

E-720 Epoxy Prepregs

Park's E-720 is a modified epoxy resin system designed to retain excellent mechanical properties after extended exposure to high temperature. E-720 has a proven history in many demanding aerospace applications.

Key Features & Benefits

- Excellent retention of mechanical properties after long-term high temperature exposure
- Long out-time for easy processing
- Good electrical properties

Product Forms

- Available on a wide variety of reinforcements including fiberglass and quartz
- Solution coated fabrics up to 60 inches wide
- Compatible with Autoclave or Press Molding processes

Applications / Qualifications

- Secondary Aircraft Structures
- Radomes
- Nacelles
- Inlet Ducts
- Fairings

For Information about Park's materials:

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Prepreg and Laminate Physical Properties

Reinforcement	7781 E-Glass	581 Quartz
Fabric Area Weight (gsm)	300	292
Prepreg Resin Content (%)	33 – 37	33 – 37
Resin Flow (325°F, 50 psi) (%)	10 – 24	10 – 24
Volatiles (275°F) (% max)	2.0	2.0
Gel Time (min)	1 – 2	1 – 2
Laminate Tg – std cure (°C)	180	180
Laminate Tg – post cure (°C)	230	230
Barcol Hardness	80	--
Dielectric Constant (Dk)	4.2	3.3 – 3.6
Loss Tangent (Df)	0.015	0.012 – 0.014

Processing Guidelines

Prepreg Storage Life

Tack Life: 14 days @ 75°F
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
- Apply 60psi autoclave pressure.
- Raise product temperature from RT to 230°F at 2 – 3°F/min
- After 30 minute hold time at 230°F, continue ramp to 350°F
- Hold product at cure temperature for 2 hours
- Cool product to 150°F at no more than 8°F/min
- Recommended post-cure: 1 hours at 500°F or 4 hours at 400°F

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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Laminate Mechanical Properties

Reinforcement	7781 E-glass	581 Quartz
Tensile Strength, 0° (Ksi)		
75°F Dry	60	90
350°F Dry	50	--
420°F Dry	45	60
500°F Dry	45	--
ASTM-D-638		
Compressive Strength (Ksi)		
75°F Dry	60	50
350°F Dry	52	--
420°F Dry	52	30
500°F Dry	45	--
ASTM-D-695		
Flexural Strength (Ksi)		
75°F Dry	85	90
350°F Dry	60	--
420°F Dry	50	40
500°F Dry	30	--
ASTM-D-790		
Flexural Modulus (Msi)		
75°F Dry	3.4	3.4
350°F Dry	2.9	--
420°F Dry	2.8	2.0
500°F Dry	2.4	--
ASTM-C-790		
Short-Beam Shear Strength (Ksi)		
75°F Dry	6.7	--
350°F Dry	4.8	--
ASTM-D-2344		

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