

Hexcel® F161 Epoxy Resin, 285 Kevlar Fabric

Category : Polymer , Thermoset , Epoxy , Epoxy Cure Resin

Material Notes:

Hexcel designation: 285-38"-F161; Fiber: Kev. 49 1140 Information provided by HexCel

Order this product through the following link:

http://www.lookpolymers.com/polymer_Hexcel-F161-Epoxy-Resin-285-Kevlar-Fabric.php

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	253 MPa	36700 psi	Wet
	@Temperature 177 °C	@Temperature 351 °F	
	259 MPa	37600 psi	Wet
	@Temperature 132 °C	@Temperature 270 °F	
	281 MPa	40800 psi	Dry
	@Temperature 177 °C	@Temperature 351 °F	
Tensile Modulus	349 MPa	50600 psi	Dry
	@Temperature 132 °C	@Temperature 270 °F	
	392 MPa	56900 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	428 MPa	62100 psi	Dry
	@Temperature 24.0 °C	@Temperature 75.2 °F	
	20.2 GPa	2930 ksi	Wet
	@Temperature 177 °C	@Temperature 351 °F	
	21.8 GPa	3160 ksi	Dry
	@Temperature 177 °C	@Temperature 351 °F	
Tensile Modulus	24.5 GPa	3550 ksi	Wet
	@Temperature 132 °C	@Temperature 270 °F	
	24.7 GPa	3580 ksi	Dry
	@Temperature 132 °C	@Temperature 270 °F	
	25.1 GPa	3640 ksi	Wet
	@Temperature 24.0 °C	@Temperature 75.2 °F	

Mechanical Properties	25.2 GPa Metric	3660 ksi English	Comments
	@Temperature -54.0 °C	@Temperature -65.2 °F	
	26.5 GPa	3840 ksi	Dry
	@Temperature 24.0 °C	@Temperature 75.2 °F	
Compressive Yield Strength	52.0 MPa	7540 psi	Wet
	@Temperature 177 °C	@Temperature 351 °F	
	71.0 MPa	10300 psi	Wet
	@Temperature 132 °C	@Temperature 270 °F	
	85.0 MPa	12300 psi	Dry
	@Temperature 177 °C	@Temperature 351 °F	
	104 MPa	15100 psi	Dry
	@Temperature 132 °C	@Temperature 270 °F	
	128 MPa	18600 psi	Wet
	@Temperature 24.0 °C	@Temperature 75.2 °F	
	199 MPa	28900 psi	Dry
	@Temperature -54.0 °C	@Temperature -65.2 °F	
	308 MPa	44700 psi	Dry
	@Temperature 24.0 °C	@Temperature 75.2 °F	
Compressive Modulus	12.1 GPa	1750 ksi	Wet
	@Temperature 177 °C	@Temperature 351 °F	
	15.2 GPa	2200 ksi	Wet
	@Temperature 132 °C	@Temperature 270 °F	
	15.6 GPa	2260 ksi	Dry
	@Temperature 177 °C	@Temperature 351 °F	
	17.2 GPa	2490 ksi	Dry
	@Temperature 132 °C	@Temperature 270 °F	
	19.7 GPa	2860 ksi	Wet
	@Temperature 24.0 °C	@Temperature 75.2 °F	
	24.8 GPa	3600 ksi	Dry
	@Temperature -54.0 °C	@Temperature -65.2 °F	
	28.1 GPa	4080 ksi	

Mechanical Properties	Metric @ Temperature 24.0 °C	English @ Temperature 75.2 °F	Dry Comments
Shear Strength	11.0 MPa	1600 psi	Short Beam
	@Temperature 177 °C	@Temperature 351 °F	
	14.0 MPa	2030 psi	Short Beam
	@Temperature 177 °C	@Temperature 351 °F	
	17.0 MPa	2470 psi	Short Beam
	@Temperature 132 °C	@Temperature 270 °F	
	23.0 MPa	3340 psi	Short Beam
	@Temperature 132 °C	@Temperature 270 °F	
	29.0 MPa	4210 psi	Short Beam
	@Temperature -54.0 °C	@Temperature -65.2 °F	
	30.0 MPa	4350 psi	Short Beam
	@Temperature 24.0 °C	@Temperature 75.2 °F	
	30.0 MPa	4350 psi	Short Beam
	@Temperature 24.0 °C	@Temperature 75.2 °F	

Descriptive Properties	Value	Comments
Cured Thickness per Ply (cm)	0.025	Laminate
Dry Resin Content (%)	47-53	Prepreg
Fiber Volume (%)	47.9	Laminate
Flow (%)	20-30	

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