

Lexan* 8A35V Film

Product Datasheet

Description

Lexan 8A35 is a one side velvet, one side polished transparent polycarbonate film. It offers high temperature resistance, excellent dimensional stability, as well as good printability without pre-treatment making it very suitable for multi-layer printing for applications such as overlays, floor graphics, high-performance labels and in-mould 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 mar resistance, and can be used over light-emitting devices (LEDs). Recent technology improvements now in effect reduce texture variation by 50% and allow improved gauge control (see below).

Typical Property Values ♦

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 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	130			
0.020" (0.50 mm)	ASTM D2176-69	double folds	35			
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	(x10 ⁻⁵ /°F)	3.2	ISO 11359	(x10 ⁻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	323		°C	160
Heat Deflection Temp. by TMA at 1.8 Mpa						
Shrinkage at 302°F (150°C)	ASTM D1204	%	1.40	ISO 75 Modified	°C	145
Brittleness Temperature	ASTM D746	°F	-211		°C	-135
Physical						
Density	ASTM D792	slug/ft ³	2.4	ISO 1183	kg/m ³	1230
Water Absorption, 24 hrs.	ASTM D570	% change	0.35	ISO 62	% change	0.35
Surface Roughness (RMS)	ASME B46-1	μ	100			
Surface Energy(1 st surface/ 2 nd surface)	ASTM D5946-01	-	34/34			
Surface Tension(1 st surface/ 2 nd surface)	Dyne Pens	Dyne	40-42/ 38-40			
Optical						
Refractive Index @77°F (25°C)	ASTM D542A	-	1.6			
Light Transmission	ASTM D1003	%	90			
Yellowness Index	ASTM D1925	%	0.9			
Haze	ASTM D1003	%	42			
Gloss over Flat Black min/max @ 60°	ASTM D523-60	-	see chart	ISO 2813	-	see chart

Manufacturing Specifications

Nominal Gauge Ranges	Min./Max Limit of Nominal
0.010-0.015" (0.250-0.375 mm)	-/+5%
0.020" (0.500 mm)	-/+3%

UL Flammability Rating / Performance Levels

Thickness	Rating
> 0.010" (0.250 mm) and < 0.015" (0.375 mm)	UL94V-2
0.015" (0.375 mm) and greater	UL94V-2
File Number E121562	

- ♦ 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 film unless otherwise noted.

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Gloss: (ASTMD 523-85)

8A35V	Gauge	Angle	Velvet	
	0.008 - 0.020" (0.200 - 0.500mm)	85°	Minimum	8
		Maximum	19	



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