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## MULTIWALL POLYCARBONATE SHEETS WITH HIGH THERMAL INSULATION

CONSERVATORIES

SPORTING HALLS

MALL

INDUSTRIAL APPLICATION

SKYLIGHTS



For all the applications that require an high thermal insulation



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# MULTIWALL POLYCARBONATE SHEETS WITH HIGH THERMAL INSULATION




## HIGH THERMAL INSULATION SHEETS

A good thermal isolation of a building is an important factor for a correct design. For the respect of the environment it is necessary to reduce wastes and the energetic consumption, for this reason it is necessary to have product with high thermal insulation in every heated or conditioned environment.

MACROLUX multiwall polycarbonate sheets guarantee the required high thermal insulation.

All the characteristic of MACROLUX sheets (light transmission, high load resistance, high impact resistance ) are the same also in the sheets with high thermal insulation.

## Macrolux® multiwall polycarbonate sheets

3 wall section "Quadro" : <b>8 - 10 mm</b>	<b>3WQ</b>	
5 wall section : <b>16 - 20 - 25 mm</b>	<b>5W</b>	
5 wall reinforced section: <b>25 - 32 - 35 mm</b>	<b>5RW</b>	



## Thermal insulation

The value of thermal insulation measures the resistance that the sheet offers to the heat passage. The extremely low value of the multiwall MACROLUX® sheets makes this solution advantageous as it minimizes the dispersion toward the outside of the heat produced with the heating, or symmetrically preventing the external heat to enter into a conditioned environment.

The sheets value are:

Structure	Thickness (mm)	Weight (kg/m <sup>2</sup> )	K-value	
			W/m <sup>2</sup> °K	Kcal/m <sup>2</sup> h°C
3Q	6	1,3	3,4	2,9
3Q	8	1,5	3,0	2,6
3Q	10	1,7	2,7	2,3
3W	16	2,7	2,2	1,9
5W	16	2,7	1,9	1,6
5W	16	2,8	1,9	1,6
5W	20	3,1	1,8	1,5
5W	25	3,4	1,5	1,3
5RW	25	3,6	1,7	1,5
5RW	32	3,7	1,4	1,2
5RW	32	3,9	1,4	1,2
5RW	35	4,1	1,3	1,1

## IMPACT RESISTANCE

MACROLUX sheets offer a great protection and resistance to the hail, in all the tests of resistance at high speed, the MACROLUX sheets show a good impacts resistance.

## UV PROTECTION

The coextruded UV protection gives a great resistance to the ageing effect of UV rays, this allows to maintain unchanged the good mechanical characteristics. MACROLUX sheets are 10 years guaranteed (see our warranty conditions).



## Impact resistance

The impact resistance of **MACROLUX®** multiwall sheets is extremely high and is the winning characteristic in comparison with the other common materials used for the realization of transparent parts (glass, acrylic, etc.). Such resistance remains unchanged i between 40°C and +120°C. Polycarbonate is a material extremely flexible and strong, tests made have shown a very good absorption of the impact energy by the increasing distortion of the sheets.

## Light transmission

The technical and light design requires a control of the light quantity necessary inside the building. It is consequently very important the installation of sheets with the right light transmission. the light transmission values for MACROLUX sheets in the various colours and type are as follows. The internal measurements according to ASTM D1003 rule.

Light transmission may change between +/- 5 numerical.

Structure	Thickness (mm)	Weight (kg/m <sup>2</sup> )	Light transmission LT (%)							
			LONG LIFE				Heat Shield (0305)	Super life (0032)	Athermic (0777)	Athermic -opal (0737)
			Clear (0010)	Bronze (0020)	Opal (0037)	Opal (0309)				
3WQ	6	1,3	75	40	60	70	65			
3WQ	8	1,5	75	40	60	70	65	25	35	
3WQ	10	1,7	75	40	55	65	65	25	35	45
5W	16	2,7	62	40	40	50	55	10	25	25
5W	16	2,8	62	40	40	50	55	10	25	25
5W	20	3,1	60	35	40	50	55	5	25	25

## Energy saving

the excellent value of thermal insulation of the **MACROLUX®** multiwall polycarbonate sheets allows, both in heated and conditioned environments , notable savings of costs, making the investment amortizable in few years.

## DEW CONTROL

The formation of condensates is an eventuality to avoid. The dewy point, temperature in which it begins the phenomenon of the condensates, is influenced by many parameters: external temperature, inside temperature, relative damp, the thermal insulation of the wall. The good thermal insulation of **MACROLUX®** sheets makes less probable the formation of condensates.

