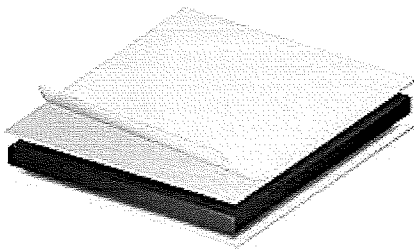


Technical Data Sheet DIBOND®

Panel thickness :			2 mm	3 mm	4 mm	6 mm
Thickness of Aluminium Layers	[mm]		0.30			
Weight	[kg/m ²]		2.90	3.80	4.75	6,60
Technical Properties :						
Section Modulus	W	[cm ³ /m]	0.51	0.81	1.11	1.71
Rigidity (Poisson's ratio $\mu = 0.3$)	E·I	[kNcm ² /m]	345	865	1620	3840
Alloy of Aluminium Layers			AlMg 1 (EN AW-5005), H44			
Modulus of Elasticity			70'000			
Tensile Strength of Aluminium			R _m 145 - 185			
0.2% Proof Stress			R _{p0.2} 110 – 175			
Elongation			A ₅₀ ≥ 3			
Linear Thermal Expansion			2.4 mm/m at 100°C temperature difference			
Core :						
Polyethylene, Typ LDPE			[g/cm ³] 0.92			
Surface :						
Lacquering			Coil Coating Mod. Polyester-System			
Gloss (initial value)			30 - 60 %			
Pencil Hardness			HB - F			
Acoustical Properties :						
Sound Absorption Factor	α_s		0.05			
Sound Transmission Loss	R _w	[dB]	23	24	25	26
Loss Factor	d		0.0048	0.0057	0.0072	0,0102
Thermal Properties :						
Thermal Resistance	R	[m ² K/W]	0.0047	0.0080	0.0113	0,0180
Heat Transition Coefficient	U	[W/m ² K]	5.72	5.61	5.50	5,30
Range of Application			[°C] -50...+80			

DIBOND® - The Original

DIBOND® was originally developed in 1992 by 3A Composites as one of the first Aluminium Composite sheets for the display and signage markets. The panel combines two 0.3 mm aluminium surface layers with a polyethylene core and comes with a protective film on both sides. Front and reverse side are either stove lacquered, with white or coloured surfaces and with either matt or high-gloss surfaces, anodized or even textured.



Application fields

DIBOND® is used in either 2D or 3D applications and stands out through extremely flat surfaces, very high resistance to weathering and corrosion and high stability. **DIBOND®** is used for interior and exterior applications.

- Exhibition stands and displays
- Shop fitting, interior design
- Furniture constructions
- PoS/PoP displays, signage and shop fronts (interior and exterior)

The unique alloy - AlMg1

- **DIBOND®** is the only ACM for display applications with an AlMg1 alloy
- High corrosion resistance
- Very easy 3D processing characteristics due to unique alloy
- Excellent processing parameters, e.g. bending, routing and folding

The special polyester coating

- Stove lacquered according to ECCA Standard in Singen
- Consistently high colour quality, trueness and colour thickness
- Absolutely flat surface

- No heavy metals in the lacquers
- Applicable for screen printing and direct-to-substrate digital printing






UV-blocker – the black core

- UV - protection
- No delamination or warping due to low thermal expansion
- Optimized for long term outdoor use
- Low thermal expansion compared to plastic materials

Advantages of Handling, Transport and Installation

- Relatively low weight combined with high stiffness and dimensional stability. Ideal for large formats
- The combination of aluminium and a PE core offer easy fabrication characteristics compared to full aluminium.
- Three dimensional processing through routing and folding technique
- Cost-effective through flat transportation and local installation
- Low thermal expansion compared to plastic materials

Comparison of thickness and weight with the same bending stiffness

Thickness	Material	Weight
3 mm	DIBOND®	3,8 kg/m ²
		
2,4 mm	Aluminium	6,5 kg/m ²
		
11,1 mm	PVC	5,6 kg/m ²
		
1,7 mm	Steel	13,3 kg/m ²
		
6,8 mm	Acrylic	8,2 kg/m ²
		

Detailed information is available in our [brochures](#).