Product Overview

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 152 cm wide
- Compatible with Autoclave or Press Molding processes

Applications / Qualifications

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

Global Availability

For Information about Park's materials:

Americas	+1.316.283.6500
Asia Pacific	+656.861.7117
Europe	+33-562-985290

info@parkelectro.com

www.parkelectro.com

Processing Guideline

E-720 Epoxy Prepregs

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 (163°C, 345 kPa) (%)	10 – 24	10 – 24
Volatiles (135°C) (% 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

Prepreg Storage Life

Tack Life: 14 days @ 24°C
Out Life: 30 days @ 24°C
Shelf Life: 6 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 414 kPa autoclave pressure.
- Raise product temperature from RT to 110°C at 2 – 3°C/min
- After 30 minute hold time at 110°C, continue ramp to 177°C
- Hold product at cure temperature for 2 hours
- Cool product to 66°C at no more than 5°C/min
- Recommended post-cure: 1 hours at 260°C or 4 hours at 204°C

E-720 Epoxy Prepregs

Laminate Mechanical Properties

Reinforcement	7781 E-glass	581 Quartz
Tensile Strength, 0° (MPa)		
24°C Dry	414	621
177°C Dry	345	--
216°C Dry	310	414
260°C Dry	310	--
ASTM-D-638		
Compressive Strength (MPa)		
24°C Dry	414	345
177°C Dry	359	--
216°C Dry	359	207
260°C Dry	310	--
ASTM-D-695		
Flexural Strength (MPa)		
24°C Dry	586	621
177°C Dry	414	--
216°C Dry	345	276
260°C Dry	207	--
ASTM-D-790		
Flexural Modulus (GPa)		
24°C Dry	23.4	23.4
177°C Dry	20.0	--
216°C Dry	19.3	13.8
260°C Dry	16.5	--
ASTM-C-790		
Short-Beam Shear Stength (MPa)		
24°C Dry	46.2	--
177°C Dry	33.1	--
ASTM-D-2344		

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.