

AYRLITE® 2053

Decorative Faced, Aluminium Honeycomb Panel



AYRES
Lightweight Panel Systems
www.ayrescom.com

DATA SHEET Issue 2

Description

AYRLITE 2053 is an aluminium honeycomb panel **with decorative laminate faces** reinforced with aluminium sheet.

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

Minimal content of combustible materials means a low-fire load, enabling **AYRLITE 2053** to achieve low-flame spread test requirements.

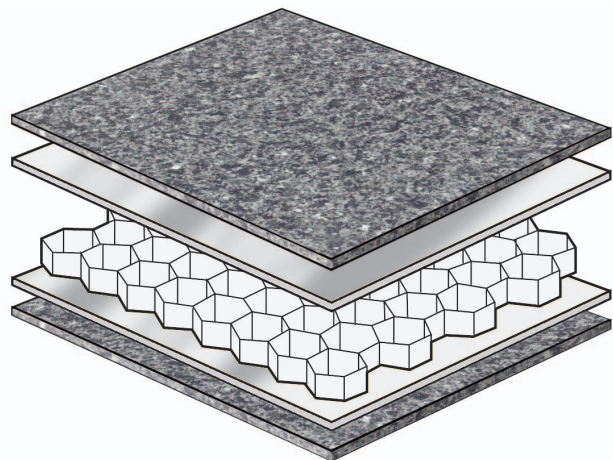
AYRLITE 2053 has been principally developed for high-performance marine vessel interior applications

- Aluminium reinforcement sheets can be selected with different thicknesses on different faces: for example, 1mm for front face, 0.5mm for back face (for weight saving on back face).
- Aluminium reinforcement sheets are of 5000 series alloy for maximum strength and anti-corrosion performance.
- Low weight.
- High stiffness.
- Easy to fabricate.
- Wide selection of anodised aluminium assembly extrusions available.

Features



- Meets IMO SOLAS test Res.A.653(16) Surface Spread of Flame.
- Meets ISO 1182 for Non-Combustibility of aluminium honeycomb core.
- Aluminium honeycomb core meets the requirements of MIL- C - 7438 for salt fog anti-corrosion performance.
- 6.35mm cell size, aluminium honeycomb core.
- Wide range of decorative options: colours, patterns, wood grains, etc.
- Panels are produced with the same decorative laminate on both faces, or with a backing laminate on the reverse face.
- Decorative faces are reinforced with a minimum of 0.3mm of aluminium sheet. Thicker reinforcements are available, including 0.5mm, 0.8mm and 1.0mm. 0.5mm is the standard reinforcement thickness.



AYRLITE® 2053

Decorative Faced, Aluminium Honeycomb Panel



Physical and Mechanical Performance

Typical room temperature properties for laminate faced panels, reinforced with 0.5mm aluminium sheet.

Thickness (mm)	Weight (Kg/m ²)	Long Beam		Flatwise Tensile (MPa)	Flatwise Compression (MPa)
		Max Load (N)	Deflection at Max Load (mm)		
10	4.7	1379	21	1.2	2.6
20	5.3	2697	9	1.2	2.6
30	5.8	3695	7	1.2	2.6

For weight with 0.3mm reinforced skins on both faces, subtract 1 kg/m².
Mechanical test procedures to MIL-STD-401

Availability

Standard Dimensions
2400 x 1200mm
Panel Thickness
Made to order, minimum thickness 6mm

Applications

- Wall linings.
- Furniture.
- Bulkheads.
- Internal modules eg. galleys, toilets, kiosks etc. (not recommended for wet areas)
- Cabinetry.
- Partitions.
- Ceilings.
- Tables.
- Doors.

Fabrication

AYRLITE 2053 can be easily cut and drilled with standard tools for laminate-faced boards, such as circular saws, routers, etc. Negative rake blades are recommended for circular saws. Components and complete interiors can be fabricated using Ayres Composite Panels aluminium extrusions, cutters and polyurethane

paste adhesives. Traditional tongue-and-groove methods can also be used.

A DVD is available, showing assembly techniques contact Ayres Composite Panels for a copy.

Safety

As with cutting operations on most materials, avoid inhalation and eye contact with machining dust. Wear protective equipment such as hearing protection 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.

Ayres Composite Panels Pty Ltd

ABN 84 071 540 568

Australia Head Office and Manufacturing

25-27 Clune Street
Bayswater WA 6053, Australia
Tel: +61 (0) 8 9279 3426 Fax: +61 (0) 8 9279 6192
australia@ayrescom.com

USA Office and Manufacturing

5460 Business Parkway
Theodore Alabama 36582, USA
Tel: +1 251-653-0700 Fax: +1 251-653-7701
usa@ayrescom.com

Europe Office (Belgium)

Tel: +32 (0) 87 891245 Fax: +32 (0) 87 891246
europe@ayrescom.com

www.ayrescom.com

Lighten Up!

® Registered Trade Mark of Ayres Composite Panels

IMPORTANT All information is given in good faith but without acceptance of liability. Ayres Composite Panels reserves the right to alter specification without prior notice. It remains the responsibility of the customer to ensure the suitability of any product for the purposes intended. All sales are made subject to Ayres Composite Panels [standard terms and conditions of sale](#). Please direct all [enquiries here](#).