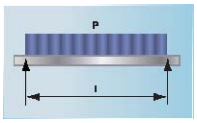
ALUCOBOND®

Product Information

ALUCOBOND® is a composite panel consisting of two aluminium cover sheets (0.5mm thick) and a polyethylene core. It is produced with various core thicknesses in a continuous process.

Mechanical Properties



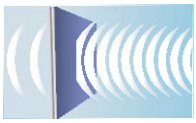
The composite material is rigid, resistant to blows, breakage and pressure and has high bending, buckling and breaking strengths. The strength is determined by the 0.5mm thick aluminium cover sheets in Peraluman-100, EN AW-5005A (AlMgI), acc to EN 573-3

Tensile strength: Rm	≥		130N/mm²
0.2% proof stress:	Rp0.2	≥	90N/mm²
Elongation:	A5.0	≥	5%
Modules of elasticity:	E	=	70000N/mm²

Since the cover sheets determine the bending strength, the core material can be disregarded when calculating the bending tension. Alucobond Architectural can provide structural analysis using computer calculations based on the Finite Element Method.

Thickness	Weight (kg/m²)
3mm	4.5
4mm	5.5
6mm	7.3

Acoustical Properties



Sound insulation

(acc. TO EN ISO 140-3/1995 and ISO IDIS 717-1/1993)

Panel thickness	Average airborne transmission loss Rw
3 mm	25 dB
4 mm	26 dB
6 mm	27 dB

(Frequency range 100-3200Hz)

Sound absorption

(acc. To EN20354)

Sound absorption factor as

Average = 0.05 for all panel thicknesses

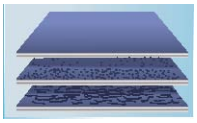
Vibration dampening

(acc. to DIN 53440)

Panel thickness	Loss factor d (frequency 200Hz)
3 mm	0.0072
4 mm	0.0087
6 mm	0.0138

The loss factor of ALUCOBOND® is about 6 times better than that of a solid aluminium sheet.

Surfaces



Stove-lacquering

With ALUCOBOND® stove-lacquering, customers can choose from a wide range of standard and metallic colours or select any type of special individual colour. High quality lacquering systems with optimum resistance to weather and industrial pollution are used exclusively. These properties are achieved by using fluorinated bonding agents; for standard finishes PVDF or FEVE based top lacquers are used. Special surface effects are achieved on request by using duroplastic fluoropolymers which are virtually as weather resistant as PVDF and FEVE lacquering systems.

Anodising

DIN 17611 standards determine the criteria for anodised fi nishes (E6/EVI), minimum thickness of the anodic layer 20 microns, corresponding to BS 1615: 1972 AA20.

PLEASE NOTE

When working with Clear Anodised ALUCOBOND® that the sheets have rack marks at each end of the panel where they have been held while being anodised. This mark extends 25mm in from each end of the panel on both sides and must be trimmed prior to fabrication. These marks are covered by the protective foil and are not obviously visible.

PVC Tapes

The application of PVC type tapes, Silicone or Polyurethane sealants to the PE protective foil or directly to the painted surface of ALUCOBOND® is not recommended. Plasticisers and/or solvents contained within these products could affect the painted surface resulting in a localised change in gloss level.

DISTRIBUTED BY

ALUCOBOND® ARCHITECTURAL

ALUCOBOND ARCHITECTURAL
A Division of Halifax Vogel Group Pty Limited
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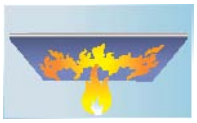
HVG HALIFAX VOGEL GROUP

ALUCOBOND®

Fire Behaviour

The non-combustible aluminium cover sheets protect the PE core.



Australia

AS 1530, Part 3 - Indicative results:

Ignitability	Index 0
Heat evolved	Index 0
Spread of flame	Index 0
Smoke developed	Index 0-1

United States of America:

ASTM E84:

Flame spread	0
Fuel contribution	0
Smoke density	0
UBC 17-5:	Passed

Germany

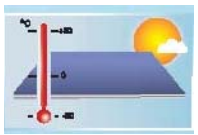
DIN 4102	Class B2

British Standards

BS 476, Part 6	Index1 ≤ 12 i ≤ 6	}	Class 1 Therefore meets Class 0 (National Building Regulations)
BS 476, Part 7	Class 1		

Thermal Insulating Properties

Due to its relatively thin and homogenous core ALUCOBOND® is not an insulating panel, however in certain instances its insulating properties can be considered.



Panel thickness [mm]	Thermal resistance 1/Λ= R [m² K/W]	Heat transmittance coefficient U-value [W/(m²K)]
3	0.0069	5.65
4	0.0103	5.54
6	0.0172	5.34

Thermal expansion

This is effectively controlled by the aluminium cover sheets. Actual linear expansion 2.4mm/m/100°C.

Temperature resistance

From -50°C to + 80°C.

Product Range

One side stovelacquered finish colours:

Refer to Colour Chart

Thickness:		Standard 4mm For special application 3mm, 6mm
Standard Width	:	1000, 1250, 1500, 1575mm
Special Width	:	min 875mm max 2050mm* (subject to min 2000m² per width for solid and metallic colours)
Standard Length	:	2500, 3200, 4000mm
Special Length	:	to customer's specification max 8000mm

Available stock in Australia

For available colours and sheet sizes refer to our Standard Range.

Other surfaces on request:

- Both sides mill-finish
  Both sides stove-lacquered
- Both sides clear anodised

Dimensional tolerances (rounded)

Thickness	mill finish resp.stove lacquered ± 0.2mm
Width	-0/+4mm
Length	1000-4000mm -0/+6mm 4001-8000mm-0/+10mm

ALUCOBOND® is produced in a continuous and fully automated process; this process introduces dimensional tolerances and factory edges that require the panels to be trimmed on all 4 edges prior to installation. 3A Composites and ALUCOBOND® Architectural do not recommend installation of untrimmed ALUCOBOND® panels

Storage

Protect pallets during storage against rain, penetration of moisture or condensation. Pile pallets in stacks one on top of the other (do not place the panels in an upright position); stacks must not comprise more than 6 pallets of identical size. Avoid storage for a period of more than 6 months.

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