

# LEXAN™ SG305 OB SHEET

## PRODUCT DATASHEET

### DESCRIPTION

LEXAN™ SG305 OB sheet is an optical bright opal white polycarbonate sheet with unique light diffusing properties while retaining a high light transmission. This both sides UV protected extruded polycarbonate sheet offers significant advantages over many other materials in terms of impact resistance, weathering properties, design freedom and aesthetics. LEXAN SG305 OB sheet is available in an optical bright opal white color with diffusion properties for uniform illumination and has a matt finish on the outside surface for reduced reflection and glare.

LEXAN SG305 OB is an excellent candidate for a variety of industry applications like:

- LED Back lighted signs
- Channel letters
- Lamp diffusers
- Projection screens
- Roller shutters with advertising features

### TYPICAL PROPERTY VALUES

PROPERTY	TEST METHOD	UNITS	VALUE
<b>PHYSICAL</b>			
Density	ISO 1183	g/cm <sup>3</sup>	1.20
Water absorption, 50% RH, 23 °C	ISO 62	%	0.15
Water absorption, saturation, 23°C	ISO 62	%	0.35
<b>MECHANICAL</b>			
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
<b>IMPACT</b>			
Charpy impact, notched 23°C, 3.0 mm	ISO 179/1eA	kJ/m <sup>2</sup>	75
Izod impact, unnotched 23°C, 3.0 mm	ISO 180/1U	kJ/m <sup>2</sup>	NB
Izod impact, notched 23°C, 3.0 mm	ISO 180/1A	kJ/m <sup>2</sup>	70
<b>THERMAL</b>			
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 <sup>-5</sup>
Ball pressure test 125 ±2°C	IEC 60695-10-2	-	Pass
<b>ELECTRICAL</b>			
Volume resistivity	IEC 60093	Ohm.cm	>10 <sup>15</sup>
Dielectric strength, in oil, 3.2 mm	IEC 60243-1	kV/mm	18

PROPERTY	TEST METHOD	UNITS	VALUE
<b>FIRE RATINGS</b>			
<b>Electrical</b>			
Horizontal burn	UL94 HB	-	HB (1.5-6mm)
Glow Wire Flammability Index	IEC-60695-2-12	°C	Pass 850°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 to ISO 294.

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## OPTICAL PROPERTIES

Gauge / color grade	Light Transmission (%)	Diffusion Factor
2 mm/ WH7C154X	52 ± 4%	0.8
3 mm/ WH7C154X	44 ± 4%	0.8
4 mm/ WH7C154X	37 ± 4%	0.8
5 mm/ WH7C154X	31 ± 4%	0.8
6 mm/ WH7C154X	27 ± 4%	0.8
5 mm/ WH9DO46X	51 ± 4%	0.62

## PRODUCT AVAILABILITY

LEXAN™ SG305 OB 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 3050/1250 x 2050

### Spools

**Gauge:** 2+3 mm  
 Only available in full web size 2120 mm  
 Production: Italy

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 OB 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 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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