



## AAC AMBER ALUMINUM COMMERCIAL HONEYCOMB

Amber's AAC core is a commercial grade Aluminum Honeycomb made from 3003 alloy Aluminum foil.

### FEATURES:

- > High strength-to-weight ratio
- > Readily available
- > Low cost
- > Perforated foil available

### APPLICATIONS

Designed to offer industrial users and designers high strength to weight properties at relatively low cost, particularly suitable as a shear carrying core in adhesively bonded sandwich panel assemblies.

Typical sandwich panel applications include,

- Industrial tooling panels
- Architectural panels
- Railway interior panels and floors
- Shelving, table and counter tops
- Commercial vehicle panels
- Marine interior panels
- Automotive chassis construction

A wide variety of other applications have been found to exploit the unique properties of Aluminum honeycomb such as,

- Energy absorption - crash barriers, impact protection
- Air or fluid flow control - wind tunnels, refrigeration display counters
- Light collimation
- Heat exchangers



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### PRODUCT DESIGNATION

e.g.	AAC	-5.2	-1/4	-25	-N	-3003
	(a)	(b)	(c)	(d)	(e)	(f)
a.	AAC	= Amber Aluminum Commercial honeycomb				
b.	5.2	= Density in pounds per cubic foot ( lb/ft <sup>3</sup> ).				
c.	1/4	= Cell size in fractions of an inch.				
d.	25	= Nominal foil thickness in ten thousands of an inch.				
e.	N	= Non-perforated foil,				
	P	= Perforated foil.				
f.	3003	= Aluminum alloy.				

### PRODUCT RANGE

#### Standard Products

The following products are usually available as ex-stock items, other grades are available to order.

- AAC-1.8-3/4-25N-3003
- AAC-3.4-1/4-15N-3003
- AAC-3.7-3/8-25N-3003
- AAC-3.7-3/8-25P-3003
- AAC-5.2-1/4-25N-3003
- AAC-5.2-1/4-25P-3003

A larger standard range of products is available with 5052 foil.

#### Standard dimensions and tolerances

Nominal sheet length (W) = 2440 mm (min)  
Nominal sheet width (L) = 1220 mm (min)  
Sheet thickness as requested from above 2mm, +/- 0.125 mm  
Density as nominal, +/- 17%  
Cell size as nominal, +/- 10%

Other sheet sizes may be available upon request.

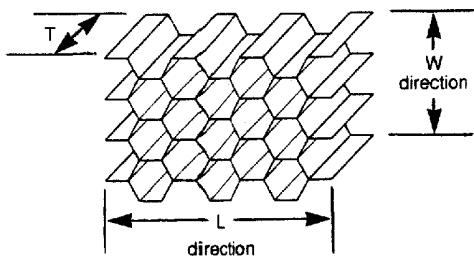
Over-expanded sheets are available upon request.



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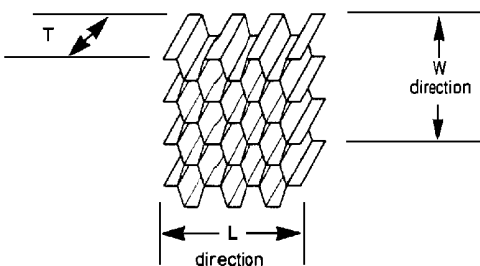
Grade	Stabilised Compression		Plate Shear			
	Strength (MPa)	Modulus (MPa)	Strength "L Direction" (MPa)	Modulus "L Direction" (MPa)	Strength "W Direction" (MPa)	Modulus "W Direction" (MPa)
AAC-1.8-3/4-25N-3003	0.90	165	0.65	110	0.40	55
AAC-3.4-1/4-15N-3003	2.50	540	1.40	260	0.85	130
AAC-3.7-3/8-25N-3003	2.60	630	1.45	280	0.90	140
AAC-5.2-1/4-25N-3003	4.60	1000	2.10	440	1.50	220

Hexagonal Cell



**T = Thickness, or cell depth**  
**L = Ribbon direction**  
**W = Direction perpendicular to the ribbon direction**

Over-Expanded Cell



**T = Thickness, or cell depth**  
**L = Ribbon direction**  
**W = Direction perpendicular to the ribbon direction**

For further information refer to Aluminum Honeycomb Material Safety Datasheet.

This is not a specification. The information given in this data sheet in relation to the performance, storage and other characteristics of the product is based on results gained from experience and tests and is believed to be accurate. Given, however, that conditions of use and storage will vary, Amber Composites will not be liable for any loss or damage resulting from reliance upon such information. The purchaser is recommended to carry out his own tests to establish the suitability of the product for its particular purpose. The use of the product in certain processes may require third party consent.