



**Haida Group Co., Ltd.**

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## Aluminum Composite Panel

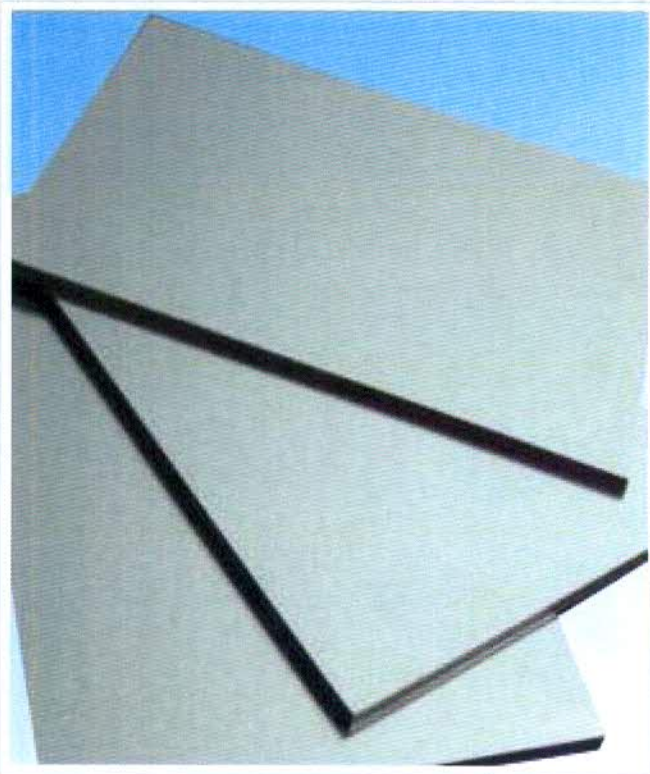
### DATA SHEET

#### Production Description

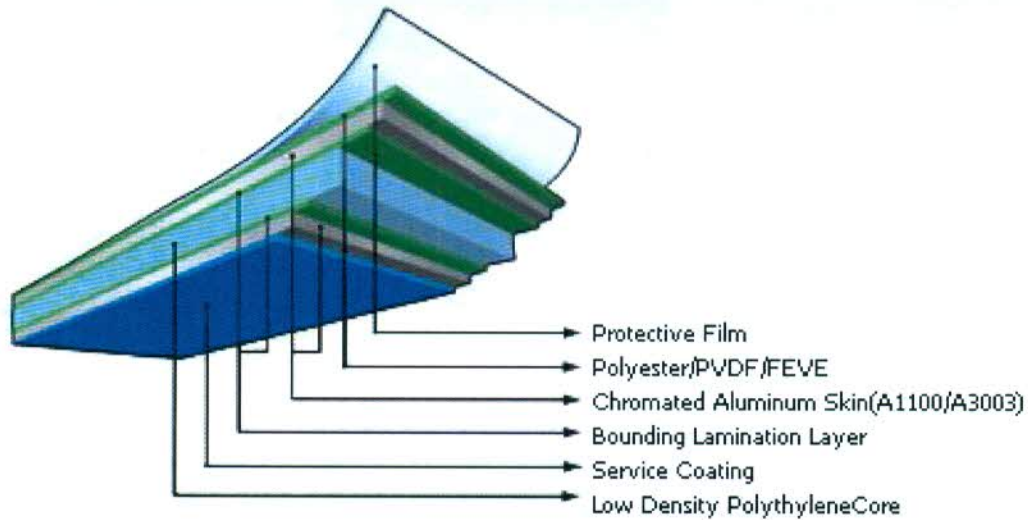
HAIDA Aluminum Composite Panel is a new decorative material used ever increasingly by developers, designers and architects world wide for various applications. The advantages of using this material over conventional material like Stone, Tiles and Paint are far too many.

HAIDA Aluminum 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 Aluminum Sheet is coated with either Polyester or PVDF Paint, also Anodize special treat. The Core is either Normal Polyethylene Based or a FR (Fire-Resistant) Core which is specially treated for fire resistance. The Bottom Aluminum 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



## HAIDA Typical Composite Structure



## Panel Physical Properties

Property	Measurement
Panel Thickness	2mm, 3mm, 4mm, 5mm, 6mm
Aluminum Thickness	0.12mm, 0.15mm, 0.21mm, 0.25mm, 0.30mm, 0.40mm, 0.50mm
Standard Panel Size	1220*2440mm, 1250*2500mm, 1250*3200mm 1500*3050mm, 1500*3200mm, 1500*4050mm 1500*6000mm, 1550*6000mm
Customs Panel Size	Max Width: 1600mm, Max Length: 6000mm
Panel Weight	2.5kg/m <sup>2</sup> (2mm/0.12mm) 3.85kg/m <sup>2</sup> (3mm/0.30mm) 4.9kg/m <sup>2</sup> (4mm/0.30mm) 5.5kg/m <sup>2</sup> (4mm/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 panel	4mm panel
Unit Weight	3.8~4.1kg/m <sup>2</sup>	4.9~5.8kg/m <sup>2</sup>
Tensile Strength	83MPa	52MPa
Abasion resistance	88L/mil	106.85L/mil
Thermal expansion	● 175um/m. °C (1.75mm/m/100°C)	235um/m. °C (2.35mm/m/100°C)

Thermal Conductivity	0.108W/m.k	0.131W/m.k
180 Peel Strength	0.78kg/mm	0.995kg/mm
Temperature Resistance	109°C	108°C

### Acoustic Properties

Property	Result
Transmission Loss (100HZ TO 5KHZ)	25dB

### Coating Properties

Property	PVDF	Polyester /anodize
Coating Thickness	Min 26 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 aluminum crack	50kg/cm, no coating remove No aluminum 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	B 1

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

HAIDA Aluminum Composite Panels are manufactured in accordance with Management systems: ISO9001, ISO14001, ASTM, CE, BS standard