

## 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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### E-766B Epoxy Prepregs

#### Prepreg and Laminate Physical Properties

Reinforcement	7781 E-Glass	7581 E-Glass	120 E-Glass	285 Aramid
Fabric Area Weight (gsm)	300	300	107	169
Prepreg Resin Content (%)	37 – 43	37 – 43	50 – 60	50 – 55
Resin Flow (135°C, 103 kPa) (%)	10 – 25	15 – 21	20 – 30	20 – 35
Volatiles (163°C) (% max)	1	1	1	1
Tg (dry, by DMA)	93°C / 200°F			

#### Sandwich Properties (7781 reinforcement)

	Mold Surface	Bag Surface
Climbing Drum Peel (mm-N/mm) <i>ASTM-D-1781, room temp</i>	74	66

### Processing Guidelines

#### Prepreg Storage Life

Tack Life: 14 days @ 24°C  
Out Life: 30 days @ 24°C  
Shelf Life: 12 months @ -18°C

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 610 Torr vacuum (minimum) for 1 hour before beginning heat cycle
- Apply 310 – 414 kPa autoclave pressure
- Vent vacuum when autoclave pressure reaches 103 – 138 kPa
- Raise product temperature from RT to 132°C at 1 – 3°C/min
- Hold product at 132±5°C for 90-120 minutes
- Cool product to 66°C at no more than 5°C/min before releasing autoclave pressure

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.

### E-766B Epoxy Prepregs

#### Laminate Mechanical Properties

Reinforcement	7781 E-Glass	7581 E-glass	120 E-glass	285 Aramid
<b>Tensile Strength (MPa)</b> 24°C Dry ASTM-D-638	483	448*	479	483*
<b>Tensile Modulus (GPa)</b> 24°C Dry ASTM-D-638	26.2	21.4*	17.9	31.0*
<b>Compressive Strength (MPa)</b> 24°C Dry ASTM-D-695	579	448	400	172**
<b>Compressive Modulus (GPa)</b> 24°C Dry ASTM-D-695	24.1	22.1	18.6	31.0**
<b>Flexural Strength (MPa)</b> 24°C Dry ASTM-D-790	758	--	552	531
<b>Flexural Modulus (GPa)</b> 24°C Dry ASTM-D-790	29.6	--	17.9	26.2
<b>Short-Beam Shear Strength (MPa)</b> 24°C Dry ASTM-D-2344	59.3	53.8	56.5	37.9

\* Tested to ASTM-D-3039

\*\* Tested to SACMA 1-94

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