Macrolux® Solid

POLYCARBONATE SHEETS

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WITH UV PROTECTION
ON BOTH SIDES

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Macrolux® Solid

Lightweight

Excellent impact resistance

Excellent light transmission

Good fire performance

Guaranteed and certified quality

UV protection

Extremely versatile to use

Macrolux® Solid compact sheets are the ideal solution in fields of application where impact resistance and excellent light transmission are primary requirements: glazing, parapets, canopies, skylights, curved roofing systems, signage in general, neon signs, road signs, noise barriers. **Macrolux® Solid** sheets come in thicknesses ranging from 1.5 mm to 15 mm, in a choice of translucent and opaque colours.

Impact resistance

Polycarbonate's mechanical properties make this the technopolymer with the highest impact resistance, allowing it to provide optimum protection against accidental damage and weather-related damage. These qualities mean polycarbonate significantly outperforms other materials (glass, acrylic, PET, etc.) commonly used in applications where transparency is a key requirement. Impact resistance remains constant across a particularly wide temperature range.

UV protection

Applying UV Absorber protection stops polycarbonate from absorbing UV rays that would otherwise lead to its rapid degradation and be responsible for subsequent yellowing and for undermining the strength of the exposed surface. UV protection is applied using co-extrusion technology, whereby an even shielding layer can be produced to screen the polycarbonate from the UV component of the solar radiation. With this technology, the UV protection is made resistant to weathering and is not prone to damage by incorrect maintenance.

Warranty

Sheets with UV protection come with a 10-year warranty against yellowing, loss of light transmission and hail damage. Our sales department will be happy to provide you the exact warranty terms.

Curve radius

Macrolux® Solid sheets can be cold-bended into curves, thus eliminating the need for thermal pre-treatment and increasing the static load values that the sheeting can handle. This gives a great deal of design freedom in the numerous building applications that require the use of curved sheets, such as domes, barrel vaults, canopies, etc. Cold bending can be performed based on a minimum curve radius that varies depending on the thickness and structure of the sheeting being used.

Thermal transmittance

Despite having the same appearance as glass, **Macrolux® Solid** sheets have far superior thermal transmittance values. With a view to reducing heating/air-conditioning costs - with a consequent reduction in harmful emissions into the atmosphere - international standards require both building materials and fenestration systems to meet ever-stricter thermal transmittance requirements.

Thermal expansion

Thermal expansion is a characteristic property of materials that consists in their tendency to change in size as temperature increases. This expansion is quantified via a coefficient that, in the case of polycarbonate, equates to 0.065 mm/m °C. The fact that this coefficient value is much higher than the values associated with materials usually used for roofing and joinery (aluminium, steel, etc.) generates the need for solutions that compensate for this difference in thermal expansion, which thus needs to be factored in at the design stage and in all building applications.

Light transmission

Proper lighting design entails ensuring that the building interior receives the required amount of light. So it is clearly important to use sheets that let enough light through. With much the same properties as glass in terms of light transmission, the **Macrolux® Solid** product range nonetheless lends itself to a much wider range of uses, with an array of colour options to choose from that are also more affordable.

Macrolux® Solid XL

Macrolux® Solid XL sheets are monolithic polycarbonate sheets with dual UV protection. They are used in all applications where the sheet is exposed to the harmful effects of direct sunlight. The co-extruded protection on both surfaces means cutting is optimized, the possibility of incorrect assembly is reduced to a minimum and lasting stability is ensured when it comes to both optical and mechanical properties. This product's features make it unique in delivering superior performance in terms of: transparency, impact resistance, mechanical strength, machinability and adaptability to a wide range of solutions, in addition to retaining exceptional chemical and physical stability. Here are some ideal applications:

- Skylights
- Glazing
- Opening frames
- External partitions
- Noise barriers
- Safety glazing
- Parapets
- Canopies

Thickness shown in full scale.

thickness 1,5 mm

thickness 2 mm

thickness 3 mm

thickness 4 mm

thickness 5 mm

thickness 6 mm

thickness 8 mm

thickness 10 mm

thickness 12 mm

thickness 15 mm

Thickness (mm)	Weight (kg/m²)	LT %			Standard Sizes▪ *(width x length)*	U▪▪ Value (W/m²K)
		Clear *(0010)*	Opal *(0332)*	Bronze *(0220)*		
1,5	1,8	89	---	---	2050 x 3050 2050 x 6100	5,7
2	2,4	89	68	52		5,6
3	3,6	88	56	52		5,5
4	4,8	87	48	52		5,3
5	6,0	87	42	52		5,2
6	7,2	86	36	52		5,1
8	9,6	85	28	52	2050 x 3050	4,8
10	12,0	83	23	52		4,6
12	14,4	81	---	52		4,4
15	18,0	80	---	---		4,1

For detailed technical data please refer to our Macrolux® Solid technical manual or to specific technical data sheets.

▪ The availability of the dimensions indicated may vary depending on the color required. Please check availability with our commercial offices.

▪▪ **Value U**: Calculated values (thermal conductivity 0.20 W/mK; outside heat transmission coefficient 23 W/m²K; inside heat transmission coefficient 8 W/m²K according to EN 674 standard).

Macrolux® Solid IR

Macrolux® Solid IR sheets are "solar control" compact sheets that, by retaining all the special properties of Macrolux® Solid XL sheets, successfully reduce the amount of infrared radiation that gets through and is responsible for the so-called "greenhouse effect". This product lends itself to rooms with large areas of glazing, where maintaining adequate occupant comfort levels is thus an important requirement, not least to keep air-conditioning costs down.

PLUS

Thickness shown in full scale.

thickness 3 mm

thickness 4 mm

thickness 5 mm

thickness 6 mm

thickness 8 mm

thickness 12 mm

Thickness (mm)	Weight (kg/m²)	LT %						Standard Sizes ▪ *(width x length)*	U▪▪ Value (W/m²K)
		IR bronze *(0222)*	IR green *(0430)*	IR blue *(0545)*	IR purple *(0630)*	IR smoked gray *(0638)*	IR gold/opal *(0832)*		
3	3,6	---	62	---	62	---	41	2050 x 3050 2050 x 6100	5,5
4	4,8	---	62	---	---	---	---		5,3
5	6,0	20	---	---	---	---	---		5,2
6	7,2	---	62	47	---	---	---		5,1
8	9,6	---	62	---	---	---	---	2050 x 3050	4,8
12	14,4	---	---	---	---	51	---		4,4

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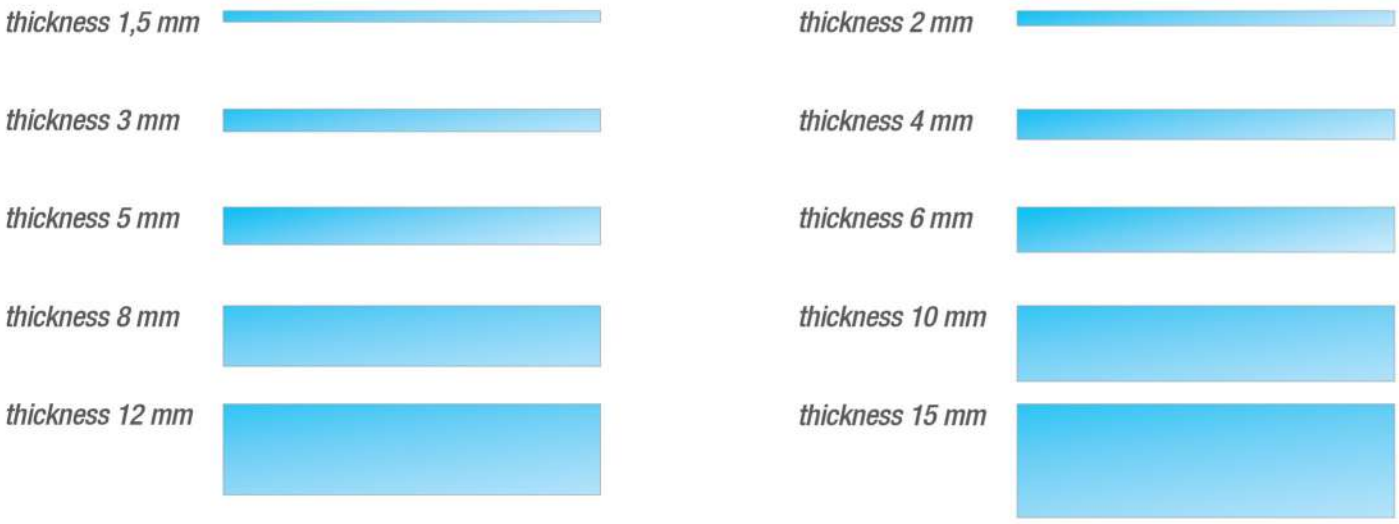
Macrolux® Solid NO UV

Macrolux® Solid NO UV sheets are monolithic polycarbonate sheets with no UV protection. They can be used in any application that is not going to be exposed to direct sunlight, such as unbreakable containers, ballot boxes, guards for industrial machinery, internal partitions.

Thickness shown in full scale.



Thickness (mm)	Weight (kg/m²)	LT %			Standard Sizes▪ (width x length)	U▪▪ Value (W/m²K)
		Clear (0010)	Opal (0332)	Bronze (0220)		
1,5	1,8	89	---	---	2050 x 3050 2050 x 6100	5,7
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10	12,0	83	23	52		4,6
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15	18,0	80	---	---		4,1

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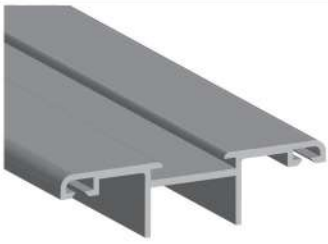
Macrolux® Solid
XL / IR / NO UV

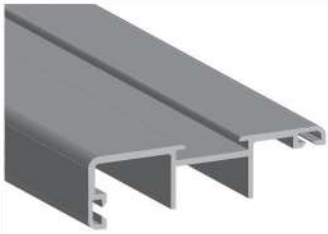


Upper anodized aluminium joining profile

DIM. 6000 mm

Lower anodized aluminium joining profile

DIM. 6000 mm



Anodized aluminium upper head profile

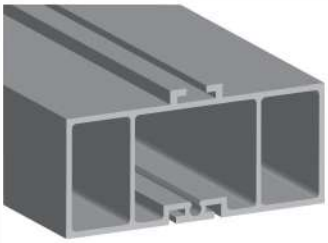
DIM. 6000 mm

Anodized aluminium lower head profile

DIM. 6000 mm

Anodized aluminium cap profile

DIM. 6000 mm

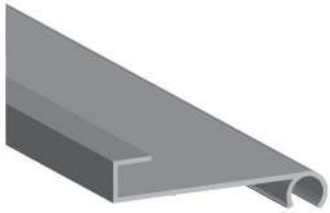


Anodized aluminium strengthening profile

DIM. 6000 mm

Anodized aluminium fixed sill profile

DIM. 6500 mm

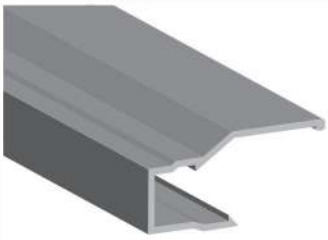


Anodized aluminium adjustable sill profile

DIM. 6500 mm

Anodized aluminium 10 mm sheet retaining profile

DIM. 5700 mm



Anodized aluminium 16 mm sheet retaining profile

DIM. 5700 mm

EPDM gasket

EPDM gasket 1 mm thick

EPDM gasket 3 mm thick

EPDM thermal-break seal

Screws

DIM. 4,2 x 13 mm / 4,2 x 19 mm

Rubber seal for screw