

TECHNICAL DATA

PROCORE A1[®]

PROCORE A1[®] is Deemed-to-Satisfy (DtS) Non-Combustible when tested to AS 1530.1 and AS 1530.3 as per the requirements of the BCA/NCC

PROCORE A1[®] is one of Australia's leading deemed to satisfy non-combustible aluminium panels.

Developed and manufactured by Probond Aluminium Cladding Panels, PROCORE A1[®] is the same as traditional aluminium composite panel, however the advanced technology of the core is constructed from a complete aluminium structure rather than from a combustible material, meaning that it contains ZERO polyethylene.

The benefits of PROCORE A1[®] include its high mechanical properties and simple fabrication. The outstanding surface flatness is enhanced with a high quality PVDF coating system, which provides optimum resistance to weather and industrial pollutants and comes in a vast range of colours, as well as a selection of special finishes such as zinc and woodgrain effects.

Not only does it look exactly like traditional Aluminium Composite Panel, it is also the same to fabricate and install making it a popular choice by installers.

PROCORE A1[®] requires minimal maintenance and comes with excellent long-term performance making this the first choice for all aluminium cladding projects.

ADVANTAGES OF PROCORE A1

- Deemed non-combustible as required by the BCA
- Tested to AS1530.1 & AS1530.3
- Non-Combustible Aluminium Core Technology
- ZERO Polyethylene
- Visually the same as traditional composite panel
- Cost effective, large stock holdings and short lead times

1. TYPICAL COMPOSITION

Aluminium Skin

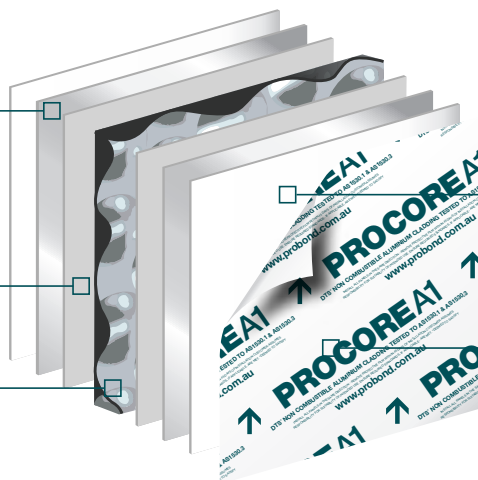
3003 Series Marine Grade aluminium offering superior performance, improved rigidity and excellent processing when CNC cutting and folding.
Face: 0.70mm thick, back: 0.50mm

Adhesive

Hot Melt Adhesive for superior adhesion.

Core

Unique technology non-combustible core of profiled aluminium construction



Paint Finish

The most durable coating available - PPG Kynar 500 PVDF Coating for long-term outdoor durability. Standard PVDF range is Satin Finish.

Protective Film

Designed to protect the panel during transit and installation, the film is clearly marked with the panel type for easy identification.



KYNAR500[®]



AS 1530.1
NON-COMBUSTIBLE

2. TECHNICAL DATA

CLASSIFICATION		PROCORE A1	
Panel Weight	4.5kg/m ²		
Thickness	4mm		
Thickness of Aluminium Face	0.7mm		
Width	1500		
ALUMINIUM SKIN			
Tensile Strength	160MPa		
Alloy/Temper Of Aluminium Layers	3003 H24		
ADHESIVE			
Adhesive Type	Hot Melt Adhesive		
Adhesive Thickness	0.05mm		
SURFACE PROPERTIES (PVDF COATINGS)			
Overall Paint Thickness (microns)	27-28 µm		
Dry Film Thickness (Nominal)	ASTM D1400	0.20-0.30 mil primer 0.70-0.80 mil topcoat	
Gloss	ASTM D523	Standard @ 60°: 25-35 Duranar LG @ 85°: <10	
Pencil Hardness	ASTM D3363	F-2H	
Flexibility	T-Bend, ASTM D4145	0-2 T-Bend; No pick-off	
Adhesion	ASTM D3359 Reverse Impact 1/16' crosshatch	No adhesion loss	
Reverse Impact	ASTM D2794	1.5 x Metal thickness (aluminium): No cracking or adhesion loss	
Acid Resistance	ASTM D1308	10% Muriatic acid - 24 hrs: No effect	
Acid Rain Test	Kesternich SO ₂ , DIN 50018	15 Cycles min. No objectionable colour change	
Alkali Resistance	ASTM D1308 10%, 25%, NaOH, 1 hr.	No effect	
Salt Spray Resistance	ASTM B117 5% salt fog @ 95°F	Passes 4000 hrs. Less than 1/1' avg. creepage from scribe; None or few #8 blisters	
Humidity Resistance	ASTM D714 ASTM D2247 100% relative humidity @ 95°F	Passes 4000 hrs. No #8 blisters	
Exterior Exposure	10 years @ 45°, South Florida ASTM D2244 ASTM D4214	Maximum 5 fade Maximum 8 chalk	

3. FIRE RESISTANCE

While the visual aspect of modern architecture is vital, form and function are also significant factors, as such, sustainability, thermal insulation and fire protection are critical considerations.

PROCORE A1® is one of the few Aluminium Composite Panels produced globally to be deemed non-combustible under the Building Code of Australia (BCA) and when tested to AS1530.1.

While PROCORE A1® has the same visual appearance as traditional composite panel, it is the innovative core technology where the difference occurs. The core is constructed from a aluminium in a wave-form structure rather than combustible material such as polyethylene or fire rated mineral.

This makes PROCORE A1® the ideal product for applications where fire resistance is required and where fire safety is essential, including schools, hospitals and high-rise environments.

As with any building product, the use of PROCORE A1® must be authorised by the appropriate regulatory body.

The Fire Resistance standards achieved by PROCORE A1® are:

PROCORE A1			
TEST STANDARD	RESULT		
AS1530.1	DEEMED NON-COMBUSTIBLE		
AS1530.3	Pass	Ignitability Index	0
	Pass	Heat Evolved	0
	Pass	Spread of Flame	0
	Pass	Smoke Developed	2

4. ACCEPTANCE VARIATION

Width	± 2.0 mm
Length	± 4.0 mm
Thickness	± 2%
Bow Maximum	0.5% of the length and/or width
Squareness Maximum	5.0 mm
Surface Defects	The surface shall not have any irregularities such as dents, scratches and other imperfections in accordance with our quality assurance

5. TECHNICAL DATA OF KYNAR 500 PVDF COATING

CLASSIFICATION	TEST STANDARD	RESULT	REMARKS
Substrate	ASTM D1005	Pass	Aluminium
Flexibility	ASTM D4145 ECCA T7 NCCA11-19	Pass	1~2T - No Cracking
DFT	ASTM D1400 ASTM D1005 NCCA11-13,14,15	Pass	
Colour Difference	ASTM 2244	$\Delta E < 5$	4000 hrs
Gloss Meter	ASTM D523	Pass	
Gloss Retention	ASTM 2244	85%	4000 hrs
Chalking Resistance	ASTM 2244	<8 units	4000 hrs
Pencil Hardness	ASTM D3363	HB	
Dry Film Adhesion		Pass	38°C, 24 hrs
Wet Adhesion		Pass	100°C, 24 hrs
Hot Adhesion		Pass	
Reverse Impact Resistance	ASTM D2794	No Cracking	12.7mm x 0.5kg x 500mm
Bending/Gardner Impact	ASTM D3281	Pass	Normal
Solvent Resistance	ASTM 2794	Pass	MEK double rubs
Acid Resistance	ASTM 1308	Pass	7 days soaking in 10% H ₂ SO ₄
Alkali Resistance	ASTM 1308	Pass	7 days soaking in 10% NaOH
Detergent Resistance	ASTM D2248	Pass	72 hrs soaling in 3% detergent
SALT RESISTANCE	ASTM B117	Includes the following:	
Gloss Retention	ASTM D523	0.8% change	5000 hrs
Colour Retention	ASTM 2244	$\Delta E = 0.68$	5000 hrs
Chalk Resistance	ASTM 4214	Rating: 10	Top rating - no chalk (5000 hrs)
HUMIDITY RESISTANCE	ASTM D714	Pass	2000 hrs
	ASTM B117	Includes the following:	
Gloss Retention	ASTM D523	No Visible Change	5000 hrs
Colour Retention	ASTM 2244	$\Delta E = 0.52$	5000 hrs
Chalk Resistance	ASTM 4214	Rating: 10	Top rating - no chalk (5000 hrs)
WEATHERING RESISTANCE	ASTM G53	Includes the following:	
Gloss Retention	ASTM D523	6.2% Change	5000 hrs
Colour Retention	ASTM 2244	$\Delta E = 0.27$	5000 hrs
Chalk Resistance	ASTM 4214	Rating: 10	Top rating - no chalk (5000 hrs)
CHEMICAL RESISTANCE	ASTM C207	Pass	Mortar, 24hrs
	ASTM C207	Pass	10% Hcl, 15 min
		Pass	70% HN03 Vapours, 30 min
		Includes the following:	
Gloss Retention	ASTM D523	6.2% Change	16 hrs
Colour Retention	ASTM 2244	No Change	16 hrs
Chalk Resistance	ASTM 4214	Rating: 10	Top rating - no chalk (5000 hrs)