PRF
Composite Materials

PREPREG
Product Data

Highly Toughened Epoxy Prepreg System

RP549

80 - 180°C Cure

Tg 214°C (DMA)

Applications
- Automotive
- Motorsport
- Marine
- Defence
- Sports and Leisure

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

TDS0003

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Description

RP549 highly toughened modified epoxy prepreg has been specially formulated for the production of components requiring high mechanical properties and good impact resistance, particularly those exposed to elevated temperatures. This new system has an >200°C Tg following the 180°C cure cycle, and provides excellent mechanical properties in tensile, ILS and flexural strength.

RP549 is now in manufacture on a range of our high quality woven fabrics.

Cure Cycle

Standard Cure cycle:
- 1½ hrs at 120°C in autoclave, 6 bar pressure plus full vacuum
- Post cure 150°C for 2 hours is required after initial cure
- Ramp up rate: 2°C per min up to temperature
- Tg DMA onset: 160°C; DMA tan delta peak: 195°C

Alternative cure cycle:
- 2°C per min to 180°C, dwell 2 hours
- Tg DMA tanδ: 214°C; Tg DMA E' Onset: 195°C

Alternative temperatures for initial cure:

Temperature (°C)	Duration (hrs)
70	24
80	16
90	8
100	4
110	2

Storage Conditions

Out life: 21 days at 20°C
This product should be stored in refrigerated conditions.

Shelf life

5°C	6 months
-18°C	1 year

Mechanical Properties

RP549 42%W_R T1000 H5 280gsm

Property	42%WR T1000 H5 280gsm		36%WR T800 6K T2/2 200gsm
	Warp	Weft	Warp
Cure temp	180°C		135°C
Tensile Strength (MPa)	1201	1062	1103
Tensile Modulus (GPa)	72	68	81
Compressive Strength (MPa)	-	-	707
Compressive Modulus (GPa)	-	-	59
Inter-Laminar Shear Strength (MPa)	55	51	90
Fracture Toughness (J/m2)	801	-	-

All values are nominal.

Note:

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:
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