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OTS65

Epoxy Oven Tooling Prepreg

Introduction

OTS65 Tooling Prepreg has been formulated to give a robust surface finish with out of autoclave processing. It can be supplied on carbon or glass formats.

Typical applications: Out of autoclave tooling

Key Features & Benefits

- Cure temperature from **65°C to 90°C**
- Service temperature up to **125°C** after post cure
- Low CTE and shrinkage
- Work life at 20°C: **up to 21 days**
- Storage life at -18°C: **12 months**
- Very low VOC content – no added solvents during manufacture
- Out of autoclave

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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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.



Material Properties

Test	Results	Standard
DMA	Tg – Storage Modulus Onset	129 °C
	Tg – Tan δ Peak	143 °C

Data obtained after a 130°C, 8h post cure.

Cure Cycles & performances

Cure	Initial Min Cure	Tg
65°C (minimum)	16 hours	70°C
75°C	8 hours	80°C
85°C	4 hours	90°C
90°C (maximum)	3 hours	95°C
130°C Post cure	8 hours	130°C

For optimum results out of autoclave, it is recommended that the initial cure is held at **65°C** for a minimum of **2 hours**.

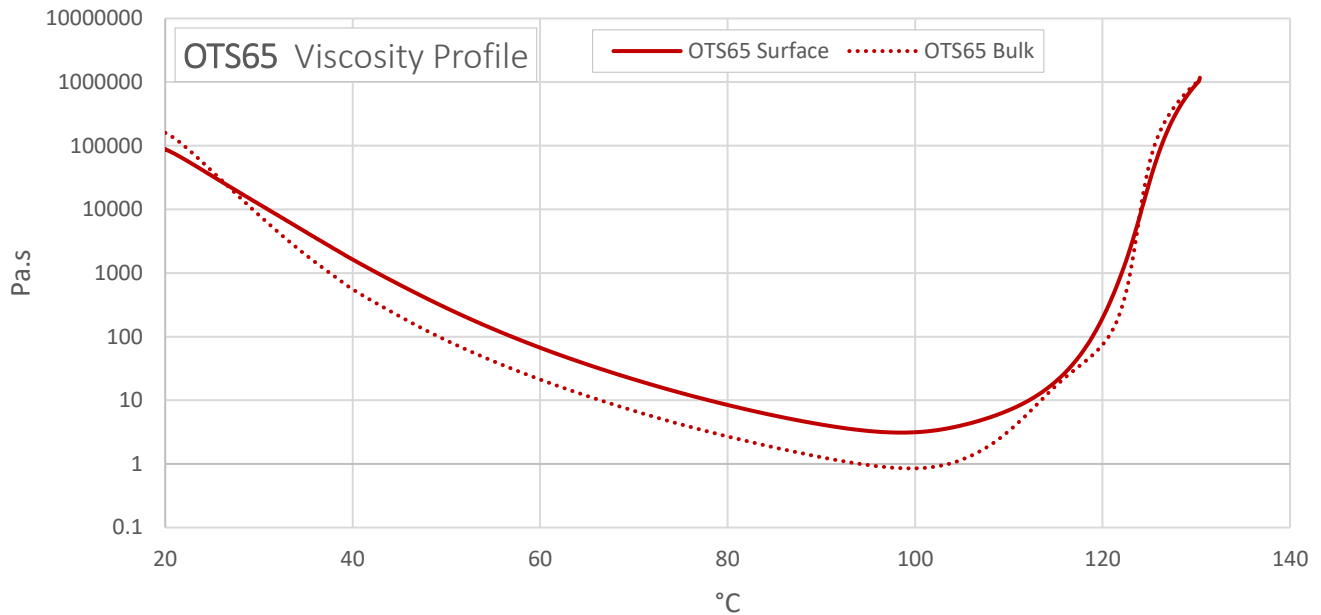
- Curing Schedule is meant to be a guide only and is subject to local conditions.
- To avoid exotherm particular care must be taken with thick laminates.
Ramp rates must not exceed **1.0°C** per minute during **initial cure**.
Ramp rates must not exceed **0.3°C** per minute during **post cure** (free standing).

Volatile content	< 1.0%
Voidage (autoclave cure)	< 1.0%



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

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