UF3339 TCR™ Resin

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TCR Composites offers a unique thermosetting resin system featuring a **one-year shelf life without refrigeration**. This resin is currently used for tow/roving, unitape, fabric, and braid. It is available for carbon, glass, aramid, and other fibers. Resin content, resin flow during cure, and tack levels can be tailored to suit your process requirements.

Neat Resin Properties and Applications*

Density (g/cc)	Tg (°F/°C) (from E" DMA curve)	Tensile Modulus (ksi/GPa)	Tensile Strength (ksi/MPa)	Elongation at Break (%)	Tg after 24-Hr Water-Boil (°F/°C)	Water Absorption (%)	Available Fiber Form
1.20	226 / 108	400 / 2.8	10.0 / 69	4.1	154 / 68	4.3	Tow/Roving, Unitape, Fabric, Braid

* The data shown was derived from the recommended 270°F cure profile.

Typical Use

Commercial products (pressure vessels, cryogenics, sporting goods, etc.), where high-temperature capabilities are not required.

Cure

The recommended cure cycle for UF3339 resin is:

1. ≤ 5°F-per-minute ramp up to 270°F (132°C), hold for 4 hours, < 5°F-per-minute ramp down to at least 150°F (66°C) before removing from oven.

The following cure cycles should also produce similar properties:

2. ≤ 5°F-per-minute ramp up to 310°F (154°C), hold for 1 hour, < 5°F-per-minute ramp down to at least 150°F (66°C) before removing from oven.

3. ≤ 5°F-per-minute ramp up to 290°F (143°C), hold for 2 hours, < 5°F-per-minute ramp down to at least 150°F (66°C) before removing from oven.

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.

The shelf life is 12 months from the date of manufacture when the maximum storage temperature shall not exceed 75°F (24°C).

The shelf life is 6 months from the date of manufacture when the maximum storage temperature shall not exceed 90°F (32°C).

The shelf life is 30 months from the date of manufacture when the maximum storage temperature shall not exceed 0°F (-18°C), with an additional 6 months at <75 °F (24°C)

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