# Aerospace Composite Materials

# **Product Overview**

# E-766B Epoxy Prepregs

Park's E-766B is a low tack, self adhesive epoxy resin system designed for honeycomb applications. E-766B displays excellent peel properties.

### **Key Features & Benefits**

- Self adhesive resin system for sandwich panel applications
- Flame retardant and self-extinguishing
- Low tack and long out-times for ease of processing

#### **Product Forms**

- Available on a wide variety of reinforcements including fiberglass, graphite and Aramid
- Solution coated fabrics up to 60 inches wide
- Compatible with Autoclave, Vacuum/Oven Cure, or Press Molding processes

# **Prepreg Storage Life**

Tack Life: 14 days @ 75°F
Out Life: 30 days @ 75°F
Shelf Life: 12 months @ 0°F

## **Autoclave Cure Cycle**

- Apply 24"Hg vacuum (minimum) for 1 hour before beginning heat cycle
- Apply 40 50 psi autoclave pressure
- Vent vacuum when autoclave pressure reaches 15 20 psi
- Raise product temperature from RT to 270°F at 2 5°F/min
- Hold product at 270±10°F for 90-120 minutes
- Cool product to 150°F at no more than 8°F/min before releasing autoclave pressure

 $\underline{\text{Note}}$ : These 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.

### **Applications / Qualifications**

- Sandwich panels / structures
- Aircraft Interiors
- Mass Transit Interiors

#### For Information about Park's materials:

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# Technical Datasheet

### **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 (275°F, 15 psi) (%)	10 – 25	15 – 21	20 – 30	20 – 35
Volatiles (325°F) (% max)	1	1	1	1
Tg (dry, by DMA)	93°C / 200°F			

### **Sandwich Properties (7781 reinforcement)**

	Mold Surface	Bag Surface
Climbing Drum Peel (in-lb/3 in) ASTM-D-1781, room temp	50	45

## **Laminate Mechanical Properties**

Reinforcement	7781 E-Glass	7581 E-glass	120 E-glass	285 Aramid
Tensile Strength (ksi) 75°F Dry ASTM-D-638	70	65*	55	70*
Tensile Modulus (Msi) 75°F Dry ASTM-D-638	3.8	3.1*	2.6	4.5*
Compressive Strength (ksi) 75°F Dry ASTM-D-695	84	65	58	25**
Compressive Modulus (Msi) 75°F Dry ASTM-D-695	3.5	3.2	2.7	4.5**
Flexural Strength (ksi) 75°F Dry ASTM-D-790	110		80	77
Flexural Modulus (Msi) 75°F Dry ASTM-D-790	4.3		2.6	3.8
Short-Beam Shear Stength (ksi) 75°F Dry ASTM-D-2344	8.6	7.8	8.2	5.5

<sup>\*</sup> Tested to ASTM-D-3039

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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<sup>\*\*</sup> Tested to SACMA 1-94