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Macrolux product applications
MORE LIGHT FOR A BETTER LIFE

Macrolux

Multiwall polycarbonate sheets

MULTIWALL POLYCARBONATE SHEETS WITH HIGH SOLAR PROTECTION

- Reflective
- Athermic
- Athermic/opal
- Superlife
- Macrolux I.R.

- Conservatories
- Malls
- Sport halls
- Skylights
- Tunnel
- Pedestrian walks

CERTIFIED QUALITY SYSTEM UNI EN ISO 9001/2000 SINCERT DNV

EMP ESTRUSIONE MATERIALI PLASTICI s.a.

SOLAR CONTROL SHEETS

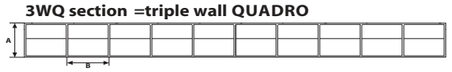
The energy transmitted by the solar rays has to be controlled, if necessary it could be maximised for example in greenhouses application or where the translucidpart is minimum but in many applications it is necessary to reduce the unpleasant serra effect. Controlling the amount of solar energy which is transmitted into a structure is an essential parameter for environment comfort. To this aim, EMP has studied a complete series of solar control sheets:

HEAT SHIELD - ATHERMIC - ATHERMIC OPAL - IR

The **Macrolux ® Heatshield sheets** are extruded with the UV block additive and heat reflective material: the result is a crystal clear sheet with a heat reflective upper layer. The **Macrolux ® Athermic sheets** are produced adding metal particles in the mass of the products together with polycarbonate. These are one colour sheets and **EMP** offers 2 different possibilities grey and deep grey colour with different LT and performances. The Macrolux ® Athermic-Opal sheets are **DOUBLE** colour sheets with on the lower side an opal tone (light or deep) and on the upper side different colours all with **METALLIC PARTICLES** in it. Thanks to these the sun is partially reflected and partially transformed in energy that remains in athermic upper side of the sheet
The Macrolux ® IR sheets is the **NEW GENERATION** of Heat Reducers. In this product it has been added an additive that stops completely the infrared rays which permits to maintain a good level of LT reaching a very good heat reduction.

PRODUCTION RANGE

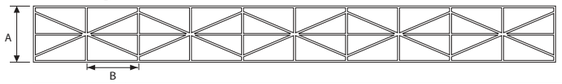
3WQ section =triple wall QUADRO



A mm	B mm	WEIGHT Kg/m²	COLOUR	SIZES AVAILABLE Width x Length
6	8	1.3	Athermic 0777 Athermic grey/opal 0737 *NEW !* IR 0181	2100 x 6/7000 (*)1200 x 6/7000 Special dimensions on request
8	8	1.5		
10	8	1.7		

(*) can only be produced with open edges.

5X Strong section = 5X reinforced walls

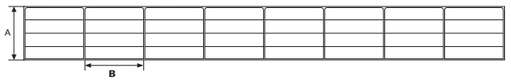


NEW PRODUCT!

A mm	B mm	WEIGHT Kg/m²	COLOUR	SIZES AVAILABLE Width x Length
16	14	2.5	Athermic 0777 Athermic grey/opal 0737 *NEW !* IR 0181	2100 x 6/7000 (*)1200 x 6/7000 Special dimensions on request
20	14	2.9		

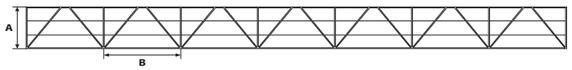
(*) can only be produced with open edges.

5W section= five wall



A mm	B mm	WEIGHT Kg/m²	COLOUR	SIZES AVAILABLE Width x Length
16	20	2.7 2.8	Athermic 0777 Athermic grey/opal 0737 *NEW !* IR 0181	2100 x 6/7000 1200 x 6/7000 Special dimensions on request
25	20	3.3		

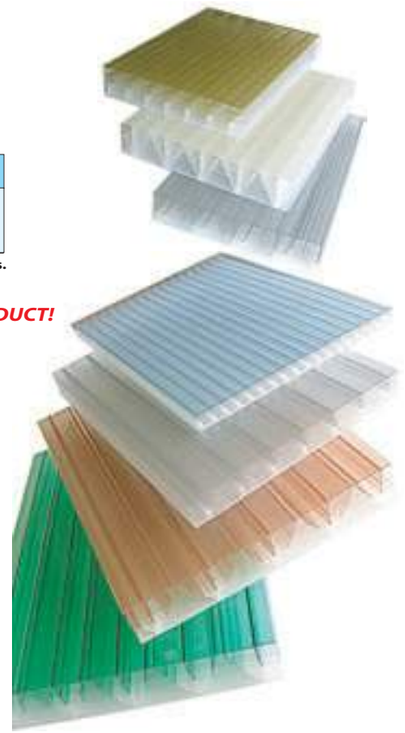
5RW section= five reinforced walls



A mm	B mm	WEIGHT Kg/m²	COLOUR	SIZES AVAILABLE Width x Length
25	32	3.3	Athermic 0777 Athermic grey/opal 0737 *NEW !* IR 0181	2100 x 6/7000 1230 x 6/7000 Special dimensions on request
32	32	3.6		
35	32	3.8		

Weight: ±5%; lengths up to 6000 mm: -0+20 mm; above 6001 mm: -0+30 mm.
Macrolux®sheet can be produced with open or closed edges. For further information contact our sales offices.

NOTE: SOME COLOURS ARE SUBJECTED TO MINIMUM QUANTITIES



COLOUR TABLE	CODE
Heatshield	305
Heatshield	338
IR	181
Pinky IR	382
Athermic blue /opal	537
Athermic blue / deep opal	539
Athermic green /opal	437
Athermic green / deep opal	439
Athermic gray/opal	737
Athermic gray/ deep opal	739
Athermic copper/opal	937
Athermic copper/deep opal	939

Macrolux product applications SWISS MADE
MORE LIGHT FOR A BETTER LIFE

TECHNICAL INFORMATION
LIGHT TRANSMISSION

A correct technical planning regarding light requires control of the amount of light needed within any given structure. It is therefore evident how important it is to use sheets with a correct light transmission. The light transmission values for **MACROLUX®** sheets in the various colours and versions are listed below:

Structure	Thickness (mm)	Weight (kg/m²)	Light transmission LT (%)					
			Heat Shield (0305)	Super life (0032)	Athermic (0777)	Athermic –opal (0737*)	Athermic –opal (0739*)	IR (0181)
3Q	6	1,3	65	-	35	50	40	-
3Q	8	1,5	65	25	35	45	30	35
3Q	10	1,7	65	25	35	45	30	35
5X	16	2,5	55	25	25	25	12	30
5W	16	2,7	55	10	25	25	12	30
5X	20	2,9	55	10	25	25	12	30
5W	25	3,3	50	5	20	20	5	25
5RW	25	3,3	50	5	20	20	5	25
5RW	32	3,6	40	5	13	13	5	20
5RW	35	3,8	40	5	13	13	5	20

Internal measurements in accordance with the ASTM D1003 regulation Light diffusion may vary by plus or minus 5 numeric

SHADING COEFFICIENT

The shading coefficient (SC) represents the ratio between total energy, which passes through the polycarbonate sheet, and the total solar energy, which passes through a clear monolithic glass with a 3 mm thickness.

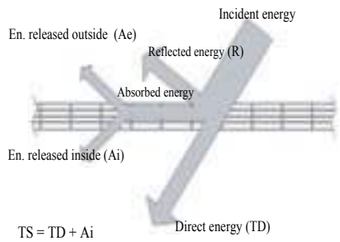
Structure	Thickness (mm)	Weight (kg/m²)	Shading coefficient (SC)					
			Heat Shield (0305)	Super life (0032)	Athermic (0777)	Athermic –opal (0737*)	Athermic –opal (0739*)	IR (0181)
3Q	6	1.3	-	-	0.59	0.61	0.60	-
3Q	8	1,5	0.67	0.53	0.55	0.56	0.52	0.49
3Q	10	1,7	0.64	0.52	0.52	0.54	0.51	0.47
5X	16	2,5	0.53	0.40	0.40	0.47	0.43	0.40
5W	16	2,7	0.63	0.40	0.38	0.47	0.43	0.40
5X	20	2,9	0.53	0.43	0.40	0.46	0.41	0.39
5W	25	3,3	0.46	0.43	0.41	0.45	0.40	0.38
5RW	25	3,3	0.48	0.32	0.43	0.43	0.38	0.38
5RW	32	3,6	0.41	0.43	0.40	0.44	0.39	0.37
5RW	35	3,8	0.41	0.41	0.39	0.43	0.37	0.35

Value measured with the relation SC = (1,15 x G)/100 where:
SC = shading coefficient
G = solar factor (G-value)

SOLAR FACTOR (G-value)

The G-value is the percentage ratio of the solar energy which passes through the sheet (TS) and the incident energy; the energy transmitted by the sheet is the sum of the direct energy (TD) and of the energy which the sheet draw again towards the interior of the structure (Ai).

Structure	Thickness (mm)	Weight (kg/m²)	G-value (%)				
			Super life (0032)	Athermic (0777)	Athermic –opal (0737*)	Athermic –opal (0739*)	IR (0181)
3Q	6	1,3	-	50	53	51	-
3Q	8	1,5	46	48	49	45	43
3Q	10	1,7	45	45	47	44	41
5X	16	2,5	35	35	41	37	35
5W	16	2,7	35	35	41	37	35
5X	20	2,9	37	35	40	36	34
5W	25	3,3	37	36	39	35	33
5RW	25	3,3	37	36	37	33	33
5RW	32	3,6	37	35	38	34	32
5RW	35	3,8	36	34	37	32	30



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