

Hexcel® HexPly® 8552 Epoxy Matrix, IM7 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-8552-Epoxy-Matrix-IM7-Fiber.php

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	91.7 MPa	13300 psi	90°, Dry
	@Temperature 104 °C	@Temperature 220 °F	
	111 MPa	16100 psi	90°, Dry
	@Temperature 25.0 °C	@Temperature 77.0 °F	
	174 MPa	25300 psi	90°, Dry
	@Temperature -55.0 °C	@Temperature -67.0 °F	
	428 MPa	62100 psi	Open Hole Tensile, Dry
	@Temperature 25.0 °C	@Temperature 77.0 °F	
Tensile Modulus	2540 MPa	368000 psi	0°, Dry
	@Temperature 104 °C	@Temperature 220 °F	
	2570 MPa	373000 psi	0°, Dry
	@Temperature -55.0 °C	@Temperature -67.0 °F	
	2720 MPa	395000 psi	0°, Dry
	@Temperature 25.0 °C	@Temperature 77.0 °F	
	10.3 GPa	1500 ksi	90°, Dry
	@Temperature 220 °C	@Temperature 428 °F	
	11.7 GPa	1700 ksi	90°, Dry
	@Temperature 77.0 °C	@Temperature 171 °F	
	19.3 GPa	2800 ksi	90°, Dry
	@Temperature -67.0 °C	@Temperature -88.6 °F	
	163 GPa	23700 ksi	0°, Dry
	@Temperature -67.0 °C	@Temperature -88.6 °F	
	163 GPa	23700 ksi	0°, Dry
	@Temperature 220 °C	@Temperature 428 °F	

Mechanical Properties	164 GPa Metric	23800 ksi English	Comments 0°, Dry
	@Temperature 77.0 °C	@Temperature 171 °F	
Flexural Yield Strength	1860 MPa	270000 psi	0°, Dry
	@Temperature 25.0 °C	@Temperature 77.0 °F	
Flexural Modulus	15.2 GPa	2200 ksi	0°, Dry
	@Temperature 25.0 °C	@Temperature 77.0 °F	
Compressive Yield Strength	170 MPa	24600 psi	0°, Wet, Fill Compression
	@Temperature 82.2 °C	@Temperature 180 °F	
	214 MPa	31000 psi	Compression After Impact, Dry
	@Temperature 25.0 °C	@Temperature 77.0 °F	
	226 MPa	32800 psi	0°, Dry, Fill Compression
	@Temperature 104 °C	@Temperature 220 °F	
	234 MPa	34000 psi	After 1500 in-in-lb/in impact, Dry
	@Temperature 25.0 °C	@Temperature 77.0 °F	
	236 MPa	34200 psi	0°, Wet, Fill Compression
	@Temperature 25.0 °C	@Temperature 77.0 °F	
	305 MPa	44200 psi	0°, Dry, Fill Compression
	@Temperature 25.0 °C	@Temperature 77.0 °F	
	336 MPa	48800 psi	Open Hole Compression, Dry
	@Temperature 25.6 °C	@Temperature 78.0 °F	
	1480 MPa	215000 psi	0°, Dry
	@Temperature 90.6 °C	@Temperature 195 °F	
	1690 MPa	245000 psi	0°, Dry
	@Temperature 25.0 °C	@Temperature 77.0 °F	
Compressive Modulus	150 GPa	21700 ksi	0°, Dry
	@Temperature 25.0 °C	@Temperature 77.0 °F	
	162 GPa	23500 ksi	0°, Dry
	@Temperature 90.6 °C	@Temperature 195 °F	
Shear Strength	80.0 MPa	11600 psi	0° Short Beam, Wet
	@Temperature 82.2 °C	@Temperature 180 °F	
	93.8 MPa	13600 psi	

Mechanical Properties	Metric @ Temperature 104 °C	English @ Temperature 220 °F	0° Short Beam, Dry Comments
	106 MPa @Temperature 104 °C	15400 psi @Temperature 220 °F	+/- 45° In-Plane, Dry
	115 MPa @Temperature 25.0 °C	16700 psi @Temperature 77.0 °F	0° Short Beam, Wet
	120 MPa @Temperature 25.0 °C	17400 psi @Temperature 77.0 °F	+/- 45° In-Plane, Dry
	137 MPa @Temperature 25.0 °C	19900 psi @Temperature 77.0 °F	0° Short Beam, Dry

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	121 °C	250 °F	Epoxy Matrix Limit

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