Unit 4
The Reservation
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LTC150

Epoxy Tooling Prepreg

Introduction

LTC150 Prepreg is designed to cure in a lower time at low temperatures than standard tooling prepregs 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 temperature, faster cure low CTE tooling*

Key Features & Benefits

- Cure temperature from **30°C** to **70°C**
- Service temperature up to **180°C** after post cure
- Low CTE and shrinkage
- Work life at 20°C: **2 days**
- Storage life at -18°C: **6 months**
- Very low VOC content – no added solvents during manufacture
- Excellent handleability in warmer conditions

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.

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Material Properties

Test	Results			Standard
DMA	Tg – Storage Modulus Onset	**186**	**°C**	*ASTM D7028*
	Tg – Tan δ Peak	**210**	**°C**	

Data obtained after a 180°C, 8h post cure.

Cure Cycles & performances

Cure		Initial Min Cure		Tg
30°C	(minimum)	40	hours	35°C
40°C		20	hours	45°C
45°C		13	hours	50°C
50°C		10	hours	55°C
70°C	(maximum)	3	hours	75°C
180°C	Post cure	8	hours	190°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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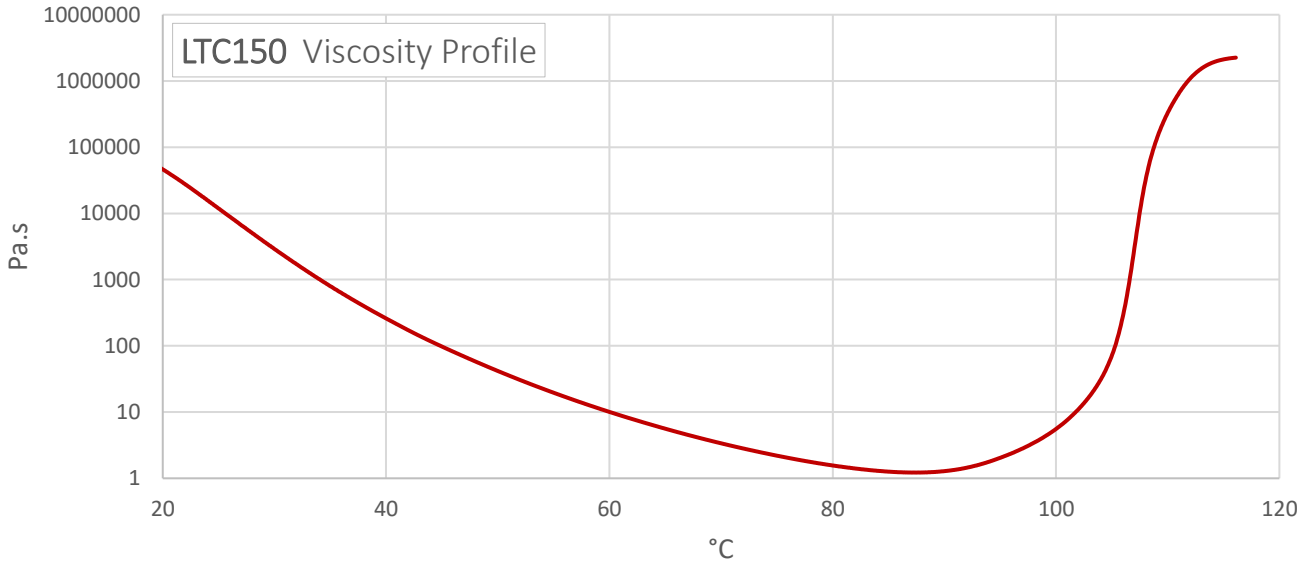
Viscosity Profile

Testing carried out at 23±2°C, 50±5% RH. Ramp rate: **2°C/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°C/min during initial cure and 0.3°C/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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