ALUCOBOND®

Vision Materialized

ALUCOBOND® 40 years of excellence

www.alucobond.com.au

ALUCOBOND®

Vision Materialized

Contents

We pioneered a product that became synonymous with quality and longevity.

Front Cover Image -
Sydney Water HQ
Parramatta, NSW

Inside Front Cover Image-
Dale Alcock
Osborne Park, WA

Image supplied by Meyer Shircore and Associates Architects

History

Originating from an ingenious, patented product idea, the unique success story of ALUCOBOND® began when the product was launched on the market in 1969. Originally used for upgrading shop buildings, transport applications and furniture construction, architects and designers soon discovered the host of advantages of ALUCOBOND® for the use in exterior architectural applications and corporate identity programs, particularly in façades, wall cladding and roof edging.

Since its first market introduction 40 years ago, ALUCOBOND® has significantly influenced the appearance of many buildings. During these four decades, a constant development in architecture has taken place. ALUCOBOND® has contributed towards this development and today it is a prominent feature in a large number of attractive, distinctive architectural projects around the world.

The enormous success of ALUCOBOND® is based on its excellent product qualities such as exceptional top-grade flatness and rigidity, low weight, excellent formability, weather resistance, simple fabrication and ease of cleaning. In addition, a large choice of colours and a wide variety of designs offer architects and designers unlimited possibilities for creative, innovative and customised planning.

ALUCOBOND® is available in a large range of formats and the possibilities for implementing ALUCOBOND® for interior and exterior applications are extremely varied. It is used in projects ranging from the precise construction of residential buildings, representative public buildings, company headquarters, commercial and industrial buildings to the prestigious landmarks of modern urban construction. Since all ALUCOBOND® products are fully recyclable, they are ideal for projects that highly value the use of eco-friendly materials.

In the future, ALUCOBOND® will continue to focus strongly on innovation. With new products and surfaces, we will offer new possibilities and solutions to the world of architecture.

Sydney Water HG
Parramatta, NSW

From Pioneer to Industry Standard

The Original

ALUCOBOND® offers architects and designers unlimited opportunities for creative, innovative and individual planning. The components can easily be fabricated and fitted on site. The wide range of interior and exterior applications are matched only by the product's versatility.

- High formability and stability
- Diversity of brilliant colours and excellent weather resistance
- Individual design and easy processing
- Lightweight and large panel sizes

The innovative concepts of ALUCOBOND® and of the honeycomb composite panel ALUCORE® have proved themselves through many years of experience, innovative developments and first-class service. Since 1969, the original has been the most popular aluminium composite panel in the world.

Comprehensive Service

The technical service teams at Alucobond Architectural support architects and building owners right from the planning stage. They provide comprehensive technical information and customized advice to assist with the perfect implementation of all ideas and plans. For every project, the proven strategy to achieve a smooth completion lies in an early coordination between vision, architectural plans and the many possibilities which our unique panels give to fabricators and installers. Our product and application expertise is the fastest and safest way to success, whether it be for buildings, renovation projects or interior and exterior applications.

Worldwide

The close cooperation between the Alucobond Architectural team and ALUCUBOND® worldwide distributors has created a tightly knit international marketing network that gives our customers significant advantages. Regardless of where the project is physically located, the ALUCUBOND® team and its partners ensure quick and professional on-site service.

The worldwide success of ALUCOBOND® speaks for itself. Never compromise when it comes to quality and experience. Your nearest fabricator will provide a tailor-made solution that will stand the test of time.

Fabrication Centres

During the past 40 years, qualified, independent fabricators and installers have become firmly established, offering professional service to the building industry. They have acquired deep knowledge in the processing of ALUCOBOND® and their skilled personnel and specialised processing equipment ensure that your project is completed on time and within budget.

Bostik Architectural
& Structural Adhesives
Welshpool, WA

Image supplied by Meyer Shircore and Associates Architects

Why use ALUCOBOND®?

- ALUCOBOND® is the original and the world's most widely recognised aluminium composite panel.
- Manufactured since 1969, by the world's largest and longest established aluminium composite producers
- ALUCOBOND® has a factory applied coil coated PVDF paint finish; recognised and proven worldwide as the best architectural coating available today for all climatic and environmental conditions.
- ALUCOBOND® is very cost effective, even in the most complex situations.
- Since 1976, numerous prestigious projects have been carried out in Australia using ALUCOBOND®.

Colours

Available in 30 standard colours, the majority of which are kept in stock locally. Also available in a range of 44 complementary colours: minimum quantities apply.

Wide range of sizes

ALUCOBOND® is available in a wide range of sheet sizes and thicknesses.

Features & applications

ALUCOBOND® is lightweight, extremely flat and rigid. ALUCOBOND® has excellent vibration dampening characteristics. ALUCOBOND® can be bent, curved or shaped to any required angle. ALUCOBOND® can be used as a fascia, as a cladding panel, for interiors or signage. ALUCOBOND® is ideal to fit into any curtain wall system.

Prompt delivery

Substantial stocks of ALUCOBOND® are kept at our warehouses in Melbourne, Sydney, Brisbane and Perth.

Technical support

Free technical support and backup is available. Just call the Alucobond Architectural office nearest to you.

AUSTRALIA'S MOST POPULAR ALUMINIUM COMPOSITE MATERIAL ONLY AVAILABLE FROM ALUCOBOND ARCHITECTURAL

Office Building, Mornington, VIC

Modernity

High Rise

Cladding a new building or refurbishing an old one; there is no doubt that the long-lasting appeal of the contemporary finish, unparalleled durability and flexibility of application makes ALUCOBOND® the means for creating an outstanding landmark in any location regardless of aspect or challenging environmental factors.

Low Rise

Smaller structures, new or old, commercial or domestic, benefit equally from the ALUCOBOND® promise…a building that says "today and for the future".

Public Buildings

Public offices and civic centres demand a highly functional yet attractive solution for exterior and interior cladding. The wide array of colours, shapes and textural detail allows ALUCOBOND® to answer the call for a modern and efficient finish that will enhance the overall appeal of the dynamic urban setting.

Give buildings and skylines the shape of the future.

Montage Building, Docklands, Melbourne, VIC

Style

Realise decades of architectural individuality and classic styling with ALUCOBOND® aluminium composite material.

The unsurpassed finish and flatness of ALUCOBOND®, its dynamic range of colours and exciting shapes allow the designer complete freedom of creativity.

Lightweight yet strong, ALUCOBOND® is the ultimate material for creating a striking first impression, with the durability to retain its sleek good looks, long after other methods lose their lustre.

Office Development,
Osborne Park, WA

Image supplied by Meyer Shircore
and Associates Architects

ALUCOBOND®

Vision Materialized

Residential Applications

Property owners and architects alike seek to continually challenge the status quo of residential projects with the use of interesting surface finishes and combining unusual architectural features and forms.

Adding distinctive style to a suburban residence is now possible with ALUCOBOND® aluminium cladding which allows almost unlimited scope to create the ultimate dream home.

Corporate Identity

ALUCOBOND® is the ideal material to create and maintain your corporate image. Unlike other alternatives, ALUCOBOND® incorporates attributes such as long term colour consistency and weather resistance, excellent flatness, rigidity and formability, as well as ease of maintenance.

Major organisations such as Holden, Woolworths and National Australia Bank use ALUCOBOND® for their institutional signage Australia-wide to maintain consistency across all their operations.

ALUCOBOND® offers a tailor-made solution for every project, in terms of exclusive colours, eye-catching details, unusual shapes or innovative surface contours.

Modern refurbishment of antiquated structures

After years of constant use and the ongoing effects of our harsh environment, many existing structures now exhibit stained concrete, cracked masonry, failing render and other time-related problems. Inevitably, this adversely affects aesthetics and market value.

The most efficient and effective way to restore exterior surfaces and protect asset value is with ALUCOBOND®. The combination of surface finishes, colour options, durability and flexibility of ALUCOBOND®; all contribute to the modernisation of any building and create a dramatic transformation.

ALUCOBOND® offers outstanding protection from the weather and will withstand the effects of industrial pollution.

ALUCOBOND® is an energy efficient and cost effective method of contemporary renovation.

Refreshing
Refurbishment
turn this into this!

Office building
North Sydney, NSW

contemporary Renovation

turn this into this!

Laser & Sign Technology
Punchbowl, NSW

modern transformations

turn this into this!

Air Apartments
Eastwood, SA

ALUCOBOND®

Vision Materialized

Photovoltaic

ALUCOBOND® is setting new standards with its aesthetic, photovoltaic façade system

ALUCOBOND® photovoltaic is a new, unique, integrated façade system combining ALUCOBOND® composite panels, having proved their value over the past 40 years; with functional, photovoltaic modules. This integrated façade system is reconciling creative optics with technological and ecological demands.

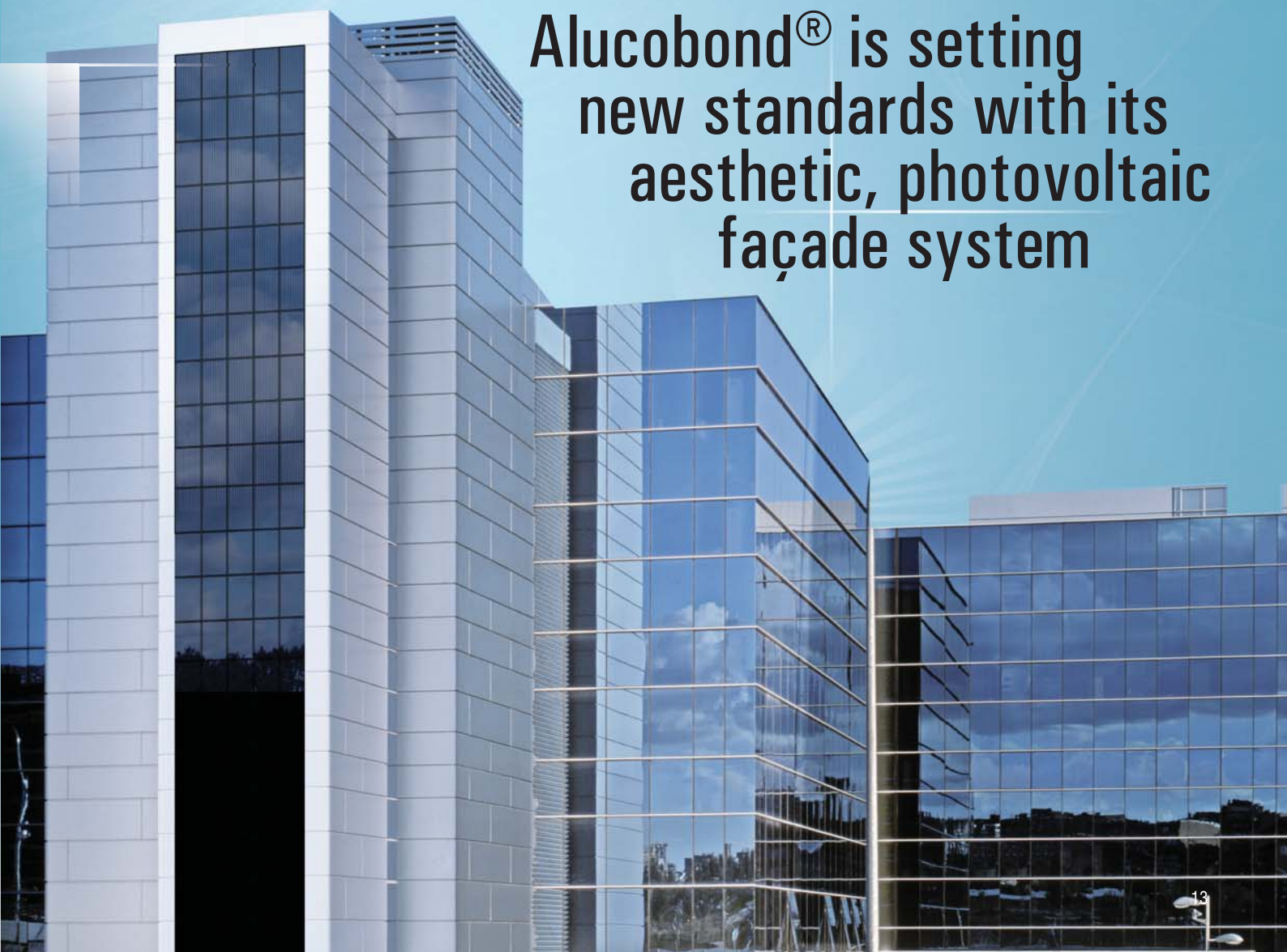
Architects and city planners are making permanent changes to our environment, which results in a tremendous responsibility for the following generations. It is their task and their concern not only to make our towns look attractive, but also to design them so that they are sustainable and environment-friendly.

By using ALUCOBOND® photovoltaic, building owners, architects and façade designers are able to meet today's demands for functionality, energy balance and aesthetics without having to make any compromises, and set completely new standards in energy and resource-saving architecture.

The systems can be integrated in the most differing façade formations in a creative way. Modern buildings that use ALUCOBOND® photovoltaic look attractive are an architectonic eye catcher and contribute decisively towards protecting our environment.

ALUCOBOND® photovoltaic is available in two module types: The elegant, homogeneously colored, CIGS Thin Film Module is the right choice for a sophisticated, aesthetic, architectural style. The technology applied for the monocrystalline module with its optimized performance, offers the highest efficiency available today. Both module variations have an individually optimized ALUCOBOND® photovoltaic system that easily enables decisive factors such as the location, orientation, shadow and rear-ventilation to be included.

For more information on ALUCOBOND® photovoltaic please contact your Alucobond Architectural representative.

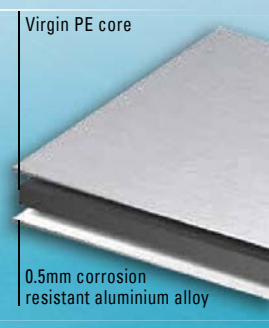


Alucobond® is setting new standards with its aesthetic, photovoltaic façade system

Product Range

ALUCOBOND®			Thickness: 3 mm / 4 mm / 6 mm			
	Width	1000 mm	1250 mm	1500 mm	1575 mm	1750 mm
	Length	2000 - 6800 mm	2000 - 11000 mm	2000 - 11000 mm	2000 - 11000 mm	2000 - 11000 mm
Solid Colours		■	■	■	■	■
Metallic Colours		■	■	■	■	■
Special Effect Colours		■	■	■	■	■
Spectra Colours		■	■	■	■	-
NaturAL		-	■	■	-	-
Wood Design		-	■	■	-	-
Anodized Look		■	■	■	■	-
Anodized*		■	■	■	-	-
Mill Finish		■	■	■	-	-

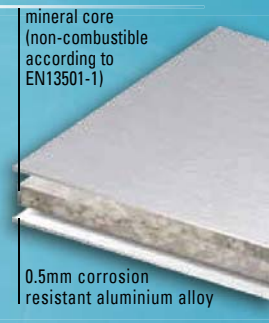
Not all finishes available ex stock.



ALUCOBOND® plus			Thickness: 4 mm			
	Width	1000 mm	1250 mm	1500 mm	1575 mm	1750 mm
	Length	2000 - 6800 mm	2000 - 11000 mm	2000 - 11000 mm	2000 - 11000 mm	2000 - 11000 mm
Solid Colours		■	■	■	■	■
Metallic Colours		■	■	■	■	■
Special Effect Colours		■	■	■	■	■
Spectra Colours		■	■	■	■	-
NaturAL		-	■	■	-	-
Wood Design		-	■	■	-	-
Anodized Look		■	■	■	■	-
Anodized*		■	■	■	-	-
Mill Finish		■	■	■	-	-

ALUCOBOND® A2			Thickness: 3 mm / 4 mm			
	Width	1000 mm	1250 mm	1500 mm	1575 mm	1650 mm
	Length	2000 - 9600 mm	2000 - 9600 mm	2000 - 9600 mm	2000 - 9600 mm	2000 - 9600 mm
Solid Colours		-	■	■	-	■
Metallic Colours		-	■	■	-	■
Special Effect Colours		-	■	■	-	■
Spectra Colours		-	■	■	-	-
NaturAL		-	-	-	-	-
Wood Design		-	■	■	-	-
Anodized Look		-	■	■	-	-
Anodized*		-	-	-	-	-
Mill Finish		-	■	-	-	-

Other specifications upon request.



SPECIALITIES						
ALUCORE® aluminium honeycomb composite panel						
		Thickness: 6 mm** / 10 mm / 15 mm / 16 mm / 25 mm				
	Width	1000 mm	1250 mm	1500 mm	1575 mm	1750 mm
	Length	2000 - 9600 mm (13000 mm)	2000 - 9600 mm (13000 mm)	2000 - 9600 mm (13000 mm)	2000 - 9600 mm (13000 mm)	2000 - 9600 mm (13000 mm)
Solid Colours		-	■	■	-	-
Metallic Colours		-	■	■	-	-
Anodized Look		-	■	■	-	-
Mill Finish		-	■	■	-	-

** On request

ALUCOBOND® photovoltaic is an integration of photovoltaic elements into an ALUCOBOND® façade. We supply the complete system.

Modules	Dimensions	Colours	Weight	Output	Mounting System
CIGS	1196 mm x 636 mm	Black	14.5 kg with frame	75 Wp +5/-0 %	Adapted to standard ALUCOBOND® façade systems
Monocrystalline module	1654 mm x 829 mm	Anthracite	19.0 kg with frame	75 Wp +5/-0 %	Adapted to standard ALUCOBOND® façade systems

* Anodized according to DIN 17611. All anodized ALUCOBOND® composite panels have contact lines (about 25 mm width) on their short sides. For panel lengths of more than 4000 mm, the composite panels have contact lines (about 2 – 3 mm width) on their long sides. Please take this into consideration when dimensioning the panels.

The Product

ALUCOBOND®

ALUCOBOND® has been developed as a rigid, yet flexible façade material for architectural uses. ALUCOBOND® is extremely weatherproof, impact-resistant and break-proof, vibration-damping, and ensures easy and fast installation. ALUCOBOND® is produced with various core thicknesses in a continuous lamination process. All painted panels are supplied with a protective peel-off foil.

Colours

ALUCOBOND® is now available in 30 standard colours, 21 speciality surfaces including Spectra, NaturAL, Wood Design and anodized colours, plus 44 pre-formulated colours. Custom colours are available on request.

The fluropolymer (PVDF or FEVE) coating is applied to the aluminium coil prior to lamination into a composite panel, using a continuous coil coating process, which is based on the latest technology. The multiple layers are individually stoved at temperatures of between 200-260°C. The quality of the coating is tested according to standards established by E.C.C.A (European Coil Coating Association) of which 3A Composites is a member. fluropolymer (PVDF or FEVE) coating systems combine good formability and excellent surface durability. They are extremely resistant against weathering, strong solar radiation and pollution attack.

Due to different production processes being applied for ALUCOBOND®, ALUCOBOND® A2 and ALUCOBOND® Plus, slight colour variations may occur between different products. If colour consistency is required do not mix different products.

Solid Colours

No matter whether a soft white or a vibrant red is selected, solid colours are always a good choice when a uniform appearance without special effects is required. The gloss of solid colours is between 30-40% according to Gardner scale.

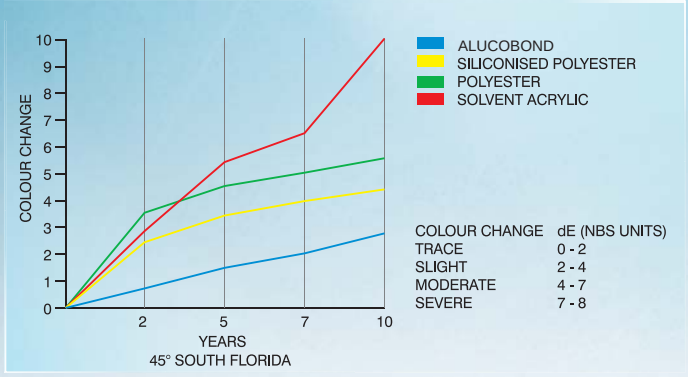
Metallic Colours

The different appearance of colour and gloss under various light conditions and viewing angles gives these surfaces a vivid impression and brings them to life. The gloss of metallic colours is between 30-40% according to Gardner Scale. Special Effect Colours / Spectra Colours & NaturAL Finishes. These eye-catching finishes applied using the same coil coating process are the result of continuous development of new paint systems and provide evidence of 3A Composites's know-how and competency in the latest coating technology. Unless specified, the gloss level of these specialised finishes are between 70 - 80% according to Gardner Scale.

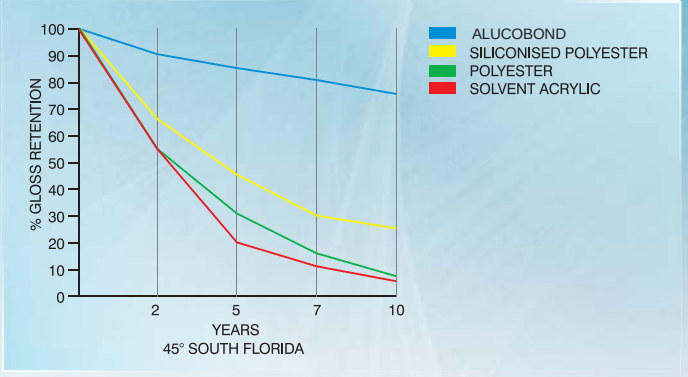
Dimensional Tolerances

Thickness:	±0,2 mm (mill-finish / stove lacquered / anodised)
Width:	-0/+4 mm
Lengths:	1 000 – 4 000 mm; -0/+6 mm
Lengths:	4 001 – 8 000 mm; -0/+10 mm

Colour change



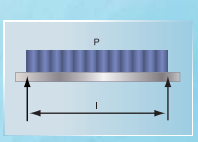
Gloss retention



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



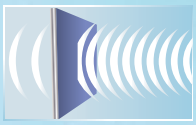
The composite material is rigid, resistant to blows, breakage and pressure and has high bending, buckling and breaking strengths. The strength is determined by the 0.5mm thick aluminium cover sheets in Peraluman-100, EN AW-5005A (AlMgI), acc to EN 573-3

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

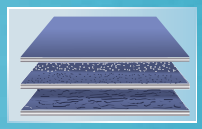
(acc. to DIN 53440)

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 finishes (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.

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

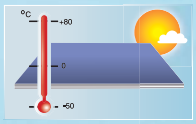
DIN 4102	Class B2

British Standards

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

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 $1/\Lambda = R$ [m² K/W]	Heat transmittance coefficient U-value [W/(m² K)]
3	0.0069	5.65
4	0.0103	5.54
6	0.0172	5.34

Thermal expansion

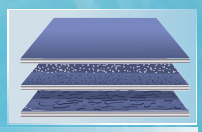
This is effectively controlled by the aluminium cover sheets. Actual linear expansion 2.4mm/m/100°C.

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.

Fabrication

Cutting

ALUCOBOND® can be cut with a vertical panel saw, circular or jig saw. Conditions for cutting with a circular saw:

Cutting tools/carbide tipped, blade geometry: Thickness of cutting teeth approx. 2-4mm; Tapered from outside to inside to prevent jamming.

Tooth geometry:	Trapeze tooth/flat tooth
Pitch t:	10-12mm
Clearance angle :	15°
Rake angle :	10° (positive)
Max cutting speed v:	5000 m/min.
Max feed s:	30 m/min.

Drilling

ALUCOBOND® can be drilled with twist drills normally used for aluminium and plastics on machines common for metals. Drill material: High-speed steel (HSS) We recommend metal drills with centre-point.

Contour cutting

ALUCOBOND® can be cut to shape using CNC machining centres, water jet cutting machines, copy routers and jig saws.

Shearing

Shearing can be done with a guillotine. To prevent surface damage, use protective pads between down-holders and ALUCOBOND® surface and adjust to minimum down holding pressure. Use carpet protection on feeder table. Do not use ball supports as they damage the ALUCOBOND® surface. Shearing will cause a slight deflection of the cut edge on the impact side.

Punching

ALUCOBOND® can be punched using conventional sheet metal punching machines or manual notchers. For clean cuts use sharp tools and dies with minimal cutting clearance. Punching will cause a slight deflection of the cut edge on the impact side.

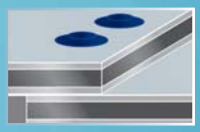
Bending

Bending is possible with a folding table or a bending press. Min required inside radius:
ALUCOBOND®: r = 10 x t
t = panel thickness
To protect the surface finish of ALUCOBOND® during bending use padding strips. The springback of ALUCOBOND® is greater than that of a solid aluminium sheet. To determine spring-back for serial production, make tests on sample panels.

Roll Bending

ALUCOBOND® can be bent using a roll bending machine (pyramid or pinch rollers).
To protect the surface finish of ALUCOBOND® during bending use only polished rollers free of dents and other defects.

Riveting



Riveting is possible using solid or blind rivets with conventional riveting tool. For exterior applications allow for thermal expansion and possible building movements.

Welding

The plastic core of ALUCOBOND® can be hot-air welded using conventional hot-air welding equipment and plastic filler rod. Hot-air welding provides a water-tight joint for decorative purpose only. It is not suitable for joints where structural strength is required.

Screwing

Use conventional wood, sheet-metal or machine screws made of stainless steel. For exterior applications allow for thermal expansion and possible building movements.

Clamping

With serrated cornerjoint or butt-joint sections or clamped between special aluminium extrusions

Bonding

For exterior use and structural applications:

- Adhesive sealing compounds
- Double-sided VHB tapes

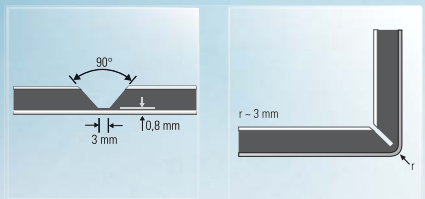
Consult sealant manufacturer for correct application.
For interior applications:

- Metal adhesives
- Double-sided VHB tapes

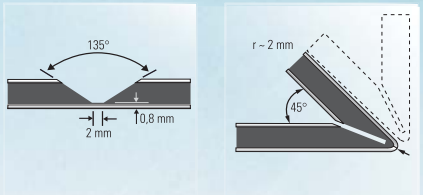
Adhesives and sealants do not adhere to the plastic core.
Apply to the aluminium cover sheet only.

Routing & Folding

ALUCOBOND® composite panels can be shaped using a very simple processing method. The technique, called the routing and folding method, enables a fabricator to produce shapes of various kinds and sizes. A V-shaped or rectangular groove is routed on the reverse side of the ALUCOBOND® composite panel using a disk or end milling cutter. A thin layer of the core material should be left at the base of the groove, i.e. on the inside of the outer cover sheet. The untouched outer cover sheet can now be bent manually, giving an exact and clean folding line which follows the routed groove. The outer radius of the folded edge depends on the shape of the groove and its depth. The routing can be done using a vertical panel saw equipped with ALUCOBOND® grooving accessories, a CNC machining centre, a portable sheet milling machine or a hand router. The routing and folding method can be used for ALUCOBOND® composite panels with all available standard surface finishes.



90° V-groove for folds up to 90°



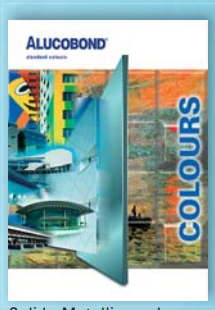
135° V-groove for folds up to 135°

Surfaces

ALUCOBOND® surfaces are coated using exclusively high-quality and eco-friendly lacquer systems.

They are highly weather resistant and resistant to industrial emissions. These properties are achieved using UV-resistant bonding agents. For standard finishes, fluorpolymeric top coats (e.g. PVDF) are used. All surface coats are applied in a continuous coil-coating process, i.e. with a continuous coating and stove-lacquering procedure.

The quality of the coating is tested according to standards established by E.C.C.A. (European Coil Coating Association), of which 3A Composites are a member.



Solid-, Metallic- and Special Effect Colours

Spectra Colours

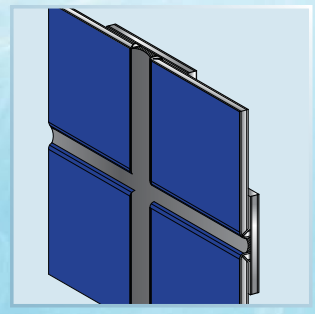
NaturAL

Wood Design

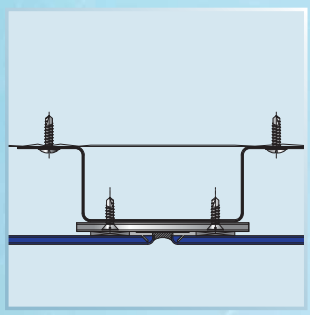
Anodized Look

Construction

ALUCOBOND® Flat Stick Method

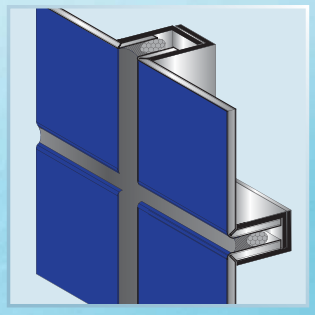


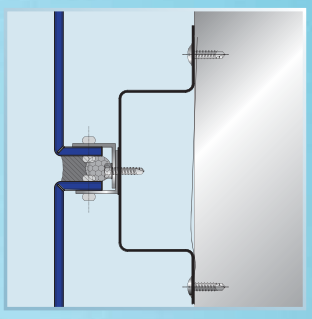
vertical section



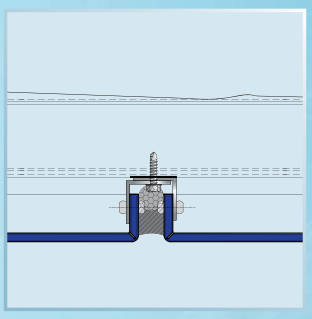
horizontal section

ALUCOBOND® Fixed Cassette System



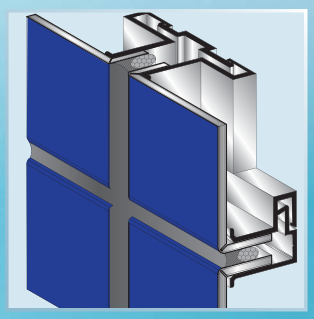


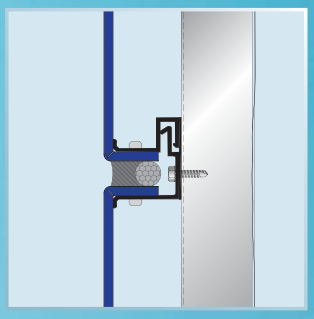
vertical section



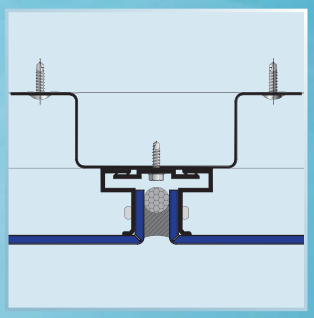
horizontal section

ALUCOBOND® Alucofix System





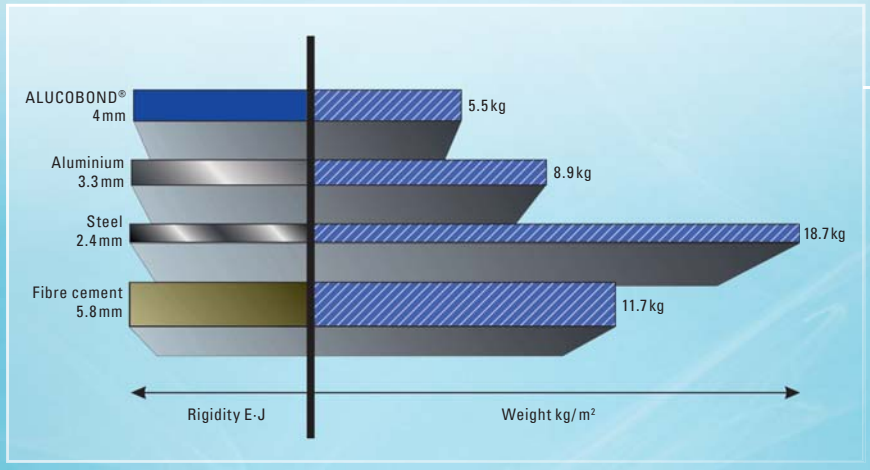
vertical section



horizontal section

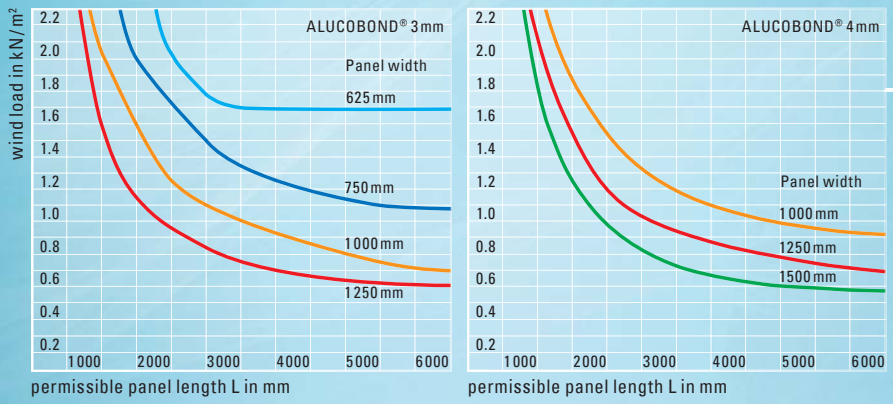
Commercial Building,
Leicester Street Carlton, VIC

Structural Behaviour



Comparison of thickness and panel weight with equal rigidity

The composite structure of ALUCOBOND® – two aluminium cover sheets and a plastic or mineral filled core – results in an impressive strength-to-weight ratio, even when comparing large panel sizes.
Even though the panels are very lightweight, which makes them easy to transport and handle in the factory and on site, they are highly rigid and strong, thus making the most suitable for exterior wall cladding. When properly designed and installed, ALUCOBOND® panels will keep their shape and remain flat for life, even when exposed to extreme temperature changes.



Wind load and permissible panel sizes

The graphs for 3 and 4 mm thick ALUCOBOND® indicate the maximum permissible panel length without having to add a stiffener based on applicable design wind load and panel width.

- Permissible design stress =51 N/mm², safety factor 1.75 is taken into account.
- Values apply to 4-side supported panels.
- Values for other systems upon request.

Technical Data	ALUCOBOND®			ALUCOBOND® plus	ALUCOBOND® A2	
Thickness	3 mm	4 mm	6 mm	4 mm	3 mm	4 mm
Panel thickness [mm]	0.50			0.50	0.50	
Weight [kg/m²]	4.5	5.5	7.3	7.6	5.9	7.6
Technical properties						
Section modulus Z [cm³/m]	1.25	1.75	2.75	1.75	1.25	1.75
Rigidity E·I [kNcm²/m]	1250	2400	5900	2400	1250	2400
Alloy/ Temper of Aluminium Layers				EN AW - 5005 A (AlMg1) H22/H42 according to EN 573-3		
Modulus of Elasticity [N/mm²]				70000		
Tensile Strength of Aluminium [N/mm²]				$R_m \geq 130$		
0.2 % Proof Stress [N/mm²]				$R_{p0,2} \geq 90$		
Elongation				$A_{50} \geq 5\,\%$		
Linear Thermal Expansion	2.4 mm/m at 100 °C temperature difference					

International Fire Classifications

	ALUCOBOND®		ALUCOBOND® plus		ALUCOBOND® A2	
Country	Test accord. to ...	Classification	Test accord. to ...	Classification	Test accord. to ...	Classification
EU	EN 13501-1	Class D	EN 13501-1	Class B, s1, d0	EN 13501-1	Class A2, s1, d0
Germany	DIN 4102-1 DIN 4102 Part 7 (VDIN ENV 1187)	Class B2 passed	DIN EN 13501-1 DIN 4102 Part 7 (VDIN ENV 1187)	Class B, s1, d0 passed	DIN EN 13501-1	Class A2, non-combustible
Austria	ÖNORM A 3800 ÖNORM B 1301-1	Class B1, TR1, Q1 Class D	ÖNORM EN 13501-1	Class B, s1, d0	ÖNORM A3800 ÖNORM EN 13501-1	Class A Class A2, non-combustible
Switzerland	VKF	Class 4.2	VKF	Class 5.3	VKF	Class 6q.3, non-combustible
France	NF P 92-501 NF F 16-101	Class M1 Class F0	NF P 92-501	Class M1	NF P 92-501	Class M0, non-combustible
Italy	CSE RF 2/75/A, RF3/77	Class 1			CSE RF 1/75/A, RF 3/77	Class 1
Scandinavia	NT-Fire 002	hardly inflammable			DS 1065.1 (NT Fire 004)	Class A, non-combustible
British Standards	BS 476, Part 6 BS 476, Part 7	Index I ≤ 12 i ≤ 6 Class 1 Therefore meets Class 0 (National Building Regulations)	BS 476, Part 6 BS 476, Part 7	Index I ≤ 12 i ≤ 6 Class 1 Therefore meets Class 0 (National Building Regulations)	BS 476, Part 6 BS 476, Part 7	Index I ≤ 12 i ≤ 6 Class 1 Therefore meets Class 0 (National Building Regulations)
Czech Republic	CSN 73 0862	Class B			CSN 73 0862	Class A
Russia					GOST 30244-94 GOST 30402-95 GOST 12.1.044-89 GOST 12.1.044-89	G 1 (combustibility) W 1 (flammability) D 1 (smoke emission) T 1 (smoke flammability)
China			GB8625 GB8626 GB8627	Class B1		
Malaysia	Approved for external wall cladding up to 18 m height.		BS 476, Part 5 BS 476, Part 6 BS 476, Part 7 Approved for any type of external wall cladding without restriction in height.	Class P Index 0 Class 1	BS 476, Part 5 BS 476, Part 6 BS 476, Part 7 Approved for any type of external wall cladding without restriction in height.	Class P Index 0 Class 1
Singapore	Approved for external wall cladding up to 10 m height.		Approved for any type of external wall cladding without restriction in height.		Approved for any type of external wall cladding without restriction in height.	
Japan	JIS A 1231 JIS A 1321 JIS K6911	QNC Class 2 incombustible (F)			JIS A 1231 JIS A 1321	QNC Class 2
Republic of Korea	KSF 2257	Passed 30 min heating time (in combination with rock wool and gypsum board)				
Australia	AS 1530, Part 3	Ignitability Index 0 Heat evolved Index 0 Spread of flame Index 0 Smoke developed Index 0-1	AS 1530, Part 3	Ignitability Index 0 Heat evolved Index 0 Spread of flame Index 0 Smoke developed Index 0-1	AS 1530, Part 3	Ignitability Index 0 Heat evolved Index 0 Spread of flame Index 0 Smoke developed Index 0-1
USA	UBC 17-5 ASTM E-162 ASTM E-108 modified ASTM E-84 - Flame spread - Fuel contribution - Smoke density	passed Flame spread Index 0 passed Index 0 Index 0 Index 0	UBC 26-1 (ASTM D2015) UBC 26-6 (ASTM D1929) UBC 26-7 (ASTM D635) UBC 8-1 (ASTM E-84) - spread of flame index - smoke development index - spread of flame index - smoke development index UBC 26-9 (NFPA 285) (Intermediate Scale Multi-story Test) Combustion Toxicity Test, NY	< 4708 BTU/lb. Self Ignition Temp. > 650 °F passed tested with exposed core: ≤ 15 ≤ 45 tested as composite ≤ 5 ≤ 5 ◘ UBC Class 1 passed passed	UBC 17-5 ASTM E-84 ASTM D-2015	passed UBC Class 1 509 BTU/lb
Canada			CAN/ULC-S 134-92 (Multi-story Test)	passed		

Useful Information

Naturally ALUCOBOND®

During the life cycle of ALUCOBOND® composite panels, no substances containing CFC, VOC's are set free at any time. The core material does not contain any nitrogen, chlorine or sulphur. Therefore, selecting ALUCOBOND® for projects which require environmentally friendly materials is a natural choice.

The Rear-Ventilated Façade

During decades of use in a rear-ventilated cladding system, ALUCOBOND® protects the building from weathering and the harmful effects caused by industrial and environmental pollution.
Advantages:

- Lower maintenance costs
- Long-term preservation of the building structure

An external cladding system using ALUCOBOND® acts as a barrier against solar radiation. The ventilated space between the ALUCOBOND® panels and the wall or the thermal insulation reduces the heat transmission.

Advantages:

- In winter: savings in heating cost
- In summer: savings in air-conditioning cost

The rear-ventilated cladding system using ALUCOBOND® protects the building's wall from high and rapid temperature changes. Moisture can pass through the wall. The building stays dry.

Advantages:

- Reduction of thermal expansion
- Reduction of crack formation

Environment, Safety and Health

For ALUCOBOND®, effective, continuous environmental protection is a main priority. It is of utmost importance to preserve natural resources in order to ensure a livable tomorrow for future generations.
It commits itself to continuous self-improvement programmes for environmental protection, many of which go above and beyond government regulations. It is also in this area that ALUCOBOND® strives to be a leader in its field.
3A Composites were one of the first companies to develop its own environmental management system, which is regularly audited by independent auditors. The successful certification according to EN ISO 14001 speaks for itself.

Storage / Handling

- Protect ALUCOBOND® pallets during storage against rain, seeping in of moisture and condensation.
- Only pallets of identical size should be stacked, with a maximum of 6 pallets stacked on top of each other.
- Avoid storing the product for more than 6 months, as it may be come difficult to remove the protective foil.
- When stacking the panels, nothing should be placed in between them, as this could produce marks on the panels.

Installation

To avoid possible reflection differences (for metallic, special effect, NaturAL, and spectra colours), it is recommended to install the panels in the same direction as marked on the protective peel-off-foil. Colour variations may occur between panels originating from different production batches. To ensure colour consistency, the total requirement for a project should be placed in one order

Protective Foil

- To avoid glue residuals on the surface of the panels due to UV radiation, it is recommended to remove the protective foil as soon as possible after the installation.
- The protective foils and the panel surfaces must not be marked using ink (marker), adhesive tapes or stickers, as the lacquered surfaces could be damaged by solvents or plasticisers.
- Make sure to remove the protective foil as soon as possible after installation as prolonged exposure to the elements could make the foil difficult to remove.

Cleaning and Maintenance

The frequency of cleaning depends on the design and the degree of soiling. For further information, please refer to our brochure ALUCOBOND® Processing.

Recycling

ALUCOBOND® can be fully recycled, i.e. both the core material and the aluminium cover sheets can be recycled and used for the production of new material.

Warranty

ALUCOBOND® stands for high quality and longevity. Warranties according to the product specification and approved field of application can be obtained upon request.

ALUCOBOND®

40 years of excellence

Vision Materialized

Distributed by: ALUCOBOND ARCHITECTURAL
A Division of Halifax Vogel Group Pty Limited
VICTORIA: 58 - 70 Hampstead Road Maidstone VIC 3012 T (03) 9319 3700 F (03) 9318 6533
NEW SOUTH WALES: 29 Henderson Street Turrella NSW 2205 T (02) 8525 6900 F (02) 9556 6068
QUEENSLAND: 128-132 Mica Street Carole Park QLD 4300 T (07) 3718 2360 F (07) 3718 2399
WESTERN AUSTRALIA: 24-26 Drynan Street Bayswater WA 6053 T 1300 700 917 F 1300 658 889
SOUTH AUSTRALIA: 46 Wodonga Street Beverley SA 5009 T (08) 8348 6800 F (08) 8445 8455
EMAIL: info@alucobond.com.au WEBSITE: www.alucobond.com.au
ALUCOBOND® is manufactured by 3A Composites GmbH, 78224 Singen / Germany

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