

Renegade Materials Corporation RM-5001 Cyanate Ester Prepreg, 3K 8HS Fabric

Category : Polymer , Thermoset , Filled/Reinforced Thermoset

Material Notes:

RM-5001 cyanate ester is a very low outgassing, toughened, high performance prepreg. Straightforward 350°F Cure Designed for the unique requirements of satellite and missile structures Low shrinkage during cure Developed for consistent handling and superior performance Continuous service up to and including 350F with post cure Available in woven and unidirectional product forms using all fibers including carbon, quartz and S2 glass Nano-enhancement for tailored laminate properties and multi-functional performance Low moisture absorption Information provided by Renegade Materials Corporation.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Renegade-Materials-Corporation-RM-5001-Cyanate-Ester-Prepreg-3K-8HS-Fabric.php

Physical Properties	Metric	English	Comments
Density	1.19 g/cc	0.0430 lb/in ³	Resin
Moisture Absorption at Equilibrium	1.1 %	1.1 %	Post cured at 350°F
	1.2 %	1.2 %	Post cured at 450°F

Mechanical Properties	Metric	English	Comments
Elongation at Break	4.0 %	4.0 %	Resin
Flexural Strength	101 MPa	14600 psi	Resin, RT, Wet
	103 MPa	15000 psi	Resin, RT, Dry
	1069 MPa	155100 psi	Prepreg, Warp Direction, RT, Dry, Normalized to 60% fiber volume fraction; ASTM D7264
Flexural Modulus	3.17 GPa	460 ksi	Resin, RT, Dry; ASTM D6272
	3.17 GPa	460 ksi	Resin, RT, Wet
	74.5 GPa	10800 ksi	Prepreg, Warp Direction, RT, Dry; ASTM D7264
Compressive Strength	793 MPa	115000 psi	Prepreg, Warp Direction, RT, Dry; ASTM D6641
Compressive Modulus	65.5 GPa	9500 ksi	Prepreg, Warp Direction, RT, Dry; ASTM D6641
Shear Strength	55.8 MPa	8100 psi	In-Plane, RT, Dry; ASTM D3518
	71.7 MPa	10400 psi	Interlaminar, RT, Dry; ASTM D2344

Thermal Properties	Metric	English	Comments
Glass Transition Temp, Tg	166 °C	331 °F	Resin, Wet, Cured at 450°F
	227 °C	441 °F	Resin, Dry, Cured at 350°F

Electrical Properties	Metric	English	Comments
Dielectric Constant	2.66	2.66	
	@Frequency 2.00e+9 - 1.80e+10 Hz	@Frequency 2.00e+9 - 1.80e+10 Hz	
Dissipation Factor	0.0050	0.0050	

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