



HexPly® M26/M26T

120 °C (250 °F) curing epoxy matrix

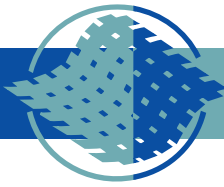
Product Data

Description

HexPly® M26 is an advance modified epoxy resin developed for aerospace and industrial markets. Its controlled flow, high peel strength on honeycomb cores and excellent fire behaviour give it a cost saving potential for interior and secondary sandwich structures. Combined with HexPly® M25 glass phenolic prepregs, it is qualified to Airbus specifications.

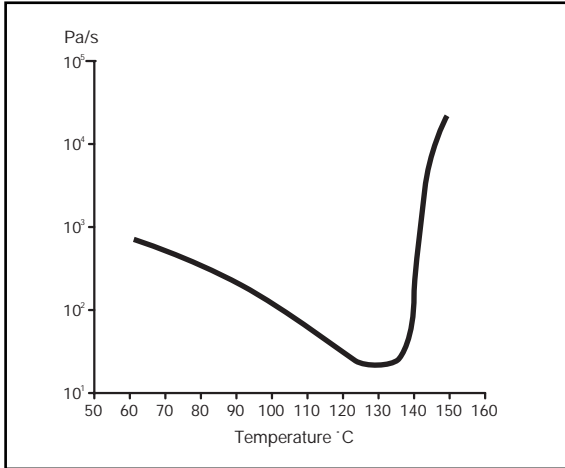
Benefits and Features

- 120 °C (250 °F) cure
- Self-extinguishing to ABD0031 requirements
- Self-adhesive on honeycomb and foam
- Environmentally friendly
- Controlled flow matrix
- Low pressure moulding capability 0.8-3 bar (12-43 Psi)
- Cure cycle versatility 100-150 °C (212-302 °F)
- Good impact resistance
- Compatible with HexPly® M25 phenolic resin system
- Two grades available:
 - M26, reduced tack grade, for flat panels applications,
 - M26T, improved tack grade, for other sandwich structures.

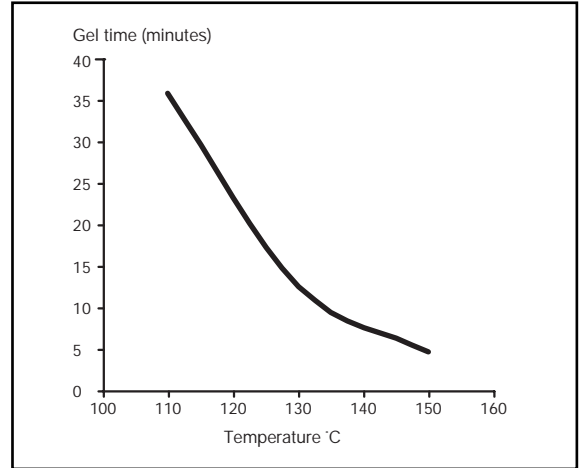


Resin Matrix Properties

Rheology



Gel Time



Cured Matrix Properties cured at 180 °C (350 °F)

Glass transition temperature

- Dry 105 °C (221 °F)
- Wet (saturation @ 70 °C/85%/RH) 90 °C (194 °F)

Cured density 1.29 g/cm³

Enthalpy ΔH 270 J/g

Method

DMA

DSC

Prepreg Curing Conditions

The ideal cure cycle is 90 min at 125 °C (257 °F), at a pressure between 0.5 and 3 bar (7-43 Psi).
Alternative cure cycles can be used.

Heat up rate 0.5-10 °C (33-50 °F)/min

Low temperature cure: 5 hours at 100 °C (212 °F) - T_g = 95 °C (203 °F)
+ post cure 1 hour at 150 °C (302 °F) to achieve a T_g of 120 °C (250 °F)

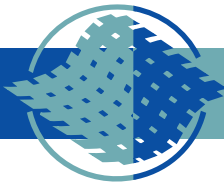
Fire Properties

Tests performed on 1 ply specimen of M26/45%/G1070 according to ABD0031.

TEST METHOD	Property	Unit	Result
AITM 2002 60 sec vertical Vertical burning test	Flame time	sec	0
	Glow time	sec	1.3
	Drip flame time	sec	0
	Burn length	cm	5.3
AITM 2007 method B	Flaming mode	Ds	75
AITM 3005 NBS toxicity Flaming mode	CO	ppm	103
	Hcl	ppm	0
	H2S - SO2	ppm	0
	HCN	ppm	2.3
	HF	ppm	0
	NO + NO2	ppm	11.7

Typical Mechanical Properties on HexPly® M26 preregs

PROPERTY	Temp. °C	M26/45%/G1070 Carbon fabric 6K T300J 370 gsm	M26T/50%/7581 Glass fabric 300 gsm
Warp tensile strength MPa	RT	790	410
Warp tensile modulus GPa	RT	65	23
Warp tensile strength MPa	80	780	400
Warp tensile modulus GPa	80	64	22
Warp flexural strength MPa	RT	900	520
Warp flexural modulus GPa	RT	58	18
Warp flexural strength MPa	80	580	450
Warp flexural modulus GPa	80	51	16.5
Warp compression strength MPa	RT	700	500
Warp compression modulus GPa	RT	62	22
Warp ILSS MPa	-55	92	/
Warp ILSS MPa	RT	71	60
Warp ILSS MPa	80	45	44
Drum peel mN/m	RT	55 (on HRH10-3/16-6.0)	65 (on HRH10-1/8-3.0)
Fibre volume content %	/	55	50



Prepreg Storage Life

■ Tack Life @ 23 °C (73 °F) 30 days

■ Guaranteed Shelf Life @ -18 °C (0 °F) 12 months

■ Storage conditions

HexPly® M26-M26T prepregs 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 polythene bag, thus preventing condensation (a full reel in its packaging can take up to 48 hours).

Important

All information is believed to be accurate but is given without acceptance of liability. 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 important terms.

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For More Information

Hexcel is a leading worldwide supplier of composite materials to aerospace and other demanding industries. Our comprehensive product range includes:

- Carbon Fibre
- RTM Materials
- Honeycomb Cores
- Continuous Fibre Reinforced Thermoplastics
- Carbon, glass, aramid and hybrid prepregs
- Reinforcement Fabrics
- Structural Film Adhesives
- Honeycomb Sandwich Panels
- Special Process 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:

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