



## ALUMINIUM COMPOSITE PANEL

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### DATA SHEET

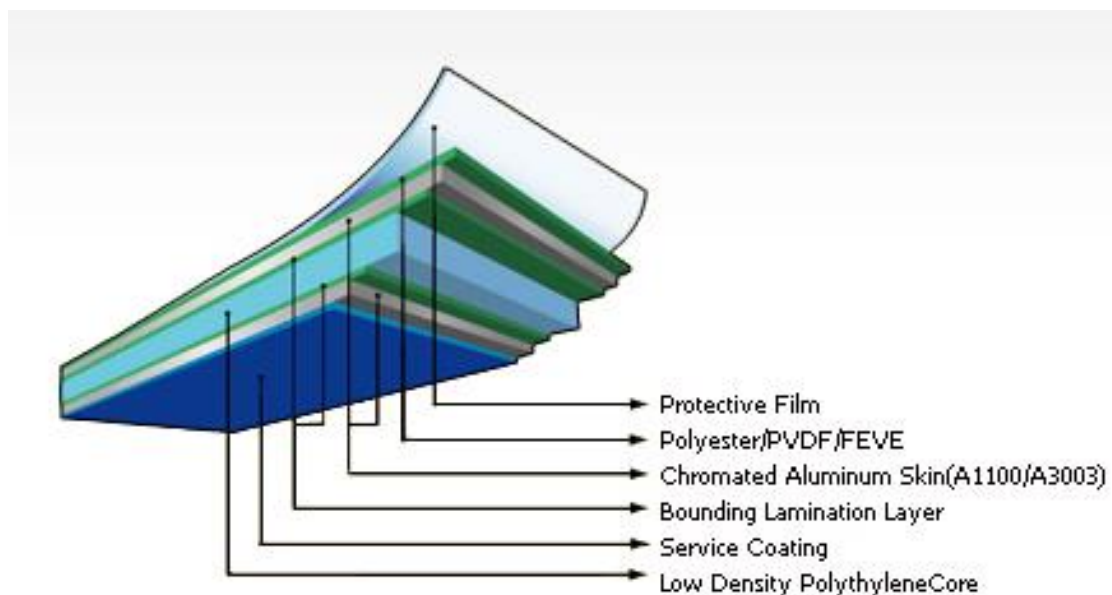
#### Production Description

ALUCOBEST Aluminium Composite Panel is a new decorative material used ever increasingly by developers, designers and architects world wide for various applications. The advantages of using this material over conventional material like Stone, Tiles and Paint are far too many.

ALUCOBEST Aluminium Composite Panel also known to many as sandwich panel consists of a Polyethylene core sandwiched between two aluminum sheets. These Panels are very versatile and can be used in many applications. The entire panel consists of 3 main layers.

The Top Aluminium Sheet is coated with either Polyester or PVDF Paint. The Core is either Normal Polyethylene Based or a FR (Fire-Resistant) Core which is specially treated for fire resistance. The Bottom Aluminium Sheet comes in either Mill Finish or if customers require we can provide a thin layer of Polyester Paint coat with (6~8um) backside paint

#### Alucobest Typical Composite Structure



## Panel Physical Properties

Property	Measurement
Panel Thickness	2mm, 3mm, 4mm, 5mm, 6mm
Aluminium Thickness	0.12mm, 0.15mm, 0.18mm, 0.21mm, 0.30mm, 0.40mm, 0.50mm
Standard Panel Size	1220*2440mm, 1250*2500mm, 1250*3200mm 1500*3200mm, 1500*4050mm, 1500*6000mm 1550*6000mm
Customs Panel Size	Maxi Width: 1800mm, Maxi Length: 6000mm
Panel Weight	2.5kg/m <sup>2</sup> (2mm/0.12mm) 4.1kg/m <sup>2</sup> (3mm/0.30mm) 4.9kg/m <sup>2</sup> (4mm/0.30mm) 6.7kg/m <sup>2</sup> (5mm/0.50mm) 7.5kg/m <sup>2</sup> (6mm/0.50mm)
Panel Tolerances	
Width	+/-2mm
Length	+/-3mm
Thickness	+/-0.2mm
Diagonals Windage	Less than 3mm
Edge Wave	Less than 1mm/m
Warpage	Less than 3mm/m

## Mechanical Properties

Property	3mm	4mm
Surfave Density	3.8~4.1kg/m <sup>2</sup>	4.9~5.8kg/m <sup>2</sup>
Bending Strength	83MPa	108MPa
Bending Elasticity Module	2.2 x 10 <sup>4</sup> MPa	2.83 x 10 <sup>4</sup> MPa
Penetrating Resistance	5.5Kn	12Kn
Shear Strength	22Mpa	30Mpa
180 Peel Strength	7N/mm	10.4N/mm
Thermal Expansion	1.60 x 10 <sup>-5</sup> °C	1.60 x 10 <sup>-5</sup> °C
Temperature Resistance	109°C	108°C

## Acoustic Properties

Property	Result
Transmission Loss (100HZ TO 5KHZ)	29dB

## Coating Properties

Property	PVDF	Polyester
Coating Thickness	Min 25 um	Min 16 um
Pencil Hardness	2H	3H
Coating Flexibility	2T	2T
Adhesion	Grade 1 Circling Grade 0 by Cross Cutting	Grade 1 Circling Grade 0 by Cross Cutting
Impact Resistance	50kg/cm, no coating remove No aluminium crack	50kg/cm, no coating remove No aluminium crack
Washing and Brushing	> 10000 no change	> 10000 no change
Aberration $\leq 3.0$	1.4	N/A
Chalking Grade	Grade 1	N/A
Other aging properties	Grade 0	N/A

## Fire Behavior

Property	Result
ASTM E84	Class A
BS476	Class 0
DIN4102	B 1
GB 17748	B 1
EN13501	B1

Property	Result
Metal Group Number	Group 3
Average Specific extinction area	305.9 m <sup>2</sup> /kg
In accordance with specification A2.4 of the Building Code of Australia Refer to Specification C1.10A section 3(c) of the Building Code of Australia Data from CSIRO Manufacturing & Infrastructure Technology as per AS3837	

## Quality Assurance

Alucobest Aluminium Composite Panels are manufactured in accordance with Management systems: ISO9001, ISO14001, ISO18001. ASTM, CE, BS standard

Applications:



Shanghai F1



Total oil Station



USA GE R&D Center