

LEXAN EXELL™ D SHEET

PRODUCT DATASHEET

DESCRIPTION

LEXAN EXELL™ D sheet is a transparent polycarbonate sheet with proprietary UV protection on both sides offering excellent weathering properties. With its excellent impact resistance it is a good candidate for a wide variety of building and construction applications. LEXAN EXELL D sheet can be easily cold formed into gentle curves which makes it a good material choice for skylights, covered walkways, barrel vaults etc. LEXAN EXELL D sheet is thermoformable and can be thermoformed into the desired geometry whilst retaining the UV resistant protection specially developed for weather resistant applications.

TYPICAL PROPERTY VALUES ◆

PROPERTY	TEST METHOD	UNITS	VALUE
PHYSICAL			
Density	ISO 1183	g/cm ³	1.20
Water absorption, 50% RH, 23 °C	ISO 62	%	0.15
Water absorption, saturation, 23°C	ISO 62	%	0.35
MECHANICAL			
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
IMPACT			
Charpy impact, notched 23°C, 3.0 mm	ISO 179/1eA	kJ/m ²	75
Izod impact, unnotched 23°C, 3.0 mm	ISO 180/1U	kJ/m ²	NB
Izod impact, notched 23°C, 3.0 mm	ISO 180/1A	kJ/m ²	70
THERMAL			
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 ⁻⁵
Ball pressure test 125 ±2°C	IEC 60695-10-2	-	Pass
ELECTRICAL			
Volume resistivity	IEC 60093	Ohm.cm	>10 ¹⁵
Dielectric strength, in oil, 3.2 mm	IEC 60243-1	kV/mm	18
FIRE RATINGS			
Building & Construction			
Europe	EN13501-1	-	b,s1,d0 (2-6mm)
Europe	NF P 92-512:1986	-	M2 (8-12mm)

◆ These property values have been derived from LEXAN™ resin data for the material used to produce this sheet product. Variation within normal tolerances are possible for various colors. These typical values are not intended for specification purposes. If minimum certifiable properties are required please contact your local SABIC, Specialty Film & Sheet 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.

™ Trademarks of SABIC.

LIGHT TRANSMISSION

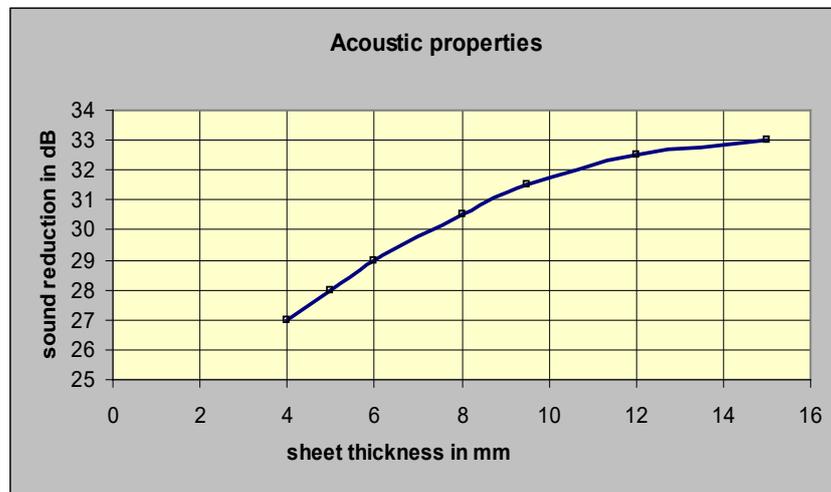
Transparent LEXAN EXELL™ D sheet have excellent light transmission, between 84 and 87%. However for buildings in hot climates or with south facing aspects, LEXAN EXELL D sheet is available in translucent bronze, grey and opal white. LEXAN EXELL D is essential opaque to all wave lengths below 385 nanometers. This useful shielding property can help prevent discoloration of sensitive materials placed under or behind LEXAN EXELL D sheet.

UV PROTECTION

LEXAN EXELL D sheet has proprietary UV protected surfaces, giving excellent durability to outdoor weathering. This superior UV resistance and toughness of LEXAN EXELL D sheet is backed by a 10 years limited written warranty against yellowing, loss of light transmission and breakage.

SOUND REDUCTION

Below graph shows the acoustic properties for different thicknesses of the sheet:



PERFORMANCE

LEXAN EXELL D sheet has a good fire performance against many national fire codes dependant on thickness and color; please check with the local sales office for details.

PRODUCT AVAILABILITY

LEXAN EXELL D sheet is normally manufactured in the standard sizes listed below. Deliveries from stock or cut to size can be ordered via our inside sales organisation.

Standard gauge in mm:	2 - 3 - 4 - 5 - 6 - 8 - 9.5 - 12 - 15
Standard sizes:	2050 x 3050 mm (is max. size for 15mm), 2050 x 6100 mm
Masking:	Top side: Coex. opal white PE/purple print, Bottom side: Coex. transparent PE
Standard colors:	clear code 112, solar bronze code 5109, solar grey code 713, opal white code WH7D2870 and opal white code WH4D3480 (opal whites max. 8MM)

CONTACT US:

SABIC CORPORATE HQ

PO Box 5101
Riyadh 11422
Saudi Arabia
T +966 (0) 1 225 8000
F +966 (0) 1 225 9000
E info@sabic.com

Americas

Functional Forms
2500 City West
Boulevard Suite 100
Houston, TX 77042
USA
Toll-free (800) 323 3783
F (888) 443 2033
E spinside.sales@sabic.com

Europe

Functional Forms
Plasticslaan 1
4612 PX
Bergen op Zoom
The Netherlands
T +31 (0)164 293678
F +31 (0)164 293272
E ff.info@sabic.com

Asia Pacific

Functional Forms
2550 Xiupu Road
Pudong
201319 Shanghai
China
T +86 21 2037 8188
F +86 21 2037 8288
E ff.info@sabic.com



DISCLAIMER: THE MATERIALS, PRODUCTS AND SERVICES OF SAUDI BASIC INDUSTRIES CORPORATION (SABIC) OR ITS SUBSIDIARIES OR AFFILIATES ("SELLER") ARE SOLD SUBJECT TO SELLER'S STANDARD CONDITIONS OF SALE, WHICH ARE AVAILABLE UPON REQUEST. INFORMATION AND RECOMMENDATIONS CONTAINED IN THIS DOCUMENT ARE GIVEN IN GOOD FAITH. HOWEVER, SELLER MAKES NO EXPRESS OR IMPLIED REPRESENTATION, WARRANTY OR GUARANTEE (i) THAT ANY RESULTS DESCRIBED IN THIS DOCUMENT WILL BE OBTAINED UNDER END-USE CONDITIONS, OR (ii) AS TO THE EFFECTIVENESS OR SAFETY OF ANY DESIGN OR APPLICATION INCORPORATING SELLER'S MATERIALS, PRODUCTS, SERVICES OR RECOMMENDATIONS. UNLESS OTHERWISE PROVIDED IN SELLER'S STANDARD CONDITIONS OF SALE, SELLER SHALL NOT BE RESPONSIBLE FOR ANY LOSS RESULTING FROM ANY USE OF ITS MATERIALS, PRODUCTS, SERVICES OR RECOMMENDATIONS DESCRIBED IN THIS DOCUMENT. Each user is responsible for making its own determination as to the suitability of Seller's materials, products, services or recommendations for the user's particular use through appropriate end-use and other testing and analysis. Nothing in any document or oral statement shall be deemed to alter or waive any provision of Seller's Standard Conditions of Sale or this Disclaimer, unless it is specifically agreed to in a writing signed by Seller. Statements by Seller concerning a possible use of any material, product, service or design do not, are not intended to, and should not be construed to grant any license under any patent or other intellectual property right of Seller or as a recommendation for the use of any material, product, service or design in a manner that infringes any patent or other intellectual property right.

SABIC and brands marked with ™ are trademarks of SABIC or its subsidiaries or affiliates, unless otherwise noted.

© 2021 Saudi Basic Industries Corporation (SABIC). All Rights Reserved.

Any brands, products or services of other companies referenced in this document are the trademarks, service marks and/or trade names of their respective holders.
