

## Hexcel® F161 Epoxy Resin, 120 Kevlar Fabric

Category : Polymer , Thermoset , Epoxy , Epoxy Cure Resin

### Material Notes:

Hexcel designation: 120-38"-F161; Fiber: Kev. 49 195  
Information provided by HexCel

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Hexcel-F161-Epoxy-Resin-120-Kevlar-Fabric.php](http://www.lookpolymers.com/polymer_Hexcel-F161-Epoxy-Resin-120-Kevlar-Fabric.php)

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	190 MPa	27600 psi	Wet
	@Temperature 177 °C	@Temperature 351 °F	
	238 MPa	34500 psi	Dry
	@Temperature 177 °C	@Temperature 351 °F	
	259 MPa	37600 psi	Wet
	@Temperature 132 °C	@Temperature 270 °F	
	334 MPa	48400 psi	Dry
	@Temperature 132 °C	@Temperature 270 °F	
	393 MPa	57000 psi	Dry
	@Temperature -54.0 °C	@Temperature -65.2 °F	
399 MPa	57900 psi	Wet	
@Temperature 24.0 °C	@Temperature 75.2 °F		
Tensile Modulus	410 MPa	59500 psi	Dry
	@Temperature 24.0 °C	@Temperature 75.2 °F	
	17.9 GPa	2600 ksi	Wet
	@Temperature 177 °C	@Temperature 351 °F	
	18.6 GPa	2700 ksi	Wet
	@Temperature 132 °C	@Temperature 270 °F	
	19.0 GPa	2760 ksi	Dry
	@Temperature 177 °C	@Temperature 351 °F	
	21.9 GPa	3180 ksi	Dry
	@Temperature 132 °C	@Temperature 270 °F	
24.9 GPa	3610 ksi	Wet	
@Temperature 24.0 °C	@Temperature 75.2 °F		

Mechanical Properties	25.9 GPa Metric	3750 ksi English	Comments
	@Temperature 24.0 °C	@Temperature 75.2 °F	
	27.3 GPa	3960 ksi	Dry
	@Temperature -54.0 °C	@Temperature -65.2 °F	
Compressive Yield Strength	52.0 MPa	7540 psi	Wet
	@Temperature 177 °C	@Temperature 351 °F	
	70.0 MPa	10200 psi	Wet
	@Temperature 132 °C	@Temperature 270 °F	
	90.0 MPa	13100 psi	Dry
	@Temperature 177 °C	@Temperature 351 °F	
	117 MPa	17000 psi	Dry
	@Temperature 132 °C	@Temperature 270 °F	
	139 MPa	20200 psi	Wet
	@Temperature 24.0 °C	@Temperature 75.2 °F	
	199 MPa	28900 psi	Dry
	@Temperature 24.0 °C	@Temperature 75.2 °F	
	222 MPa	32200 psi	Dry
	@Temperature -54.0 °C	@Temperature -65.2 °F	
Compressive Modulus	14.0 GPa	2030 ksi	Wet
	@Temperature 177 °C	@Temperature 351 °F	
	15.7 GPa	2280 ksi	Wet
	@Temperature 132 °C	@Temperature 270 °F	
	16.9 GPa	2450 ksi	Dry
	@Temperature 177 °C	@Temperature 351 °F	
	18.4 GPa	2670 ksi	Dry
	@Temperature 132 °C	@Temperature 270 °F	
	21.0 GPa	3050 ksi	Wet
	@Temperature 24.0 °C	@Temperature 75.2 °F	
	24.1 GPa	3500 ksi	Dry
	@Temperature -54.0 °C	@Temperature -65.2 °F	
	26.8 GPa	3890 ksi	

Mechanical Properties	Metric @ Temperature 24.0 °C	English @ Temperature 75.2 °F	Dry Comments
Shear Strength	15.0 MPa	2180 psi	Short Beam
	@Temperature 132 °C	@Temperature 270 °F	
	16.0 MPa	2320 psi	Short Beam
	@Temperature 177 °C	@Temperature 351 °F	
	19.0 MPa	2760 psi	Short Beam
	@Temperature 177 °C	@Temperature 351 °F	
	26.0 MPa	3770 psi	Short Beam
	@Temperature 132 °C	@Temperature 270 °F	
	34.0 MPa	4930 psi	Short Beam
	@Temperature -54.0 °C	@Temperature -65.2 °F	
	34.0 MPa	4930 psi	Short Beam
	@Temperature 24.0 °C	@Temperature 75.2 °F	
	36.0 MPa	5220 psi	Short Beam
	@Temperature 24.0 °C	@Temperature 75.2 °F	

Descriptive Properties	Value	Comments
Cured Thickness per Ply (cm)	0.01	Laminate
Dry Resin Content (%)	52-58	Prepreg
Fiber Volume (%)	44	Laminate
Flow (%)	20-30	

## Contact Songhan Plastic Technology Co.,Ltd.

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