

Hexcel® HexPly® M12 135°C Curing Epoxy Matrix, 37%/7781 Fiber

Category : Polymer , Thermoset , Epoxy , Epoxy Cure Resin

Material Notes:

Information provided by HexCel

Order this product through the following link:

http://www.lookpolymers.com/polymer_Hexcel-HexPly-M12-135C-Curing-Epoxy-Matrix-377781-Fiber.php

Physical Properties	Metric	English	Comments
Density	1.24 g/cc	0.0448 lb/in ³	Resin Density
	2.60 g/cc	0.0939 lb/in ³	Fibre Density

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	415 MPa	60200 psi	90°, RT, Dry; EN2561
	510 MPa	74000 psi	RT; Dry; EN2561
	270 MPa	39200 psi	Wet; EN2561
	@Temperature 75.0 °C	@Temperature 167 °F	
	270 MPa	39200 psi	Wet; EN2561
	@Temperature 100 °C	@Temperature 212 °F	
	270 MPa	39200 psi	90°, Wet; EN2561
	@Temperature 75.0 °C	@Temperature 167 °F	
	300 MPa	43500 psi	90°, Wet; EN2561
	@Temperature 100 °C	@Temperature 212 °F	
Tensile Modulus	26.0 GPa	3770 ksi	90°, RT, Dry; EN2561
	29.0 GPa	4210 ksi	RT; Dry; EN2561
	25.0 GPa	3630 ksi	90°, Wet; EN2561
	@Temperature 100 °C	@Temperature 212 °F	
	26.0 GPa	3770 ksi	90°, Wet; EN2561
	@Temperature 75.0 °C	@Temperature 167 °F	
	27.0 GPa	3920 ksi	Wet; EN2561
	@Temperature 100 °C	@Temperature 212 °F	
	28.0 GPa	4060 ksi	Wet; EN2561
	@Temperature 75.0 °C	@Temperature 167 °F	

Mechanical Properties	Metric	English	Comments
	500 MPa	72500 psi	RT; Dry; DIN65380
	320 MPa	46400 psi	90°, Wet; DIN65380
	@Temperature 100 °C	@Temperature 212 °F	
	360 MPa	52200 psi	Wet; DIN65380
	@Temperature 100 °C	@Temperature 212 °F	
	380 MPa	55100 psi	Wet; DIN65380
	@Temperature 75.0 °C	@Temperature 167 °F	
	400 MPa	58000 psi	90°, Wet; DIN65380
	@Temperature 75.0 °C	@Temperature 167 °F	
Compressive Modulus	27.0 GPa	3920 ksi	90°, RT, Dry; DIN65380
	30.0 GPa	4350 ksi	RT; Dry; DIN65380
	25.0 GPa	3630 ksi	90°, Wet; DIN65380
	@Temperature 100 °C	@Temperature 212 °F	
	26.0 GPa	3770 ksi	Wet; DIN65380
	@Temperature 75.0 °C	@Temperature 167 °F	
	26.0 GPa	3770 ksi	Wet; DIN65380
	@Temperature 100 °C	@Temperature 212 °F	
	26.0 GPa	3770 ksi	90°, Wet; DIN65380
	@Temperature 75.0 °C	@Temperature 167 °F	
Shear Strength	80.0 MPa	11600 psi	In-Plane, RT, Dry; EN6031
	83.0 MPa	12000 psi	0°, ILSS (Short Beam), RT, Dry; EN2563
	37.0 MPa	5370 psi	0°, ILSS (Short Beam), Wet; EN2563
	@Temperature 100 °C	@Temperature 212 °F	
	43.0 MPa	6240 psi	0°, ILSS (Short Beam), Wet; EN2563
	@Temperature 75.0 °C	@Temperature 167 °F	
	70.0 MPa	10200 psi	In-Plane, Wet; EN6031
	@Temperature 100 °C	@Temperature 212 °F	
	75.0 MPa	10900 psi	In-Plane, Wet; EN6031
	@Temperature 75.0 °C	@Temperature 167 °F	

Mechanical Properties	Metric	English	Comments
Processing Properties	Metric	English	Comments
Shelf Life	14.0 Month	14.0 Month	
	@Temperature -18.0 °C	@Temperature -0.400 °F	

Descriptive Properties	Value	Comments
Cured Thickness per Ply (cm)	0.23	
Fiber Volume (%)	50	

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