HexPly® M25

120 °C (250 °F) curing epoxy matrix

Product Data

Description

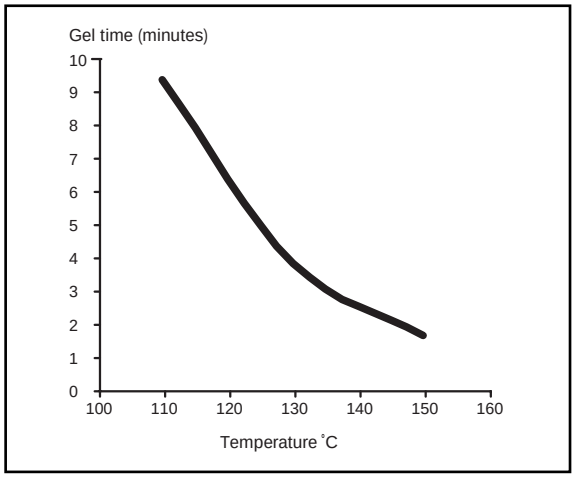
HexPly® M25 is a modified phenolic resin developed for aerospace market.Its very low flow and excellent fire behaviour make HexPly® M25 lightweight glass prepregs usable as fire barrier for floor panels. Combined with HexPly® M26 epoxy prepregs, it is qualified to Airbus specifications.

Benefits and Features

- 120 °C (250 °F) cure
- Self-extinguishing to ABD0031 requirements
- Controlled flow matrix
- Compatible with HexPly® M26 epoxy resin system

Resin Matrix Properties

Gel Time



Cured Matrix Properties

		Method
Glass transition temperature (dry)	108 °C (226 °F)	DMA
Cured density	1.25 g/cm^3	
Enthaply ΔH	205 J/g	DSC

Prepreg Curing Conditions

The ideal cure cycle is 1 hour at 135 °C (275 °F), at a pressure between 2 and 3 bar (30-43 Psi).
Alternative cure cycles can be used.

Heat up rate 0.5-10 °C (33-50 °F)/min

Fire Properties

Tests performed on 1 ply specimen of M25/53%/120 according to ABD0031.

TEST METHOD	Property	Unit	Result
AITM 2002 60 sec vertical Vertical burning test	Flame time	sec	0
	Glow time	sec	1.0
	Drip flame time	sec	0
	Burn length	cm	30
AITM 2007 method B	Flaming mode	Ds	8.3
AITM 3005 NBS toxicity Flaming mode	CO	ppm	77
	Hcl	ppm	0
	H2S - SO2	ppm	0
	HCN	ppm	0
	HF	ppm	0
	NO + NO2	ppm	3
Heat release rate OSU chamber	HRR max	kW/m^2	51.9
	HR total	$kW\ min/m^2$	12.3

Typical Mechanical Properties on HexPly® M25 prepregs

PROPERTY	Temp. °C	M25/53%/120 Glass fabric 107 gsm
Warp tensile strength MPa	RT	320
Warp tensile modulus GPa	RT	16.9
Warp flexural strength MPa	RT	508
Warp flexural modulus GPa	RT	19.2
Warp flexural strength MPa	80	390
Warp flexural modulus GPa	80	15.8
Warp ILSS MPa	-55	65
Warp ILSS MPa	RT	55
Warp ILSS MPa	80	31
Fibre volume content %	/	35

Prepreg Storage Life

■ Tack Life	@ 23 °C (73 °F)	30 days
■ Guaranteed Shelf Life	@ -18 °C (0 °F)	12 months

■ Storage conditions

HexPly® M25 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

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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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