

Description

Lexan*SG305-OB sheet is an optical bright light diffuser sign grade. This extruded polycarbonate sheet offers significant advantages over many other sign materials 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 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 sheet are UV-resistant giving excellent durability to outdoor weathering. Lexan SG305-OB sheet is an excellent candidate for a variety of sign industry applications ranging from back lighted and pole mounted signs, through channel letters to projection screens and roller shutters for advertisements.

Typical Property Values ♦

Property	Test Method	Unit	Value
Physical			
Density	ISO 1183	g/cm ³	1.20
Water absorption, 24 hours	ISO 62	mg	10
Water absorption, saturation /23°C	ISO 62	%	0.35
Optical			
Light transmission #) WH7C154X [at 3.00mm]	ASTM-D1003	%	44
Light diffusion factor [at 3.00mm]	DIN 5036	%	0.85
Mechanical			
Tensile stress at yield 50 mm/min	ISO 527	MPa	60
Tensile stress at break 50 mm/min	ISO 527	MPa	70
Tensile strain at yield 50 mm/min	ISO 527	%	6
Tensile strain at break 50 mm/min	ISO 527	%	120
Tensile Modulus 1 mm/min	ISO 527	MPa	2300
Flexural stress at yield 2 mm/min	ISO 178	MPa	90
Flexural Modulus 2 mm/min	ISO 178	MPa	2300
Impact			
Charpy impact, notched ISO 179/2C	kJ/m ²	35	
Izod impact, unnotched 23°C	ISO 180/4U	kJ/m ²	NB
Izod impact, unnotched -30°C	ISO 180/4U	kJ/m ²	NB
Izod impact, notched 23°C	ISO 180/4A	kJ/m ²	65
Izod impact, notched -30°C	ISO 180/4A	kJ/m ²	10
Thermal			
Vicat Softening Temperature, Rate B/120	ISO 306	°C	145
HDT/ Ae, 1.8 MPa edgew. 120*1*04/sp=100	ISO 75/Be	°C	138
Thermal Conductivity	ISO 8302	W/m °C	0.2
Coeff. of Thermal Expansion extr. 23-80°C	ISO 11359-2	1/ °C	7.10-5
Flammability			
Glow wire test 850 °C	IEC695-2-1	passes at	3 mm

♦ 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 Innovative Plastics 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.

Light transmission value and light diffusion may vary by + or -4 %.

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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/WH9D046X	51 ± 4%	0.62

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.

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

Spools

Gauge (mm)	Width (mm) (full web (mm))	Length (m)	Weight
2	1250	250	750
3	(1300)	167	750
2	2050	152	748
3	(2150)	100	738

Standard optical bright white colors: WH7C154X and WH9D046X

Masking:

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

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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