

PRODUCT DATASHEET

Lexan™ Thermoclear™ Sheet

General Purpose Multiwall Sheet

DESCRIPTION

Lexan™ Thermoclear™ sheets are sheets with a 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. Lexan Thermoclear Plus 2UV sheet grades are available in the standard colors Clear (112), Opal White (WH7A092X) & Solar control IR Green (GN8B038T).

PRODUCT AVAILABILITY

SABIC Grade name	Standard Widths (mm)	Available lengths (mm)	(sheets/pallet) **
LT2UV452RS10	1250-2100	3000-13000	80
LT2UV62RS13	1250-2100	3000-13000	60
LT2UV82RS15	1250-2100	3000-13000	45
LT2UV102RS17	1250-2100	3000-13000	40
LT2UV105R175	1250-2100	3000-13000	40
LT2UV163TS27	980-1250-2100	3000-13000	25

** Please check our latest product guide for MOQ & Stock (MTI) items

TYPICAL PROPERTY VALUES

Grade	(mm)	Structure	weight (kg/m ²)	^ U value (W/m ² K)	Rib Distance (mm)
LT2UV452RS10	4.5	2 wall Rectangular	1.00	3.86	6.30
LT2UV62RS13	6	2 wall Rectangular	1.30	3.56	6.30
LT2UV82RS15	8	2 wall Rectangular	1.50	3.26	10.70
LT2UV102RS17	10	2 wall Rectangular	1.70	3.02	10.70
LT2UV105R175	10	5 wall Rectangular	1.75	2.48	8.00
LT2UV163TS27	16	3 wall Tunnel structure	2.70	2.27	20.00

^ U-values based on SABIC calculated values according ISO 10077

LIGHT TRANSMISSION STANDARD COLORS

Grade	# LT clear (%)	LT opal white (%)	LT IR Green (%)
LT2UV452RS10	83	67	
LT2UV62RS13	82	66	66
LT2UV82RS15	81	64	65
LT2UV102RS17	81	64	65
LT2UV105R175	65	60	
LT2UV163TS27	74	63	55

Light transmission measurements acc. ISO 9050

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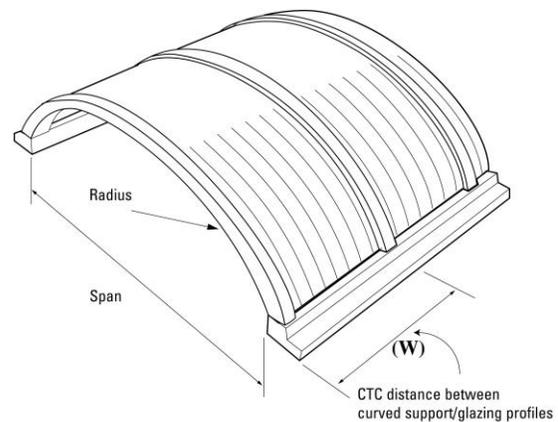
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COLD CURVED GLAZING

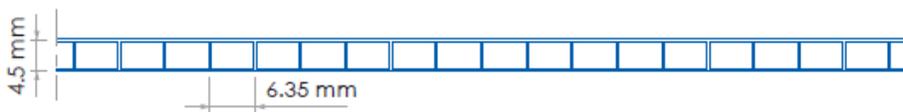
Lexan Thermoclear sheet can be successfully cold curved over curved support glazing profiles, to suit many glazing applications, e.g. domes, roof-lights, etc. Providing the radius is not below the minimum recommended value of 2400mm, then the introduced stress by cold-curving will not have any adverse effect upon the mechanical performance of the sheet. Sheets must always be bent longitudinally, never across the width of the sheet. Sheet length needs to be greater than the sheet width to facilitate curvature; in practice, a ratio of 1:2 or less is never contemplated because of the practicalities of installation geometry.

Grade	Min. bending radius (mm) 150X gauge
LT2UV452RS10	n/a
LT2UV62RS13	900
LT2UV82RS15	1200
LT2UV102RS17	1500
LT2UV105R175	1500
LT2UV163TS27	2400



STRUCTURES & NOMENCLATURES

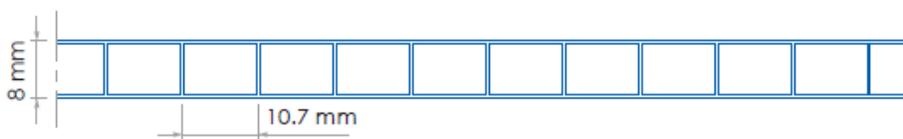
452RS10 structure



62RS13 structure



82RS15 structure



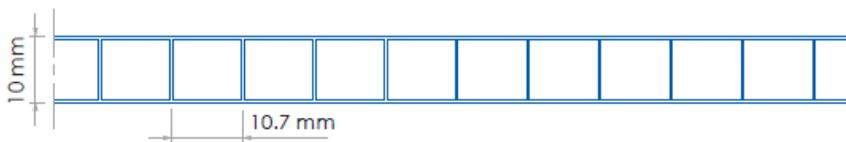
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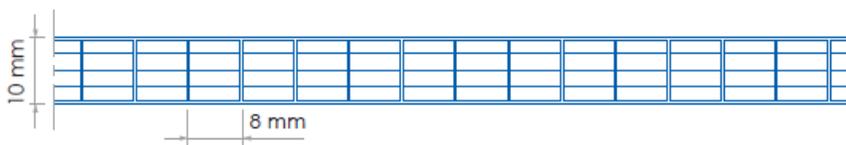
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STRUCTURES & NOMENCLATURES (continued)

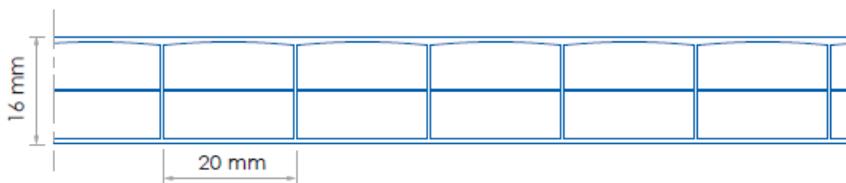
102RS17 structure



105R175 structure



163TS27 structure



COATING AVAILABILITY

Lexan Thermoclear 2UV plus Sheet:

Lexan Thermoclear 2UV plus sheet is the standard coating applied to both sides of the SABIC multiwall sheet and gives the product an excellent UV weathering performance.

Lexan Thermoclear SunXP Sheet:

Lexan Thermoclear SunXP sheet is a coating which even enhances the weathering performance to the extent that SABIC offers a fifteen year written limited warranty with this product.

Lexan Thermoclear Solar Control IR (SCIR) Sheet:

Lexan Thermoclear Solar Control IR reduces significantly the solar transmission coming from the sun while simultaneously offering high levels of light transmission.

Lexan Thermoclear Solar Control Sheet:

Lexan Thermoclear Solar Control sheet, the interior surface side will have a full Solar Control print lowering the solar transmittance coming from the sun light.

Lexan Thermoclear Venetian Sheet:

Lexan Thermoclear Venetian sheet, the interior surface side will have Venetian printed stripes as an aesthetic view of the product.

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SOLAR TRANSMISSION

Lexan Thermoclear sheet is essential opaque to all wavelengths below 385 nanometers. This useful shielding property can prevent discoloration of sensitive materials placed under or behind. Solar heat gain within a building is caused by heat input from radiation emitted from the sun. Sunlight entering the building heats the air both directly and through absorption by the framework, furniture, etc. and is released as infrared energy. In combination with the insulation properties of Lexan Thermoclear sheet, this prevents heat escaping faster than it is created causing a temperature increase, the so-called 'greenhouse effect'. The temperature can be controlled by venting, often in combination with special tinted opal white or Lexan Thermoclear SC IR which contains a proprietary additive which selectively absorbs the near infrared region of the light. Lexan Thermoclear is therefore available in many different colors or with IR additives, which both cuts down the brightness of sunlight to a pleasing level and reduces heat buildup inside the building. Calculations for solar heat input through glazing are normally based on data published in 'The Institution of Heating and Ventilating Engineers Guide Book'. These calculations are based on clear glass and correction factors or shading coefficients are then applied when alternative glazing materials are used.

UV RESISTANCE

The complete Lexan Thermoclear sheet range features a proprietary both sides surface treatment designed to protect the sheet against the degrading effects of ultra-violet radiation in natural sunlight. Both sides UV protected surfaces offers advantage in economically cutting the sheet in desired shapes, and installation mistakes are minimized since both sheet surfaces may be faced outwards.

WARRANTY

SABIC Innovative Plastics offers a Ten (10) Year Limited Written Warranty on Lexan Thermoclear sheet covering discoloration, loss of light transmission and loss of strength due weathering. See warranty for exact details.

FIRE TEST PERFORMANCE

Lexan Thermoclear sheet has good fire performance against many national fire codes dependent on thickness and color; please check with the local sales office for details.

IMPACT STRENGTH

Lexan Thermoclear sheet has outstanding impact performance over a wide temperature range, -40°C to +120°C, and also after prolonged outdoor exposure. As a roof glazing material Lexan Thermoclear 2UV sheet is subjected to the extremes of weather; storms, hail stones, wind, snowfalls 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. Please refer to the warranty for details.

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