

Park Electrochemical Nelcote® E-765 Epoxy Prepreg, T300 6K 5HS Reinforced

Category : Polymer , Thermoset , Epoxy

Material Notes:

Nelcote® E-765 is a tough 250°F cure prepreg system designed to replace 350°F cure systems in aircraft structural applications. FAA-approved Design Allowable Databases are available upon request. Key Features and Benefits: Designed to replace first generation 350°F (176°C) cure systems. Wide cure temperature process window of 250°F to 350°F Exhibits very low void content, i.e.,

Order this product through the following link:

http://www.lookpolymers.com/polymer_Park-Electrochemical-Nelcote-E-765-Epoxy-Prepreg-T300-6K-5HS-Reinforced.php

Physical Properties	Metric	English	Comments
Volatiles	<= 1.5 %	<= 1.5 %	
Thickness	381 microns	15.0 mil	cured, per ply

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	586 MPa	85000 psi	0° Direction, Wet; Autoclave Cured; ASTM D3039-95
	@Temperature 82.2 °C	@Temperature 180 °F	
	593 MPa	86000 psi	0° Direction, Dry; Autoclave Cured; ASTM D3039-95
	@Temperature 21.1 °C	@Temperature 70.0 °F	
	593 MPa	86000 psi	0° Direction, Dry; Vacuum/Oven Cured; ASTM D3039-95
	@Temperature 21.1 °C	@Temperature 70.0 °F	
	614 MPa	89000 psi	0° Direction, Dry; Vacuum/Oven Cured; ASTM D3039-95
Tensile Modulus	@Temperature -53.9 °C	@Temperature -65.0 °F	
	627 MPa	91000 psi	0° Direction, Dry; Autoclave Cured; ASTM D3039-95
	@Temperature -53.9 °C	@Temperature -65.0 °F	
	676 MPa	98000 psi	0° Direction, Dry; Vacuum/Oven Cured; ASTM D3039-95
	@Temperature 82.2 °C	@Temperature 180 °F	
	683 MPa	99000 psi	0° Direction, Dry; Autoclave Cured; ASTM D3039-95
	@Temperature 82.2 °C	@Temperature 180 °F	
	61.4 GPa	8900 ksi	0° Direction, Wet; Autoclave Cured; ASTM D3039-95
	@Temperature 82.2 °C	@Temperature 180 °F	
	62.1 GPa	9000 ksi	0° Direction, Dry; Vacuum/Oven Cured; ASTM D3039-95
	@Temperature 82.2 °C	@Temperature 180 °F	
	63.4 GPa	9200 ksi	0° Direction, Dry; Autoclave Cured;

Mechanical Properties	Metric @ Temperature 82.2 °C	English @ Temperature 180 °F	ASTM D3039-95 Comments
	64.1 GPa	9300 ksi	0° Direction, Dry; Vacuum/Oven Cured; ASTM D3039-95
	@Temperature 21.1 °C	@Temperature 70.0 °F	
	64.1 GPa	9300 ksi	0° Direction, Dry; Autoclave Cured; ASTM D3039-95
	@Temperature 21.1 °C	@Temperature 70.0 °F	
	65.5 GPa	9500 ksi	0° Direction, Dry; Vacuum/Oven Cured; ASTM D3039-95
	@Temperature -53.9 °C	@Temperature -65.0 °F	
	68.3 GPa	9900 ksi	0° Direction, Dry; Autoclave Cured; ASTM D3039-95
	@Temperature -53.9 °C	@Temperature -65.0 °F	
Compressive Strength	310 MPa	45000 psi	Wet; Autoclave Cured; SACMA 1-94
	@Temperature 82.2 °C	@Temperature 180 °F	
	565 MPa	82000 psi	Dry; Autoclave Cured; SACMA 1-94
	@Temperature 82.2 °C	@Temperature 180 °F	
	572 MPa	83000 psi	Dry; Vacuum/Oven Cured; SACMA 1-94
	@Temperature 82.2 °C	@Temperature 180 °F	
	786 MPa	114000 psi	Dry; Vacuum/Oven Cured; SACMA 1-94
	@Temperature 21.1 °C	@Temperature 70.0 °F	
	793 MPa	115000 psi	Dry; Autoclave Cured; SACMA 1-94
	@Temperature 21.1 °C	@Temperature 70.0 °F	
	862 MPa	125000 psi	Dry; Autoclave Cured; SACMA 1-94
	@Temperature -53.9 °C	@Temperature -65.0 °F	
	876 MPa	127000 psi	Dry; Vacuum/Oven Cured; SACMA 1-94
	@Temperature -53.9 °C	@Temperature -65.0 °F	
Compressive Modulus	58.6 GPa	8500 ksi	Wet; Autoclave Cured; SACMA 1-94
	@Temperature 82.2 °C	@Temperature 180 °F	
	60.7 GPa	8800 ksi	Dry; Autoclave Cured; SACMA 1-94
	@Temperature 82.2 °C	@Temperature 180 °F	
	60.7 GPa	8800 ksi	Dry; Vacuum/Oven Cured; SACMA 1-94
	@Temperature 21.1 °C	@Temperature 70.0 °F	
	61.4 GPa	8900 ksi	Dry; Vacuum/Oven Cured; SACMA 1-94
	@Temperature 82.2 °C	@Temperature 180 °F	

Mechanical Properties	Metric	English	Comments
	61.4 GPa	8900 ksi	Dry; Autoclave Cured; SACMA 1-94
	@Temperature 21.1 °C	@Temperature 70.0 °F	
	69.6 GPa	10100 ksi	Dry; Autoclave Cured; SACMA 1-94
	@Temperature -53.9 °C	@Temperature -65.0 °F	
	71.0 GPa	10300 ksi	Dry; Vacuum/Oven Cured; SACMA 1-94
	@Temperature -53.9 °C	@Temperature -65.0 °F	
Shear Strength	71.7 MPa	10400 psi	Beam, V-Notched; Wet; Autoclave Cured; ASTM D5379-93
	@Temperature 82.2 °C	@Temperature 180 °F	
	75.2 MPa	10900 psi	Short-Beam, Dry; Vacuum/Oven Cured; ASTM D2344
	@Temperature 21.1 °C	@Temperature 70.0 °F	
	77.9 MPa	11300 psi	Short-Beam, Dry; Autoclave Cured; ASTM D2344
	@Temperature 21.1 °C	@Temperature 70.0 °F	
	103 MPa	14900 psi	Beam, V-Notched; Dry; Autoclave Cured; ASTM D5379-93
	@Temperature 82.2 °C	@Temperature 180 °F	
	125 MPa	18100 psi	Beam, V-Notched; Dry; Autoclave Cured; ASTM D5379-93
	@Temperature 21.1 °C	@Temperature 70.0 °F	
	143 MPa	20700 psi	Beam, V-Notched; Dry; Autoclave Cured; ASTM D5379-93
	@Temperature -53.9 °C	@Temperature -65.0 °F	

Thermal Properties	Metric	English	Comments
Glass Transition Temp, Tg	165 °C	329 °F	Dry; DMA

Processing Properties	Metric	English	Comments
Gel Time	5.00 min	5.00 min	
	@Temperature 135 °C	@Temperature 275 °F	
Shelf Life	6.00 Month	6.00 Month	
	@Temperature -17.8 °C	@Temperature 0.000 °F	

Descriptive Properties	Value	Comments
Fabric Area Weight (g/m²)	370	
Prepreg Resin Content (%)	37-43	
Resin Flow (%)	10-22	275°F, 15psi

Descriptive Properties	Value	Comments
Tack	Medium	

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