POLYVANTIS

PRODUCT DATASHEET

LEXAN™ 8010SG FILM

DESCRIPTION

LEXAN™ 8010SG uncoated polycarbonate sheet offers excellent clarity, good heat resistance, high gloss surface finish, superior impact resistance and enhanced UV stability. LEXAN 8010SG sheets may be thermoformed, pressure formed, cold formed or use in flat applications.

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
Tensile Strength Ultimate	ASTM D882	psi	9000	ISO 527	MPa	65
Tensile Modulus (0.43mm)	ASTM D882	psi	300000	ISO 527	MPa	2500
Tensile Elongation at Break	ASTM D882	%	100-150	ISO 527	%	100-150
Gardner Impact Strength at 0.03" (0.75 mm)	ASTM D3029	ft-lb	23	ISO 6603-1	J	31
Puncture Resistance (Dynatup)	ASTM D3763	ft-lb	9			
Poisson's Ratio	ASTM E132	-	0.37			
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	$(x10^{-5}/°C)$	5.8
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			160
Heat Deflection Temp. by TMA at 1.8 Mpa		°F	290	ISO 75 Modified	°C	145
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
Rockwell Hardness M scale	ASTM D785	-	70			
Rockwell Hardness R scale	ASTM D785	-	118			
Pencil Hardness	ASTM D3363	-	B-HB			
Taber Abrasion	ASTM D1044	Delta Haze	28			
Surface Energy	ASTM D5946-01	-	34			
Surface Tension	Dyne Pens	Dyne	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	%	90			
Haze	ASTM D1003	%	0.4			
ELECTRICAL						
Dielectric Constant						
@ 60 Hz	ASTM D150	-	2.3	IEC 60250	-	2.3
@ 1 MHz	ASTM D150	-	2.3	IEC 60250	-	2.3
Dissipation Factor						
@ 60 Hz	ASTM D150	-	0.001	IEC 60250	-	0.001
@ 1 MHz	ASTM D150	-	0.006	IEC 60250	-	0.006
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	70			

UL Listing

UL File#: E539157

*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
0.03 – 0.06”
(0.750-1.5mm)

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