

## Hexcel® HexPly® M42 180°C (350°F) Curing Epoxy Matrix, 52%/G1177 Glass/Carbon Fiber

Category : Polymer , Thermoset , Carbon Fiber/Thermoset Composite , Epoxy , Epoxy/Carbon Fiber Composite

### Material Notes:

Information provided by HexCel

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Hexcel-HexPly-M42-180C-350F-Curing-Epoxy-Matrix-52G1177-GlassCarbon-Fiber.php](http://www.lookpolymers.com/polymer_Hexcel-HexPly-M42-180C-350F-Curing-Epoxy-Matrix-52G1177-GlassCarbon-Fiber.php)

Physical Properties	Metric	English	Comments
Density	1.26 g/cc	0.0455 lb/in <sup>3</sup>	Resin Density
	2.10 g/cc	0.0759 lb/in <sup>3</sup>	Fibre Density

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	400 MPa	58000 psi	90°, RT, Dry; EN2561
	320 MPa	46400 psi	90°, Wet; EN2561
	@Temperature 130 °C	@Temperature 266 °F	
Tensile Modulus	370 MPa	53700 psi	90°, Wet; EN2561
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	38.0 GPa	5510 ksi	90°, RT, Dry; EN2561
Compressive Yield Strength	37.0 GPa	5370 ksi	90°, Wet; EN2561
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	37.0 GPa	5370 ksi	90°, Wet; EN2561
Compressive Modulus	@Temperature 130 °C	@Temperature 266 °F	
	650 MPa	94300 psi	90°, RT, Dry; EN2850 Type B
	390 MPa	56600 psi	90°, Wet; EN2850 Type B
Compressive Modulus	@Temperature 130 °C	@Temperature 266 °F	
	590 MPa	85600 psi	90°, Wet; EN2850 Type B
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Compressive Modulus	37.0 GPa	5370 ksi	90°, RT, Dry; EN2850 Type B
	36.0 GPa	5220 ksi	90°, Wet; EN2850 Type B
	@Temperature 130 °C	@Temperature 266 °F	
	38.0 GPa	5510 ksi	

Mechanical Properties	Metric @ Temperature 23.0 °C	English @ Temperature 73.4 °F	90° Wet; EN2850 Type B Comments
Shear Modulus	3.50 GPa	508 ksi	In-Plane, RT, Dry; EN6031
	2.40 GPa @Temperature 130 °C	348 ksi @Temperature 266 °F	In-Plane, Wet; EN6031
Shear Strength	68.0 MPa	9860 psi	90°, ILSS Short Beam, RT, Dry; EN2563
	79.0 MPa	11500 psi	In-Plane, RT, Dry; EN6031
	31.0 MPa @Temperature 150 °C	4500 psi @Temperature 302 °F	90°, ILSS Short Beam, Wet; EN2563
	34.0 MPa @Temperature 130 °C	4930 psi @Temperature 266 °F	90°, ILSS Short Beam, Wet; EN2563
	48.0 MPa @Temperature 130 °C	6960 psi @Temperature 266 °F	In-Plane, Wet; EN6031
	54.0 MPa @Temperature 100 °C	7830 psi @Temperature 212 °F	In-Plane, Wet; EN6031

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	120 - 130 °C	248 - 266 °F	Epoxy Matrix Limit

Processing Properties	Metric	English	Comments
Shelf Life	12.0 Month @Temperature -18.0 °C	12.0 Month @Temperature -0.400 °F	

Descriptive Properties	Value	Comments
Cured Thickness per Ply (cm)	0.021	
Fiber Volume (%)	42	

## Contact Songhan Plastic Technology Co.,Ltd.

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