

ES-A4 perforated slide-in strips material data sheet

Description

Lexan® Film is a transparent polycarbonate film, velvet on one side and very fine matte on the other, that offers excellent clarity, high heat resistance, and superior dimensional stability in all thicknesses. Lexan 8B35E Film can be printed using traditional solvent-based inks as well as IR and UV curing inks. It offers ease of processing for thermoforming, hydroforming, embossing, diecutting and bending. Since the surface of Lexan 8B35E Film is low gloss, it is ideal for overlays, back-lit dials, second surface printed applications, dead-front graphics, display protection and poster protection. The film is printed on one side with special silk screen colour.

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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 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	ISO 34	kN/m	245
Propagation	ASTM D1922	g/mil	30 - 55	NA	g/mil	10-20
Puncture Resistance (Dynatup)	ASTM D3763	ft-lb	9	ISO	J	12
Fold Endurance (MIT)						
0.010 inch (0.25 mm)	ASTM D2176-69	double folds	60			
0.020 inch (0.50 mm)	ASTM D2176-69	double folds	20			

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Property	ASTM Test Method	Units (USCS)	Value	ISO Test Method	Units (SI)	Value
Thermal						
Coefficient of Thermal Conductivity	ASTM D5470	Btu/hr/ft ² /°F/in	1.35	DIN 52612	W/m°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	ISO	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	ISO 306	°C	156
Heat Deflection Temp. by TMA at 1.8 MPa		°F	290	ISO 75-1.2:2004	°C	145
Shrinkage at 302 °F (150 °C)	ASTM D1204	%	0.80%	ISO	%	0.8
Brittleness Temperature	ASTM D746	°F	-211		°C	-135
Physical						
Density	ASTM D792	slug/ft ³	2.3	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		6.3 (VFM) / 34 (V)			
Surface Energy (1st surface/2nd surface)	ASTM D5946-01		38/32			
Surface Tension (1st surface/2nd surface)	Dyne Pens	Dyne	>34 / >34			
Optical						
Refractive Index @77 °F (25 °C)	ASTM D542A		1.6			
Light Transmission	ASTM D1003	%	86			
Yellowness Index	ASTM D1925	%	1.9			
Haze	ASTM D1003	%	100			
Gloss over Flat Black min/max @ 60°	ASTM D523-60		see chart	ISO 2813		

* These are typical properties and are not intended for specification purposes. Reported Values are based on 0.250 mm (0.010") Thickness unless otherwise noted.

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Gloss by Gauge: (ASTMD 523-60)

8B35E	Gauge	Angle		Velvet	Matte
	0.005" (0.125 mm)	60°	Minimum Maximum	2 3.1	3.6 7
	0.007" (0.175 mm)	60°	Minimum Maximum	2.1 4.9	3.4 7.8
	0.010" (0.250 mm)	60°	Minimum Maximum	2.4 5.1	3.5 7.5
	0.015" (0.375 mm)	60°	Minimum Maximum	3.5 6	4.2 7.7
	0.020" (0.500 mm)	60°	Minimum Maximum	3.6 8.1	2 8

Manufacturing Specifications

Nominal Gauge Ranges	Min/Max Limit of Nominal
0.005 - 0.010" (0.125 - 0.250 mm)	± 8%
0.015-0.020" (0.375-0.500 mm)	± 5%

The available data have been determined and checked with the greatest care according to today's state of knowledge, but are not binding. We reserve the right to make technical changes to the data. This does not release the customer from the obligation to carry out an incoming inspection. The suitability of the Murrplastik product for a specific application must be checked by the user himself. In the event of improper use or combination with third-party products of a Murrplastik product, all liability shall lapse.