

LEXAN™ 8A13F FILM

PRODUCT DATASHEET

DESCRIPTION

LEXAN™ 8A13F is a one side fine matte, one side polished transparent polycarbonate film and is specifically designed to help eliminate pinholes in demanding backlit applications. The next generation of our proven polish/matte polycarbonate film, LEXAN 8A13F films offer the same excellent clarity, heat resistance, and dimensional stability with an even a smoother surface. The matte texture offers mar resistance, and can be used over light-emitting devices (LEDs). Its low gloss level reduces glare in automobile interiors and office environments. 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	2100
Tensile Elongation at Break	ASTM D882	%	100-157	ISO 527	%	100
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
Propagation	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)	7
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	150
Heat Deflection Temp. by TMA at 1.8 Mpa		°F	290	ISO 75 Modified	°C	135
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	μ	55			
Surface Energy(1 st surface/ 2 nd surface)	ASTM D5946-01	-	34/36			
Surface Tension(1 st surface/ 2 nd surface)	Dyne Pens	Dyne	>44/38-40			

PROPERTY	ASTM TEST METHOD	UNITS (USCS)	VALUE	ISO TEST METHOD	UNITS (SI)	VALUE
OPTICAL						
Refractive Index @77°F (25°C)	ASTM D542A	-	1.6			
Light Transmission	ASTM D1003	%	87			
Yellowness Index	ASTM D1925	%	1.4			
Haze	ASTM D1003	%	90			
Gloss over Flat Black min/max @ 85°	ASTM D523-60	-	14	ISO 2813	-	14

◆ These are typical properties and are not intended for specification purposes. If minimum certifiable properties are required, please contact your local SABIC representative or the SABIC Quality Services Department. Reported values are based on 0.250 mm (0.010") thickness film unless otherwise noted.
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MANUFACTURING SPECIFICATIONS

NOMINAL GAUGE RANGES	MIN./MAX LIMIT OF NOMINAL
0.008" (0.200 mm)	-/+ 10%
0.010-0.015" (0.250-0.375 mm)	-/+5%
0.020" (0.500 mm)	-/+3%

CONTACT US:

Middle East and Africa
 SABIC Global Headquarters
 PO Box 5101
 Riyadh 11422
 Saudi Arabia
 T +966 (0) 1 225 8000
 F +966 (0) 1 225 9000
 E info@sabic.com

Email
 sfs.info@sabic.com

Americas
 SABIC
 Functional Forms
 2500 City West Boulevard
 Suite 100
 Houston, TX 77042
 USA
 Toll-free (800) 323 3783
 F (888) 443 2033
 E spinside.sales@sabic.com

Europe
 SABIC
 Functional Forms Plasticslaan 1
 4612 PX
 Bergen op Zoom
 The Netherlands
 T +31 (0)164 293678
 F +31 (0)164 293272
 E sfs.info@sabic.com

Asia Pacific
 SABIC
 Functional Forms
 2550 Xiupu Road
 Pudong
 201319 Shanghai
 China
 T +86 21 2037 8188
 F +86 21 2037 8288
 E sfs.info@sabic.com

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