

# TCR™ Prepregs Resin Selector Guide

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TCR Composites offers a unique thermosetting epoxy matrix resin system featuring either a **3-month,‡ 6-month,† or 1-year\* shelf life without refrigeration.** These resins are currently used for tow/roving, unitape, fabric, and braid, and are available for carbon, glass, Aramid, and other fibers. Ask us about custom resin formulations for unique prepreg applications.

## Neat Resin Properties and Applications

Formulation	Density (g/cc)	Tg (from G'' DMA curve) (°F/°C)	Tensile Modulus (ksi/GPa)	Tensile Strength (ksi/MPa)	Elongation at Break (%)	Tg After 24-hr Water-Boil (°F/°C)	Water Absorption (%)	Typical Use
UF3323*	1.212	240/116	410/2.83	9.5/65.5	5.0	199/93	2.5	Rocket motor cases, large structures
UF3325*	1.208	255/124	410/2.83	10.0/69.0	5.5	169/76	3.9	Sporting goods, rocket motor cases, high pressure cylinders, commercial applications
UF3330*	Values similar to UF3325							Braidable
UF3339*	1.202	220/104	390/2.69	10.0/69.0	6.3	169/76	3.9	Cryogenic, commercial applications
UF3350†	1.254	376/191	550/3.79	6.0/41.37	1.2	267/131	2.9	High-temp, Unitape/Fabric
UF3352*	1.229	270/132	440/3.03	10.7/73.77	4.0	169/76	3.9	Sporting goods, rocket motor cases, commercial, Unitape/Fabric
UF3357†	1.240	360/182	Values similar to UF3350					High-temp applications
UF3359	Values similar to UF3360							Braidable
UF3360†	1.202	322/161	460/3.17	10.0/69.0	3.5	237/114	3.3	Moderately high-temp commercial applications
UF3362†	1.211	322/161	Values similar to UF3360					Moderately high-temp Unitape/Fabric
UF3369‡	1.18	242/117	417/2.83	10.9/69.0	5.3	152/67	5.1	High-pressure cylinders, low-temp cure recreational and commercial applications
UF3374*	Values similar to UF3339							Cryogenic/Commercial, Unitape/Fabric
UF3376‡	1.18	275/135	534/3.68	12.0/82.7	3.9	172/78	4.4	Low-temp cure recreational and large structure applications
UF3380*	Values similar to UF3323							Rocket motor cases, large structures, Unitape/Fabric

\*One-year shelf life at room temp.

†Six-month shelf life at room temp.

‡Three-month shelf life at room temp.

## Typical Cure Cycles

Formulation	Option 1(°F/°C)	Option 2(°F/°C)	Option 3(°F/°C)
UF3323	24 hr at 280/138	12 hr at 300/149	---
UF3325	1 hr at 310/154	2 hr at 290/143	4 hr 15 at 270/132
UF3330	1 hr at 310/154	2 hr at 290/143	4 hr at 270/132
UF3339	1 hr at 310/154	2 hr at 290/143	4 hr at 270/132
UF3350	2 hr at 350/177	4 hr at 330/166	8 hr at 310/154
UF3352	1 hr at 310/154	2 hr at 290/143	4 hr at 270/132
UF3357	2 hr at 350/177	4 hr at 330/166	8 hr at 310/154
UF3359	1 hr at 350/177	2 hr at 330/166	4 hr at 310/154
UF3360	1 hr at 350/177	2 hr at 330/166	4 hr at 310/154
UF3362	1 hr at 350/177	2 hr at 330/166	4 hr at 310/154
UF3369	1.5 hr at 250/121	4 hr at 230/110	24 hr at 210/100
UF3374	1 hr at 310/154	2 hr at 290/143	4 hr at 270/132
UF3376	1.5 hr at 250/121	4 hr at 230/110	24 hr at 210/100
UF3380	24 hr at 280/138	12 hr at 300/149	---

The values here represent expected ranges based on actual test data. Since the values are specimen-preparation- and test-method-dependent, TCR Composites cannot guarantee that these properties will be obtained in all cases. The data should be used as an indication only, since part or component properties are highly equipment- and process-dependent. 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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