

Zyvex Performance Materials Arovex™ 180 Carbon Nanotube Strengthened Prepreg

Category : Polymer , Thermoset , Carbon Fiber/Thermoset Composite

Material Notes:

Arovex® 180 Prepreg is a 180°F (82°C) curing carbon nanotube strengthened epoxy prepreg suitable for numerous composites applications. Arovex 180 resin contains an optimum level of carbon nanotubes for additional toughness and enhanced mechanical properties. The carbon nanotubes use molecular dispersion technology to ensure enhancements are evenly distributed throughout the resin. Features: Very high toughness High strength High stiffness Enhanced mechanical properties Excellent retention of tack and drape

Order this product through the following link:

http://www.lookpolymers.com/polymer_Zyvex-Performance-Materials-Arovex-180-Carbon-Nanotube-Strengthened-Prepreg.php

Physical Properties	Metric	English	Comments
Viscosity	0.060 cP	0.060 cP	Rheology, 2°C/min
	@Temperature 120 °C	@Temperature 248 °F	
	0.070 cP	0.070 cP	Rheology, 2°C/min
	@Temperature 80.0 °C	@Temperature 176 °F	
	0.75 cP	0.75 cP	Rheology, 2°C/min
	@Temperature 40.0 °C	@Temperature 104 °F	
	100 cP	100 cP	Rheology, 2°C/min
	@Temperature 140 °C	@Temperature 284 °F	

Mechanical Properties	Metric	English	Comments
Tensile Strength	1790 MPa	259000 psi	0°; ASTM D3039
Tensile Modulus	132 GPa	19200 ksi	0°; ASTM D3039
Flexural Strength	68.3 MPa	9900 psi	90°; ASTM D790
	1390 MPa	201000 psi	0°; ASTM D790
Flexural Modulus	9.10 GPa	1320 ksi	90°; ASTM D790
	113 GPa	16400 ksi	0°; ASTM D790
Compressive Strength	1210 MPa	175000 psi	0°; SACMA SRM 1R-94
Compressive Modulus	128 GPa	18500 ksi	0°; SACMA SRM 1R-94
Poissons Ratio	0.32	0.32	ASTM D3039
Shear Strength	79.3 MPa	11500 psi	Short Beam; ASTM D5528-07

Thermal Properties	Metric	English	Comments
Glass Transition Temp, Tg	120 °C	248 °F	ASTM D7028-07

Processing Properties	Metric	English	Comments
Cure Time	600 min	10.0 hour	
	@Temperature 82.2 °C	@Temperature 180 °F	
Shelf Life	12.0 Month	12.0 Month	
	@Temperature -17.8 °C	@Temperature 0.000 °F	

Descriptive Properties	Value	Comments
Glc Strain Release Energy	3.0 in-lb/in ²	ASTM D5528-07

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