

Aluminium Composite Material - ACM



ALUMINIUM COMPOSITE MATERIAL (ACM)			
PANEL DIMENSIONS		SPECIFICATIONS	
Panel Thickness	mm	4.00mm	6.00mm
Aluminium Thickness	mm	0.5 (x 2)	
Polyethylene Core	mm	3.00	
Standard Widths	mm	1250 1500	
Min / Max Panel Lengths	mm	1000 5000	
Standard Length	mm	3200	
MECHANICAL CHARACTERISTICS			
Weight	Kg / m ²	5.60	7.30
Tensile Strength Tolerance Rm	N / mm ²	≥158	
Yield Strength Rp0.2	N / mm ²	≥130	
Elongation A ₅	%	≥5	
Modulus Of Elasticity E	N / mm ²	70000	
Rigidity EJ	kN / mm ²	0.24	0.60
Aluminium Sheet Alloy/Temper		3105 H22 / 42 (Painted)	
SURFACE PAINT CHARACTERISTICS			
		3 Layer Poly Vinyl / di Fluoride (PVDF) 70% Kynar-500	
Surface Preparation		Degreasing Chromate Etch	
Primer	Microns	3	
Top Coat	"	25	
Clear Coat	"	5	
Total Coating (Average)	"	c. 33	
Protective Film Thickness	Microns	100	
PANEL OPERATIONAL TEMPERATURE RANGE °C			
		-50 °C - +80 °C	
THERMAL EXPANSION			
	mm / °C	2.3mm per linear metre per 100 °C temperature change	
DEGREE OF THERMAL INSULATION pe			
	W / mK	0.29	
FIRE RESISTANCE			
		DIN 4102 (B2) UK BS476 Pt 6 Class 0. Pt 7 Class 1	
SOUND INSULATION			
	dB	24	25

Aluminium

A combination of high strength to weight ratio, its natural durability, a wide choice of manufacturing and finishing processes and the ease and economy with which the material can be fully recycled, have all contributed to establishing aluminium as a highly regarded cladding material.

Advantages of Aluminium

In natural 'mill finish' aluminium reacts with the oxygen in the atmosphere to form an extremely hard inert oxide, which inhibits further corrosion. Even if the surface layer is scratched, the oxide layer reforms to protect the material.

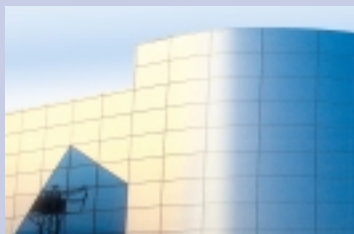
Surfaces will be enhanced by the application of a decorative finish.

A coloured coating is normally required to meet the planning requirements and design intent, conform to house colours or contrast/match other building materials. Aluminium sheet can be specified with any standard RAL or BS colour Polyester powder coated finish. Additionally, over 30 anodised colours are available using the Anolok® process.

Aluminium is produced from one of the Earths most abundant minerals (Bauxite). Over 8% of the Earths crust consists of aluminium compounds.

Aluminium recycling uses only 5% of the energy required to produce primary aluminium.

Even though aluminium can be recycled over and over again its characteristics are maintained. This provides significant benefits in comparison to other materials.



Note: SPECIFICATIONS Sheet to BS 1470: 1987 - ACM Alloy 3105 H22 - Sheet Alloy 1050A H14 or 3103 H14. Extrusions to BS EN 12020-1-2 2001 (UK formally BS 1474). Alloys EN 6060 & 6063. Paint to BS 6496. ANOLOK® is a registered trademark owned by Alcan Aluminium (UK) Ltd. CSL reserves the right to modify its products without notice.



Aluminium Composite Material - ACM



A Rainscreen / facade is created through a combination of material, finish and shape.

ACM is a sandwich composite panel consisting of a non-toxic polyethylene core bonded between 0.5mm aluminium facing and backing sheets.

Advantages of ACM

- Capable of being shaped and formed without loss of surface integrity
- Superior flatness - ideal for creating smooth, monolithic surfaces
- Light in weight, reducing frame loadings and installation cost
- High impact resistance
- Resistant to extremes of weather exposure and temperature
- Excellent UV characteristics retaining colour after long exposure
- Pollution, acid, alkali, and salt spray resistant finish
- Minimal maintenance
- Smooth paint finish and lacquering - 3 layer PVDF 70% Kynar - 500
- High strength and rigidity - outstanding deflection capacity and bending strength
- Very low coefficient of expansion
- Good sound insulation - (24 dB) and low resonance factor - reduces unwanted vibrational noise
- Fire retardant grade available

Available in a standard range of colours. Any (RAL) colour may be specified - minimum quantities apply.

CSL systems are compatible with all leading ACM brands. CSL offers etalbond® and Symonite® ACM depending on precise finish and performance specification.



ACM can be fabricated into Trays, Cassettes, Curves, Shapes, Flat Panels and Sharp Corners.



Specialist finishes available. (Copper / Titanium / steel)