

## Lexan\* 8A25 Film

## Product Datasheet

### Description

Lexan 8A25 is a one side velvet, one side polished custom colored polycarbonate film. It offers high temperature resistance, excellent dimensional stability, as well as good printability without pre-treatment making it suitable for multi-layer printing for applications such as overlays, floor graphics, high-performance labels and in-mold decoration. It can be screen printed using traditional solvent based or water based inks, as well as UV or infrared drying inks and offers ease of processing for thermoforming, embossing, die-cutting, hydro-forming and bending. The velvet texture offers additional mar resistance, and can be used over light-emitting devices (LEDs).

### Typical Property Values ♦

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" (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" (0.25 mm)	ASTM D2176-69	double folds	60			
0.020" (0.50 mm)	ASTM D2176-69	double folds	20			
<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	(x10 <sup>-5</sup> /°F)	3.2	ISO 11359	(x10 <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	323		°C	160
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
<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	μ	55			
Surface Energy(1 <sup>st</sup> surface/ 2 <sup>nd</sup> surface)	ASTM D5946-01	-	34/34			
Surface Tension(1 <sup>st</sup> surface/ 2 <sup>nd</sup> surface) Dyne Pens		Dyne	40-42/ 38-40			

### Manufacturing Specifications

Nominal Gauge Ranges	Min./Max Limit of Nominal
0.007-0.015" (0.178mm-0.381 mm)	-/+10%
0.020-0.030" (0.508mm-0.762 mm)	+/-5%

- ♦ These are typical properties and are not intended for specification purposes. If minimum certifiable properties are required, please contact your local SABIC Innovative Plastics, Specialty Film & Sheet representative or the Quality Services Department. Reported values are based on 0.250 mm (0.010" ) thickness natural film. Custom colored film may show different properties than those listed above.

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Americas:  
SABIC Innovative Plastics  
Specialty Film & Sheet  
One Plastics Avenue  
Pittsfield, MA 01201  
USA  
Tel. (1) (413) 448 7110  
Fax. (1) (413) 448 5573

Europe:  
SABIC Innovative Plastics  
Specialty Film & Sheet  
Plasticslaan 1  
NL - 4612 PX Bergen op Zoom  
The Netherlands  
Tel. (31) (164) 292911  
Fax. (31) (164) 292940

Pacific:  
SABIC Innovative Plastics  
Specialty Film & Sheet  
1468 Nanjin Road (W)  
26<sup>th</sup> Floor, United Plaza  
200040 Shanghai, China  
Tel. (86) 21 3222 4500  
Fax. (86) 21 6289 8998

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