POLYVANTIS

PRODUCT DATASHEET

LEXAN™ 8010 FILM

DESCRIPTION

LEXAN™ 8010 polycarbonate film offers excellent clarity in all thicknesses, high heat resistance, and superior dimensional stability for graphic art applications. Derived from one of the world's toughest polymers, LEXAN 8010 provides a high gloss finish.

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	63
Ultimate	ASTM D882	psi	9000	ISO 527	MPa	65
Tensile Modulus	ASTM D882	psi	300000	ISO 527	MPa	>2000
Tensile Elongation at Break	ASTM D882	%	100-150	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
THERMAL						
Coefficient of Thermal Conductivity	ASTM D5470	Btu/hr/ft^2/°F/i	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	148
Vicat Softening Temperature, B	ASTM 1525-00	°F	323		°C	144
Heat Deflection Temp. by TMA at 1.8		°F	290	ISO 75	°C	127
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	NA			
Surface Energy	ASTM D5946-01	-	34			
Surface Tension	Dyne Pens	Dyne	>34			
Pencil Hardness	ASTM D3363	-	B			
Bayer Abrasion	Colts Lab Test	Ratio	0.38			
Steel Wool Abrasion	Colts Lab Test	Haze Gain	15.44			
Steel Wool Abrasion	Colts Lab Test	Ratio	0.08			

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	%	91			
Yellowness Index	ASTM D1925	%	0.7			
Haze	ASTM D1003	%	0.5			
Gloss over Flat Black min/max @ 60°	ASTM D523-60	-	170	ISO 2813	-	170
ELECTRICAL						
Dielectric Strength in oil, short time @ 72°F (23°C), 10 mils (0.25 mm)	ASTM D149-97a Method A	kv/mil	1.81	IEC 60243	kv/mm	71
@ 60 Hz	ASTM D150	-	2.32	IEC 60250	-	2.32
@1,000,000	ASTM D150	-	2.3	IEC 60250	-	2.3
Dissipation Factor						
@ 60 Hz	ASTM D150	-	0.001	IEC 60250	-	0.001
@ 1,000,000 Hz	ASTM D150	-	0.01	IEC 60250	-	0.01
Volume Resistivity	ASTM D257	Ω-cm	8.65E+16	IEC 60093	Ω-cm	8.65E+16
Surface Resistivity	ASTM D257	Ω/square	5.24E+15	IEC 60093	Ω/square	5.24E+15
Arc Resistance, Tungsten Electrodes	ASTM D495	s	120			

- 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 unless otherwise noted

POLYVANTIS

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LEXAN™ POLYCARBONATE FILM & SHEET Tough, Virtually Unbreakable

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