

LEXAN™ SG305 OB FR SHEET

PRODUCT DATASHEET

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/cm ³	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/m ²	75
Izod impact, unnotched 23°C, 3.0 mm	ISO 180/1U	kJ/m ²	NB
Izod impact, notched 23°C, 3.0 mm	ISO 180/1A	kJ/m ²	70
THERMAL			
Vicat softening temperature, rate 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	7x 10 ⁻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			
Electrical			
Rail			
France	NF P 92-501	-	M2 (4-8mm)
France	NF F 16-101	-	F2 (4-8mm)
Electrical			
Limited Oxygen Index	ISO 4589-2	%	35
Glow Wire Flammability Index	IEC-60695-2-12	°C	Pass 960°C (3mm)

◆ These property values have been derived from LEXAN™ resin data for the material used to produce this sheet product. Variations within normal tolerances are possible for various colors. If minimum certifiable properties are required please contact your local SABIC representative. All values are measured at least after 48 hours storage at 23°C/50% relative humidity. All properties are measured on injection molded samples.

All samples are prepared according ISO 294.

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OPTICAL PROPERTIES

Gauge / color grade	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

PRODUCT AVAILABILITY

LEXAN™ SG305 OB FR sheet is available in form of sheets as well as on economical spools, making it easy to cut into desired sizes.

Sheets

Gauge: 2, 3, 4, 5, 6 mm

Size: 2050 x 3050

Spools

Gauge: 2+3 mm

Only available in full web size 2120 mm

Standard optical bright white color: WH7C154X

Masking: Top/matte side: co-ex opal white PE with print Bottom side: co-ex transparent PE

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.

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 years warranty# against yellowing, loss of light transmission and breakage.

) see warranty for details.

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