



HexPly[®] M34

75°C (167°F) curing epoxy matrix



Product Data Sheet

Description

HexPly[®] M34 is an epoxy system, specifically developed for low temperature curing of large structural components, particularly in industrial markets.

HexPly[®] M34 is a self-extinguishing system, providing excellent fire-resistant properties, and meeting the German and French rail qualifications DIN 5510, S3-SR2-ST2 and NF F 16-101 (M2, F1). HexPly[®] M34 prepreg is ideal for manufacturing sandwich structures, providing excellent adhesion to PVC foam cores.

HexPly[®] M34 exhibits a good shelf life at Room Temperature for a low temperature curing system.

Benefits and Features

- Halogen free
- 10 days shelf life at RT
- Self adhesive on foam (PVC) and on honeycomb
- Low pressure moulding capability 0.8-3 bar (12-43 Psi)
- Good flexibility and handleability of prepregs
- Suitable for thick laminates - low exotherm



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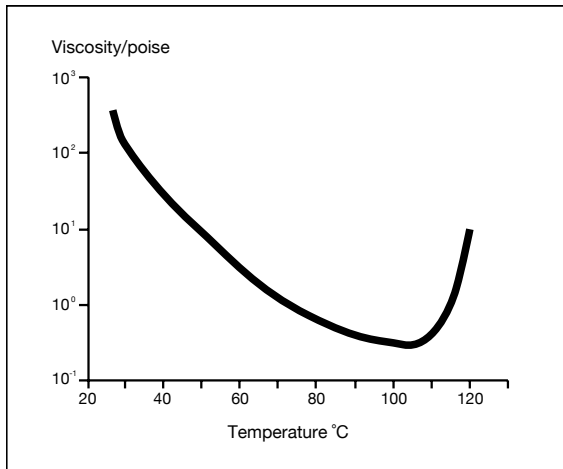
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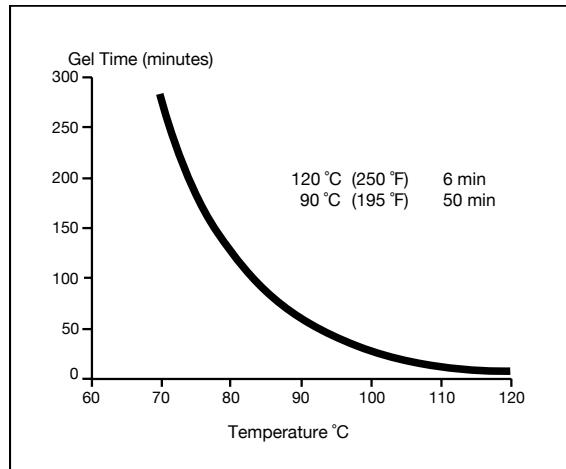
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Resin Matrix Properties

Rheology



Gel Time



Cured Matrix Properties cured at 75°C (167°F) - 8H

<i>Test</i>	<i>Values</i>	<i>Method</i>
Glass transition temperature	80°C (176°F)	DMA
Cured resin density	1.26 g/cm ³	
Flexural	Str = 120 MPa (17.4 Ksi) Mod = 3.8 GPa (551 Ksi)	

Prepreg Curing Conditions

The standard cure cycle is 8 hours at 75°C (167°F), at a pressure between 0.8 and 3 bar. The following alternative cure cycles can be used:

<i>Temperature</i>	<i>Time</i>
65°C (149°F)	16 hours
90°C (194°F)	90 minutes
120°C (250°F)	40 minutes



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Typical Mechanical Properties on HexPly[®] M34 prepregs

Main references (Others available)

Test	E-glass Balanced fabric 600 g/m ²	E-glass Balanced fabric 300 g/m ²	HS 12k carbon Balanced fabric 600 g/m ²
0° Tensile strength MPa (Ksi)	400 (58)	600 (87)	900 (130)
0° Tensile modulus GPa (Msi)	20 (2.9)	21 (3)	65 (9.4)
0° Flexure strength MPa (Ksi)	670 (97)	700 (101)	950 (137)
0° Flexure modulus GPa (Msi)	20 (2.9)	20 (2.9)	65 (9.4)
0° Compression strength MPa (Ksi)	/	540 (78)	600 (87)
0° Short beam strength MPa (Ksi)	53 (7.7)	50 (7.2)	70 (10)
Fibre volume content %	50	55	60

HS = high strength



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Prepreg Storage Life

- Shelf Life @ 23 + 2 °C (73 °F) 10 days
- Guaranteed Shelf Life @ -18 °C (0 °F) 12 months

Precautions for Use

The usual precautions when handling uncured synthetic resins and 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.

For more information

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

- HexTow[®] carbon fibers
- HexFlow[®] RTM resins
- Acusti-Cap[®] sound attenuating honeycomb
- HexForce[®] reinforcements
- Redux[®] adhesives
- Engineered core
- HexPly[®] prepregs
- HexTool[®] tooling materials
- Engineered products
- HexMC[®] molding compounds
- HexWeb[®] honeycombs

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/contact/salesoffice>

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