



AYRLITE® 2071

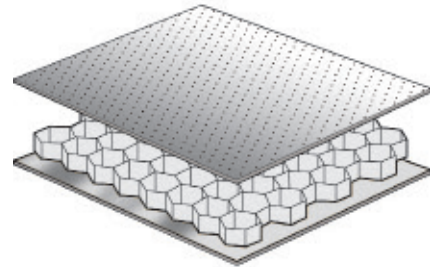
Acoustic Honeycomb Panel

DESCRIPTION

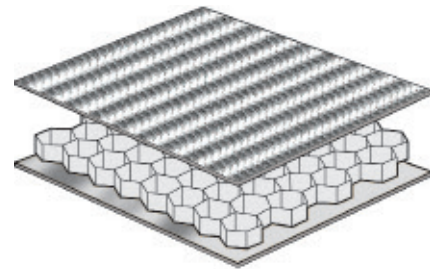
AYRLITE® 2071 is a revolutionary fibre-free, lightweight **sound absorbing** aluminium honeycomb panel. It is faced on one side with a flat micro-perforated aluminium sheet (AYRLITE® 2071 | FLAT) or with a corrugated micro-perforated aluminium sheet (AYRLITE® 2071 | CORR).

The panel has outstanding sound absorption, particularly at low frequencies. The sound absorption properties are unique and remarkable for such a low weight and fibre-free material.

Being all-aluminium, AYRLITE® 2071 has very good fire performance. Health and safety features are also excellent because there are no loose fibres. Although principally developed for high-performance marine vessel interior applications, AYRLITE® 2071 is also attracting interest in other marine sectors, restaurants, construction and mining industries.



AYRLITE® 2071 | FLAT



AYRLITE® 2071 | CORR

ACCREDITATIONS



- Fully compliant with European Union Marine Equipment Directive (EU-MED) 96/98/EC. May be used on vessels constructed, registered or operated in the European Union



- DNV Type Examination Certificate, for C-Class applications (on SOLAS and HSC vessels)



- DNV Type Approval, for C-Class applications (on SOLAS and HSC vessels)



- US Coast Guard Certificate of Approval



- IMO MSC 61(67) Fire Test Procedures Code compliant



- Meets IMO Res.A.653(16) Surface Spread of Flame test

- Meets ISO 1182 requirements for Non- Combustibility of aluminium honeycomb core

- Aluminium honeycomb core meets the requirements of AMS-C-7438 for salt fog anti-corrosion performance

- Patent Pending

FEATURES

- Outstanding sound absorption especially at low frequencies
- Free of any fibrous or dust producing materials
- Low weight, high stiffness & easy to fabricate
- Fully Recyclable; all-aluminium
- Standard panel thickness is 40mm. Panels may be manufactured to any thickness from 6mm to 80mm
- Panels may be tuned to absorb particular problem frequencies by simply selecting appropriate panel thickness
- Mill finish microperforated aluminium face sheets are 5000 series alloy, for maximum strength & anti-corrosion performance
- Mill finish aluminium backing sheets are available in a range of thicknesses including 0.3mm, 0.5mm, 0.8mm, 1.0mm, etc.
- AYRLITE® 2071 | FLAT face sheet is 0.9mm thick, AYRLITE® 2071 | CORR is 1.0mm thick
- Attractive powder coated and anodized finishes are available on request, for AYRLITE® 2071 | FLAT



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SOUND ABSORPTION

AYRLITE® 2071 achieves very high sound absorption without using combustible materials, or conventional fibrous materials.

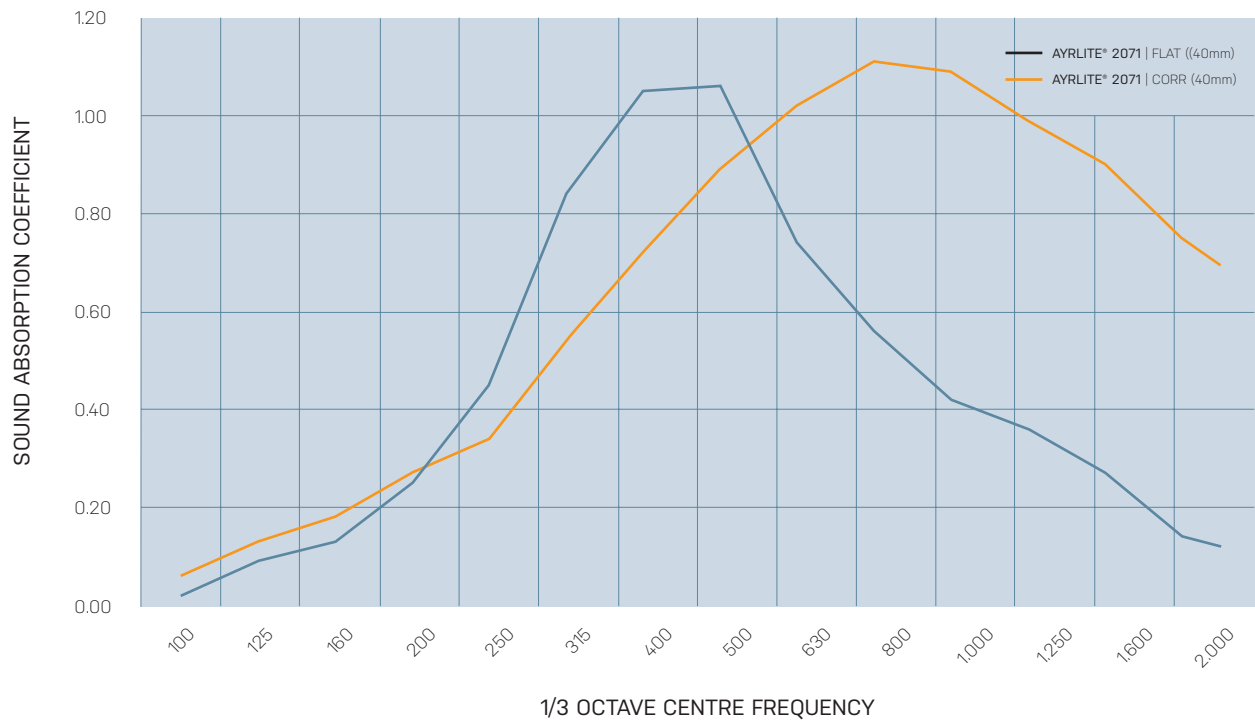
It is able to reduce interior noise and improve interior acoustic quality.

The peak absorption frequency of AYRLITE® 2071 can be tailored to the frequency range required, simply by selecting an appropriate panel thickness.

The absorptive frequency range can be adjusted to as low as 250Hz, where effective sound absorption is difficult to achieve using traditional materials.

Sound absorption coefficients to ISO 354-2006 for the two different types of surface finishes are shown in the graph below.

AYRLITE® 2071 | FLAT has greater absorption at the lowest frequencies whereas AYRLITE® 2071 | CORR absorbs a larger bandwidth of frequencies.



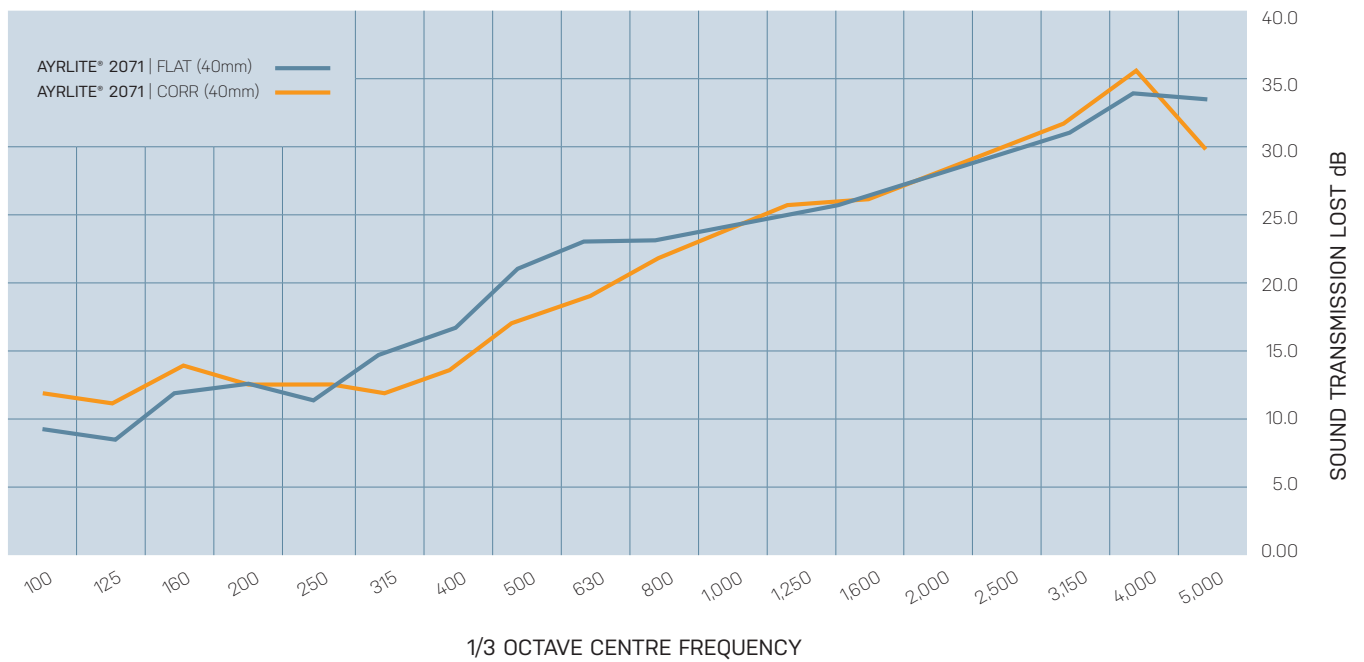
	AYRLITE® 2071 FLAT	AYRLITE® 2071 CORR
NRC (Noise Reduction Coefficient)	0.50	0.75
Weighted Sound Absorption Coefficient	0.15 L,M	0.60 M

SOUND TRANSMISSION LOSS

As well as outstanding sound absorption capabilities, AYRLITE® is also very good for Sound Transmission Loss.

The Sound Reduction Index to ISO 717.1 for the AYRLITE® | FLAT and AYRLITE® | CORR can be found in the graph below.

The Transmission loss can be even further improved by embedding Quadzero® or similar material into the panel. Further information available on request.



	AYRLITE® FLAT	AYRLITE® CORR
Rw	23	22



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PHYSICAL AND MECHANICAL PERFORMANCE

Thickness (mm)	Weight (kg/m ²)	Long Beam		Climbing Drum Peel (N/76mm)	Flatwise Compression (MPa)
		Max Load (N)	Deflection at Max Load (mm)		
40 (FLAT)	5.1	4900	3	230	0.9
40 (CORR)	5.4	4900	3	190	0.9

Typical room temperature properties for 0.5mm aluminium backed panels. Mechanical test procedures to AMS-STD-401

AVAILABILITY

Standard Dimensions
2400mm x 1200mm
Panel Thicknesss
Made to order, minimum thickness 6mm, max. 80mm standard thickness 40mm

FABRICATION

The micro-perforated surface is installed facing the noise source. AYRLITE® 2071 can be easily cut and drilled with standard tools, such as circular saws, routers etc. Negative rake blades are recommended for circular saws. Caution should be taken in case of aluminium burrs on cut edges. Face sheets must be kept clean and free from any oil or grease before painting or bonding.

Components and complete interiors can be fabricated using AYRES® Profiles & Assembly Accessories, cutters and polyurethane paste adhesives.

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.



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