SABIC Innovative Plastics™

Lexan* 8010V Film

Product Datasheet

Description

Lexan 8010V polycarbonate film offers excellent clarity in all thicknesses. It provides high heat resistance and superior dimensional stability for graphic art applications which require UL94 flammability performance. Derived from one of the world's toughest polymers, Lexan 8010V film also provides high gloss surface finishes. Recent technology improvements now in effect reduce color variation by 50%. Additional enhancements 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	%	100-151	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		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			
Thermal						
Coefficient of Thermal Conductivity	ASTM D5470	Btu/hr/ft²/ºF/in	1.35		W/mºK	0.2
Coefficient of Thermal Expansion	ASTM E831	(x 10^{-5}/ºF)	3.2	ISO 11359	(x 10^{-5}/ºC)	5.8
Specific Heat @ 40 ºF (4 ºC)	ASTM E1269	Btu/lb/ºF	0.3		KJ/Kg-ºC	1.25
Glass Transition Temperature	ASTM D3417/D3418	ºF	307	ISO 11357	ºC	153
Vicat Softening Temperature, B	ASTM 1525-00 Modified	ºF	323		ºC	160
Heat Deflection Temp. by TMA at 1.8 MPa		ºF	290	ISO 75 Modified	ºC	145
Shrinkage at 302 ºF (150 ºC)	ASTM D1204	%	1.40		%	1.40
Brittleness Temperature	ASTM D746	ºF	-211		ºC	-135
Physical						
Density	ASTM D792	slug/ft³	2.3	ISO 1183	kg/m³	1200
Water Absorption, 24 hrs.	ASTM D570	% change	0.35	ISO 62	%	0.35
Surface Roughness (RMS)	ASME B46-01	-	NA			
Surface Energy	ASTM D5946-01	-	34			
Surface Tension	Dyne Pens	Dyne	38-40			
Pencil Hardness	ASTM D3363	-	b-hb			
Taber Abrasion	ASTM D1044	delta Haze	28			
Optical						
Refractive Index @ 77 ºF (25 ºC)	ASTM D542A	-	1.6			
Light Transmission	ASTM D1003	%	91			
Yellowness Index	ASTM D1925	%	0.7			
Haze	ASTM D1003	%	0.4			
Gloss over Flat Black min/max @ 60º	ASTM D523-60	-	170	ISO 2813	-	170

UL Flammability Rating / Performance Levels

Thickness	Rating
> 0.005" (0.125 mm) and < 0.015" (0.375 mm)	UL94V-2
0.015" (0.375 mm) and greater	UL94V-2
File Number	E61257

Manufacturing Specifications

Nominal Gauge Ranges	Min./Max Limit of Nominal
0.005" (0.125 mm)	± 10%
0.010-0.015" (0.250-0.375 mm)	± 5%
0.020-0.030" (0.500-0.750 mm)	± 3%

◆ 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 Reported values are based on 0.250 mm (0.010") thickness film unless otherwise noted.

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