

CC1 Lexan* Thermoclear* 2UV Co-Extruded Sheet

Product Datasheet

Description

CC1 Lexan* Thermoclear* 2UV Co-Extruded sheet grades are members of the Lexan Thermoclear sheet range of high quality, multi-wall polycarbonate glazing sheets extruded from Lexan resin. The complete range offers remarkable impact strength, high light transmission, light weight, long term weather resistance and, due to the multi-wall construction, outstanding thermal insulation properties and is 2 sides UV protected. CC1 Lexan Thermoclear 2UV Co-Extruded sheet grades are available in colors: Clear, Opal White, Bronze, Solar Control IR Green and Metallic.

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)	DST [#] (%DST)	TST [#] (%TST)	SHGC [#]	LSGR [#]	SC [#]
LTT2R45											
Clear	4.5	1.0	16	3.86	>72	83	77	83	0.83	1.00	0.95
Opal White	4.5	1.0	16	3.86	>72						
Bronze	4.5	1.0	16	3.86	>72						
IR-Green	4.5	1.0	16	3.86	>72	67	49	61	0.61	1.12	0.71
Metallic	4.5	1.0	16	3.86	>72						
LTT2R6											
Clear	6	1.3	17	3.56	>72	82	76	82	0.82	1.00	0.94
Opal White	6	1.3	17	3.56	>72						
Bronze	6	1.3	17	3.56	>72						
IR-Green	6	1.3	17	3.56	>72	66	47	60	0.60	1.10	0.69
Metallic	6	1.3	17	3.56	>72						
LTT2R8											
Clear	8	1.7	18	3.26	>72	81	77	82	0.82	0.99	0.94
Opal White	8	1.7	18	3.26	>72						
Bronze	8	1.7	18	3.26	>72						
IR-Green	8	1.7	18	3.26	>72	65	47	61	0.61	1.07	0.70
Metallic	8	1.7	18	3.26	>72						
LTT2R10											
Clear	10	2.0	19	3.02	>72	81	76	80	0.80	1.01	0.92
Opal White	10	2.0	19	3.02	>72						
Bronze	10	2.0	19	3.02	>72						
IR-Green	10	2.0	19	3.02	>72	65	45	60	0.60	1.08	0.69
Metallic	10	2.0	19	3.02	>72						
LTT3T16											
Clear	16	2.8	21	2.27	>72	74	70	78	0.78	0.95	0.90
Opal White	16	2.8	21	2.27	>72						
Bronze	16	2.8	21	2.27	>72						
IR-Green	16	2.8	21	2.27	>72	55	36	52	0.52	1.06	0.60
Metallic	16	2.8	21	2.27	>72						

Color number reference table:

Color	Color number
Clear	112
Opal White (40%LT)	825074
Opal White (20%LT)	825075
Bronze	5109
IR-Green	GN8B038T
Metallic	GY6A744M

♦ 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)

¶ Impact test using Gardner Impact method ASTM D4226, D5420, D5628, A2LA Accredited

• 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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Lexan* Thermoclear*

Solar Transmission

Transparent grades of Lexan Thermoclear have excellent light transmission. Although Lexan Thermoclear has less solar transmission versus traditional glass, we advise for buildings in hot climates or facing south, Lexan Thermoclear in IR version (absorbing infra red) which will reduce the solar transmission substantially up to 70%.

UV Resistance

Despite transmitting visible light very well, CC1 Lexan Thermoclear 2UV Co-Extruded 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 CC1 Lexan Thermoclear 2UV Co-Extruded sheet glazing in, for example, a factory warehouse, museum or shopping centre.

The complete CC1 Lexan Thermoclear 2UV Co-Extruded sheet range features a proprietary two sides surface treatment designed to protect the sheet against the degrading effects of ultra-violet radiation in natural sunlight. It has excellent resistance to outdoor weathering.

Warranty

SABIC Innovative Plastics offers a Ten (10) Year Limited Written Warranty on CC1 Lexan Thermoclear 2UV Co-Extruded sheet covering discoloration, loss of light transmission and loss of strength due to weathering.

Thermal insulation

The multi-wall structure of CC1 Lexan Thermoclear 2UV Co-Extruded 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

CC1 Lexan Thermoclear 2UV Co-Extruded 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 22dB.

Impact Strength

CC1 Lexan Thermoclear 2UV Co-Extruded sheet has outstanding impact performance over a wide temperature range, -40°C to 120°C, and also after prolonged outdoor exposure.

Hail Resistance

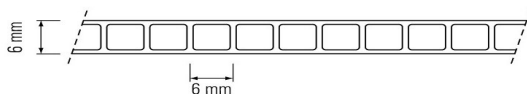
As roofing material CC1 Lexan Thermoclear 2UV Co-Extruded sheet is subjected to the extremes of weather; like storms, hail, wind, snowfall and ice formation. Under these conditions, the product is virtually unbreakable and is able to accommodate the subsequent temperature change to sunny conditions without breaking or buckling. It should be noted that when glass and acrylic are tested their failure characteristics are typical brittle, whilst CC1 Lexan Thermoclear 2UV Co-Extruded sheet shows a ductile deformation one, e.g. small indentations. SABIC Innovative Plastics offers a Ten Year (10) Limited Written Warranty on CC1 Lexan Thermoclear 2UV Co-Extruded sheet covering loss of strength or impact due to weathering.

Structures and nomenclatures

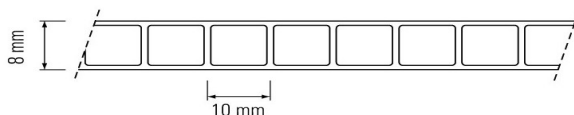
LTT2R45



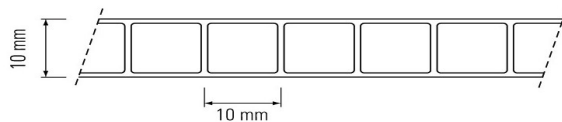
LTT2R6



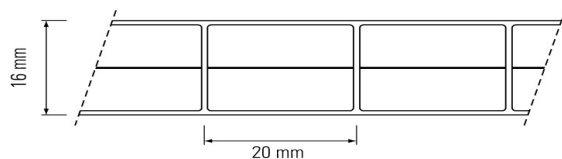
LTT2R8



LTT2R10



LTT3T16



Tolerances on Dimensions

	Weight	Gauge	Width	Length <6m	Length >6m
4mm 2RS 900gr	+/-2%	+/-7%	+/-0.5%	+12mm	+30mm
4.5mm 2RS 1000gr	+/- 1%	+/-7%	+/-0.5%	+12mm	+30mm
6mm 2RS 1300gr	+/- 1%	+/-5%	+/-0.5%	+12mm	+30mm
8mm 2RS 1700gr	+/- 1%	+/-5%	+/-0.5%	+12mm	+30mm
10mm 2RS 2000gr	+/- 1%	+/-5%	+/-0.5%	+12mm	+30mm
16mm 3TS 2800gr	+/- 2%	+/-3%	+/-0.5%	+12mm	+30mm

General Guidelines

Storage

CC1 Lexan Thermoclear 2UV Co-Extruded sheet should be stored and protected against atmospheric influences like sun, rain, etc. Care should be exercised when handling and transporting CC1 Lexan Thermoclear 2UV Co-Extruded sheet in order to prevent scratches on the panel surface and damage to the panel edges.

Cleaning

SABIC Innovative Plastics recommends the following cleaning agent SUMALIGHT D12 from Johnson Diversey Lever (check Technical manual for further details). Small surfaces can be cleaned with luke warm water, using a soft sponge and a solution of mild soap. Do not use any corrosive materials or chemicals to clean CC1 Lexan Thermoclear 2UV Co-Extruded sheet s. Using any other cleaning agents than the recommended one must have the prior approval of SABIC Innovative Plastics in order to validate the CC1 Lexan Thermoclear 2UV Co-Extruded sheet warranty.

Chemical Resistance

Neoprene, EPT or EPDM rubbers with an approximate Shore Hardness of A65 are recommended. When using glazing compounds it is essential that the sealant system accepts a certain amount of movement to allow for thermal expansion, without loss of adhesion to the frame or sheet. Silicone sealants are generally recommended for use with CC1 Lexan Thermoclear 2UV Co-Extruded sheet . It is strongly advised when using sealing to check before compatibility before use.

Sawing

CC1 Lexan Thermoclear 2UV Co-Extruded sheet can be cut easily and accurately with standard workshop equipment. This includes common circular, hand and hacksaws. Saw dust should be blown out of the channels using clean compressed air. Circular saw blade should be fine-toothed panel blades. When hand or power hacksaws are used, the sheet should be clamped to the worktable to avoid undesirable vibration.

Thermal expansion allowance

Since CC1 Lexan Thermoclear 2UV Co-Extruded sheet has a greater linear thermal expansion coefficient than that of traditional glazing materials, care should be taken to allow for free expansion of the sheet to prevent bowing and internal thermal stress. Thermal expansion allowance must be made for both the length and width of the CC1 Lexan Thermoclear 2UV Co-Extruded sheet . In general, thermal expansion of the sheet is approximately 3 mm per linear meter.



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