



marlonst

LONGLIFE

MULTIWALL POLYCARBONATE SHEET

Marlon ST Longlife is a lightweight multiwall polycarbonate sheet with exceptional insulating properties and high impact resistance. Excellent light transmission and an attractive appearance make Marlon ST Longlife the ideal solution for a wide range of applications including architectural roofing, vertical glazing and conservatories.

The vast product range offers a number of options - Super Strength from XX wall, Marlon ST Longlife's most resilient structure, Energy Efficiency from sheet thicknesses up to 55mm which can contribute towards lowering the overall energy consumption of a building, Condensation Control for horticulture and greenhouses, Dual Tints to reduce solar heat gain and Infra Red (IR) Heat Block which reflects heat from the sun without compromising on light transmission.



OPTIONS

- **Thicknesses:** 4mm-55mm
- **Structures:** Twinwall, Triplewall, Fourwall, Fivewall, M wall, Sevenwall, XX wall, Tenwall
- **Tints:** Clear, Glass Clear, Opal, Pearlescent Opal, Bronze
- **Dual Tints:** Heat Guard Opal, Bronze Opal
- **Colours:** Red, Blue, Green, Yellow (specials available on request)
- **Protective Coatings:** Double sided UV protection, IR Heat Block, Condensation Control

MAIN BENEFITS

- Energy saving
- Provides high levels of natural light
- Light weight and easy to handle
- High optical clarity
- Thermally insulating
- Damage and impact resistance
- Weatherable Longlife UV protection
- Excellent fire performance
- 10 year warranty
- Extensive and growing range of structures

APPLICATIONS

- Conservatories
- Curved Rooflights
- Canopies
- Industrial Rooflights
- Vertical Glazing
- Greenhouses
- Covered Walkways
- Swimming Pool Covers

COLOURS AND LIGHT TRANSMISSION

Light transmission (%) DIN 5036							
STRUCTURE	CLEAR 'S'	GLASS CLEAR	BRONZE 'B'	OPAL 'V'	PEARLESCENT	HEAT GUARD OPAL	BRONZE OPAL
4mm Twinwall	85		28	39			
6mm Twinwall	82		26	39			
8mm Twinwall	82		20	39			
10mm Twinwall	82		33	40			
30mm Twinwall	77			37			
16mm Triplewall	77	75	18	42			
16x16 Triplewall	77			42			
16x32 Triplewall	74				72		
16mm Mwall	73			35			
8mm Fourwall	74		21	39			
10mm Fourwall	74		30	34			
16mm Fivewall	69		16	39			
25mm Fivewall	68		11	30		7	8
32mm XXwall	64		11	40			
35mm XXwall	67		11	33			
32mm Sevenwall	64		7	33		4	7
35mm Sevenwall	63		7	31			
32mm Tenwall	54			35	31		
35mm Tenwall	54			35			
40mm Tenwall	54	52		33	27		
55mm Tenwall	52			32	25		

STRUCTURES

STRUCTURE	SHEET THICKNESS mm	RIB SPACING mm	MAXIMUM SHEET WIDTH mm	WEIGHT g/m ²	U-VALUE W/m ² K	FALLING DART Nm
Twinwall	4	6	2100	800	3.9	21.3
	6	6	2100	1300	3.7	27
	8	10	2100	1500	3.4	>27
	10	10	2100	1700	3.2	>27
	30	35	1250	3500	2.6	>27
Triplewall	16	20	2100	2700	2.4	>27
M wall	16	17.5	1250	2800	2.2	>27
16x16 Triplewall	16	16	1250	2500	2.4	>27
Fourwall	8	12.5	2100	1500	2.8	>27
	10	12.5	2100	1700	2.5	>27
Fivewall	16	20	2100	2700	1.9	>27
	25	20	2100	3400	1.6	>27
XX Wall	32	16	2100	3800	1.4	>27
	35	16	980	4200	1.4	>27
Sevenwall	32	20	2100	3600	1.25	>27
	35	20	2100	3900	1.2	>27
Tenwall	32	20	1250	3600	1.14	>27
	35	20	1250	3900	1.08	>27
	40	20	1250	4200	0.99	>27
	55	20	1250	5000	0.83	>27

PHYSICAL PROPERTIES

PROPERTIES	TEST METHOD	VALUE	UNITS
Mechanical Properties	Tensile strength at yield	DIN 53455	>60 MPa
	Tensile Strength at break	DIN 53455	>70 MPa
	Elongation at yield	DIN 53455	6-8 %
	Elongation at break	DIN 53455	>100 %
	Modulus of elasticity	DIN 53457	>2300 MPa
	Charpy notched impact strength	DIN 53453	>50
Physical Properties	Specific gravity	DIN 53479	1.20 g/cm ³
	Refractive index nD25	DIN 53491	1.586
	Water absorption, 24h @23°C	DIN 53495	0.35 %
	Water permeability (thickness 1mm)	DIN 53122	<2.28 g/m ²
Thermal Properties	Softening temperature Vicat 'B'	DIN 53460	148 °C
	Deflection temperature, load 1.81MPa	DIN 53461	142 °C
	Linear thermal expansion	DIN 53752	6.8X10 ⁻⁵ m/m.K
	Thermal conductivity	DIN 52612	0.2 W/m.K
	Maximum service temperature - no loading		Permanent 100 °C Short Term 130 °C



FIRE PERFORMANCE

Marlon ST will in most cases meet the following classifications

TEST METHOD	CLASSIFICATION
BS476 Part 7	Class 1
EN 13501	B-s1, d0

Classification is subject to structure and thickness. For further details please contact our technical department.

WARRANTY



Marlon polycarbonate is also available in a range of flat, corrugated and corrugated multiwall sheet options. A range of accessories is also available. For further details please visit our website.

