

E-770 (FCE-770) Epoxy Prepregs

Park's E-770 is a 350°F (176°C) curing, flame resistant modified epoxy system for 200°F (93°C) service and meets the requirements of Mil R-9300-B, Type I. It has excellent green strength developing properties quickly and doesn't need a post cure to maintain its 200°F (93°C) properties.

Key Features & Benefits

- Low tack / Single poly required
- Store at room temperature (72°F) for up to 3 weeks
- Excellent sandwich adhesive properties
- Short cycle time
- Meets FAR 25.853 burn requirements

Product Forms

- Available on fiberglass such as 7781 or other types of fabrics
- Solution coated fabrics up to 60 inches wide

Applications / Qualifications

- Specialty Applications
- Recreational Applications

For Information about Park's materials:

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Physical Properties

Prepreg Resin Content (%)	42 – 46
Resin Flow (325°F, 100psi) (%)	25 – 32
Volatiles (325°F, 5 min) (%)	2.5 max
Gel Time (325°F) (sec)	50 – 100

**Note: All values are nominal, actual values will vary*

Prepreg Storage Life

Out Life: 30 days @ 75°F
Shelf Life: 6 months @ 0°F

Note: The following guidelines are provided to assist Park material users with general recommendations for successful processing. The recommendations are for general review purposes only and process adjustments may be required to achieve optimum results in your specific manufacturing environment.

Autoclave Cure Cycle

- Apply 24”Hg vacuum (minimum) for 1 hour before beginning heat cycle
- Increase pressure to 50psi, tent vacuum when pressure is at 20psi
- Raise product temperature from RT to 350-360°F at 2 – 5°F/min
- Hold product at cure temperature for 90 – 120 minutes
- Cool product to 150°F at no more than 8°F/min

All test data provided are typical values and not intended to be specification values. For review of critical specification tolerances, please contact a company representative directly.

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Mechanical Properties

Reinforcement	7781			
	75°F (23°C) Dry	75°F (23°C) Wet*	200°F (93°C) Dry	200°F (93°C) Wet**
Cure Cycle				
Tensile Strength, ksi (MPa) ASTM-D-638	72 (496)	61.8 (426)	60 (414)	51.8 (357)
Tensile Modulus, Msi (GPa) ASTM-D-638	3.7 (25.5)	3.5 (24.1)	3.4 (23.5)	3.4 (23.5)
Compressive Strength, ksi (MPa) ASTM-D-695	75 (517)	63 (435)	53 (366)	48 (331)
Compressive Modulus, Msi (GPa) ASTM-D-695	3.7 (25.5)	3.5 (24.1)	3.5 (24.1)	3.5 (24.1)
Flexural Strength, ksi (MPa) ASTM-D-790	110 (759)	94 (647)	84 (580)	73 (504)
Flexural Modulus, Msi (GPa) ASTM-D-790	3.7 (25.5)	3.5 (24.1)	3.4 (23.5)	3.4 (23.5)
Short Beam Shear, ksi (MPa) ASTM-D-2344	9.8 (67.6)	-	-	-
Laminate Resin %	34.0	-	-	-
Glass Transition °F (°C) (TMA 10°C/min)	316 (158)	-	-	-
Thermal Coefficient (CTE) mm/mm/°C	62.0x10 ⁻⁶	-	-	-

*Specimen were soaked for 2 hours in boiling water.

**Specimen were soaked for 2 hours in boiling water, removed and soaked at 200°F (93°C) for 30 minutes prior to testing.

All test data provided are typical values and not intended to be specification values. For review of critical specification tolerances, please contact a Park representative directly. Park reserves the right to change these typical values as a natural process of refining our testing equipment and techniques.