



PRODUCT DATA SHEET

Alphex™ Commercial Grade Aluminium Honeycomb

THE GILL CORPORATION - FRANCE

The Gill Corporation-France is pioneer and European leader in its field, has been manufacturing Commercial Grade Aluminum Honeycomb since 1985. Thanks to our experience, know-how and industrial capabilities, we commit to the highest quality and technical properties of our ALPHEX™ honeycomb.

With two lines of foil surface treatment and several bonding/stacking lines, The Gill Corporation-France manufactures a wide range of aluminum honeycombs, used in a wide variety of industrial and aerospace applications. We can offer large volumes and just-in-time delivery, at very competitive prices.

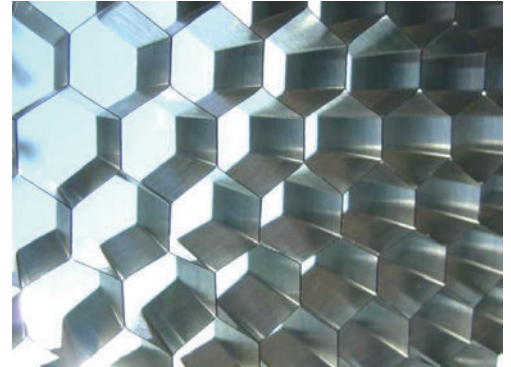
DESCRIPTION

ALPHEX™ is a range of Commercial Grade Honeycomb using 3003 or 3104 aluminum foil as standard, or similar performance alloy.

The foil is coated with a surface treatment (chrome-free) designed for the highest node bond strength and corrosion resistance performances, complying with corrosion protection requirements of US Standard AMS-C-7438.

The foil is printed with bond lines, stacked, and cured in blocks. Slices are cut from the block then expanded into honeycomb panels.

As standard, the foil is micro-perforated. It can also be supplied non-perforated upon request.



GENERAL PROPERTIES

ALPHEX™ provides the following features:

- Lightness
- Rigidity
- Aesthetic appearance
- Very high surface quality
- Constant thickness
- Thermal and electrical conductivity
- Large selection of cell/foil/density
- Excellent durability
- Effective quality/cost ratio

APPLICATIONS

ALPHEX™ is an excellent core material for sandwich panels, with skins such as metal, composite, laminate, or wood.

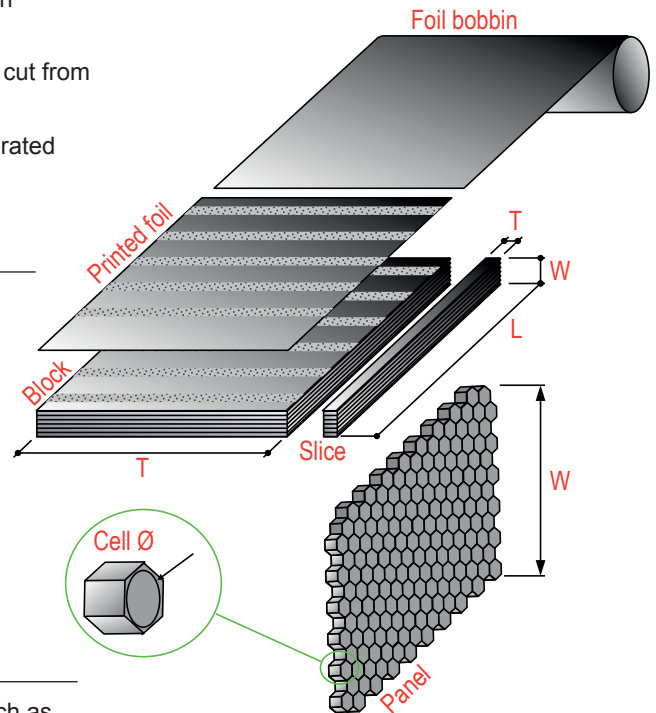
Applications: Partition walls, ceilings, floors, facades for interiors or exteriors in railways, shipbuilding, construction, structural sandwich panels for flooring, machines or tooling components. It also can be used in other fields of application such as: energy absorption devices, air or liquid flow turbulence reduction, optical devices, cutting beds for water jet or laser cutting machines.

SIZE AND PRESENTATION

- Standard cell diameters: 5.2, 6, 9, 12, 19 et 25 mm
- Standard foil thicknesses: 50, 60, 70, 75, 80 and 100 M
- 2 standard sizes: W x L: 2500 x 1250 and 3000 x 1500 mm
- Other sizes available either by cutting or by block size optimization.
- Net surface after expansion guaranteed.
- T (Thickness) cut to customer's requirement from 5 to 960 mm in 0.1 mm steps.

The Gill Corporation-France supplies honeycomb in many forms upon request:

- Full blocks
- Expanded sheets
- Perforated or non perforated foil
- Unexpanded slices
- Expanded and contoured sheets





PERFORMANCE PROPERTIES

ALPHEX™ mechanical properties - most frequently requested

Designation		Foil Thickness μ	Stabilized Compress. Strength MPa	Shear Strength		Crush Strength MPa
\varnothing Cell mm	Density Kg/m ³			L Direction MPa	W Direction MPa	
6	57	50	2,30	1,20	0,80	1,00
9	38	50	1,30	1,10	0,70	0,60
12	28	50	0,80	0,50	0,40	0,35
19	19	50	0,40	0,40	0,30	0,15
5,2	83	60	3,70	2,30	1,50	1,67
6	69	60	3,40	1,80	1,20	1,50
9	46	60	1,80	1,50	0,90	0,80
12	34	60	1,20	0,70	0,60	0,48
19	23	60	0,50	0,50	0,40	0,20
25	17	60	0,30	0,35	0,20	
5,2	93	70	4,81	2,71	1,82	2,10
6	82	70	4,20	2,20	1,50	1,80
9	54	70	2,26	1,83	1,13	0,99
12	40	70	1,53	0,90	0,75	0,60
19	27	70	0,63	0,63	0,54	0,25
25	19	70	0,37	0,45	0,27	

PRODUCT DESIGNATION

When issuing a purchase order, please edit the following product designation:

ALPHEX™ ; \varnothing -D; P (ou NP); W x L x T; EX (ou NEX) and the requested quantity of sheets or surface in sqm.

\varnothing = Cell diameter in mm; **D** = Density in Kg/m³

P = Micro Perforated; **NP** = Not Perforated

W = Net expanded size in mm; **L** = Ribbon direction in mm; **T** = Thickness in mm

EX = Expanded sheet; **NEX** = Non Expanded

Specify the required tolerance for the thickness T. When not specified, our standard tolerance will apply: +/-0,2 mm.

Other cell sizes, other foil thickness, other alloys, specific surface treatment.

We can manufacture honeycomb on your specification request. Should you be interested, please call us.



Updated: 3/1/23

All recommendations, statements, values and technical data herein are based on tests The Gill Corporation believes to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty, either expressed or implied. Users shall rely on their own information and tests to determine suitability of the product for the intended use and assume all risks and liability resulting from their use of the product. The Gill Corporation's sole responsibility shall be to replace that portion of the product that proves to be defective. The Gill Corporation will not be liable to the buyer or any third person for any injury, loss or damage directly or indirectly resulting from use of, or inability to use, the product. Recommendations or statements not contained in a written agreement signed by an officer of The Gill Corporation shall not be binding upon The Gill Corporation.