POLYVANTIS

PRODUCT DATASHEET

LEXAN™ THERMOCLEAR™ SHEET GENERAL PURPOSE

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

POLYVANTIS GRADE NAME	STANDARD WIDTH (MM)	AVAILABLE LENGTHS (MM)	(SHEETS/PALLET) **
LT2UV452RS10	1200-2100	3000-13000	80
LT2UV62RS13	1200-2100	3000-13000	60
LT2UV82RS15	1200-2100	3000-13000	45
LT2UV102RS17	1200-2100	3000-13000	40
LT2UV105R175	1250-2100	3000-13000	40
LT2UV163TS27	980-1200-2100	3000-13000	25

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

TYPICAL PROPERTY VALUES

GRADE	(MM)	STRUCTURE	WEIGHT (KG/M²)	^ U VALUE (W/M² K)	RIB DISTANCE (MM)
LT2UV452RS10	4.5	2 wall Rectangular	1.00	3.86	6.3
LT2UV62RS13	6	2 wall Rectangular	1.30	3.56	6.3
LT2UV82RS15	8	2 wall Rectangular	1.50	3.26	10.7
LT2UV102RS17	10	2 wall Rectangular	1.70	3.02	10.7
LT2UV105R175	10	5 wall Rectangular	1.75	2.48	8.0
LT2UV163TS27	16	3 wall tunnel structure	2.70	2.27	20.0

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

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.

LIGHT TRANSMISSION STANDARD COLORS

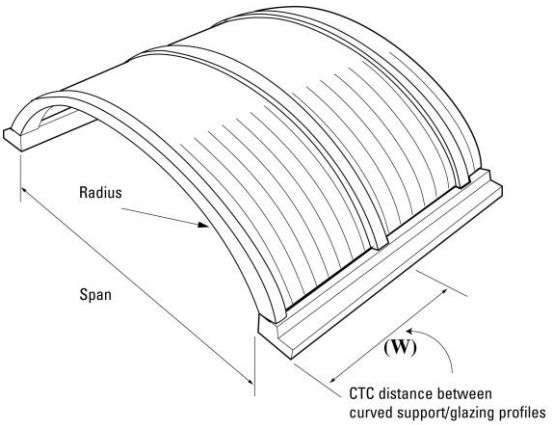
GRADE	# LT CLEAR (%)	LT OPAL WHITE (%)	LT IR GREEN (%)
LT2UV452RS10	83	67	-
LT2UV62RS13	82	66	66
LT2UV82RS15	81	64	65
LT2UV102RS17	81	64	65
LT2UV105R175	65	60	-
LT2UV163TS27	74	63	55

Light transmission measurements acc. ISO 9050

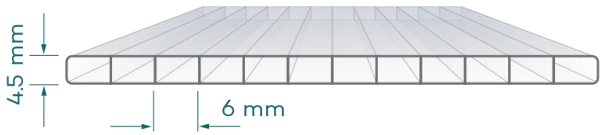
COLD CURVED GLAZING

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



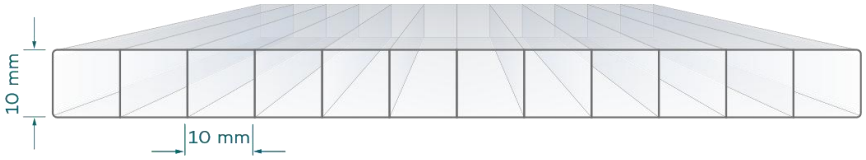
452RS10



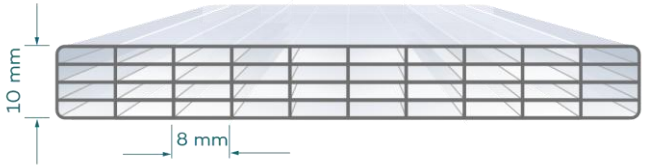
62RS13



82RS15



102RS17



LT2UV105R175



LT2UV163TS27

COATING AVAILABILITY

LEXAN THERMOCLEAR 2UV PLUS SHEET:

LEXAN™ THERMOCLEAR™ plus sheet is the standard coating applied to both sides of the POLYVANTIS multiwall sheet and gives the product an excellent UV weathering performance.

LEXAN THERMOCLEAR SOLAR CONTROL IR (SCIR) SHEET:

LEXAN THERMOCLEAR Solar Control IR sheet reduces significantly the solar transmission coming from the sun while simultaneously offering high levels of light transmission.

SOLAR TRANSMISSION

LEXAN THEROMCLEAR 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

POLYVANTIS offers a Twenty (20) 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.

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.

POLYVANTIS

Polycarbonate products are sold globally under the trademark LEXAN™ Film & Sheet, owned by SABIC or its subsidiaries or affiliates.

www.polyvantis.com

LEXAN™ POLYCARBONATE FILM & SHEET Tough, Virtually Unbreakable

LEXAN is a trademark of SABIC