

P-650M Polyester Prepregs

Park's P-650M is a polyester resin system suitable for coating on any MIL-C-9084. P-650M has good electrical and mechanical properties and has been used in a wide variety of applications, including embossing die fabrication and aircraft structural parts

Key Features & Benefits

- Meets requirements of MIL-R-7575C, grades A and B
- Good electrical and structural properties
- Excellent retention of mechanical properties at elevated temperatures

Product Forms

- Available on a wide variety of reinforcement
- Solution coated fabrics up to 152 cm wide
- Compatible with Autoclave, Vacuum Bag/Oven or Press Molding processes

Applications / Qualifications

- Embossing die fabrication
- Aircraft structural parts
- Electrical Insulation

For Information about Park's materials:

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Prepreg Physical Properties

Reinforcement	7781 E-glass
Fabric Area Weight (gsm)	300
Prepreg Resin Content (%)	42 – 48
Volatiles (104°C, 8 min) (%)	2.0 max
Gel Time (sec)	45

Processing Guidelines

Prepreg Storage Life

Out Life: 30 days @ 24°C
Shelf Life: 8 months @ 4°C
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.

Press Cure Cycle

- Apply 690 kPa pressure
- Cure for 45 minutes at 149°C

Laminate Physical Properties

Reinforcement	7781 E-glass
Hardness (Barcol)	71
Specific Gravity	1.89
Dielectric Constant (Dk)	
8.6 GHz Dry	3.56
13.6 GHz Dry	3.49
8.6 GHz Wet	3.61
13.6 GHz Wet	3.52
Loss Tangent (Df)	
8.6 GHz Dry	0.011
13.6 GHz Dry	0.009
8.6 GHz Wet	0.040
13.6 GHz Wet	0.020

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 Physical Properties

Reinforcement	7781 E-glass
Tensile Strength, 0° (MPa) 24°C Dry 71°C Dry ASTM-D-638 Type 1	359 248
Tensile Modulus, 0° (GPa) 24°C Dry 71°C Dry ASTM-D-638 Type 1	21.4 17.9
Compressive Strength (MPa) 24°C Dry 71°C Dry ASTM-D-695	324 255
Compressive Modulus (GPa) 24°C Dry 71°C Dry ASTM-D-695	24.1 20.7
Flexural Strength (MPa) 24°C Dry 71°C Dry ASTM-D-790	496 359
Flexural Modulus (GPa) 24°C Dry 71°C Dry ASTM-D-790	25.5 17.9

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