

Hexcel® HexPly® F650 Bismaleimide Resin with IM6 Fiber

Category : Polymer , Thermoset , Polyimide, TS

Material Notes:

Composition: IM6 Fiber, 12K, G sizes, UD Tape - 145 g/m2 Information provided by HexCel

Order this product through the following link:

http://www.lookpolymers.com/polymer_Hexcel-HexPly-F650-Bismaleimide-Resin-with-IM6-Fiber.php

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	112 MPa	16200 psi	[+/-45°]; Resin Content=27%, Fiber Volume=66%; Wet condition-96 hours in boiling H2O
	@Temperature 177 °C	@Temperature 351 °F	
	138 MPa	20000 psi	
	@Temperature 177 °C	@Temperature 351 °F	
	145 MPa	21000 psi	[+/-45°]; Resin Content=27%, Fiber Volume=66%
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	2774 MPa	402300 psi	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Yield	1.66 %	1.66 %	[0°]; Resin Content=26%, Fiber Volume=67%
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	9.79 GPa	1420 ksi	
	@Temperature 177 °C	@Temperature 351 °F	
Tensile Modulus	15.8 GPa	2290 ksi	[+/-45°]; Resin Content=27%, Fiber Volume=66%; Wet condition-96 hours in boiling H2O
	@Temperature 177 °C	@Temperature 351 °F	
	19.7 GPa	2860 ksi	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	165 GPa	23900 ksi	[0°]; Resin Content=26%, Fiber Volume=67%
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	917 MPa	133000 psi	
	@Temperature 177 °C	@Temperature 351 °F	
Compressive Yield Strength	1089 MPa	157900 psi	[0°]; Resin Content=29%, Fiber Volume=64%
	@Temperature 232 °C	@Temperature 450 °F	
	1303 MPa	189000 psi	
	@Temperature 177 °C	@Temperature 351 °F	

Mechanical Properties	Metric	English	Comments
	@Temperature 23.0 °C	@Temperature 73.4 °F	[0°]; Resin Content=29%, Fiber Volume=64%
Compressive Modulus	131 GPa	19000 ksi	[0°]; Resin Content=29%, Fiber Volume=64%; Wet condition-96 hours in boiling H2O
	@Temperature 177 °C	@Temperature 351 °F	
	137 GPa	19900 ksi	[0°]; Resin Content=29%, Fiber Volume=64%
	@Temperature 177 °C	@Temperature 351 °F	
	139 GPa	20200 ksi	[0°]; Resin Content=29%, Fiber Volume=64%
	@Temperature 232 °C	@Temperature 450 °F	
	145 GPa	21000 ksi	[0°]; Resin Content=29%, Fiber Volume=64%
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Shear Strength	27.0 MPa	3920 psi	Short Beam; [0°]; Resin Content=29%, Fiber Volume=64%; Wet condition-96 hours in boiling H2O
	@Temperature 232 °C	@Temperature 450 °F	
	45.0 MPa	6530 psi	Short Beam; [0°]; Resin Content=29%, Fiber Volume=64%; Wet condition-96 hours in boiling H2O
	@Temperature 177 °C	@Temperature 351 °F	
	65.0 MPa	9430 psi	Short Beam; [0°]; Resin Content=29%, Fiber Volume=64%
	@Temperature 232 °C	@Temperature 450 °F	
	88.9 MPa	12900 psi	Short Beam; [0°]; Resin Content=29%, Fiber Volume=64%
	@Temperature 177 °C	@Temperature 351 °F	
	118 MPa	17100 psi	Short Beam; [0°]; Resin Content=29%, Fiber Volume=64%
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Descriptive Properties	Value	Comments
Energy Release Rate (kJ/m2)	0.41	

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