

LEXAN™ THERMOCLEAR™ 1UV LITE POLYCARBONATE SHEET

PRODUCT DATASHEET

DESCRIPTION

LEXAN™ THERMOCLEAR™ 1UV 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 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 | GAUGE MM | Weight kg/m ² | SOUND RED. VALUE † (DB) | U-Value‡ W/m ² K | Impact Test¶ Gardner | LT* D65 %LT |
|-------------------|-------------|-----------------------------|-------------------------------|--------------------------------|-------------------------|-------------------|
| LC20613 | | | | | | |
| Clear 112 | 6 | 1.2 | 17 | 3.56 | >60 | 80 |
| Opal White 825075 | | | | | | 20 |
| Bronze BR236 | | | | | | 36 |
| Grey GY424 | | | | | | 24 |
| LC20815 | | | | | | |
| Clear 112 | 8 | 1.5 | 18 | 3.26 | >60 | 80 |
| Opal White 825075 | | | | | | 20 |
| Bronze BR236 | | | | | | 36 |
| Grey GY424 | | | | | | 24 |
| LC21017 | | | | | | |
| Clear 112 | 10 | 1.7 | 19 | 3.02 | >60 | 76 |
| Opal White 825075 | | | | | | 20 |
| Bronze BR236 | | | | | | 36 |
| Grey GY424 | | | | | | 24 |
| LC31627 | | | | | | |
| Clear 112 | 16 | 2.4 | 21 | 2.27 | >60 | 68 |
| Opal White 825075 | | | | | | 20 |
| Bronze BR236 | | | | | | 36 |
| Grey GY424 | | | | | | 24 |

♦ These property values have been derived from Lexan* resin data for the material used to produce this sheet product

† Sound reduction values 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 2 m/sec.

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

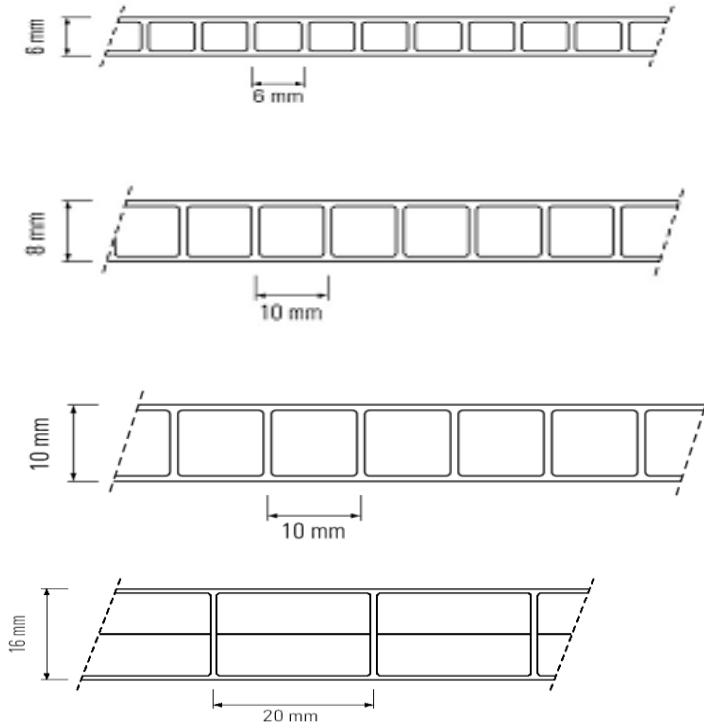
TST (Total Solar Transmission) divided by 100 equals Solar Heat Gain Coefficient (SHGC) or g-value.

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Other Colors Available:

| COLOR | COLOR NUMBER |
|------------|--------------|
| Blue | BL350 |
| Green | GN736 |
| Blue White | C920 |

STRUCTURES AND DIMENSIONAL TOLERANCES



DIMENSIONAL TOLERANCES

| | Gauge | Width | Length <6m | Length >6m |
|-------|--------|----------|------------|------------|
| 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 Innovative Plastics 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 Innovative Plastics' Service Center or authorized dealer.

SOUND INSULATION

The sound insulation characteristics of a material are largely pre-determined by its stiffness, mass and physical construction. According to DIN 52210-75, the maximum obtainable sound is 21dB.

IMPACT STRENGTH

LEXAN THERMOCLEAR 1UV LITE sheet has outstanding impact performance over a wide temperature range, -40°F to 248°F, (-40°C to 120°C) and also after prolonged outdoor exposure.

HAIL RESISTANCE

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 LITE sheet covering loss of strength or impact due to weathering.

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

SABIC
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

SABIC
Functional Forms
Plasticslaan 1
4612 PX
Bergen op Zoom
The Netherlands
T +31 (0)164 293684
F +31 (0)164 292272
E ff.info@sabic.com

PACIFIC

SABIC
Functional Forms
2550 Xiupu Road
Pudong
201319 Shanghai
China
T +86 20 2866 6168
E ff.info@sabic.com

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