

Renegade Materials Corporation MVK-14 Polyimide FreeForm™ T650-35 8HS Carbon Fabric

Category : Polymer , Thermoset , Filled/Reinforced Thermoset

Material Notes:

MVK-14 polyimide prepregs are a more affordable and easier-to-process, non-carcinogenic alternative to PMR-15 and other older polyimide chemistries. MVK-14 offers a more durable alternative to high-temp BMI's, titanium and specialty metals. MVK-14 polyimide composites exhibit excellent mechanical and thermal properties in aerospace propulsion and airframe structure applications up to 600°F. MVK-14 is further supported by an FAA-conformed B-Basis Design-Allowable Database. MVK-14 Polyimide materials can be processed using autoclave or compression-molding. The product is available in fabric and unidirectional tape prepreg form, using carbon, quartz, ceramic and glass fibers. Information provided by Renegade Materials Corporation. Typical Properties for 14 mil CPT; autoclave cured at 600°F, with 625°F air post-cure.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Renegade-Materials-Corporation-MVK-14-Polyimide-FreeForm-T650-35-8HS-Carbon-Fabric.php

Physical Properties	Metric	English	Comments
Oxidative Stability	125 hour	125 hour	<2% wt loss
	@Temperature 316 °C, Pressure 1.03 MPa	@Temperature 600 °F, Pressure 150 psi	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	827 MPa	120000 psi	Dry; ASTM D3039
	@Temperature 21.1 °C	@Temperature 70.0 °F	
	841 MPa	122000 psi	
Tensile Modulus	@Temperature 288 °C	@Temperature 550 °F	Dry; ASTM D3039
	848 MPa	123000 psi	
	@Temperature 232 °C	@Temperature 450 °F	
Compressive Strength	60.0 GPa	8700 ksi	Dry; ASTM D3039
	@Temperature 288 °C	@Temperature 550 °F	
	61.4 GPa	8900 ksi	
Compressive Strength	@Temperature 21.1 °C	@Temperature 70.0 °F	Dry; ASTM D3039
	64.1 GPa	9300 ksi	
	@Temperature 232 °C	@Temperature 450 °F	
Compressive Strength	262 MPa	38000 psi	Wet; ASTM D6641
	@Temperature 288 °C	@Temperature 550 °F	
	345 MPa	50000 psi	

Mechanical Properties	Metric @ Temperature 232 °C	English @ Temperature 450 °F	Wet; ASTM D6641 Comments
	379 MPa @Temperature 288 °C	55000 psi @Temperature 550 °F	Dry; ASTM D6641
	483 MPa @Temperature 232 °C	70000 psi @Temperature 450 °F	Dry; ASTM D6641
	607 MPa @Temperature 21.1 °C	88000 psi @Temperature 70.0 °F	Wet; ASTM D6641
	731 MPa @Temperature 21.1 °C	106000 psi @Temperature 70.0 °F	Dry; ASTM D6641
Compressive Modulus	55.8 GPa @Temperature 288 °C	8100 ksi @Temperature 550 °F	Wet; ASTM D6641
	59.3 GPa @Temperature 232 °C	8600 ksi @Temperature 450 °F	Wet; ASTM D6641
	60.0 GPa @Temperature 288 °C	8700 ksi @Temperature 550 °F	Dry; ASTM D6641
	61.4 GPa @Temperature 21.1 °C	8900 ksi @Temperature 70.0 °F	Dry; ASTM D6641
	63.4 GPa @Temperature 232 °C	9200 ksi @Temperature 450 °F	Dry; ASTM D6641
	64.1 GPa @Temperature 21.1 °C	9300 ksi @Temperature 70.0 °F	Wet; ASTM D6641
Shear Modulus	2.07 GPa @Temperature 288 °C	300 ksi @Temperature 550 °F	In-Plane, Dry; ASTM D790
	2.76 GPa @Temperature 232 °C	400 ksi @Temperature 450 °F	In-Plane, Dry; ASTM D790
	4.83 GPa @Temperature 21.1 °C	700 ksi @Temperature 70.0 °F	In-Plane, Dry; ASTM D790
Shear Strength	55.2 MPa @Temperature 232 °C	8000 psi @Temperature 450 °F	In-Plane, Dry; ASTM D790
	62.1 MPa @Temperature 288 °C	9000 psi @Temperature 550 °F	In-Plane, Dry; ASTM D790

Mechanical Properties	Metric	English	Comments
	82.7 MPa	12000 psi	In-Plane, Dry; ASTM D790
	@Temperature 21.1 °C	@Temperature 70.0 °F	

Thermal Properties	Metric	English	Comments
Glass Transition Temp, Tg	274 °C	525 °F	Wet, Storage Modulus
	318 °C	605 °F	Dry, Storage Modulus

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China