



# HexPly<sup>®</sup> Epoxy Matrix M34/41%/300H8/G



## Description

HexPly<sup>®</sup> M34/41%/300H8/G is a Epoxy E-Glass Woven prepreg, whereby M34 is the resin type; 41% is the resin content by weight; 300H8/G is the reinforcement reference and G represents E-Glass fibre. This data sheet is complementary to the M34 resin data sheet, which should be consulted for additional information.

Reinforcement Data		0°		90°	
Nominal Area Weight	g/m <sup>2</sup>	300	153	147	
Composition		8H satin			
Fibre Type		E-Glass			
Nominal Fibre Density	g/cm <sup>3</sup>	2,56			

Matrix Properties			
Glass transition temperature of laminate	°C	90 (DMA onset, 5°C/min, 1Hz, 15µm)	
(Cure cycle: 90 min @ 90°C)			
Nominal Resin Density	g/cm <sup>3</sup>	1,26	

Prepreg Data			
Nominal Area Weight	g/m <sup>2</sup>	508	
Nominal Resin Content	weight %	41	
Tack Level		High	

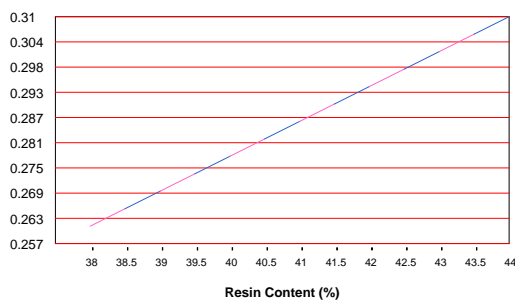
Processing			
Cure Cycle		@ 75 °C	480 min
	or	@ 90 °C	90 min
	or	@ 120 °C	40 min
Recommended heat up rate	°C/min	0.5 - 3	
Pressure gauge	bar	0.9 - 5	

The optimum cure cycle, heat up rate and dwell period depend on part size, laminate construction, oven capacity and thermal mass of tool.

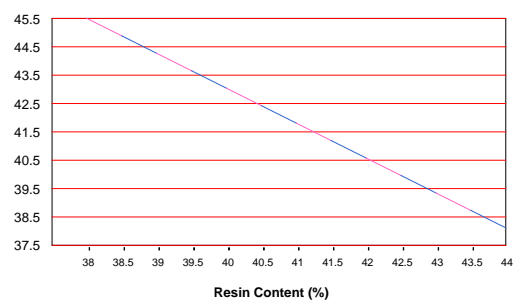
## Cured Laminate Properties

(nominal composite density 1.80 g/cm<sup>3</sup>)

RESIN CONTENT % vs CURED PLY THICKNESS



RESIN CONTENT % vs FIBRE VOLUME %



The above graphs enable the fibre volume content of a laminate to be estimated using the measured cured ply thickness. The calculation assumes no resin loss.



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## Mechanical Properties

Mechanical Properties are based on 120 °C cure for 60 min, at 5 bar pressure and . .95 bar vacuum.

Data is the result from several tests on Autoclave cured laminates. Some of the values achieved will have been higher, and some lower, than the figure quoted.

(Normalised to 50% fibre volume, except for ILSS)

Warp (RT / Dry)	Tensile	Flexural	ILSS	Compression
Strength (MPa)	440	560	56	580
Modulus (GPa)	24	22	.	.
Test Method	EN 2747	EN 2746	EN 2377	EN 2850B
Weft (RT / Dry)	Tensile	Flexural	ILSS	Compression
Strength (MPa)	430	560	56	580
Modulus (GPa)	24	22	.	.
Test Method	EN 2747	EN 2746	EN 2377	EN 2850B

NB: Flexural results are not normalised

## Prepreg Storage Life

Shelf Life<sup>1</sup>: 12 months at -18°C/0°F (from date of manufacture).

<sup>1</sup> Shelf Life: the maximum storage life for HexPly® prepreg, when stored continuously, in a sealed moisture-proof bag, at -18°C/0°F or 5°C/41°F. To accurately establish the exact expiry date, consult the box label.

Out Life<sup>2</sup>: 10 days at Room Temperature.

<sup>2</sup> Out Life: the maximum accumulated time allowed at room temperature between removal from the freezer and cure.

Prepreg should be stored as received in a cool dry place or in a refrigerator. After removal from refrigerator storage, prepreg should be allowed to reach room temperature before opening the polyethylene bag, thus preventing condensation. (A full reel in its packing can take up to 48 hours).

## Precautions for Use

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

## For more informations

Hexcel is a leading worldwide supplier of composite materials to aerospace and industrial markets. Our comprehensive range includes:

- HexTow® carbon fibers
- HexForce® reinforcements
- HiMax™ multiaxial reinforcements
- HiTape™ advanced reinforcements
- HexPly® prepregs
- HexMC® molding compounds
- HexFlow® RTM resins
- Redux® adhesives
- HexTool® tooling materials
- HexWeb® honeycombs
- Acousti-CAP® sound attenuating honeycomb
- Engineered core
- Engineered products

For US quotes, orders and product information call toll-free 1-800-688-7734. For other worldwide sales office telephone numbers and a full address list, please go to:

<http://www.hexcel.com/Resources/DataSheets/Prepreg>

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