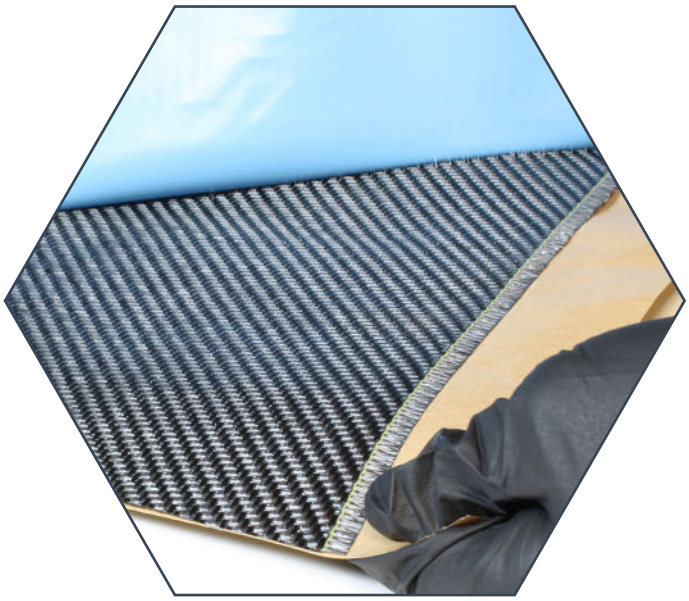
EPOXY COMPONENT PREPREG
MODEL #: PREG401

INTRODUCTION

PREG401 is an epoxy resin system designed to give an initial cure at low temperatures or snap cure at high temperatures with enhanced toughness, honeycomb bondability and higher service temperature, giving greater flexibility in component manufacture. It can be supplied on a variety of fabrics in UD format to meet your cost and manufacturing requirements.

Typical applications: General purpose – Visual



KEY FEATURES & BENEFITS

- Cure temperature from 150°F to 250°F
- Service temperature up to 275°F after post cure
- Low CTE and shrinkage
- Work life at 70°F: 21 days
- Storage life at 0°F: 12 months
- Very low VOC content – no added solvents during manufacture

STORAGE & OUT LIFE

This material should be kept frozen at 0°F. It must be kept sealed in a polythene bag which must not be opened until fully thawed to room temperature. If the material is not fully used, then the material must be resealed in the polythene bag to prevent moisture absorption.

HEALTH AND SAFETY

This material contains epoxy resin which can cause allergic reactions with skin contact and must avoid repeated and prolonged skin contact. Please refer to the product Safety Data Sheet before using this material. The following precautions must be taken when using epoxy resin prepregs:

- Protective clothing is strongly recommended.
- Curing schedule is meant to be as a guide only and is subject to local conditions.
- To avoid exotherm, particular care must be taken with thick laminates.
- Ramp rates must not exceed 5°F/min during initial cure and 1°F/min during post cure.

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MECHANICAL PROPERTIES

Tests performed on VTC401-C200T-T300-2X2T-3K-42%RW laminates

TEST	RESULTS		STANDARD
Compression	Compressive strength	631 MPa	BS EN ISO 14126 : 1999
Tension	Tensile strength Tensile modulus	573 MPa 52.7 GPa	BS EN ISO 527-4 : 1997
Flexure	Flexural strength Flexural modulus Strain to failure	863 MPa 51.7 GPa 1.7 %	BS EN ISO 14125 : 1998
Interlaminar Shear Strength		74.0 MPa	BS EN 2563 : 1997
DMA	Tg – Storage Modulus Onse Tg – Tan δ Peak	290 °F 305 °F	AITM 1-0003 Issue 3

Mechanical testing carried out at 80°F, 50±5% RH. All mechanical tests were completed independently by UKAS approved organisations. Complete tests reports can be supplied independently upon request. All figures are actual test results and haven't been normalised.

CURE CYCLE & PERFORMANCES

CURE	INITIAL MINIMUM CURE	TG
150°F (minimum)	16 hours	160°F
175°F	4 hours	185°F
210°F	1 hour	120°F
250°F (maximum)	45 minutes	260°F
275°F Post-Cure	2 hours	285°F

Curing Schedule is meant to be a guide only and is subject to local conditions.
To avoid exotherm particular care must be taken with thick laminates.
Ramp rates must not exceed 5°F per minute during initial cure.
Ramp rates must not exceed 1°F per minute during post cure (free standing).

Volatile content	< 1.0%
Fibre volume fraction	50 to 60%
Voidage (autoclave cure)	< 1.0%

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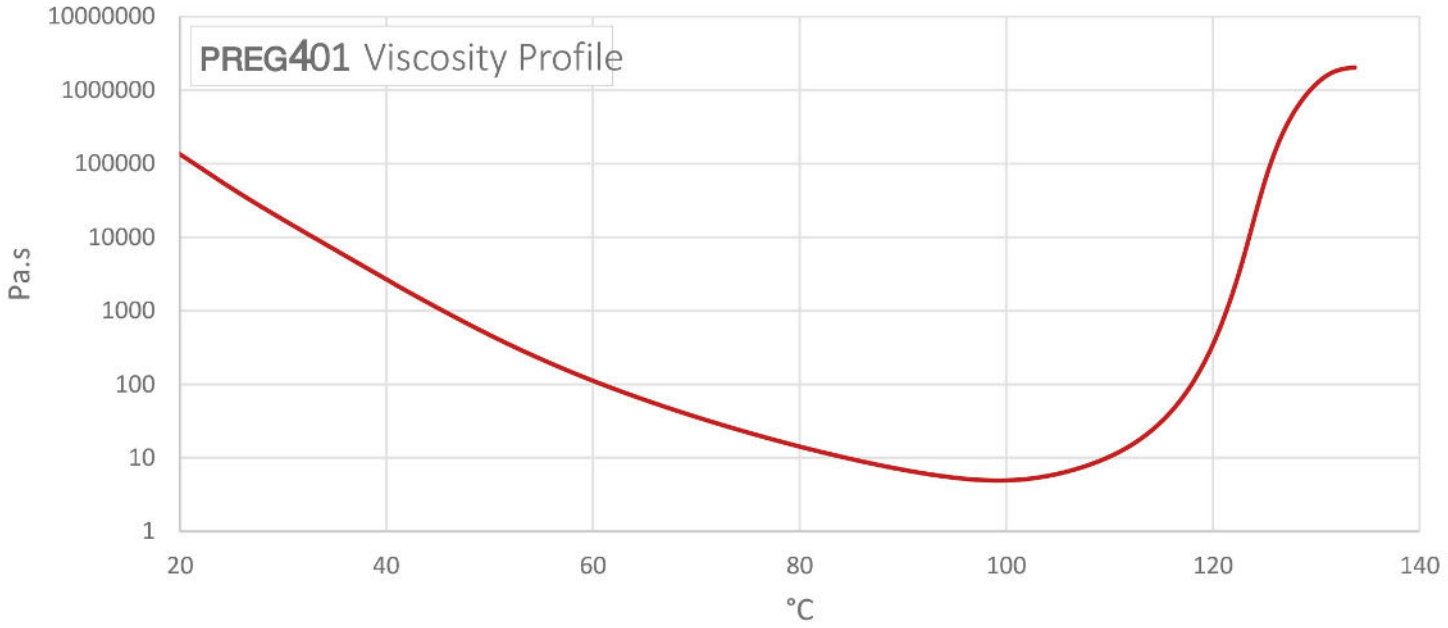
VISCOSITY PROFILE

Testing carried out at 80°F, 50±5% RH.
Ramp rate: 4°F/min



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