

Renegade Materials Corporation RM-3002 Bismaleimide (BMI) Resin T650-35-6K-UC309-5HS Carbon Fabric

Category : Polymer , Thermoset , Filled/Reinforced Thermoset

Material Notes:

Developed using state-of-the-art formulating technologies, RM-3002 BMI prepreg products deliver superior hot/wet performance in airframe, missile and propulsion applications at service temperatures up to 400°F. RM-3002 "next-generation" BMI delivers improved damage tolerance at higher temperatures vs. industry-standard BMI's. Renegade precision-quality prepregs exhibit excellent handling characteristics and are available in woven and unidirectional form on various fibers including carbon, quartz and S2 glass. A wide variety of nano-materials can be incorporated into this resin system for tailored laminate properties and multi-functional performance. Renegade offers paste (RM-3006 and RM-3007) and film (RM-3011) adhesives compatible with RM-3002. Renegade also offers similar resin systems for RTM (RM-3000) or VARTM (RM-3010) processing. Information provided by Renegade Materials Corporation. Typical properties. Tensile and flexural data has been normalized to 60% fiber volume.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Renegade-Materials-Corporation-RM-3002-Bismaleimide-BMI-Resin-T650-35-6K-UC309-5HS-Carbon-Fabric.php

Physical Properties	Metric	English	Comments
Density	1.26 g/cc	0.0456 lb/in ³	Resin

Mechanical Properties	Metric	English	Comments
Tensile Strength	889 MPa	129000 psi	Dry, RT, 0° Direction; ASTM D3039
	1010 MPa	146000 psi	Dry, RT, 90° Direction; ASTM D3039
Elongation at Break	3.6 %	3.6 %	Resin
Tensile Modulus	75.2 GPa	10900 ksi	Dry, RT, 0° Direction; ASTM D3039
	75.2 GPa	10900 ksi	Dry, RT, 90° Direction; ASTM D3039
Flexural Strength	145 MPa	21000 psi	Resin
	951 MPa @Temperature 204 °C	138000 psi @Temperature 400 °F	Dry, 90° Direction; ASTM D790
	1030 MPa @Temperature 177 °C	150000 psi @Temperature 350 °F	Dry, 90° Direction; ASTM D790
	1080 MPa @Temperature 21.1 °C	157000 psi @Temperature 70.0 °F	Dry, 0° Direction; ASTM D790
	1120 MPa @Temperature 21.1 °C	163000 psi @Temperature 70.0 °F	Dry, 90° Direction; ASTM D790

Elemental Modulus Mechanical Properties	4.27 GPa Metric	620 ksi English	Resin Comments
	61.4 GPa @Temperature 21.1 °C	8900 ksi @Temperature 70.0 °F	Dry, 90° Direction; ASTM D790
	61.4 GPa @Temperature 177 °C	8900 ksi @Temperature 350 °F	Dry, 90° Direction; ASTM D790
	63.4 GPa @Temperature 204 °C	9200 ksi @Temperature 400 °F	Dry, 90° Direction; ASTM D790
	71.0 GPa @Temperature 21.1 °C	10300 ksi @Temperature 70.0 °F	Dry, 0° Direction; ASTM D790
Compressive Strength	592 MPa @Temperature 204 °C	85800 psi @Temperature 400 °F	Dry, 90° Direction; ASTM D695
	781.9 MPa @Temperature 21.1 °C	113400 psi @Temperature 70.0 °F	Dry, 90° Direction; ASTM D695
	786 MPa @Temperature 21.1 °C	114000 psi @Temperature 70.0 °F	Dry, 0° Direction; ASTM D695
Compressive Modulus	64.1 GPa @Temperature 21.1 °C	9300 ksi @Temperature 70.0 °F	Dry, 90° Direction; ASTM D695
	68.3 GPa @Temperature 21.1 °C	9900 ksi @Temperature 70.0 °F	Dry, 0° Direction; ASTM D695
	70.3 GPa @Temperature 204 °C	10200 ksi @Temperature 400 °F	Dry, 90° Direction; ASTM D695
Shear Strength	76.5 MPa	11100 psi	Short Beam, Dry, RT, 90° Direction; ASTM D2344
	80.7 MPa	11700 psi	Short Beam, Dry, RT, 0° Direction; ASTM D2344

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