

## Hexcel® HexPly® F652 Bismaleimide Resin, Carbon Tape Form

Category : Polymer , Thermoset , Polyimide, TS

**Material Notes:**

Material Description: T6T145; Fiber: T300-6K Information provided by HexCel

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Hexcel-HexPly-F652-Bismaleimide-Resin-Carbon-Tape-Form.php](http://www.lookpolymers.com/polymer_Hexcel-HexPly-F652-Bismaleimide-Resin-Carbon-Tape-Form.php)

Physical Properties	Metric	English	Comments
Density	1.50 - 1.53 g/cc	0.0542 - 0.0553 lb/in <sup>3</sup>	Laminate
Volatiles	<= 2.0 %	<= 2.0 %	Prepreg

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	143.6 MPa	20830 psi	Autoclave Cured; [+/- 45°]2s
	@Temperature 177 °C	@Temperature 351 °F	
	193.7 MPa	28090 psi	Autoclave Cured; [+/- 45°]2s
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Modulus	16.7 GPa	2420 ksi	Autoclave Cured; [+/- 45°]2s
	@Temperature 177 °C	@Temperature 351 °F	
	18.8 GPa	2730 ksi	Autoclave Cured; [+/- 45°]2s
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Flexural Yield Strength	12.0 MPa	1740 psi	Autoclave Cured; [90°]16; Wet condition
	@Temperature 232 °C	@Temperature 450 °F	
	23.0 MPa	3340 psi	Autoclave Cured; [90°]16; Wet condition
	@Temperature 177 °C	@Temperature 351 °F	
	28.0 MPa	4060 psi	Autoclave Cured; [90°]16
	@Temperature 316 °C	@Temperature 601 °F	
	60.0 MPa	8700 psi	Autoclave Cured; [90°]16
	@Temperature 232 °C	@Temperature 450 °F	
	69.6 MPa	10100 psi	Autoclave Cured; [90°]16
	@Temperature 177 °C	@Temperature 351 °F	
	105 MPa	15200 psi	Autoclave Cured; [90°]16
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Mechanical Properties	544 MPa Metric	78900 psi English	Comments
	@Temperature 316 °C	@Temperature 601 °F	
	692.9 MPa	100500 psi	Autoclave Cured; [0°]16; Wet condition
	@Temperature 232 °C	@Temperature 450 °F	
	1066 MPa	154600 psi	Autoclave Cured; [0°]16; Wet condition
	@Temperature 177 °C	@Temperature 351 °F	
	1236 MPa	179300 psi	Autoclave Cured; [0°]16
	@Temperature 232 °C	@Temperature 450 °F	
	1434 MPa	208000 psi	Autoclave Cured; [0°]16
	@Temperature 177 °C	@Temperature 351 °F	
	1705 MPa	247300 psi	Autoclave Cured; [0°]16
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Flexural Modulus	3.20 GPa	464 ksi	Autoclave Cured; [90°]16; Wet condition
	@Temperature 232 °C	@Temperature 450 °F	
	3.40 GPa	493 ksi	Autoclave Cured; [90°]16
	@Temperature 316 °C	@Temperature 601 °F	
	5.30 GPa	769 ksi	Autoclave Cured; [90°]16; Wet condition
	@Temperature 177 °C	@Temperature 351 °F	
	7.17 GPa	1040 ksi	Autoclave Cured; [90°]16
	@Temperature 232 °C	@Temperature 450 °F	
	7.93 GPa	1150 ksi	Autoclave Cured; [90°]16
	@Temperature 177 °C	@Temperature 351 °F	
	9.51 GPa	1380 ksi	Autoclave Cured; [90°]16
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	96.46 GPa	13990 ksi	Autoclave Cured; [0°]16; Wet condition
	@Temperature 232 °C	@Temperature 450 °F	
	100 GPa	14500 ksi	Autoclave Cured; [0°]16
	@Temperature 316 °C	@Temperature 601 °F	
	115.4 GPa	16740 ksi	Autoclave Cured; [0°]16; Wet condition
	@Temperature 177 °C	@Temperature 351 °F	
	118.7 GPa	17220 ksi	

Mechanical Properties	Metric @ Temperature 23.0 °C	English @ Temperature 73.4 °F	Autoclave Cured; [0°]16 Comments
	120.5 GPa @Temperature 177 °C	17480 ksi @Temperature 351 °F	Autoclave Cured; [0°]16
	129.8 GPa @Temperature 232 °C	18830 ksi @Temperature 450 °F	Autoclave Cured; [0°]16
Compressive Yield Strength	941.8 MPa @Temperature 232 °C	136600 psi @Temperature 450 °F	Autoclave Cured; [0°]4
	1136 MPa @Temperature 177 °C	164800 psi @Temperature 351 °F	Autoclave Cured; [0°]4
	1282 MPa @Temperature 232 °C	185900 psi @Temperature 450 °F	Autoclave Cured; [0°]4
	1376 MPa @Temperature 177 °C	199600 psi @Temperature 351 °F	Autoclave Cured; [0°]4
	1685 MPa @Temperature 23.0 °C	244400 psi @Temperature 73.4 °F	Autoclave Cured; [0°]4
Shear Modulus	5.40 GPa @Temperature 23.0 °C	783 ksi @Temperature 73.4 °F	Autoclave Cured; [+/- 45°]2s
	6.10 GPa @Temperature 177 °C	885 ksi @Temperature 351 °F	Autoclave Cured; [+/- 45°]2s
Shear Strength	34.0 MPa @Temperature 316 °C	4930 psi @Temperature 601 °F	Short Beam; Autoclave Cured; [0°]16
	37.0 MPa @Temperature 232 °C	5370 psi @Temperature 450 °F	Short Beam; Autoclave Cured; [0°]16; Wet condition
	57.0 MPa @Temperature 177 °C	8270 psi @Temperature 351 °F	Short Beam; Autoclave Cured; [0°]16; Wet condition
	68.9 MPa @Temperature 232 °C	9990 psi @Temperature 450 °F	Short Beam; Autoclave Cured; [0°]16
	71.7 MPa @Temperature 177 °C	10400 psi @Temperature 351 °F	Autoclave Cured; [+/- 45°]2s
	88.3 MPa @Temperature 177 °C	12800 psi @Temperature 351 °F	Short Beam; Autoclave Cured; [0°]16

Mechanical Properties	Metric Pa	English psi	Comments
	@Temperature 22.0 °C	@Temperature 71.6 °F	Autoclave Cured; [45/-45]2S
	135 MPa	19600 psi	Short Beam; Autoclave Cured; [0°]16
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Descriptive Properties	Value	Comments
Cured Thickness per Ply (cm)	0.0135-0.0155	Laminate
Dry Resin Content (%)	33-37	Prepreg
Fiber Volume (%)	55-59	Laminate

## Contact Songhan Plastic Technology Co.,Ltd.

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