

PRODUCT DATASHEET

WLMW Polycarbonate Sheet

DESCRIPTION

WLMW is a structured 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. WLMW polycarbonate sheet can be an excellent 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 reduction value † (dB)	U- value‡ (W/m ² K)	Hail impact Test ¶ (m/sec)	LT* D65 (%LT)	DST* (%DST)	TST* (%TST)	SHGC #	LSGR	SC
WLMW42RS											
Clear	4	0.75	15	3.96	>21	83	79	83	0.83	1.00	0.95
Opal White	4	0.75	15	3.96	>21	67	65	70	0.70	0.96	0.80
Bronze	4	0.75	15	3.96	>21	37	43	58	0.58	0.64	0.67
WLMW62RS											
Clear (112)	6	1.1	17	3.56	>21	81	77	81	0.81	1.00	0.93
White (WH7A092X)	6	1.1	17	3.56	>21	66	63	69	0.69	0.96	0.79
Bronze (515055)	6	1.1	17	3.56	>21	37	43	58	0.58	0.64	0.67
WLMW82RS											
Clear (112)	8	1.3	18	3.26	>21	81	77	82	0.82	0.99	0.94
White (WH7A092X)	8	1.3	18	3.26	>21	64	62	68	0.68	0.94	0.78
Bronze (515055)	8	1.3	18	3.26	>21	38	43	59	0.59	0.64	0.68
WLMW102RS											
Clear (112)	10	1.5	19	3.02	>21	81	76	80	0.80	1.01	0.91
White (WH7A092X)	10	1.5	19	3.02	>21	64	62	68	0.68	0.94	0.78
Bronze (515055)	10	1.5	19	3.02	>21	39	44	59	0.59	0.66	0.68
WLMW163TS											
Clear (112)	16	2.5	21	2.27	>21	74	70	78	0.78	0.95	0.92
White (WH7A092X)	16	2.5	21	2.27	>21	63	60	66	0.66	0.95	0.76
Bronze (515055)	16	2.5	21	2.27	>21	33	38	53	0.53	0.63	0.61

♦ 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), DST (Direct Solar 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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DEFINITIONS

Light Transmission D65 (% LT):

Percentage of the incident visible light that passes through the sheet.

Direct Solar Transmission (%DST):

Percentage of incident solar radiation that passes directly through the sheet.

Total Solar Transmission (%TST):

The percentage of incident Solar radiation transmitted by the sheet which includes the direct Solar Transmission plus the part of the Solar Absorption reradiated inward.

Solar Heat Gain Coefficient (SHGC):

or g-value is the total solar energy that enters the interior of a building, divided by 100.

Shading Coefficient (SC):

The ratio of the total solar radiation transmitted by a given material to that transmitted by normal 3 mm glass, whose light transmission is 87%. SC=%TST/87.

Light to Solar Gain Ratio (LSGR):

The ratio between total light transmission (LT) and the total solar transmission (TST).

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GENERAL GUIDELINES

STORAGE

WLMW sheet should be stored and protected against atmospheric influences like sun, rain, etc. Care should be exercised when handling and transporting WLMW sheet in order to prevent scratches on the panel surface and damage to the panel edges.

CLEANING

SABIC recommends the following cleaning agent SUMALIGHT D12 BRUCODECID. Small surfaces can be cleaned with like warm water, using a soft sponge and a solution of mild soap. Do not use any corrosive materials or chemicals to clean WLMW sheets. Using any other cleaning agents than the recommended one must have the approval of SABIC in order to keep the properties of WLMW sheets.

CHEMICAL RESISTANCE

Neoprene, EPT or EPDM rubbers with an approximate Shore Hardness of the 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 WLMW sheet. It is strongly advised when using sealing to check before compatibility before use.

SAWING

WLMW 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 WLMW 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 WLMW sheet. In general, thermal expansion of the sheet is approximately 3 mm per linear meter.

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