

NeXolve CORIN XLS Polyimide

Category : Polymer , Film , Thermoset , Polyimide, TS , Polyimide, Thermoset Film

Material Notes:

Resistant to radiation and atomic oxygen erosion. NeXolve's CORIN XLSPolyimide is a colorless, clear, organic/inorganic sprayable nanocomposite that is resistant to radiation and atomic oxygen erosion. CORIN XLS Polyimide is ideal for use in national security applications, such as satellites, and also in solar panels and light-emitting organic displays. CORIN XLS Polyimide combines polyimide and nanocomposite technologies to deliver unsurpassed levels of optical clarity and oxidative stability, as well as stability to solar radiation. This fluorinated polyimide nanocomposite offers the highest atomic oxygen (AO) durability as well as the highest light transmission of all the CORIN grades, making it an ideal lightweight substitute material for glass used in space polyvoltaic (PV) arrays in low earth orbit (LEO). CORIN XLS Polyimide exhibits a glass transition temperature in excess of 250°C and can be used as a replacement for glass substrates in display applications. CORIN XLS Polyimide can be processed with organic solvents for spray, dip or casting applications as well as with hot isostatic press (HIP). This multipurpose material is available in film (standard thicknesses of 0.5 mil and 1.0 mil, other thicknesses available), solvent-based liquid resin or powder form. CORIN XLS Polyimide is manufactured in continuous rolls of 0.1, 0.25, 0.50, and 1.0 mil thickness. CORIN XLS Polyimide is optically transparent and exhibits a glass transition temperature greater than 250 degrees centigrade. Information Provided by NeXolve Corporation.

Order this product through the following link:

http://www.lookpolymers.com/polymer_NeXolve-CORIN-XLS-Polyimide.php

Mechanical Properties	Metric	English	Comments
Tensile Strength	74.0 MPa	10700 psi	ASTM D882-02
	@Thickness 0.0250 mm	@Thickness 0.000984 in	
Elongation at Break	8.0 %	8.0 %	ASTM D882-02
	@Thickness 0.0250 mm	@Thickness 0.000984 in	
Tensile Modulus	2.10 GPa	305 ksi	ASTM D882-02
	@Thickness 0.0250 mm	@Thickness 0.000984 in	

Thermal Properties	Metric	English	Comments
CTE, linear	68.0 µm/m-°C	37.8 µin/in-°F	ASTM E831-06
	@Thickness 1.00 mm, Temperature 125 - 175 °C	@Thickness 0.0394 in, Temperature 257 - 347 °F	
Glass Transition Temp, Tg	251 °C	484 °F	DMA; ASTM E1356-03
	266 °C	511 °F	DSC; ASTM E1356-03

Optical Properties	Metric	English	Comments
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Optical Properties Refractive Index	^{1.54} Metric	^{1.54} English	Comments Abbe, ASTM D542-00
	@Wavelength 589 nm	@Wavelength 589 nm	
UV Transmittance	50 %	50 %	
	@Thickness 0.0120 mm, Wavelength 377 nm	@Thickness 0.000472 in, Wavelength 377 nm	50% Transmission UV Cutoff
	50 %	50 %	
	@Thickness 0.0250 mm, Wavelength 392 nm	@Thickness 0.000984 in, Wavelength 392 nm	50% Transmission UV Cutoff
	50 %	50 %	
	@Thickness 0.0380 mm, Wavelength 407 nm	@Thickness 0.00150 in, Wavelength 407 nm	50% Transmission UV Cutoff

Descriptive Properties	Value	Comments
Solar Absorptivity	0.08	1 mil thickness; ASTM E903-96

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