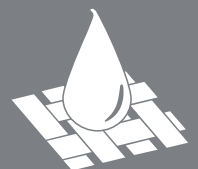
120°C - 135°C

Applications

- Aerospace
- Automotive
- Racing Car Components
- Motorsport Components
- Marine
- Defence

Processing Methods

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





Introduction

RP-522 is a controlled flow, toughened epoxy prepreg system formulated for the manufacture of high performance structural composite parts requiring very good impact strength properties. The system has a medium temperature cure of 120 - 135°C under vacuum or autoclave pressure and is also suitable for press moulding. Fully cured, this system has a dry service temperature capability up to 120°C. The component surface finish with this system is excellent.

The tack level of this system can be adjusted to meet the constructor's individual requirements and will be retained for up to 21 days at 22°C making this system suitable for the manufacture of large composite components.

RP-522 can be supplied on most of the vast range of PRF reinforcement materials in widths up to 1350 mm wide.

Main Features

- Toughened system
- Excellent surface finish
- Core bondable
- Cure 120°C - 135°C
- Service Temperature up to 120°C
- Tg 120°C*
- Good hot/wet stability
- Outstanding dynamic strength behaviour over temperature range from -20°C to +90°C
- Controlled flow system
- Outlife 21 days at room temperature
- Available on most of PRF's reinforcement fabrics

Storage

This product should be stored in refrigerated conditions.
Shelf life is 6 months at below -5°C or 12 months at below -18°C.

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

*Test Method: DMTA.



Processing

RP-522 prepreg resin system may be processed at room temperature using established prepreg moulding techniques on properly prepared moulds. The cure cycle depends on the construction of the component and processing method. If honeycomb core is used in the part, the temperature ramp should be increased at a slower rate to enable a controlled flow of the resin to form a fillet between the core and skin.

Temperature	110°C	120°C	130°C	140°C	150°C
Times in minutes	240	100	45	20	10

Test method: DMTA

Cure cycles

Laminates with honeycomb core

Elevate temperatures at 2 - 5°C per minute up to 125 - 135°C. Hold the final temperature for 30 - 45 minutes then allow the component to cool naturally inside the oven before demoulding.

Vacuum bagged monolythic laminates

Elevate temperature at 5 - 10°C per minute up to 125 - 135°C, hold for 30 - 45 minutes then allow the component to cool naturally inside the oven before demoulding.

Press moulded monolythic laminates

RP-522 system may be applied directly to hot press moulds at temperatures up to 150°C. The cure time at the highest temperature will be approximately 12-15 minutes. The mould and component temperatures should be cooled to below 80°C before demoulding.

It is important, when manufacturing honeycomb sandwich panels without the use of adhesive films, to increase the resin content on the fabric plies being used as the first layers against the honeycomb. This ensures enough resin is available for the formation of the resin fillet between the honeycomb and the skins.

Find out what PRF can do for your business

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