

NeXolve LaRC™ -CP1 Polyimide

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

Material Notes:

Transparent polyimide with low moisture uptake and low dielectric constant. Transparent polyimide with low moisture uptake and low dielectric constant. LaRC™ CP1 exhibits the lowest moisture uptake, lowest dielectric constant, and lowest color of all commercially available polyimides, making it an ideal choice for electronics, displays, and aerospace applications. Additionally, continuous rolls are available now in thicknesses as low as 2.5 microns (0.1 mil) and in widths up to 60 inches (152 cm). Information Provided by NeXolve Corporation.

Order this product through the following link:

http://www.lookpolymers.com/polymer_NeXolve-LaRC-CP1-Polyimide.php

Physical Properties	Metric	English	Comments
Density	1.54 g/cc	0.0556 lb/in³	ASTM D792-08
Water Absorption	0.40 % @Time 86400 sec	0.40 % @Time 24.0 hour	ASTM D570-98

Mechanical Properties	Metric	English	Comments
Tensile Strength	87.0 MPa @Thickness 0.0250 mm	12600 psi @Thickness 0.000984 in	ASTM D882-02
Elongation at Break	16 % @Thickness 0.0250 mm	16 % @Thickness 0.000984 in	ASTM D882-02
Modulus of Elasticity	2.00 GPa	290 ksi	ASTM D882-02

Thermal Properties	Metric	English	Comments
CTE, linear	51.0 µm/m-°C @Thickness 1.00 mm, Temperature 125 - 175 °C	28.3 µin/in-°F @Thickness 0.0394 in, Temperature 257 - 347 °F	ASTM E831-06
Glass Transition Temp, Tg	263 °C	505 °F	DSC; ASTM E1356-03

Optical Properties	Metric	English	Comments
Refractive Index	1.57 @Wavelength 549 nm	1.57 @Wavelength 549 nm	Abbe; ASTM D542-00
	0.60 %	0.60 %	

Haze Optical Properties	@Thickness 0.0250 Metric	@Thickness 0.000984 English	ASTM D1003-11 Comments
Transmission, Visible	0.83 %	0.83 %	Solar Transmittivity; ASTM E903-96
	@Thickness 0.0250 mm	@Thickness 0.000984 in	
	88 %	88 %	Average
	@Wavelength 400 - 780 nm, Thickness 1.00 mm	@Wavelength 400 - 780 nm, Thickness 0.0394 in	
UV Transmittance	50 %	50 %	50% Transmission UV Cutoff
	@Thickness 0.0250 mm, Wavelength 409 nm	@Thickness 0.000984 in, Wavelength 409 nm	
Emissivity (0-1)	0.45	0.45	Infrared (Hemispherical); ASTM E408-71
	@Thickness 1.00 mm	@Thickness 0.0394 in	
Reflection Coefficient, Visible (0-1)	0.090	0.090	Solar Reflectivity; ASTM E903-96
	@Thickness 0.0250 mm	@Thickness 0.000984 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+9 ohm-cm	>= 1.00e+9 ohm-cm	ASTM D257-91
Surface Resistivity per Square	>= 1.00e+12 ohm	>= 1.00e+12 ohm	ASTM D257-91
Dielectric Constant	2.4 - 2.5	2.4 - 2.5	
	@Frequency 1.00e+10 Hz	@Frequency 1.00e+10 Hz	
Dielectric Strength	197 kV/mm	5000 kV/in	ASTM D149-09

Descriptive Properties	Value	Comments
Applications	Composites	
	Displays	
	Electrical Insulation	
	Electronics	
	Insulation Blankets	
	Insulation Tubing	
	Optical Filters/Mirrors	

Descriptive Properties	Pressure Sensitive Tape Value	Comments
	Spare Structures	
	Thermal Control	
Characteristics	10 Year Rated Life in GEO	
	Conductive/Nonconductive Offerings	
	Highly Transparent	
	Low Dielectric Constant	
	Low Moisture Uptake	
	UV Resistant	
	Vacuum Coating Compatible	
Solar Absorptivity	0.08	1 mil thickness; ASTM E903-96

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