POLYVANTIS

PRODUCT DATASHEET

LEXAN™ 8A13FV FILM

DESCRIPTION

LEXAN™an 8A13FV Film is a one side matte, one side polished transparent polycarbonate film and is specifically designed for applications which require UL94 flammability performance. Its smoother surface is designed to help eliminate pinholes in demanding backlit applications. The next generation of our proven polish/matte polycarbonate film, LEXAN 8A13FV Film offers the same excellent clarity, heat resistance, and dimensional stability. 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”	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-	double folds	130			
0.020” (0.50 mm)	ASTM D2176-	double folds	35			
THERMAL						
Coefficient of Thermal Conductivity	ASTM D5470	Btu/hr/ft^2/°F/in	1.35		W/m°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		°F	290	ISO 75 Modified	°C	135
Brittleness Temperature	ASTM D746	°F	-211		°C	-135

PROPERTY	ASTM TEST METHOD	UNITS (USCS)	VALUE	ISO TEST METHOD	UNITS (SI)	VALUE
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	-	55			
Surface Energy(1st surface/ 2nd	ASTM D5946-	-	34/36			
Surface Tension(1st surface/2nd	Dyne Pens	Dyne	>44/38-40			
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-	-	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 POLYVANTIS representative or the POLYVANTIS Quality Services Department. Reported values are based on 0.250 mm (0.010") thickness film unless otherwise noted.

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%

UL FLAMMABILITY RATING / PERFORMANCE LEVELS

THICKNESS	RATING
>0.008" (0.200 mm) and <0.015" (0.375 mm)	UL94V-2
0.015" (0.375 mm) and greater	UL94V-2
File Number	E539157

POLYVANTIS

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LEXAN™ POLYCARBONATE FILM & SHEET Tough, Virtually Unbreakable

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