

Park Electrochemical Nelcote® P-650M Polyester Prepreg, 7781 E-Glass Reinforced

Category : Polymer , Thermoset , Polyester, TS

Material Notes:

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

Applications/Qualifications: Embossing die fabrication
 Aircraft structural parts
 Electrical Insulation

Information provided by Park Electrochemical Corp.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Park-Electrochemical-Nelcote-P-650M-Polyester-Prepreg-7781-E-Glass-Reinforced.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.89 g/cc	1.89 g/cc	
Volatiles	<= 2.0 % @Temperature 104 °C	<= 2.0 % @Temperature 220 °F	8 min

Mechanical Properties	Metric	English	Comments
Hardness, Barcol	71	71	
Tensile Strength, Yield	248 MPa @Temperature 121 °C	36000 psi @Temperature 250 °F	0° Direction, Dry; ASTM D638 Type 1
	359 MPa @Temperature 23.9 °C	52000 psi @Temperature 75.0 °F	0° Direction, Dry; ASTM D638 Type 1
Tensile Modulus	17.9 GPa @Temperature 121 °C	2600 ksi @Temperature 250 °F	0° Direction, Dry; ASTM D638 Type 1
	21.4 GPa @Temperature 23.9 °C	3100 ksi @Temperature 75.0 °F	0° Direction, Dry; ASTM D638 Type 1
Flexural Strength	359 MPa @Temperature 121 °C	52000 psi @Temperature 250 °F	Dry; ASTM D790
	496 MPa @Temperature 23.9 °C	72000 psi @Temperature 75.0 °F	Dry; ASTM D790
Flexural Modulus	17.9 GPa @Temperature 121 °C	2600 ksi @Temperature 250 °F	Dry; ASTM D790

Mechanical Properties	25.5 GPa Metric	3700 ksi English	Comments 0790
	@Temperature 23.9 °C	@Temperature 75.0 °F	
Compressive Strength	255 MPa	37000 psi	Dry; ASTM D695
	@Temperature 121 °C	@Temperature 250 °F	
Compressive Strength	324 MPa	47000 psi	Dry; ASTM D695
	@Temperature 23.9 °C	@Temperature 75.0 °F	
Compressive Modulus	20.7 GPa	3000 ksi	Dry; ASTM D695
	@Temperature 121 °C	@Temperature 250 °F	
Compressive Modulus	24.1 GPa	3500 ksi	Dry; ASTM D695
	@Temperature 23.9 °C	@Temperature 75.0 °F	

Electrical Properties	Metric	English	Comments
Dielectric Constant	3.49	3.49	Dry
	@Frequency 1.36e+10 Hz	@Frequency 1.36e+10 Hz	
Dielectric Constant	3.52	3.52	Wet
	@Frequency 1.36e+10 Hz	@Frequency 1.36e+10 Hz	
Dielectric Constant	3.56	3.56	Dry
	@Frequency 8.60e+9 Hz	@Frequency 8.60e+9 Hz	
Dielectric Constant	3.61	3.61	Wet
	@Frequency 8.60e+9 Hz	@Frequency 8.60e+9 Hz	
Dissipation Factor	0.0090	0.0090	Dry
	@Frequency 1.36e+10 Hz	@Frequency 1.36e+10 Hz	
Dissipation Factor	0.011	0.011	Dry
	@Frequency 8.60e+9 Hz	@Frequency 8.60e+9 Hz	
Dissipation Factor	0.020	0.020	Wet
	@Frequency 1.36e+10 Hz	@Frequency 1.36e+10 Hz	
Dissipation Factor	0.040	0.040	Wet
	@Frequency 8.60e+9 Hz	@Frequency 8.60e+9 Hz	

Processing Properties	Metric	English	Comments
Gel Time	0.750 min	0.750 min	
Shelf Life	3.00 Month	3.00 Month	
	@Temperature 4.44 °C	@Temperature 40.0 °F	
	6.00 Month	6.00 Month	
	@Temperature -17.8 °C	@Temperature 0.000 °F	

Descriptive Properties	Value	Comments
Fabric Area Weight (g/m ²)	300	
Prepreg Resin Content (%)	42-48	

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