

TR1106 TCR™ RESIN

TECHNICAL DATA SHEET



TR1106 Resin Summary

- Unique, **thermally conductive**, solvent-free, epoxy resin
- **3-month shelf life** without refrigeration
- Resin content, flow during cure, and tack levels tailored to suit your process needs
- **Available reinforcement materials:** carbon, glass, aramid, and other fibers
- **Available fiber forms:** tow/roving, unitape, and fabric
- **Typical use:** thermally conductive commercial products where high temperatures are required

Neat Resin Properties

Properties	Values	Test Method
Density	1.23 g/cc	ASTM D792
Tensile Strength	49.5 MPa / 7.2 Ksi	ASTM D638
Tensile Modulus	2.62 GPa / 380 Ksi	ASTM D638
Elongation at Break	1.9%	ASTM D638
Tg – from E" DMA curve	190°C / 375°F	ASTM E1640
Tg after 24-Hr Water-Boil	140°C / 285°F	ASTM E1640
Water Absorption	3.6%	

Composite Properties**

Properties	Metric	English	Test Method
0° Tensile Strength	1,150 MPa	225 Ksi	ASTM D3039
0° Tensile Modulus	134 GPa	19.4 Msi	ASTM D3039
0° Tensile Strain	1.0%		ASTM D3039
90° Tensile Strength	19 MPa	2.9 Ksi	ASTM D3039
Short Beam Strength	45 MPa	6.5 Ksi	ASTM D2344
Flexural Strength	1,860 MPa	270 Ksi	ASTM D0790

**T700 type fiber. Normalized to 60% fiber volume. Cured at 177°C for 4 hours.

Presented values are expected ranges based on actual test data. Since values are dependent on specimen preparation and test method, TCR Composites cannot guarantee that these properties will be obtained in all cases. Data should be used only as an indication, since part or component properties are highly dependent on user process and design. It is recommended that end users determine the suitability of this material for each application through their own testing and evaluation. TCR™ is a trademark of TCR Composites, Inc.

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Cure Profile

Options	Ramp Up	Hold Temperature	Hold Time (Hours)	Ramp Down
1	≤ 1.5°C/min (3°F/min)	177°C / 350°F	4	≤ 2.5 °C/min (5°F/min) to 66°C (150°F) or less

Storage Requirements

The preimpregnated materials manufactured from this resin shall remain sealed and stored in the original package. The material is to be stored indoors, out of the weather.

Maximum Storage Temperature	Approximate Shelf Life (Months)	Additional Life at Ambient Temperatures After Refrigeration (Months)
24°C / 75°F	3	-
32°C / 90°F	1.5	-
-18°C / 0°F	18	2 (at Temps ≤ 24°C / 75°F)

For additional technical information regarding TCR Composites' products, please visit our website for a list of technical service contacts.

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