

Aluminium Honeycomb Core

Aluminium honeycombs and panels made with it offer the advantage of lightness, compression and shear resistance, fire and corrosion resistance and the possibility to be recycled. Aluminium honeycomb is used in a number of applications, for example in railways, in shipbuilding, in aviation, in cleanroom sector, for printing pallets and building industry etc.

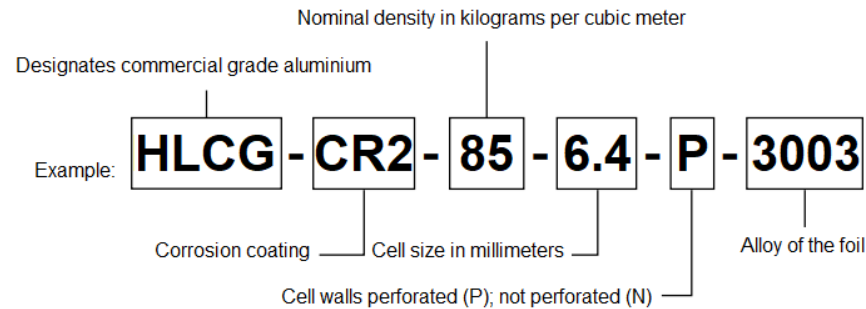
Aluminium honeycomb is used as core material for sandwich panels: floors, roofs, doors and partitions, facades, working surfaces for automatic machines and for all products which require an optimal stiffness-to-weight-ratio.

Aluminium honeycomb as panels' core is the winner because of:

- lightness
- stiffness
- fire resistance
- compression, shear and corrosion resistance
- flatness

Aluminium honeycomb without skins can be used as deflector for laminar flow-ventilation, and as crash-absorber for absorbing kinetic energy. Regarding the aluminium honeycomb the client can choose a thickness from 3 until 300 mm, a cell size from 6.4 until 25.4 mm and a density from 20kg/m³ until 85kg/m³ (density depends on foil thickness and cell size).

NOTE: 1.6mm, 3.2mm & 4.8mm cell size and aluminium alloy 5052 is also available. Additional densities and configurations available upon request.

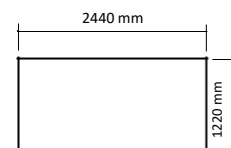
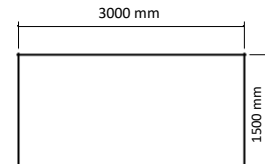


Trade Name – Corrosion Coating – Density – Cell Size – Perforation – Alloy

Honeycomb core's Properties					
Type	ALUMINIUM ALLOY 3003				
Thickness mm	From 3 to 300 standard tolerance ± 0.20 mm				
Effective Temperature Range °C	From - 50 + 175				
Cell Size [mm]	6.4	9.6	12.7	19.1	25.4
Density [kg/m ³]	85	54	40	30	20
Compressive Bare Strength [MPa]	4.69	2.34	1.41	0.86	0.59
Plate Shear Strength "L" Direction [MPa]	2.28	1.56	0.97	0.72	0.48
Plate Shear Modulus "L" Direction [GPa]	0.46	0.38	0.26	0.16	0.10
Plate Shear Strength "W" Direction [MPa]	1.34	0.93	0.53	0.42	0.34
Plate Shear Modulus "W" Direction [GPa]	0.26	0.17	0.10	0.09	0.05

Standard dimensions

(other dimensions available on request)



Alloy 3003 aluminium honeycomb is sold **perforated** or **non-perforated** (the micro perforations allowing air flow between cells, for use under vacuum or decompression) in three forms: **unexpanded block non perforated, unexpanded slices, expanded sheets.**