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Technical Data Sheet

Dibond

Aluminium composite panel – skins EN AW-5005A (AlMg1), core polyethylene (PE)

Typical Properties

- Low weight combined with high flatness and stiffness
- Easy to saw, rout, drill and fold
- Weather- and UV-resistant coil-coated finish
- Wide range of colours and gloss levels
- Temperature resistant from -50 °C to +80 °C
- Building material class B2 (normal flammability) to DIN 4102-1

Typical Industries

- Facade cladding / architecture
- Advertising technology and display construction
- Interior fit-out and furniture making
- Exhibition and trade fair construction
- Signage and wayfinding systems

	Test Method	Unit	Value
General Properties			
Skin alloy	EN 485-2		EN AW-5005A (AlMg1), H44
Skin thickness (per skin)		mm	0.30
Core material			Polyethylene (LDPE)
Core density		g / cm³	0.92
Temperature resistance		°C	-50 … +80
Weight and Mechanical Values by Panel Thickness			
Weight per unit area		kg / m²	2 mm: 2.90 3 mm: 3.80 4 mm: 4.75 6 mm: 6.60
Section modulus W		cm³ / m	2 mm: 0.51 3 mm: 0.81 4 mm: 1.11 6 mm: 1.71
Flexural rigidity E·I		kNcm² / m	2 mm: 345 3 mm: 865 4 mm: 1620 6 mm: 3840
Properties of the Aluminium Skin			
Modulus of elasticity	EN 485-2	N / mm²	70,000

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	Test Method	Unit	Value
Tensile strength Rm	EN 485-2	N / mm²	145-185
Yield strength Rp0.2	EN 485-2	N / mm²	110-175
Elongation at break A50	EN 485-2	%	≥3
Coefficient of linear expansion (at 100 °C)		mm / m	2.4
Surface Coating			
Coating system			Modified polyester paint (coil coating)
Gloss level		%	30-85
Hardness (pencil hardness)			HB-F
Acoustic Properties			
Sound absorption αs (3 mm)			0.05
Sound reduction index Rw		dB	3 mm: 23 4 mm: 24 5 mm: 25 6 mm: 26
Loss factor d			3 mm: 0.0048 4 mm: 0.0057 5 mm: 0.0072 6 mm: 0.0102
Thermal Properties			
Thermal resistance		m²K / W	2 mm: 0.0047 3 mm: 0.0080 4 mm: 0.0113 6 mm: 0.0180
Thermal transmittance		W / m²K	2 mm: 5.72 3 mm: 5.61 4 mm: 5.50 6 mm: 5.30
Fire Behaviour			
Building material class	DIN 4102-1		B2 (normal flammability)

Dibond is an aluminium composite panel with aluminium skins (EN AW-5005A) and a polyethylene (PE) core. The values stated are typical average values and are subject to normal production tolerances; they serve as an aid to material selection and are not a legally binding assurance of specific properties. Dibond is not declared for direct food contact.

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