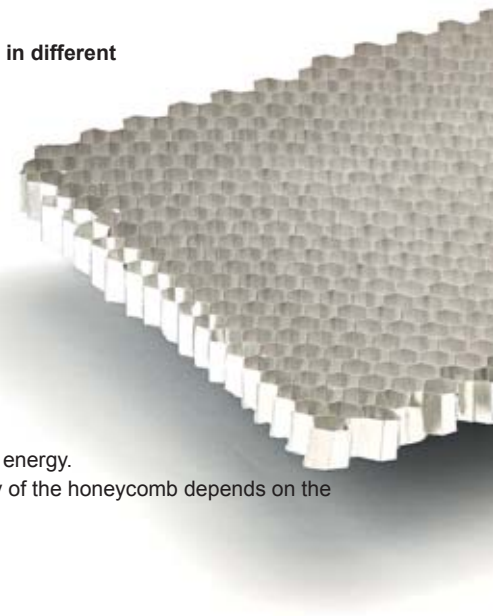
CEL Components S.r.l.
Via Ca' dell'Orbo Sud 4 - 40055 Castenaso (Bologna) Italy
Tel. +39 051 782505 Fax +39 051 782477
www.cel.eu info@cel.eu
P.IVA 04102600378 CCIAA BO 0339628

Aluminium honeycomb

Aluminium honeycomb is used for several of applications (i.e. for tool machines, for serigraphy..etc.) **and in different sectors** such as: public transport industry,nautical sector, building industry, etc...



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

Aluminium honeycomb as panels' core has several advantages:
- lightweight
- stiffness
- fire resistance
- compression, shear and corrosion resistance

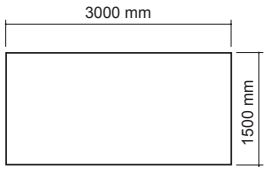
Aluminium honeycomb can be used as deflector for laminar flow-ventilation, and as crash-absorber for kinetic energy.
Thickness of non-expanded Blocks: 1000mm standard, the diameter of the cells from 3 to 25 mm. The density of the honeycomb depends on the thickness of the foil and the diameter of the cells.
Thickness of expanded section from 3mm to 60 / 200mm approx. (depending on the cell diameter).
Honeycomb density (from 20 to 163 kg/m^3) depends on foil's thickness and on cell size.

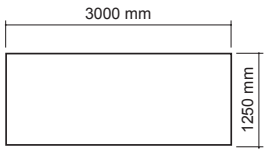
CERTIFICATE FOR SHIPBUILDING INDUSTRY: IMO MED, FTP CODE 2010 Mod. B. and D
CERTIFICATE FOR CONSTRUCTION INDUSTRY: UNI EN 13501-1 Fire Class A1

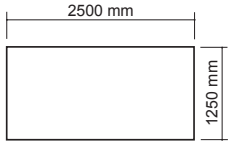
Honeycomb core's properties	50 Microns				
Aluminium Alloy series 3000	**3003/3005/3103/3104**				
Ø honeycomb in mm ca.	3,8	6	9	12	19
Ø honeycomb in inches	1/8"	1/4"	3/8"	1/2"	3/4"
Density kg/m^3	112	56 - 59	39 - 40	29 - 30	20 - 21
Compressive stabilised strength MPa	6,8	3,0 - 3,5	1,4 - 1,95	0,8 - 0,95	0,4 - 0,6
thickness' tolerance mm	± 0,1 (± 0,05 on request)				
dimension's tolerance mm	± 30				

Honeycomb core's properties	70 Microns				
Aluminium Alloy series 3000	**3003/3005/3103/3104**				
Ø honeycomb in mm ca.	3,8	6	9	12	19
Ø honeycomb in inches	1/8"	1/4"	3/8"	1/2"	3/4"
Density kg/m^3	123	80 - 83	54	40 - 42	27 - 29
Compressive stabilised strength MPa	7,7	4,3 - 4,6	2,5 - 2,6	1,41 - 1,5	0,85 - 0,9
thickness' tolerance mm	± 0,1 (± 0,05 on request)				
dimension's tolerance mm	± 30				

Standard dimensions
(other dimensions available on request)







Alloy 3000/3003/3005/3103/3104 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.**

CEL COMPONENTS

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