

# Lexan<sup>®</sup> 8B35FA Film

## Product Datasheet

### DESCRIPTION

Lexan<sup>®</sup> 8B35FA Film is a one side velvet, one side fine-matte transparent polycarbonate film with tight gloss control across the available gauges. A 2% allowable gloss change across gauges means better multi-component consistency for the OEM and the engineered fine-matte on the 2nd surface helps the processor eliminate pinholes in demanding backlit applications. This velvet/fine-matte film offers excellent clarity, heat resistance and dimensional stability with a smooth surface. It is provided with improved gauge control and reduced texture variations.

### Typical Property Values<sup>1</sup>

Property	ASTM Test Method	Units (USCS)	Value	ISO Test Method	Units (SI)	Value
<b>Mechanical</b>						
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 Strength 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		kN/m	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	130			
0.020 inch (0.50 mm)	ASTM D2176-69	double folds	35			
<b>Thermal</b>						
Coefficient of Thermal Conductivity	ASTM D5470	Btu/hr/ft <sup>2</sup> /°F/in	1.35		W/m <sup>2</sup> K	0.2
Coefficient of Thermal Expansion	ASTM E831	(x 10 <sup>-5</sup> /°F)	3.2	ISO 11359	(x 10 <sup>-5</sup> /°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	290	ISO 75 Modified	°C	145
Shrinkage at 302 °F (150 °C)	ASTM D1204	%	1.40%		%	1.40%
Brittleness Temperature	ASTM D746	°F	-211		°C	-135

### Manufacturing Specifications

Nominal Gauge Ranges 0.010-0.015" (0.250-0.375 mm)	Min./Max Limit of <u>Nominal</u> ± 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
<b>Physical</b>						
Density	ASTM D792	slug/ft <sup>3</sup>	2.3	ISO 1183	kg/m <sup>3</sup>	1200
Water Absorption, 24 hrs.	ASTM D570	% change	0.35	ISO 62	% change	0.35
Surface Roughness (RMS)	ASME B46-1	-	25			
Surface Energy (1st surface / 2nd surface)	ASTM D5946-01	-	38/34			
Surface Tension (1st surface / 2nd surface)	Dyne Pens	Dyne	>44 / 38-40			
<b>Optical</b>						
Refractive Index @ 77 °F (25 °C)	ASTM D542A	-	1.6			
Light Transmission	ASTM D1003	%	88			
Yellowness Index	ASTM D1925	%	1.2			
Haze	ASTM D1003	%	92			
Gloss over Flat Black min/max @ 60°	ASTM D523-60	-	see chart	ISO 2813	-	see chart

## Gloss by Gauge: (ASTMD 523-60)

8B35FA	Gauge	Angle	Velvet		
	0.010-0.015" (0.250-0.375 mm)	60°	Minimum	2.5	Maximum

## RMS by Gauge

8B35FA	Gauge	Matte		
	0.010-0.015" (0.250-0.375 mm)	Minimum	10	Maximum

## Gloss by Gauge: (ASTMD 523-60)

8B35FA	Gauge	Angle	Matte		
	0.010-0.015" (0.250-0.375 mm)	60°	Minimum	25	Maximum

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