

LEXAN^{*} 8B28 Film

Product Datasheet

DESCRIPTION

LEXAN^{*} 8B28 is a one side velvet, one side fine matt translucent or opaque white polycarbonate film featuring high heat resistance and superior dimensional stability. It offers good printability and ease of processing (ie die-cutting, embossing, bending, folding, thermoforming and hydroforming). LEXAN 8B28 can be used in wide variety of applications such as lamp shades, lamp diffusers for indirect lighting, exhibition stand panels, smart cards, labels, and dials.

Typical Property Values¹

Property	ASTM Test Method	Units (USCS)	Value	ISO Test Method	Units (SI)	Value
Mechanical						
Tensile Strength						
@ Yield	ASTM D882	psi	8500	ISO 527	MPa	62
Ultimate	ASTM D882	psi	9000	ISO 527	MPa	65
Tensile Modulus	ASTM D882	psi	300000	ISO 527	MPa	2506
Tensile Elongation at Break	ASTM D882	%	100-160	ISO 527	%	100-154
Gardner Impact Strenght at 0.03 in. (0.75 mm)	ASTM D3029	ft-lb	23	ISO 6603-1	J	31
Tear Strength						
Initiation	ASTM D1004	lb/mil	1.4-1.8		kN/m	245
Propogation	ASTM D1922	g/mil	30-55		g/mil	10-20
Puncture Resistance (Dynatup)	ASTM D3763	ft-lb	9		J	12
Fold Endurance (MIT)						
0.010 inch (0.25 mm)	ASTM D2176-69	double folds	80			
0.020 inch (0.50 mm)	ASTM D2176-69	double folds	NA			
Thermal						
Coefficient of Thermal Conductivity	ASTM D5470	Btu/hr/ft ² /°F/in	1.35		W/m ² K	0.2
Coefficient of Thermal Expansion	ASTM E831	(x 10 ⁻⁵ /°F)	3.2	ISO 11359	(x 10 ⁻⁵ /°C)	5.8
Specific Heat @ 40 °F (4 °C)	ASTM E1269	Btu/lb/°F	0.3		KJ/Kg-°C	1.25
Glass Transition Temperature	ASTM D3417/D3418	°F	307	ISO 11357	°C	153
Vicat Softening Temperature, B	ASTM 1525-00 Modified	°F	312		°C	156
Heat Deflection Temp. by TMA at 1.8 MPa		°F	350	ISO 75 Modified	°C	175
Shrinkage at 302 °F (150 °C)	ASTM D1204	%	1.10%		%	1.10%
Brittleness Temperature	ASTM D746	°F	-211		°C	-135

Manufacturing Specifications

Color 82728 (translucent white)

Nominal Gauge Ranges 0.007-0.030" (0.175-0.500 mm)	Min./Max Limit of Nominal ± 5%
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Color 805085 (opaque white)

Nominal Gauge Ranges 0.010-0.030" (0.250-0.750 mm)	Min./Max Limit of Nominal ± 5%
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1 These are typical properties and are not intended for specification purposes. If minimum certifiable properties are required, please contact your local GE Advanced Materials, Specialty Film & Sheet representative or the GE Advanced Materials, Specialty Film & Sheet Quality Services Department. Reported values are based on 0.010" (0.250 mm) thickness unless otherwise noted.

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GE Advanced Materials Specialty Film & Sheet

Property	ASTM Test Method	Units	Value	ISO Test Method	Units	Value
Physical						
Density	ASTM D792	slug/ft ³	75	ISO 1183	kg/m ³	1200
Water Absorption, 24 hrs.	ASTM D570	% change	0.35	ISO 62	% change	0.35
Surface Roughness (RMS)	ASME B46-1	-	NA			
Surface Energy (1st surface / 2nd surface)	ASTM D5946-01	-	35/35			
Surface Tension (1st surface / 2nd surface)	Dyne Pens	Dyne	>44 / 40-42			
Optical						
Refractive Index @ 77 °F (25 °C)	ASTM D542A	-	NA			
Light Transmission	ASTM D1003	%	45			
Yellowness Index	ASTM D1925	%	19			
Haze	ASTM D1003	%	103			
Gloss over Flat Black min/max @ 60°	ASTM D523-60	-	see chart	ISO 2813	-	see chart

Gloss by Gauge: (ASTMD 523-60)

	Gauge	Angle	Matte	
	0.010" (0.250 mm)	60°	Minimum Maximum	15 35
8B28	0.025" (0.375 mm)	60°	Minimum Maximum	20 40
	0.020-0.031" (0.500-0.790 mm)	60°	Minimum Maximum	25 45

Gloss by Gauge: (ASTMD 523-60)

	Gauge	Angle	Velvet	
	0.010-0.015" (0.250-0.375 mm)	60°	Minimum Maximum	4 6.5
8B28	0.020" (0.500 mm)	60°	Minimum Maximum	5 9
	0.025-0.031" (0.625-0.790 mm)	60°	Minimum Maximum	6 10

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