



MTC475

Epoxy Component Prepreg

Introduction

MTC475 is an epoxy resin system designed to combine excellent clarity and elevated service temperature. It cures from 80°C to 120°C, allowing flexibility in component manufacture. It can be supplied on a variety of fabrics to meet your cost and manufacturing requirements.

Typical applications: *Higher service temperature – Visual*

Key Features & Benefits

- Cure temperature from **80°C to 120°C**
- Service temperature up to **180°C** after post cure
- Low CTE and shrinkage
- Work life at 20°C: **30 days**
- Storage life at -18°C: **12 months**
- Very low VOC content – no added solvents during manufacture
- Excellent clarity

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.



Cure Cycles & performances

CURE CYCLE OPTIONS:

Temperature		Duration	Tg
80°C	(minimum)	16 hours	90°C
90°C		8 hours	100°C
100°C		4 hours	110°C
120°C	(maximum)	1 hour	130°C
180°C	Post Cure	2 hours	165°C
200°C	Post Cure	2 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 **3.0°C** per minute during **initial cure**.
Ramp rates must not exceed **0.3°C** per minute during **post cure** (free standing).

Cured Material Properties

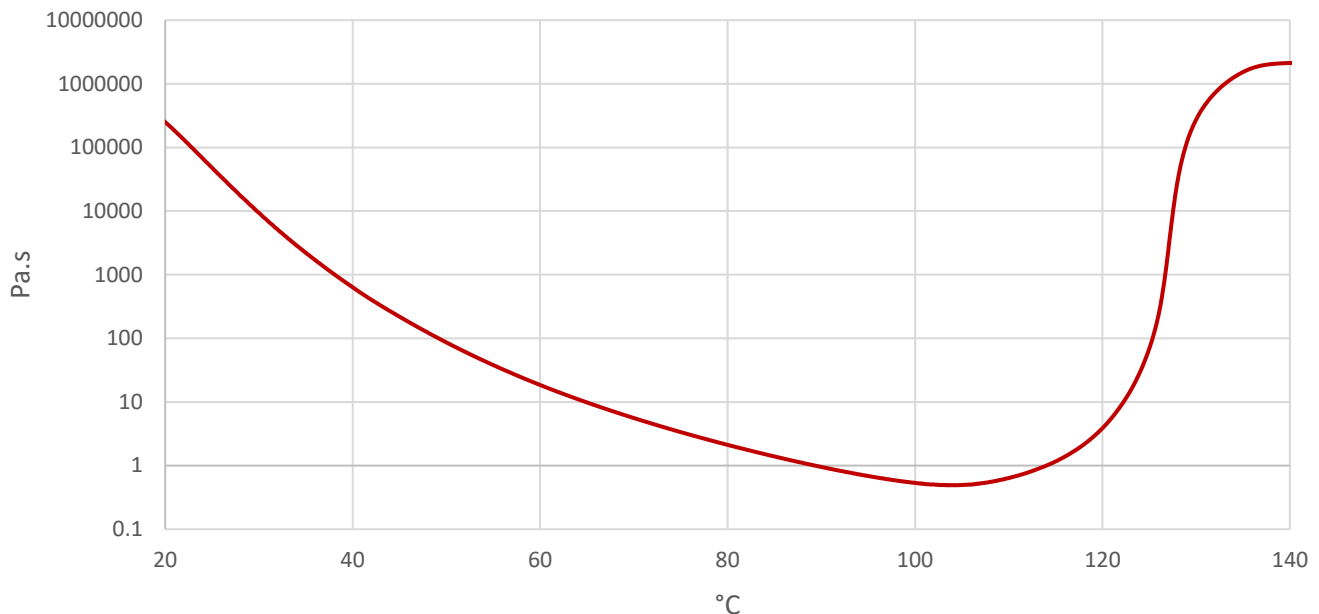
Test	Results	Standard
DMA	Tg – Storage Modulus Onset	190 °C
	Tg – Tan δ Peak	206 °C
		ASTM D7028

Data obtained after a 200°C, 2h post cure.



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 $3.0^\circ\text{C}/\text{min}$ during initial cure and $0.3^\circ\text{C}/\text{min}$ during post cure.

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Customers must carry out their own tests and assessments as necessary in order to determine the quality and suitability of the product for their particular application and circumstances. Such testing should be performed under conditions identical to those to which the final component/product may be subjected. Values listed in any SHD document are for typical properties of the product or substance in question and are not intended to be used in establishing either statistical specifications nor engineering basis values. They do not constitute either minimum or maximum values for the product or substance in question.