

PRODUCT DATASHEET

Lexan* Thermoclear* 16mm 5X Multiwall Sheet

DESCRIPTION

Lexan* Thermoclear* LT2UV165X27 sheet is a unique sheet which combines a high thermal insulation, high light transmission and an outstanding balance of low weight and high stiffness. LT2UV165X27 is a member of the Lexan Thermoclear sheet range of high quality, multiwall polycarbonate glazing sheets extruded from Lexan resin. Lexan Thermoclear 16 mm 5 wall X-structure sheet has two sides proprietary UV protected surface, giving superior resistance to outdoor weathering. Lexan Thermoclear LT2UV165X27 is available in the sheet widths (w): 980, 1050¹, 1250 and 2100mm.

PRODUCT AVAILABILITY

Grade	std widths	available in lengths in mm	std packaging stock items
LT2UV165X27	980mm - 1050mm ¹ - 1250mm - 2100mm	3000-13000	25 sheets/pallet

¹ This width has a minimum order quantity of 5000kg's

COATING AVAILABILITY

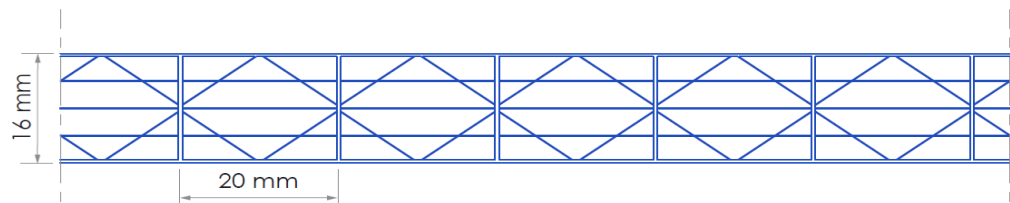
Thermoclear 2UV plus sheet:

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.

Thermoclear SunXP sheet:

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

LT2UV165X27



BASIC PROPERTY VALUE'S

weight kg/m ²	U value W/m ² K	Rib distance in mm	Light Transmission 112	Light Transmission WH7A092X	Light Transmission IR Green
2.700	1.88	20	59%	53%	42%

U-values based on SABIC calculated values according ISO 10077 (EN673)
Light Transmission measurements according ISO 9050 (EN 410) on 600x600 mm samples

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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 to weathering. See warranty for exact details.

FIRE TEST PERFORMANCE

Lexan Thermoclear sheet has good fire performance against many national and international fire codes dependent on thickness and color; please check with the local sales office for details. Lexan Thermoclear LT2UV165X27 sheet has a rating of B, s1, d0 according EN13501

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.

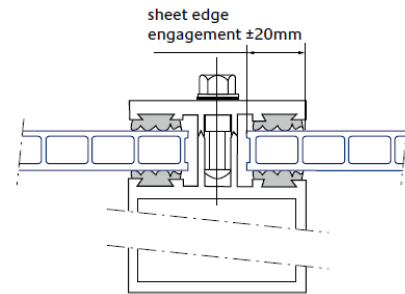
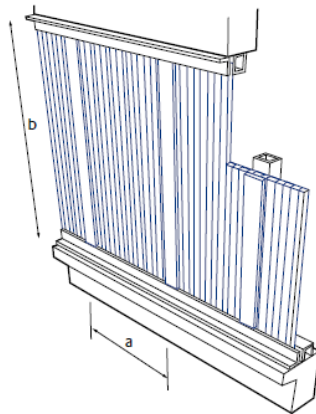
HAIL SIMULATION

It should be noted that when glass and Acrylic are tested their failure characteristics are typical brittle, whilst Lexan Thermoclear LT2UV165X27 sheet shows a ductile deformation, e.g. small indentations. SABIC Innovative Plastics offers a Ten Year (10) Limited Written Warranty on Lexan Thermoclear sheet covering loss of strength or impact due to weathering.

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DEFLECTION CHARACTERISTICS



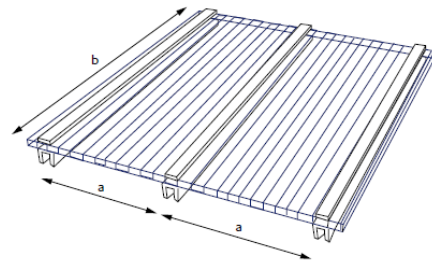
Four sides clamped:

The deflection characteristics in this particular configuration are dependent upon the ratio of the support bar spacing a/b . In practice, "a" represents the center-to-center distance of glazing profiles on the width of the sheet. "b" represents the center to center distance of glazing profiles on the length of the sheet.

Center to center distance "b" = mm

Ratio a : b	600	800	1000	1200	1400	1600	1800	2000
1 : 1	2100*	2100*	1900	1800	1700	1600	1500	1400
1 : <1.5	1700	1600	1450	1350	1200	1100	1000	950
1 : >1.5	1200	1150	1100	1050	1000	950	900	850

*center to center distance = maximum sheet width



Two sides clamped:

The major factor determining the sheet deflection behavior is the distance "a" between the center points of two adjacent supports. Since any length can be selected, the measurement "b" does not influence the overall deflection performance.

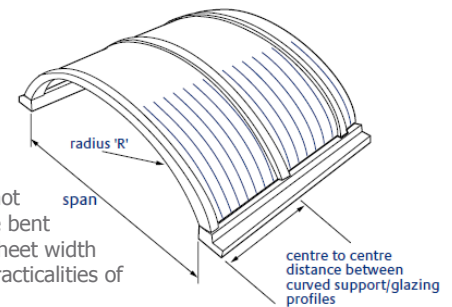
Pressure N/m^2	600	800	1000	1200	1400	1600	1800	2000
center to center distance "a" (mm)	1200	1150	1100	1050	1000	950	900	850

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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.



Loading in N/m ²	600	800	1000	1200	1400	1600	1800	2000
Radius (mm)	Center to center distance (mm) curved glazing profiles							
2400	2100*	2100*	2100*	2100*	2100*	1800	1500	1200
2800	2100*	2100*	2100*	2100*	1800	1500	1250	1150
3200	2100*	2100*	2100*	1850	1550	1400	1250	1100
3400	2040	2000	1900	1650	1450	1300	1200	1050
3600	1980	1900	1850	1550	1350	1200	1100	950
3800	1920	1800	1700	1450	1250	1120	1000	950
4000	1850	1700	1600	1350	1200	1050	950	950
4200	1790	1600	1500	1275	1150	1000	950	950
4400	1740	1500	1400	1200	1100	950	950	950
4600	1700	1400	1300	1140	1050	950	950	950
4800	1650	1300	1200	1100	1000	950	950	950
5000	1600	1200	1150	1050	950	950	950	950
5200	1550	1100	1000	950	950	950	950	950
5400	1400	1050	950	950	950	950	950	950
5600	1300	1000	950	950	950	950	950	950
5800	1200	950	950	950	950	950	950	950
6000	1200	950	950	950	950	950	950	950

*center to center distance = maximum sheet width

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