POLYVANTIS

PRODUCT DATASHEET

LEXAN™ 8A37 FILM

DESCRIPTION

LEXAN™ 8A37 Film is a one side brushed, one side polished transparent polycarbonate film. It offers high temperature resistance, excellent dimensional stability, as well as good printability without pretreatment making it an excellent candidate 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, hydroforming and bending. The brushed 1st surface allows processors and OEMs alike to achieve a brushed metal appearance by back printing, laminating, or spraying with metallic inks, adhesives, or paint.

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	%	100-155	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	120			
0.020" (0.50 mm)	ASTM D2176-69	double folds	30			
THERMAL						
Coefficient of Thermal Conductivity	ASTM D5470	Btu/hr/ft2/°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 Mpa		°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	$slug/ft^3$	2.3	ISO 1183	kg/m^3	1200
Water Absorption, 24 hrs.	ASTM D570	% change	0.35	ISO 62	% change	0.35
Surface Energy (1^{st} / 2^{nd} surface)	ASTM D5946-01	-	38/34			
Surface Tension (1^{st} / 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	%	1.2			
Haze	ASTM D1003	%	66			
Gloss over Flat Black min/max @60°	ASTM D523-60	-	31	ISO 2813	-	31

*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.

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MANUFACTURING SPECIFICATIONS

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

POLYVANTIS

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LEXAN™ POLYCARBONATE FILM & SHEET Tough, Virtually Unbreakable

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