

**HexPly® M77**  
80 – 160 °C curing epoxy matrix

## Product Datasheet

### Description

M77 is a formulated epoxy resin matrix, specifically designed for prepreg applications and short cure cycles. It is a very versatile matrix, allowing a range of processing temperatures from 80°C up to 160°C.

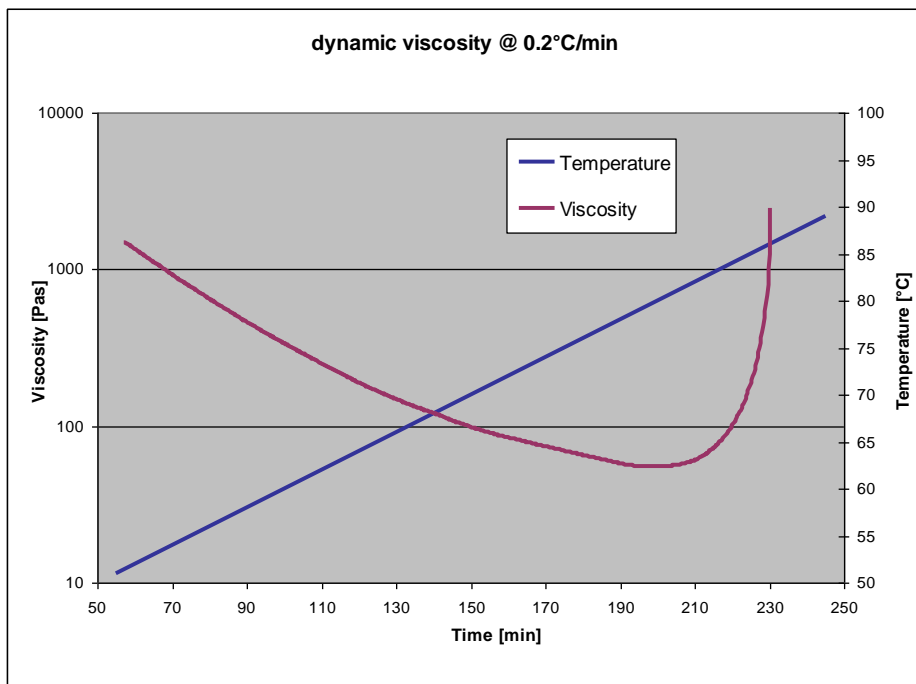
M77 is based on a modified epoxy resin. It can be pre-impregnated into carbon, glass or aramide fibres and exhibits a significant long out-life at room temperature.

### Benefits and Features

- High Toughened epoxy
- High Excellent tack life
- Suitable for a range of pressures (1 to 10bar)
- Short cure cycle at 120 – 160°C
- Good surface finish
- Medium tack and excellent drap
- Controlled flow for ease of processing
- Long out-life at room temperature

### Resin Matrix Properties

- Tg after 130° @ 15min: 125°C (DMTA 30-180°C, 2°C/min)
- Density: 1,22g/cm<sup>3</sup>
- Colour: milky
- Viscosity:





# HexPly® M77

## Curing Conditions

The ideal cure cycle is 7min at 120°C, at a pressure between 1 and 10bar. Alternative cure cycles can be used:

Temperature	Time
80 °C	480 min
90 °C	90 min
100 °C	40 min
110 °C	18 min
120 °C	7 min
130 °C	5 min
140 °C	3 min
150 °C	2 min
160 °C	1,5 min

## Prepreg Types and Cured Prepreg Mechanical Properties

Mechanical Properties are based on 130 °C cure for 10 min, at 5 bar pressure.

Product name	Reinforcement				Prepreg data				mechanical data		
	fibre	fabric weave style	fabric weight g/m <sup>2</sup>	fabric direction 0°/90°/+45°/-45° g/m <sup>2</sup>	pressed thickness mm	weight g/m <sup>2</sup> (± 5%)	resin content % (± 3)	resin flow % (± 5)	tensile strength MPa	tensile modulus GPa	ILS MPa
M77/80%/F65/G	Glas	fleece	65	---	0,24	325	80	45	---	---	---
M77/42%/200T2/CHS-3K	Carbon	twill	200	100/100/0/0	0,19	345	42	20	1100	72	---
M77/38%/395P/G	Glas	plain	386	204/182/0/0	0,34	623	38	25	0°: 610 90°: 315	0°: 24 90°: 20,1	---
M77/36%/LT483/G	Glas	non woven	483	432/33/0/0	0,41	755	36	20	1000	35	---
M77/40%/LT570/G+F	Glas	non woven + fleece	560	432/75/0/0 fleece 35	0,45	848	35	15	830	33,8	---
M77/35%/LBB790/G+F	Glas	non woven + fleece	787	425/0/150/150 fleece 50	0,65	1215	35	15	0°: 660 45°: 240	0°: 27,7 45°: 16,2	---
M77/34%/L845/G+F	Glas	non woven + fleece	787	720/0/0/0 fleece 100	0,69	1280	34	15	1000	38,3	---
M77/42%/UD90/CHS	Carbon	UD	90	90/0/0/0	0,103	150	42	18	2700	140	75
M77/39%/UD110/CHS	Carbon	UD	110	110/0/0/0	0,119	180	39	20	2400	135	73
M77/39%/UD120/CHS	Carbon	UD	120	120/0/0/0	0,129	197	39	20	2400	135	73
M77/35%/UD600/CHS	Carbon	UD	600	600/0/0/0	0,597	923	35	20	2000	120	75



## HexPly<sup>®</sup> M77

### Storage Life

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▪ Out-life	@ + 23 °C	6 weeks
	@ + 5 °C	6 months
	@ - 18 °C	18 months

### Precautions for Use

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The usual precautions when handling uncured synthetic resins and fine fibrous materials should be observed, and a Safety Data Sheet is available for this product. The use of clean disposable inert gloves provides protection for the operator and avoids contamination of material and components.

#### Important

All information is believed to be accurate but is given without acceptance of liability. All users should make their own assessment of the suitability of any product for the purposes required. All sales are made subject to our standard terms of sale which include limitations on liability and other terms.

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### For More Information

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- Carbon, glass, aramid and hybrid prepregs
- Structural film adhesives
- Special process honeycombs
- Honeycomb cores
- Honeycomb sandwich panels
- RTM materials

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