POLYVANTIS

PRODUCT DATASHEET

LEXAN™ SG305 OB FR SHEET

DESCRIPTION

LEXAN™ SG305 OB FR sheet is an optical bright light diffuser sign grade. This extruded polycarbonate sheet offers significant advantages over many other light diffusers in terms of design freedom, aesthetics, and weathering properties. It combines high impact resistance with light diffusion properties that provides excellent protection against vandalism, ensuring a positive corporate image. LEXAN SG305 OB FR sheet is available in optical bright opal white color with diffusion properties for uniform illumination and matte finish on the outside surface for reduced reflection and glare. Both surfaces of LEXAN SG305 OB FR sheet are UV-resistant giving excellent durability to outdoor weathering. LEXAN SG305 OB FR sheet is an excellent candidate for a variety of sign and lighting industry applications ranging from light covers, back lighted and pole mounted signs, through channel letters to projection screens and roller shutters for advertisements.

TYPICAL PROPERTY VALUES*

PROPERTY	TEST METHOD	UNITS	VALUE
PHYSICAL			
Density	ISO 1183	g/cm³	1.25
Water absorption, 50% RH, 23 °C	ISO 62	%	0.15
Water absorption, saturation, 23°C	ISO 62	%	0.35
MECHANICAL			
Yield stress 50 mm/min	ISO 527	MPa	>60
Yield strain 50 mm/min	ISO 527	%	6
Nominal strain at break 50 mm/min	ISO 527	%	>100
Tensile modulus 1 mm/min	ISO 527	MPa	2300
Flexural strength 2 mm/min	ISO 178	MPa	90
Flexural modulus 2 mm/min	ISO 178	MPa	2300
IMPACT			
Charpy impact, notched 23°C, 3.0 mm	ISO 179/1eA	kJ/m²	75
Izod impact, unnotched 23°C, 3.0 mm	ISO 180/1U	kJ/m²	NB
Izod impact, notched 23°C, 3.0 mm	ISO 180/1A	kJ/m²	70
THERMAL			
Vicat softening temperature, B/120	ISO 306	°C	145
Temperature of deflection under load (type A), 1.8 MPa, flat	ISO 75-2	°C	127
Thermal conductivity	ISO 8302	W/m.°C	0.2
Coefficient of linear thermal expansion, 23-55°C	ISO 11359-2	1/°C	$7x10^{-5}$
Ball pressure test 125 ±2°C	IEC 60695-10-2	-	Pass
ELECTRICAL			
Volume resistivity	IEC 60093	Ohm.cm	$>10^{15}$
Dielectric strength, in oil, 3.2 mm	IEC 60243-1	kV/mm	18

PROPERTY	TEST METHOD	UNITS	VALUE
FIRE RATINGS			
Rail		-	
Europe	EN 45545-2 R4	-	HL1 Pass (2-4mm)
Electrical			
Limited Oxygen Index	ISO 4589-2	%	35
Glow Wire Flammability Index	IEC-60695-2-12	°C	Pass 960°C (3mm)

*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.

OPTICAL PROPERTIES

GAUGE / COLOR	LIGHT TRANSMISSION	DIFFUSION FACTOR
2 MM / WH6D060X	52 ± 4%	0.8
3 MM / WH6D060X	44 ± 4%	0.8
4 MM / WH6D060X	37 ± 4%	0.8
5 MM / WH6D060X	31 ± 4%	0.8
6 MM / WH6D060X	27 ± 4%	0.8

UV PROTECTION

LEXAN SG305 OB (FR) sheet has proprietary UV protected surfaces, giving excellent durability to outdoor weathering. The superior UV protected surface treatment is not affected by forming and fabricating and LEXAN SG sheets are therefore backed by a 10-year warranty against yellowing, loss of light transmission and breakage.

PRODUCT AVAILABILITY

Product code: LEXAN™ SG305 OB FR Sheet
Gauge range: 2-6mm
Standard size**:** 2050 x 3050 mm
Color: WH6D060X

LEXAN SG sheet is essentially opaque to all wave lengths below 385 nanometers. This useful shielding property prevent discoloration of posters placed behind the LEXAN sheet, second surface graphics and lacquers applied to the reverse side.

POLYVANTIS

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LEXAN™ POLYCARBONATE FILM & SHEET Tough, Virtually Unbreakable

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