

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 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
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
LC20815						
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
LC21017						
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
LC31627						
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)

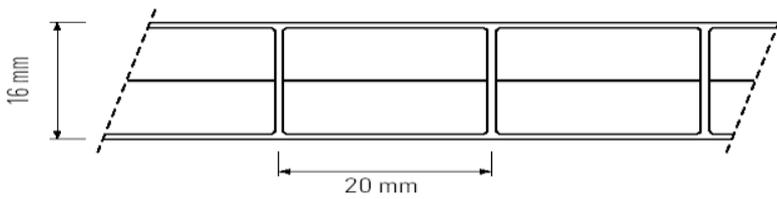
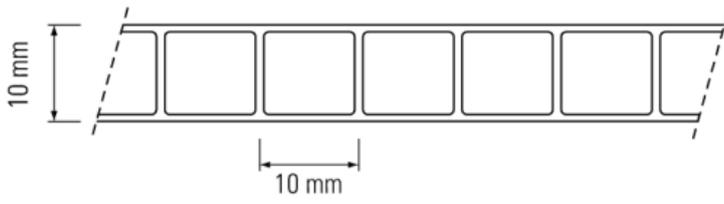
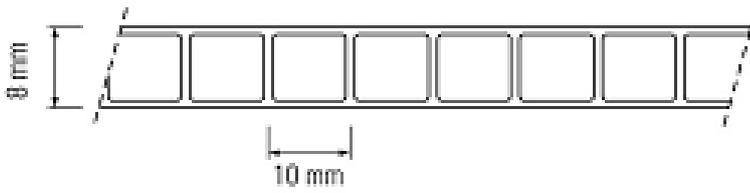
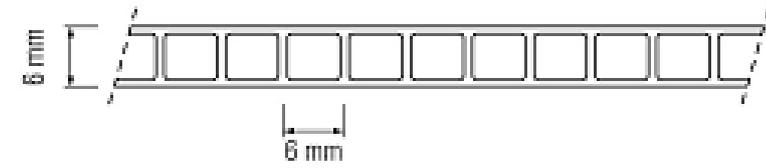
¶ Hail simulation test developed by TNO, the Netherlands, artificial hailstones of 20 mm diameter are shot at the sheet at min. speed of 21 m/sec.

* 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.

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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.

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