

Hexcel® HexPly® F655 Bismaleimide Resin, Carbon Tape Form

Category : Polymer , Thermoset , Polyimide, TS

Material Notes:

Fiber: T300-12K, IM7-12K Information provided by HexCel

Order this product through the following link:

http://www.lookpolymers.com/polymer_Hexcel-HexPly-F655-Bismaleimide-Resin-Carbon-Tape-Form.php

Physical Properties	Metric	English	Comments
Density	1.53 - 1.56 g/cc	0.0553 - 0.0564 lb/in³	Laminate
Volatiles	<= 2.0 %	<= 2.0 %	Prepreg

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	16.0 MPa	2320 psi	IM7 (12K); [90°]16; Wet Condition
	@Temperature 177 °C	@Temperature 351 °F	
	42.0 MPa	6090 psi	IM7 (12K); [90°]16
	@Temperature 232 °C	@Temperature 450 °F	
	66.0 MPa	9570 psi	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	148 MPa	21500 psi	T300 (6K); [+/- 45°]2s; Wet Condition
	@Temperature 177 °C	@Temperature 351 °F	
	202 MPa	29300 psi	T300 (6K); [+/- 45°]2s
	@Temperature 177 °C	@Temperature 351 °F	
	216 MPa	31300 psi	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	1517 MPa	220000 psi	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	2013 MPa	292000 psi	IM7 (12K); [0°]8
	@Temperature 232 °C	@Temperature 450 °F	
	2068 MPa	299900 psi	IM7 (12K); [0°]8; Wet Condition
	@Temperature 177 °C	@Temperature 351 °F	
	2730 MPa	396000 psi	
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Mechanical Properties	0.2875 % Metric	0.2875 % English	Comments
	@Temperature 177 °C	@Temperature 351 °F	
	0.6215 %	0.6215 %	IM7 (12K); [90°]16
	@Temperature 232 °C	@Temperature 450 °F	
	0.7668 %	0.7668 %	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	1.04 %	1.04 %	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	1.61 %	1.61 %	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Modulus	6.00 GPa	870 ksi	IM7 (12K); [90°]16; Wet Condition
	@Temperature 177 °C	@Temperature 351 °F	
	6.50 GPa	943 ksi	T300 (6K); [+/- 45°]2s; Wet Condition
	@Temperature 177 °C	@Temperature 351 °F	
	7.90 GPa	1150 ksi	IM7 (12K); [90°]16
	@Temperature 232 °C	@Temperature 450 °F	
	9.20 GPa	1330 ksi	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	15.7 GPa	2280 ksi	T300 (6K); [+/- 45°]2s
	@Temperature 177 °C	@Temperature 351 °F	
	16.5 GPa	2390 ksi	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	142.7 GPa	20700 ksi	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	160.6 GPa	23290 ksi	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	163.4 GPa	23700 ksi	IM7 (12K); [0°]8
	@Temperature 232 °C	@Temperature 450 °F	
	164.8 GPa	23900 ksi	IM7 (12K); [0°]8; Wet Condition
	@Temperature 177 °C	@Temperature 351 °F	
	48.0 MPa	6960 psi	

Flexural Yield Strength Mechanical Properties	Metric @ Temperature 177 °C	English @ Temperature 351 °F	T300 (6K); [90°]16; Wet Condition Comments
	80.0 MPa @Temperature 232 °C	11600 psi @Temperature 450 °F	T300 (6K); [90°]16
	107 MPa @Temperature 177 °C	15500 psi @Temperature 351 °F	T300 (6K); [90°]16
	138 MPa @Temperature 23.0 °C	20000 psi @Temperature 73.4 °F	
	1110 MPa @Temperature 177 °C	161000 psi @Temperature 351 °F	T300 (6K); [0°]16; Wet Condition
	1351 MPa @Temperature 232 °C	195900 psi @Temperature 450 °F	T300 (6K); [0°]16
	1655 MPa @Temperature 177 °C	240000 psi @Temperature 351 °F	T300 (6K); [0°]16
	2127 MPa @Temperature 23.0 °C	308500 psi @Temperature 73.4 °F	
Flexural Modulus	5.30 GPa @Temperature 177 °C	769 ksi @Temperature 351 °F	T300 (6K); [90°]16; Wet Condition
	7.70 GPa @Temperature 232 °C	1120 ksi @Temperature 450 °F	T300 (6K); [90°]16
	9.00 GPa @Temperature 177 °C	1310 ksi @Temperature 351 °F	T300 (6K); [90°]16
	9.90 GPa @Temperature 23.0 °C	1440 ksi @Temperature 73.4 °F	
	127.6 GPa @Temperature 177 °C	18510 ksi @Temperature 351 °F	T300 (6K); [0°]16; Wet Condition
	137.9 GPa @Temperature 23.0 °C	20000 ksi @Temperature 73.4 °F	
	138.6 GPa @Temperature 177 °C	20100 ksi @Temperature 351 °F	T300 (6K); [0°]16
	142.7 GPa @Temperature 232 °C	20700 ksi @Temperature 450 °F	T300 (6K); [0°]16

Mechanical Properties	MetricMPa	Englishpsi	Comments
Compressive Yield Strength	@Temperature 177 °C	@Temperature 351 °F	T300 (6K); [0°]8; Wet Condition
	164 MPa	23800 psi	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	212 MPa	30700 psi	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	218 MPa	31600 psi	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	243 MPa	35200 psi	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	243 MPa	35200 psi	IM7 (12K); Open Hole Compression; [45°, 0°, -45°, 90°]4s; Wet Condition
	@Temperature 177 °C	@Temperature 351 °F	
	285 MPa	41300 psi	IM7 (12K); Open Hole Compression; [45°, 0°, -45°, 90°]4s
	@Temperature 232 °C	@Temperature 450 °F	
	336 MPa	48700 psi	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	968 MPa	140000 psi	IM7 (12K); [0°]8; Wet Condition
	@Temperature 177 °C	@Temperature 351 °F	
	1181 MPa	171300 psi	IM7 (12K); [0°]8
	@Temperature 232 °C	@Temperature 450 °F	
	1575 MPa	228400 psi	T300 (6K); [0°]8
	@Temperature 177 °C	@Temperature 351 °F	
	1671 MPa	242400 psi	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	2167 MPa	314300 psi	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	38.9 GPa	5640 ksi	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Compressive Modulus	42.6 GPa	6180 ksi	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	51.7 GPa	7500 ksi	

Mechanical Properties	Metric @ Temperature 23.0 °C	English @ Temperature 73.4 °F	Comments
	51.7 GPa	7500 ksi	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Shear Modulus	2.80 GPa	406 ksi	IM7 (12K); [+/- 45°]2s; Wet Condition
	@Temperature 177 °C	@Temperature 351 °F	
	3.90 GPa	566 ksi	IM7 (12K); [+/- 45°]2s
	@Temperature 232 °C	@Temperature 450 °F	
	4.30 GPa	624 ksi	T300 (6K); [+/- 45°]2s
	@Temperature 177 °C	@Temperature 351 °F	
	4.90 GPa	711 ksi	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	5.20 GPa	754 ksi	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Shear Strength	52.0 MPa	7540 psi	T300 (6K); Short Beam; [0°]16
	52.0 MPa	7540 psi	T300 (6K); Short Beam; [0°]16; Wet Condition

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China