

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 152 cm wide
- Compatible with Autoclave, Vacuum/Oven Cure, or Press Molding processes

Applications / Qualifications

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

For Information about Park's materials:

Newton, KS +1.316.283.6500

info@parkaerospace.com

www.parkaerospace.com

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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.

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Laminate Mechanical Properties

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