

## Description

Lexan\*SGC44-OB polish/polish 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. Lexan SGC44-OB sheet is available in optical bright opal white color with diffusion properties for uniform illumination. The top surface of Lexan SGC44-OB sheet is UV-resistant giving excellent durability to outdoor weathering. Lexan SGC44-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
<b>Physical</b>			
Specific Gravity	ASTM D792	--	1.20
Water absorption, 24 hours	ISO 62	mg /ounce	10/0.00035
Water absorption, saturation /23°C	ISO 62	%	0.35
<b>Optical</b>			
Light transmission WH7C154X [at 0.177"]	ASTM-D1003	%	36
Light diffusion factor [at 0.177"]	DIN 5036	--	0.83
<b>Mechanical</b>			
Tensile stress at yield 50 mm/min	ASTM D638	Mpa / Kpsi	60/8.7
Tensile stress at break 50 mm/min	ASTM D638	MPa / Kpsi	70/10.2
Tensile strain at yield 50 mm/min	ASTM D638	%	6
Tensile strain at break 50 mm/min	ASTM D638	%	120
Tensile Modulus 1 mm/min	ASTM D638	MPa / Kpsi	2300/333.6
Flexural stress at yield 2 mm/min	ASTM D790	MPa / Kpsi	90/13.1
Flexural Modulus 2 mm/min	ASTM D790	MPa / Kpsi	2300/333.6
<b>Impact</b>			
Charpy impact, notched	ISO 179/2C	kJ/m2 / Klb/ft	35/2.4
Izod impact, unnotched 23°C	ASTM D256A	kJ/m <sup>2</sup> / Klb/ft	NB
Izod impact, unnotched -30°C	ASTM D256A	kJ/m <sup>2</sup> / Klb/ft	NB
Izod impact, notched 23°C	ASTM D256A	kJ/m <sup>2</sup> / Klb/ft	65/4.5
Izod impact, notched -30°C	ASTM D256A	kJ/m <sup>2</sup> / Klb/ft	10 /0.7
<b>Thermal</b>			
Vicat Softening Temperature, Rate B/120	ASTM D648	°C / F	145/293
HDT/ Ae, 1.8 MPa edgew. 120*1*04/sp=100	ISO 75/Be	°C / F	138/280
Thermal Conductivity	ISO 8302	W/m °C	0.2
Coeff. of Thermal Expansion extr. 23-80°C	ASTM D696	1/ °C / 1/F	7.10-5/4.10-5
<b>Flammability</b>			
UL Flammability (.060" min.)	UL94		HB <sup>1</sup>

♦ 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.

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

1 Expected value based on this being a Lexan product, testing is in process

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Lexan\*

## Optical properties

Gauge / color grade	Light Transmission (%)	Diffusion Factor
.118"/ WH7C154X	45 ± 4%	0.83
.150"/ WH7C154X	39 ± 4%	0.83
.177"/ WH7C154X	35 ± 4%	0.83

Lexan SG sheet is essentially opaque to all wave lengths below 385 nanometers. This useful shielding property prevent discoloration of second surface graphics applied to the reverse side.

## Product availability

Lexan\* SGC44-OB sheet is available in form of sheets as well as on economical spools, making it easy to cut into desired sizes.

### Sheets

#### Gauge (inches):

.118, .150,.177

#### Standard Sizes (inches):

Widths: 52, 76, 100 web  
Length: 100

### Spools

#### Gauge (inches):

.118, .150,.177

#### Standard Sizes (inches):

Widths: 52, 64, 76, 100 web

### Other Gauges may be available upon request

Standard optical bright white color: **WH7C154X**

### Masking:

Top side: co-ex white PE with no print, UL tape

Bottom side: co-ex white PE with no print, "footage tape" on coils

◆web width is full extrusion from die, including the bead line, which is typically 2" of each side of the sheet

## UV protection

Lexan SGC44-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 SGC44-OB sheet is therefore backed by a 10 years warranty† against yellowing, loss of light transmission and breakage.

†see warranty for details.



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