

Unit 4  
The Reservation  
Sleaford Enterprise Park  
Sleaford  
Lincolnshire  
NG34 7BY

www.shdcomposites.com  
Tel +44(0)1529 307629  
Fax +44(0)1529 306990  
sales@shdcomposites.com



# MTC811

## Epoxy Component Prepreg

### Introduction

MTC811 is a toughened, honeycomb bondable epoxy resin system designed to produce a durable cost effective component with an excellent surface finish. It can be supplied on a variety of fabrics and in UD format to meet your cost and manufacturing requirements.

*Typical applications: General Purpose – Visual*

### Key Features & Benefits

- Cure temperature from **90°C** to **120°C**
- Service temperature up to **115°C**
- Low CTE and shrinkage
- Work life at 20°C: **60 days**
- Storage life at -18°C: **12 months**
- Very low VOC content – no added solvents during manufacture
- Excellent surface finish
- **Honeycomb** bondable

### 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 31<sup>st</sup> August 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.

Unit 4  
The Reservation  
Sleaford Enterprise Park  
Sleaford  
Lincolnshire  
NG34 7BY

www.shdcomposites.com  
Tel +44(0)1529 307629  
Fax +44(0)1529 306990  
sales@shdcomposites.com



## Mechanical Properties

Tests performed on **MTC811-C200T-T300-2X2T-3K-42%RW** laminates

Test	Results	Standard
<b>Compression</b>	Compressive strength	<b>614 MPa</b>
	Compressive modulus	<b>52.3 GPa</b>
<b>Tension</b>	Tensile strength	<b>624 MPa</b>
	Tensile modulus	<b>57.3 GPa</b>
<b>Flexure</b>	Flexural strength	<b>921 MPa</b>
	Flexural modulus	<b>53.6 GPa</b>
<b>Interlaminar Shear Strength</b>	Interlaminar shear strength	<b>68.8 MPa</b>
<b>In Plane Shear</b>	IPS strength	<b>116 MPa</b>
	IPS modulus	<b>3.40 GPa</b>
<b>DMA</b>	Tg – Storage Modulus Onset	<b>121 °C</b>
	Tg – Tan δ Peak	<b>128 °C</b>

Mechanical testing carried out at 23±2°C, 50±5% RH. Mechanical testing was completed in house. Initial cure 2 hrs @ 110°C @ 3°C/min 90psi. 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
90°C (minimum)	14 hours	90°C
100°C	6 hours	100°C
120°C (maximum)	1 hour	120°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).

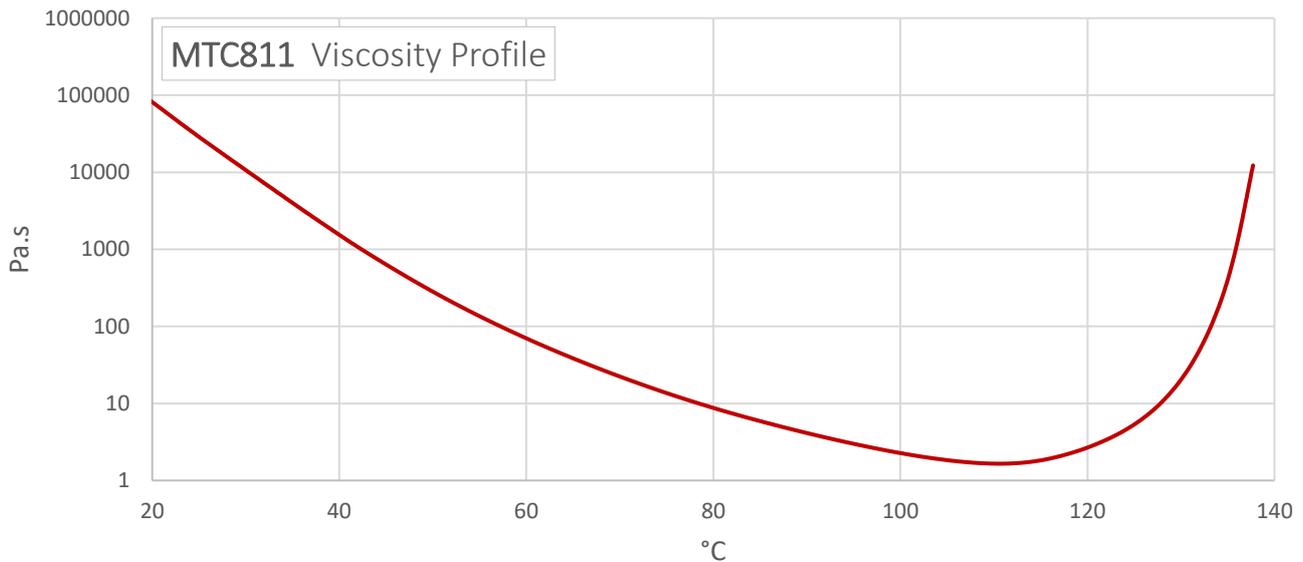
Issued 31<sup>st</sup> August 2018

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.



## 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.

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.

Issued 31<sup>st</sup> August 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.