

# LEXAN™ THERMOCLEAR™ 1 UV LITE SHEET

## PRODUCT DATASHEET

### DESCRIPTION

LEXAN™ THERMOCLEAR™ 1 UV Lite sheet is a structural sheet made of polycarbonate resin. The sheet combines the properties like high thermal insulation and light transmission, low weight with high stiffness and impact resistance. It can be easily cold curved or cut to size. The sheet side bearing UV protection layer should always be the side facing the sun. LEXAN THERMOCLEAR 1 UV Lite sheet can be a good candidate for heat-insulating glazing at conservatories, greenhouses, skylights, as well as swimming pool covers, industrial roofing and glazing.

### TYPICAL PROPERTY VALUES♦

GRADE-COLOR	GAUGE (MM)	Weight (kg/m <sup>2</sup> )	SOUND RED. VALUE † (DB)	U-Value‡ (W/m <sup>2</sup> K)	Impact Test¶ Gardner	LT* D65 (%LT)
<b>LC20613</b>						
Clear - 112	6	1.2	17	3.56	>60	80
Bronze - BR236	6	1.2	17	3.56	>60	50
Opal White - 825075	6	1.2	17	3.56	>60	20
Grey - GY424	6	1.2	17	3.56	>60	24
<b>LC20815</b>						
Clear - 112	8	1.5	18	3.26	>60	80
Bronze - BR236	8	1.5	18	3.26	>60	50
Opal White - 825075	8	1.5	18	3.26	>60	20
Grey - GY424	8	1.5	18	3.26	>60	24
<b>LC21017</b>						
Clear - 112	10	1.7	19	3.02	>60	76
Bronze - BR236	10	1.7	19	3.02	>60	50
Opal White - 825075	10	1.7	19	3.02	>60	20
Grey - GY424	10	1.7	19	3.02	>60	24
<b>LC31627</b>						
Clear - 112	16	2.4	21	2.27	>60	68
Bronze - BR236	16	2.4	21	2.27	>60	50
Opal White - 825075	16	2.4	21	2.27	>60	20
Grey - GY424	16	2.4	21	2.27	>60	24

### OTHER COLORS AVAILABLE:

Blue - BL530
Green - GN736
Bluewhite - C 920

♦ These property values have been derived from LEXAN™ resin data for the material used to produce this sheet product.

† Sound reduction value based on SABIC calculated values according DIN 52210-75

‡ U-values based on SABIC calculated values according ISO 10077 (EN673)

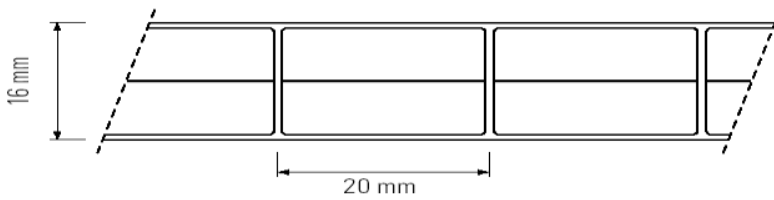
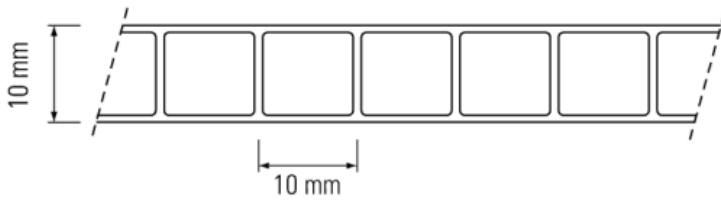
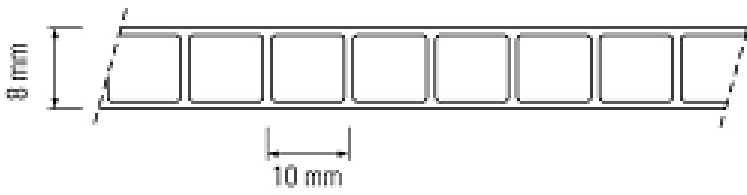
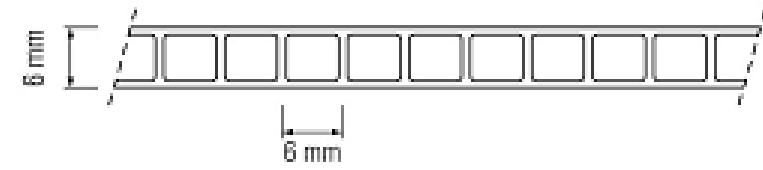
¶ Hail simulation test developed by TNO, the Netherlands, artificial hailstones of 20 mm diameter are shot at the sheet at min. speed of 21 m/sec.

\* LT (Light Transmission) and TST (Total Solar Transmission) measurements according ISO 9050 (EN 410) on 600x600 mm samples.

# TST (Total Solar Transmission) divided by 100 equals Solar Heat Gain Coefficient (SHGC) or g-value.

™ Trademarks of SABIC.

## STRUCTURES AND DIMENSIONAL TOLERANCES



## DIMENSIONAL TOLERANCES

	GAUGE	WIDTH	LENGTH <6M	LENGTH >6MM
6 mm	+/- 8%	+/- 0.5%	+ 12 mm	+ 30 mm
8 mm	+/- 8%	+/- 0.5%	+ 12 mm	+ 30 mm
10 mm	+/- 8%	+/- 0.5%	+ 12 mm	+ 30 mm
16 mm	+/- 8%	+/- 0.5%	+ 12 mm	+ 30 mm

---

## DEFINITIONS

### LIGHT TRANSMISSION

LEXAN THERMOCLEAR 1 UV Lite sheet in clear color transmits the visible light range very well. Light transmission D65 (%LT) measures the percentage of visible light that passes through the sheet.

### UV RESISTANCE

Despite transmitting visible light very well, LEXAN THERMOCLEAR 1UV Lite sheet is almost opaque to radiation in the UV and far infra-red region. This useful shielding property can prevent discoloration of sensitive materials such as fabrics or other organic materials placed under or behind LEXAN THERMOCLEAR 1UV Lite sheet glazing in, for example, a factory warehouse, museum or shopping centre. The complete LEXAN THERMOCLEAR 1UV Lite sheet range features a proprietary one side surface treatment designed to protect the sheet against the degrading effects of ultra-violet radiation in natural sunlight. This side must always be facing the sun.

### WARRANTY

SABIC offers a Ten (10) Year Limited Written Warranty on LEXAN THERMOCLEAR 1UV Lite sheet covering discoloration, loss of light transmission and loss of strength due to weathering.

### THERMAL INSULATION

The multi-wall structure of LEXAN THERMOCLEAR 1UV Lite sheet offers significant advantages where thermal insulation is a major consideration. The hollow form provides excellent insulation characteristics with heat losses significantly lower than mono-wall glazing materials.

### FIRE TEST PERFORMANCE

LEXAN THERMOCLEAR 1UV Lite sheet has good fire behavior characteristics. More detailed information is available from your local SABIC Service Center or authorized dealer.

### IMPACT STRENGTH

LEXAN THERMOCLEAR 1UV Lite sheet has outstanding impact performance over a wide temperature range, -40°C to 120°C, and also after prolonged outdoor exposure.

### HAIL SIMULATION

As roofing material LEXAN THERMOCLEAR 1UV Lite sheet is subjected to the extremes of weather; like storms, hail, wind, snowfall and ice formation. Under these conditions, the product is virtually unbreakable and is able to accommodate the subsequent temperature change to sunny conditions without breaking or buckling. It should be noted that when glass and acrylic are tested their failure characteristics are typical brittle, whilst LEXAN THERMOCLEAR 1UV Lite sheet shows a ductile deformation one, e.g. small indentations. SABIC offers a Ten Year (10) Limited Written Warranty on LEXAN THERMOCLEAR 1UV sheet covering loss of strength or impact due to weathering.

---

## CONTACT US:

### Middle East and Africa

SABIC Global Headquarters  
PO Box 5101  
Riyadh 11422  
Saudi Arabia  
T +966 (0) 1 225 8000  
F +966 (0) 1 225 9000  
E [info@sabic.com](mailto:info@sabic.com)

### Email

[sfs.info@sabic-ip.com](mailto:sfs.info@sabic-ip.com)

### Americas

Specialty Film & Sheet  
1 Plastics Avenue  
Pittsfield, MA 01201  
USA  
Toll-free 1 800 323 3783  
T 1 413 448 6655  
F (888) 443 2033  
E [Spinside.sales@sabic-ip.com](mailto:Spinside.sales@sabic-ip.com)

### Europe

Specialty Film & Sheet  
Plasticslaan 1  
4612 PX  
Bergen op Zoom  
The Netherlands  
T +31 (0)164 293678  
F +31 (0)164 293272  
E [sfs.info@sabic-ip.com](mailto:sfs.info@sabic-ip.com)

### Asia Pacific

Specialty Film & Sheet  
2550 Xiupu Road  
Pudong  
201319 Shanghai  
China  
T +86 21 2037 8188  
F +86 21 2037 8288  
E [sfs.info@sabic-ip.com](mailto:sfs.info@sabic-ip.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.  
© 2014 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.

[www.sabic.com/sfs](http://www.sabic.com/sfs)

