

Park Electrochemical Nelcote® F-502 Phenolic Prepreg, Silica Reinforced

Category : Polymer , Thermoset , Phenolic

Material Notes:

Nelcote® F-502 is a MIL-R-9299 phenolic resin system suitable for impregnation on any MIL-C-9084 fabric with a compatible finish. F-502 is used in the manufacture of ablative reinforcements in rocket nozzles, as well as ducting and secondary structures. GMS4001 qualified specifications. Key Features and Benefits: Provides a combination of high-strength and ablative properties for demanding applications. Low thermal expansion. Good Tack and Drape properties. Conforms to MIL-R-9299 Type B. Applications/Qualifications: Rocket Nozzles, Ducting, Secondary Structures. Information provided by Park Electrochemical Corp.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Park-Electrochemical-Nelcote-F-502-Phenolic-Prepreg-Silica-Reinforced.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.70 g/cc	1.70 g/cc	ASTM D792
Volatiles	6.0 - 10 % @Temperature 135 °C	6.0 - 10 % @Temperature 275 °F	8 min
Thickness	711 microns	28.0 mil	cured laminate, per ply

Mechanical Properties	Metric	English	Comments
Hardness, Barcol	70	70	ASTM D2583
Tensile Strength, Yield	89.6 MPa @Temperature 23.9 °C	13000 psi @Temperature 75.0 °F	0° Direction, Dry; 325°F, 1000psi Cured; ASTM D638
Tensile Modulus	16.5 GPa @Temperature 23.9 °C	2400 ksi @Temperature 75.0 °F	0° Direction, Dry; 325°F, 1000psi Cured; ASTM D638
Flexural Strength	159 MPa @Temperature 23.9 °C	23000 psi @Temperature 75.0 °F	Dry; 325°F, 1000psi Cured; ASTM D790
Flexural Modulus	17.2 GPa @Temperature 23.9 °C	2500 ksi @Temperature 75.0 °F	Dry; 325°F, 1000psi Cured; ASTM D790
Compressive Strength	165 MPa @Temperature 23.9 °C	24000 psi @Temperature 75.0 °F	Dry; 325°F, 1000psi Cured; ASTM D695
Compressive Modulus	16.5 GPa @Temperature 23.9 °C	2400 ksi @Temperature 75.0 °F	Dry; 325°F, 1000psi Cured; ASTM D695

Processing Properties	Metric	English	Comments
Gel Time			

Processing Properties	0.800 - 1.70 min Metric	0.800 - 1.70 min English	Comments
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/m²)	610	
Prepreg Resin Content (%)	31-37	
Resin Flow (%)	10-30	325°F, 15psi

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