

Aluminium Composite Material (ACM)

Aluminium Composite Material (ACM) is a composite panel made by bonding two thin layers of 0.13mm – 0.3mm thick aluminium to a low-density polyethylene core.

It is very strong and rigid despite its light weight, and is frequently used as signage, insulation and as external cladding for buildings.

The aluminium provides a surface that can be coated with PVDF or polyester paint, producing almost any kind of colour or pattern, including metallic and non-metallic finishes, and imitation of other materials, such as wood or marble.

<i>Key Properties</i>		<i>Units</i>	<i>Test Method</i>
General			
Density	1.29 (0.05)	g/cm ³ (lb/in ³)	ISO 1183
Aluminium Thickness	0.21	mm	DIN 1784
Aluminium Thickness Deviation	±0.02	mm	DIN 1784
Horizontal Flatness	5.0	mm	DIN ISO 1101
Coating Thickness	≥ 16	µm	-
Surface Hardness	2H	-	ECCA T4
Thermal			
Continuous Service Temperature	80 (176)	°C (°F)	-
Minimum Service Temperature	-50 (-58)	°C (°F)	-
Thermal Expansion (100°C difference)	2.4	mm/m	EN 1999
Heat Transition Coefficient	5.6	W/m ² K	DIN 4108-
Thermal Resistance	0.007	m ² K/W	DIN 52612
Mechanical			
Proof Stress (0.2%)	>100	N/mm ²	EN 485-2
Rigidity (µ = 0.3)	0.15	kNcm ² /m	DIN 53293
Tensile Strength of Aluminium	>144	N/mm ²	EN 485-2
Modulus of Elasticity	70000	N/mm ²	EN 1999
Elongation (A50)	≥ 2	%	EN 485-2
Acoustic			
Sound Absorption	0.05	αs factor	ISO 354
Sound Loss	0.007	d factor	EN ISO 6721

Notes

Figures shown are for panel thickness 3mm

DISCLAIMER: The purpose of this data sheet is to enable a consistent comparison with other products to help users to make an informed choice. The information provided in this product data sheet is for comparison and reference purposes only and is based on generic information gathered from a number of sources. In some cases the data provided is an average value only and represents our best attempt to describe the material's properties under typical factory conditions. We make no representations or warranties as to the completeness or accuracy of any of the data contained in this data sheet and users should use them as a general decision-making guide only. Branded data sheets are available on request. The information contained in this data sheet is subject to copyright. This data sheet cannot be reproduced for commercial purposes, apart from assisting users with making a purchasing decision, without the express permission of Plastic Wholesale.