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LTC102

Epoxy Tooling Prepreg

Introduction

LTC102 Prepreg is designed to cure at low temperatures whilst giving the potential for high temperature tooling. It can be supplied on a variety of fabrics to meet your cost and manufacturing requirements.

Typical applications: Low CTE tooling

Key Features & Benefits

- Cure temperature from **30°C to 65°C**
- Service temperature up to **210°C** after post cure
- Low CTE and shrinkage
- Work life at 20°C: **3 days**
- Storage life at -18°C: **12 months**
- Very low VOC content – no added solvents during manufacture

Storage & Out Life

This material should be kept frozen at -18°C. 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.

Issued 01st February 2018

Note: The information and assistance provided herein is for your consideration without legal responsibility. Users are required to perform verification and testing to confirm that the product meets with their requirements.

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Mechanical Properties

Tests performed on **LTC102**, 1-8-1 laminates

Test	Results	Standard
Interlaminar Shear Strength	Interlaminar shear strength 38.0 MPa	BS EN 2563 : 1997
DMA	Tg – Storage Modulus Onset 214 °C	AITM 1-0003 Issue 3
	Tg – Tan δ Peak 232 °C	

Mechanical testing carried out at $23\pm 2^{\circ}\text{C}$, $50\pm 5\%$ 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 Cycles & performances

Cure	Initial Min Cure	Tg
30°C (minimum)	45 hours	50°C
50°C	14 hours	60°C
60°C	7 hours	70°C
65°C (maximum)	5 hours	75°C
200°C Post cure	8 hours	210°C

- 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 **1.0°C** per minute during **initial cure**.
Ramp rates must not exceed **0.3°C** per minute during **post cure** (free standing).

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

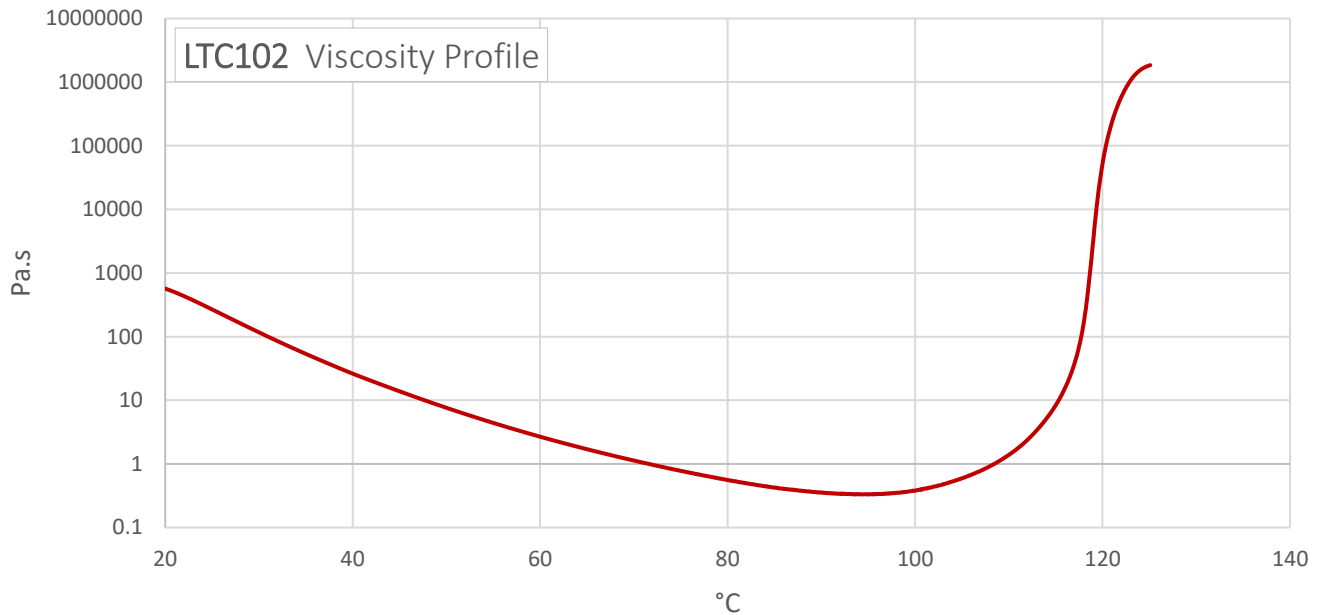
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Viscosity Profile

Testing carried out at $23\pm 2^{\circ}\text{C}$, $50\pm 5\%$ RH. Ramp rate: $2^{\circ}\text{C}/\text{min}$.



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:

- Overalls must be worn
- Impervious gloves must be worn.
- 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 $1.0^{\circ}\text{C}/\text{min}$ during initial cure and $0.3^{\circ}\text{C}/\text{min}$ during post cure.

SHD Composite Materials Ltd cannot accept any liability for injury or damage where the above precautions have not been taken or where the material is used for any purpose other than its intended use.

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