

## Renegade Materials Corporation MVK-14 Polyimide FreeForm™ IM7 12K Carbon Unitape

Category : Polymer , Thermoset , Carbon Fiber/Thermoset Composite , 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: 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-IM7-12K-Carbon-Unitape.php](http://www.lookpolymers.com/polymer_Renegade-Materials-Corporation-MVK-14-Polyimide-FreeForm-IM7-12K-Carbon-Unitape.php)

Physical Properties	Metric	English	Comments
Volatiles	10.5 - 13.5 %	10.5 - 13.5 %	
Oxidative Stability	50 hour @Temperature 316 °C, Pressure 0.414 MPa	50 hour @Temperature 600 °F, Pressure 60.0 psi	<2% wt loss
Thickness	140 microns	5.50 mil	Typical, Cured Ply

Mechanical Properties	Metric	English	Comments
Compressive Strength	986 MPa @Temperature 21.1 °C	143000 psi @Temperature 70.0 °F	Test at RT after Oxidative Stability Test (600°F, 150 psia, 121 hrs)
	1030 MPa @Temperature 21.1 °C	149000 psi @Temperature 70.0 °F	

Thermal Properties	Metric	English	Comments
Glass Transition Temp, Tg	254 °C	490 °F	Wet, Storage Modulus
	339 °C	643 °F	Dry, Storage Modulus

Descriptive Properties	Value	Comments
Areal Fiber Weight	140-150 gsm	Typical
Prepreg Resin Content Range	34-38%	Typical
Void Content	<3%	Typical

## **Contact Songhan Plastic Technology Co.,Ltd.**

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