

BRIGHT+ TOUGH

FUNCTIONAL FORMS

LEXAN™ SG305-OB sheet for display applications



SABIC

Founded in 1976, SABIC is today the first public, global multinational enterprise headquartered in the Middle East. Our products range from bulk commodity chemicals to highly engineered plastics for demanding applications. We are a leading producer of polyethylene, polypropylene, glycols, methanol and fertilizers and the world's third largest polyolefin producer.

SABIC's offerings include Chemicals, Polymers, Specialties, Agri-Nutrients and Metals. In Saudi Arabia, the Netherlands, Spain, the USA, India, China and Japan, our dedicated Technology & Innovation centers research ways to meet our customers' needs with excellence.

INNOVATING FOR CUSTOMER SUCCESS

We believe that SABIC customers deserve the full benefit of every advantage our enterprise can offer. After all, our success is defined by our customers' success. And with more than 80 years of experience pioneering advanced engineering thermoplastics, SABIC is positioned to help create new opportunities for growth and breakthrough applications.

We offer expertise and experience to our customers in a variety of ways:

- Material solutions to help drive innovation and market leadership.
- Design, logistics and processing expertise to spark new ideas and better efficiencies.
- Unwavering commitment to build long-term relationships with ingenuity, trust and continuous improvement.

It's what we strive for and work to deliver... a mutual benefit.

Excellence and nothing less.

INTRODUCTION

SABIC's LEXAN SG305-OB sheet combines uniform illumination with superior optical brightness for eye-catching signage

LEXAN SG305-OB PC sheet, unlike conventional sheet products, offers both uniform light diffusion to eliminate light emitting diode (LED) "pinholes" and a view of light sources, and superior light transmission for exceptional optical brightness at lower energy costs.

In fact, the 2 mm and 5 mm thicknesses of LEXAN SG305-OB sheet boost light transmission to more than 50% versus competitive materials like polymethyl acrylate (PMMA) that allow only about 25%. The opal white sheet grade, which has a matte finish on its outward-facing surface to reduce reflections, also provides excellent UV protection as well as the renowned impact resistance of tough, virtually unbreakable LEXAN resin.



LEXAN SG305-OB SHEET

TYPICAL BENEFITS

- A higher light transmission, combined with higher light diffusion
 - for uniform illumination (light source not seen from outside)
 - to prevent bright spots, allowing fewer LED lights and lower total product cost
- Impact resistance
- Easy fabrication
- Both surfaces UV-resistant
- Outstanding white color retention after weathering
- Decoration
- Printability
- Wide range of sizes. Also available on spools
- 10-year limited written warranty against loss of impact strength; yellowing (< 12%) and loss of light transmission (<6%)

APPLICATIONS

- Back lighted signs
- Channel letters
- Formed wholesale faces
- Flat signs
- Formed production signs
- Menu boards
- Digital advertisement screens
- Projection screens
- Roller shutters
- Interior cladding
- Counters
- Displays



ENHANCED BRIGHTNESS, TOUGHER BUILD

Until recently, sign manufacturers have been forced to choose between optimal diffusion and optimal brightness. With SABIC's LEXAN SG305-OB sheet, they get both – plus great performance and fabrication ease. This material opens many new design opportunities for illuminated signage. For example, the SeaCloud Hotel in Busan, South Korea is using LEXAN SG305-OB sheet for its main exterior sign and others are following suit.

The SeaCloud hotel sign utilizes a color changing system which occurs when LEXAN SG305-OB sheet is installed with a gray-colored film. As a result, the material shows as gray during the day and as white at night when displayed with LED lamps. This gray color film has many small holes which allow lamp light to pass through when it is dark.

Although conventional materials such as PMMA typically lose significant brightness in the process of achieving acceptable diffusion, LEXAN SG305-OB sheet retains a high level of optical brightness while presenting a uniform appearance that masks both light bulbs and LEDs.

The result is a consistently bright appearance that enhances graphics, which can be screen-printed on the back surface and projected from the rear. The back surface of the sheet is polished for better printing, while the front surface's matte texture reduces glare and reflection. Another major benefit is the enhanced brightness of the LEXAN sheet which enables designers to reduce lighting requirements for energy savings.

Unlike acrylics, which are often brittle, LEXAN SG305-OB sheet offers exceptional impact-resistance to deter vandalism and other damage.



PROTECTION THAT SHINES

EUROLL ADDSCREEN[†] ROLLER TURNS SECURITY SHUTTERS INTO ADVERTISING BILLBOARDS

Advertising is constantly finding its way onto new surfaces. Trains and buses are “wrapped” in graphics, and images are projected onto subway tunnels as passengers move past. Euroll saw a similar possibility in the roller shutters it produced to protect stores, ticket windows and other businesses after hours. By replacing steel with the right material, blank roller shutters could be transformed into billboards for a variety of promotional information.

Instead of metal or clear PC panels, ADDscreen shutters come with specially developed sheet projection panels. With these panels, projection from the inside out is possible. In many situations, it is even possible to keep the existing roller track construction. By only changing the shutter screen to an ADDscreen, the costs can be kept low.

ADDscreen is a unique and innovative product that turns unattractive shutters into aesthetically pleasing marketing tools for customers – without losing the basic security features.

In this new shutter system, the shop owner is able to connect the projection equipment to a PC and advertise by projecting text, images, or video on the ADDscreen. Euroll ADDscreen shutters with SABIC's LEXAN SG305-OB sheet are generally specified for retail shop windows, exhibition areas and arcades. In such locations, the shutters provide the dual benefits of out of hours security plus 24-hour customer access to the shop window advertisement. Also, these shutters can be used in town centers, where the addition of illuminated advertising makes streets brighter and, in turn, safer after dark.



PERFORMANCE AND AVAILABILITY

PERFORMANCE CAPABILITY	LEXAN SG305-OB SHEET
High impact strength	YES
Formability	YES
Added UV resistance	YES
Available in colors	White only
Available on spools	YES
Matte finish on one side	YES
Improved light diffusion	YES
10 years limited written warranty	YES

TYPICAL VALUES	LT %	DIFFUSION FACTOR
2 mm	52	0.82
3 mm	44	0.85
4 mm	37	0.82
6 mm	27	0.83

AVAILABILITY

LEXAN SG305-OB sheet is available in form of sheets and on economical spools, making it easy to cut into desired sizes.

Sheet gauge	2, 3, 4, 5, 6 mm
Size	2050 x 3050 mm
Standard optical bright white colors	WH7C154X

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