

Park Electrochemical Nelcote® V-341 Polybutadiene Prepreg, 503 Quartz Reinforced

Category : Polymer , Thermoset , Rubber or Thermoset Elastomer (TSE)

Material Notes:

Nelcote® V-341 is Polybutadiene resin system designed to provide excellent electrical properties in demanding airborne, shipboard, and undersea applications. Key Features and Benefits: Extremely low Dk/Df values for demanding RF / microwave applications Self adhesive bond to foam cores Long ambient out-time for easy processing Easily processed in both vacuum/oven and autoclave processes A cost effective, shop-friendly alternative to BMI and Cyanate Ester materials in many applications Resistant to fungus, moisture, rain impact, and most chemicals Applications/Qualifications: High performance radomes Signature control devices US Army Helicopter Air Force Ground-Based Radar Information provided by Park Electrochemical Corp.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Park-Electrochemical-Nelcote-V-341-Polybutadiene-Prepreg-503-Quartz-Reinforced.php

Physical Properties	Metric	English	Comments
Volatiles	<= 2.0 % @Temperature 288 °C	<= 2.0 % @Temperature 550 °F	10 min
Water Absorption	0.050 %	0.050 %	14 days immersion

Mechanical Properties	Metric	English	Comments
Hardness, Barcol	67	67	
Tensile Strength, Yield	427 MPa @Temperature 93.3 °C	62000 psi @Temperature 200 °F	0° Direction, Dry; ASTM D638
	503 MPa @Temperature 23.9 °C	73000 psi @Temperature 75.0 °F	0° Direction, Dry; ASTM D638
Tensile Modulus	20.0 GPa @Temperature 23.9 °C	2900 ksi @Temperature 75.0 °F	0° Direction, Dry; ASTM D638
Flexural Strength	172 MPa @Temperature 93.3 °C	25000 psi @Temperature 200 °F	Dry; ASTM D790
	193 MPa @Temperature 93.3 °C	28000 psi @Temperature 200 °F	Dry; Post-Cure; ASTM D790
	345 MPa @Temperature 23.9 °C	50000 psi @Temperature 75.0 °F	Dry; Post-Cure; ASTM D790
	372 MPa @Temperature 23.9 °C	54000 psi @Temperature 75.0 °F	Dry; ASTM D790

Mechanical Properties	Metric	English	Comments
Flexural Modulus			Dry; Post-Cure; ASTM D790
	@Temperature 93.3 °C	@Temperature 200 °F	
	15.2 GPa	2200 ksi	Dry; ASTM D790
	@Temperature 93.3 °C	@Temperature 200 °F	
	18.6 GPa	2700 ksi	Dry; Post-Cure; ASTM D790
@Temperature 23.9 °C	@Temperature 75.0 °F		
Compressive Strength	20.0 GPa	2900 ksi	Dry; ASTM D790
	@Temperature 23.9 °C	@Temperature 75.0 °F	
	152 MPa	22000 psi	Dry; Post-Cure; ASTM D695
@Temperature 93.3 °C	@Temperature 200 °F		
Compressive Modulus	20.0 GPa	2900 ksi	Dry; Post-Cure
	@Temperature 93.3 °C	@Temperature 200 °F	

Electrical Properties	Metric	English	Comments
Dielectric Constant	3.09	3.09	
	@Frequency 1.00e+10 Hz	@Frequency 1.00e+10 Hz	
	3.12	3.12	
@Frequency 3.50e+10 Hz	@Frequency 3.50e+10 Hz		
Dissipation Factor	0.0030	0.0030	
	@Frequency 3.50e+10 Hz	@Frequency 3.50e+10 Hz	
	0.0035	0.0035	
@Frequency 1.00e+10 Hz	@Frequency 1.00e+10 Hz		

Processing Properties	Metric	English	Comments
Gel Time	1.00 - 1.50 min	1.00 - 1.50 min	
	@Temperature 171 °C	@Temperature 340 °F	
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	

Processing Properties Descriptive Properties	Metric Value	English	Comments Comments
Fungus Resistance	Rated 1 (Pass)		ASTM G21-70
Prepreg Resin Content (%)	26-33		
Rain Impact Erosion	No detrimental effect at 15 minutes		2mm droplet at 1"/hr
Resin Flow (%)	6-14		350°F, 100psi

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