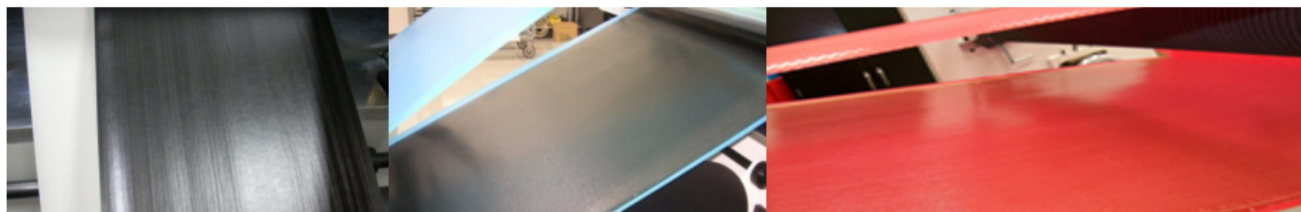


<b>Product designation</b>	<b>RM-1100 Polyimide Prepreg System</b>
<b>Brand name</b>	<b>Renegade™</b>
<b>Product key</b>	<b>230013 X01</b>
<b>Resin type</b>	<b>Polyimide</b>
<b>Origin</b>	<b>USA</b>

This product has been developed for high temperature applications in commercial and military aircraft and propulsion structures. RM-1100 exhibits unparalleled hot-wet properties and thermal oxidative stability in harsh environments. High-temperature polyimide composites made with RM-1100 are ideal for continuous service in up to 343 °C (650 °F) with excursion to 371 °C (700 °F). The product can be cured using autoclave or compression-moulding processes, and are available in fabric and unidirectional tape prepreg forms, on carbon, quartz, ceramic and glass fibers.

RM-1100 is a Safe, Non-Carcinogenic Polyimide – Manufactured in a Green Process.

RM-1100 is Non-ITAR and exportable outside of the US with an export license.



**Typical thermo-mechanical properties**

<b>Test</b>	<b>Value</b>	
Glass Transition Temperature (Dry TG) by DMA with Post-cure	385 – 399 °C	725 – 750 °F
Glass Transition Temperature (Wet TG) by DMA with Post-cure	288 – 299 °C	550 – 570 °F
Thermal Oxidative Stability (TOS)	< 1 % weight loss at 316 °C (600 °F) 120 hours in 150 psi air	

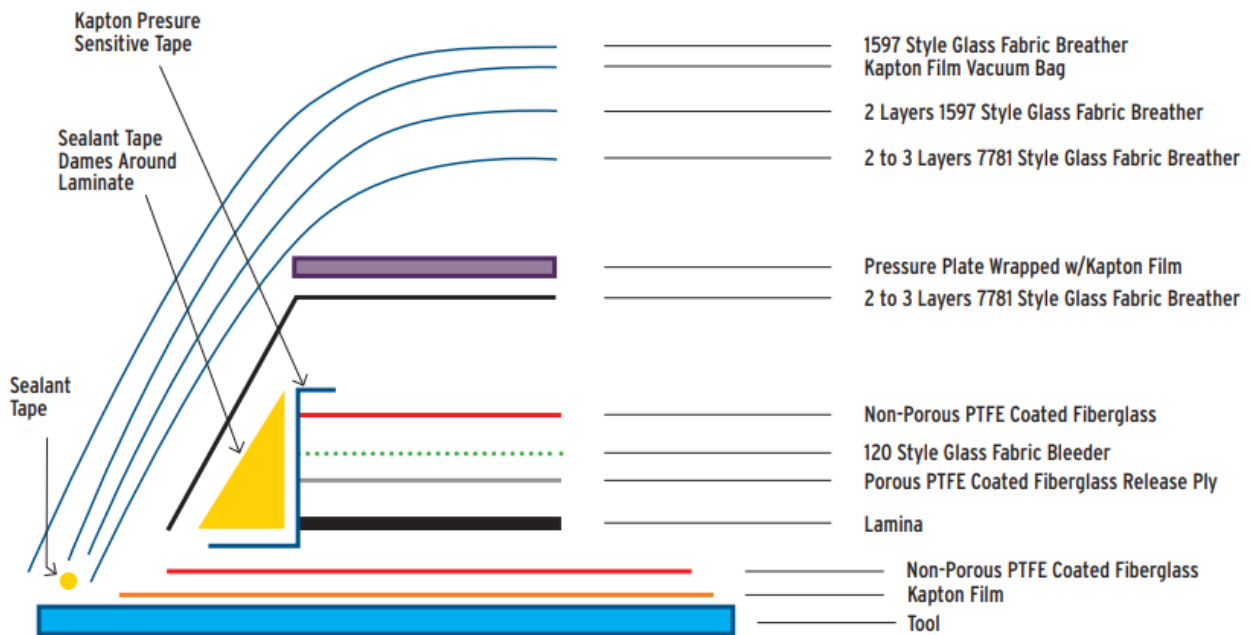
**RM-1100-HTS40-3K-DEZ-8HS-60 Carbon Fabric Prepreg**
**Typical mechanical properties**

1. 370 g/m<sup>2</sup> Tenax™ HTS40 Fiber
2. 0.35 mm (13.7 mil) cured play thickness at 60 % fiber volume

Test	Test method	Condition	Test temperature	Value	
Tensile strength	ASTM D 3039		RT	931 MPa	135 Ksi
			288 °C (550 °F)	835 MPa	121 Ksi
Tensile modulus	ASTM D 3039		RT	69 GPa	10 Msi
			288 °C (550 °F)	72 GPa	10.4 Msi
Compression strength	ASTM D 695	500 h at 290 °C (550 °F)	RT	707 MPa	103 Ksi
			288 °C (550 °F)	458 MPa	66 Ksi
			288 °C (550 °F)	437 MPa	63 Ksi
			1000 Cycles RT-288 °C (550 °F)	382 MPa	55 Ksi
Compression modulus	ASTM D 695	500 h at 290 °C (550 °F)	RT	64 GPa	9.3 Msi
			288 °C (550 °F)	77 GPa	11.2 Msi
			288 °C (550 °F)	66 GPa	9.6 Msi
			1000 Cycles RT-288 °C (550 °F)	67 GPa	9.7 Msi
In Plane Shear strength	ASTM D 3518/M	500 h at 290 °C (550 °F)	RT	110 MPa	16 Ksi
			288 °C (550 °F)	83 MPa	12 Ksi
			288 °C (550 °F)	73 MPa	10.5 Ksi
In Plane Shear modulus	ASTM D 3518/M	500 h at 290 °C (550 °F)	RT	4.64 GPa	0.67 Msi
			288 °C (550 °F)	3.54 GPa	0.51 Msi
			288 °C (550 °F)	3.63 GPa	0.53 Msi

**Sellers makes no warranty regarding accuracy of this information. Buyers should make their own evaluation to determine suitability of any product for their own intended puposes.**

**RM-1100 Mechanical Test Panel Autoclave Cure Cycle**



- **STEP 1:** Apply Partial Vacuum, 170 – 230 mbar Hg (5 – 7 inches Hg), an heat up to 177 °C ± 5 °C (350 °F ± 10 °F) at 1.5 °C/min (3 °F/min)
- **STEP 2:** Apply Fully Vacuum at 177 °C ± 5 °C (350 °F ± 10 °F)
- **STEP 3:** Heat to 302 °C ± 5 °C (575 °F ± 10 °F) at 1.5 °C/min (3 °F/min)
- **STEP 4:** Hold for 120 min. After 60 min at 300 °C (575 °F) apply 13.8 bar (200 psi)
- **STEP 5:** Heat to 370 °C ± 5 °C (700 °F ± 10 °F) at 0.6 °C/min (1 °F/min) and hold for 180 min.
- **STEP 6:** Cool at 5 °C/min (10 °F/min) maximum and vent pressure when T < 65.5 °C (150 °F)

**RM-1100 Optional Post-Cure Cycle – for highest TG only**

- Does not change mechanicals.
- Place dry part in air-circulation oven and ramp at 0.6 °C/min (1 °F/min) to 316 °C (600 °F) and hold for 48 hours. Cool to room temperature at 5.6 °C/min (10 °F/min).

**Storage conditions and shelf life**

Storage life is dependent upon storage temperature. Keep poly bag sealed when not in use. To limit moisture pick-up, allow the prepreg roll to reach room temperature prior to opening the sealed poly bag.

Storage conditions:

- At or below -12 °C (10 °F) in a sealed poly bag 12 months from date of manufacturing
- Room temperature (21 °C), storage in a sealed poly bag: 20 days

**Delivery**

The prepreg can be delivered by sea or air freight. Air freight is delivered with dry ice.

**General Information**

- All data shown are typical values representative of the material and cannot be guaranteed. Properties may vary depending on samples preparation and test methods.
- For each shipment an inspection certificate is generated and supplied.
- A detailed customer specification is arranged on request.
- The export or transfer of resin can be subject to authorization, depending on end-use and final destination.