

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 | Unit | Value |
|--|-------------------|-------------------|--------|
| Physical | | | |
| Density | ISO 1183 | g/cm ³ | 1.25 |
| 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 960°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/ 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 |
| 5 mm/WH6D060X | 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 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 (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 color: WH6D060X

Masking:

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

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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