AYRLITE® 2016

Glassfibre / Epoxy Faced,
Aluminium Honeycomb Panel

DATA SHEET | Issue 2

AYRES
Lightweight Panel Systems
www.ayrescom.com

Description

AYRLITE 2016 is an aluminium honeycomb panel **faced with glassfibre reinforced epoxy resin.**

Strain-hardened hexagonal cell aluminium honeycomb has optimal mechanical properties and is able to carry shear loads at significantly lower weight than foams or other core types.

Features

- Meets ISO 1182 for Non-Combustibility of aluminium honeycomb core.
- 6.35mm cell size, aluminium honeycomb core.
- Aluminium honeycomb core meets the requirements of MIL-C-7438 salt fog anti-corrosion performance.
- Low weight.
- A single ply facing has 290 gsm of woven glassfibre reinforcement. Any number of plys can be specified.
- The same number of plys has to be used on both sides, to maintain flatness.
- High stiffness and strength.
- Easy to fabricate.
- Wide selection of anodised aluminium assembly extrusions available.

Applications

- Automotive tooling.
- Panels for stone bonding.
- Lightweight, high strength models and structures.

Fabrication

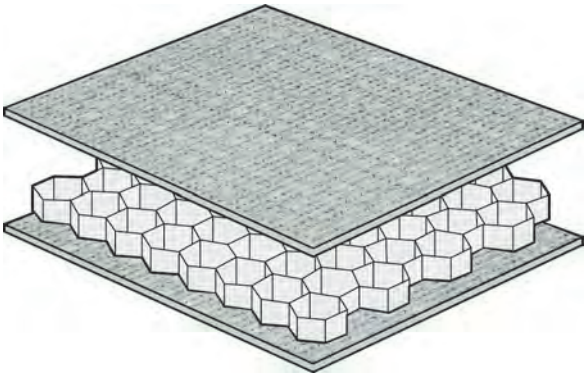
AYRLITE 2016 can be easily cut and drilled with standard tools such as circular saws, routers etc. Glassfibre dust is an irritant, so the use of a good dust extraction system is recommended.

Facings must be clean and free of oil or grease before any assembly bonding is done. A peel ply can be incorporated to maintain cleanliness of the outer surfaces, if required.

Components or complete interiors can be fabricated using Ayres Composite Panels aluminium extrusions, cutters and polyurethane paste adhesives. Traditional tongue-and-groove (mortice and tenon) methods can also be used.

Additionally, the cut-and-fold method can be used to produce curves or bends: by cutting a strip of skin material from one face, folding to close the gap created and permanently bonding the gap closed using adhesive.

A CD is available, showing assembly techniques (contact Ayres Composite Panels for details).



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Physical and Mechanical Performance

Typical room temperature properties for 1 ply faced panels.

Thickness (mm)	Weight (kg\m²)	Long Beam Max Load (N)	Long Beam Deflection at Max Load (mm)	Flatwise Tensile (MPa)	Flatwise Compression (MPa)
10	1.7	500	24	228	2.6
20	2.2	830	11	228	2.6
30	2.7	1080	8	228	2.6

Mechanical test procedures to MIL -STD-401

Availability

Standard Dimensions
2400 x 1200mm

Panel Thickness
Made to order, minimum thickness 6mm

Safety

As with cutting operations on most materials, avoid inhalation and eye contact with machining dust. Wear protective equipment such as ear defenders and safety glasses during any cutting operations. Use machine guards. Wear gloves to avoid cuts. Wash hands before eating, drinking or smoking and after finishing work.

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Lighten Up!