

Polycarbonate honeycomb core

Polycarbonate honeycomb finds major applications in: deflectors for laminar-flow ventilation, in commercial refrigeration, sterilized rooms, wind tunnels and climatic chambers.

Honeycomb deflectors increase flow efficiency and efficacy. Moreover they eliminate turbulence, reduce the flow of impurity and humidity, as well as noise and energy consumption.

Polycarbonate honeycomb has the following characteristics:

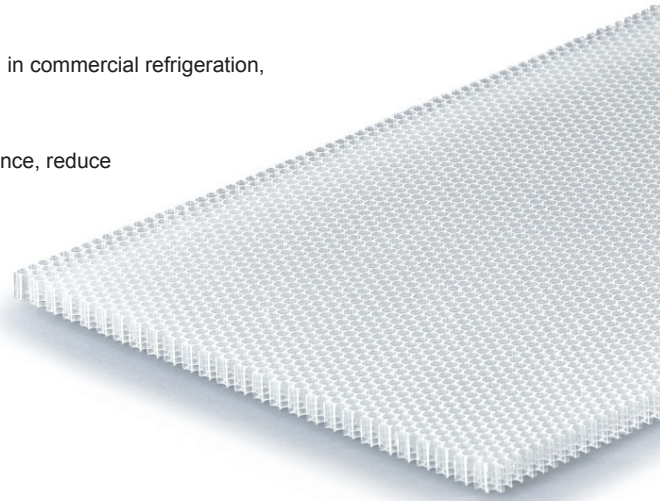
- easy application
- shapes according to customer specifications
- waterproof / washable
- suitable for food contact and non-toxic
- 100% recyclable

World-wide, all major commercial refrigeration companies use this kind of honeycomb.

The versatility of polycarbonate honeycomb is also demonstrated by the way it focuses light.

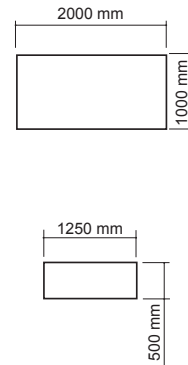
Polycarbonate honeycomb with density of 200kg/m³ is also an **excellent crash-absorber**. Polycarbonate with inferior density is used for lightweight and transpiring structures.

Cel's polycarbonate honeycomb has established new standard as far as energy absorption is concerned. In fact, the uniform crushing of the cells absorbs kinetic energy at a constant compressive load until a 78% reduction of its initial volume. We supply special densities, according to the level of energy absorption required by the customer.



Honeycomb core's properties	standard		on request		
	3,5-90	6,0-70	2,5-110	4,0-80	7,0-70
Type					
Cell size mm	3,5	6,0	2,5	4,0	7,0
Colour	grey • white • trasparente • black				
Density kg/m ³	90	70	110	80	70
Compressive strength MPa	2,8	1,9	3,6	2,2	1,8
Compressive modulus MPa	115	95	155	106	95
Shear strength MPa	1,3	1,0	1,5	1,1	1,0
Shear modulus MPa	22	19	25	21	19
Effective temperature range °C	from -40 to +110				
Thickness mm	from 3 to 300				
Maximum length mm	3000				
Maximum Width mm	1350				

Standard dimensions
(other dimensions available on request)



We can supply two types of polycarbonate: standard quality polycarbonate and visual grade polycarbonate.

In the visual grade polycarbonate the positioning of the cells is checked one by one in order to obtain an outstanding quality product. For this reason its supply is related to higher costs.

In standard quality we provide a product of an excellent quality but where sometimes a cell might be missing. This does not affect its use at all, as long as it is not that of lighting.

Lighting customers are therefore asked to require a visual quality product.