

## NeXolve Essar™ Stretch 255 Polyimide

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

### Material Notes:

High temperature colorless elastic polyimide. NeXolve Essar™ Stretch 255 combines polyimide high temperature survivability and stability with elastomer elasticity and optical clarity into a single polyimide elastomer. Essar™ Stretch 255 is a colorless polyimide elastomer with a wide variety of uses in display applications, space structures, thermal insulation, electrical insulators, industrial tapes and advanced composites. For applications requiring transparency, traditional polyimides are highly absorptive in the UV and blue region, and absorb significant amounts of energy, leading to high thermal loads. Essar Stretch™ 255 provides high optical clarity in combination with elastomer compliance. Essar™ Stretch 255 is solvent soluble and forms a tough, conformal coating upon cure. Essar™ Stretch 255 is provided as a film in continuous rolls, or as a liquid resin for spray or flow casting operations. Information Provided by NeXolve Corporation.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_NeXolve-Essar-Stretch-255-Polyimide.php](http://www.lookpolymers.com/polymer_NeXolve-Essar-Stretch-255-Polyimide.php)

Mechanical Properties	Metric	English	Comments
Tensile Strength	19.0 MPa @Thickness 0.0500 mm	2760 psi @Thickness 0.00197 in	ASTM D882-02
Elongation at Break	80 % @Thickness 0.0500 mm	80 % @Thickness 0.00197 in	ASTM D882-02
Tensile Modulus	0.0410 GPa @Thickness 0.0500 mm	5.95 ksi @Thickness 0.00197 in	ASTM D882-02

Thermal Properties	Metric	English	Comments
CTE, linear	220 $\mu\text{m/m-}^{\circ}\text{C}$ @Thickness 2.00 mm, Temperature -125 - 20.0 $^{\circ}\text{C}$	122 $\mu\text{in/in-}^{\circ}\text{F}$ @Thickness 0.0787 in, Temperature -193 - 68.0 $^{\circ}\text{F}$	ASTM E831-06
Glass Transition Temp, Tg	33.0 $^{\circ}\text{C}$	91.4 $^{\circ}\text{F}$	DSC; ASTM E1356-03

Optical Properties	Metric	English	Comments
Refractive Index	1.49 @Wavelength 549 nm	1.49 @Wavelength 549 nm	Abbe; ASTM D542-00
UV Transmittance	50 % @Thickness 0.0500 mm, Wavelength 392 nm	50 % @Thickness 0.00197 in, Wavelength 392 nm	50% Transmission UV Cutoff

Descriptive Properties	Value	Comments
Applications	Advanced Composites	
	Conformal Encapsulants	
	Display Applications	
	Electrical Insulators	
	Industrial Tapes	
	Space Structures	
	Thermal Insulation	
Characteristics	Forms a tough conformal coating	
	High heat stability	
	High optical clarity, low visible light absorption	
	Highly elastic, greater than 100% recoverable elastic strain	
	Low temperature curing	
	Solvent soluble	
Solar Absorptivity	0.1	2 mil thickness; ASTM E903-96

## Contact Songhan Plastic Technology Co.,Ltd.

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