



Aluminium sheet and composite panel

Reynolux® Building and Reynobond® Architecture

References

STANDARD:

Metallic,
Plain red,
Black, white ...

EFFECTS:

Sparkling,
Matt anodised,
Chameleon ...

DESIGN Natural Design:

Terracotta,
Riyadh,
Granite ...

DESIGN Wood Design:

Mahogany,
Oak,
Zebrano ...

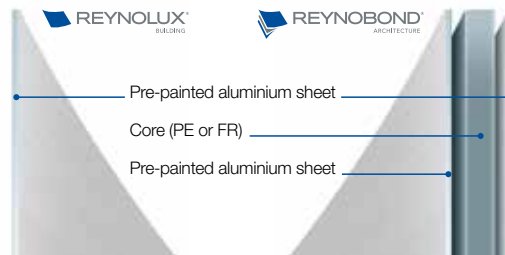


Main features

Reynolux® Building: pre-painted aluminium sheet. Reynobond® Architecture: two Reynolux® aluminium sheets bonded to a thermoplastic core material (PE or FR). Both products have an extraordinary bond integrity and offer an outstanding corrosion resistance. The advantages are particularly obvious for large area applications, which place exceptionally high demands on evenness and stiffness.

Application

Reynolux® Building and Reynobond® Architecture are especially developed for outdoor applications such as ventilated facades, interior coverings, and designing facades, both in the area of new buildings as well as refurbishments. Reynolux® Building can be installed as clapboards, trapezoidal sheets, sandwich panels or as cassettes. Reynobond® Architecture can be installed in different cassette systems, screwed and riveted systems. Learn more at www.reynobond.eu.



Manufacturer's particulars and installers qualifications

Cladding manufacturer should be qualified by Alcoa Architectural Products. Aluminium composite cladding should be installed by a fabricator/installator authorized by the principal manufacturer. The fabricator/installator shall have a minimum experience of 5 years in successfully installing composite cladding. The installation team should have sufficient experience in installing cladding. Contractor shall submit 10 years work guarantee from date of handing over.

Cleaning

Frequent and regular cleaning once a year is strongly recommended or when the appearance has become unsightly or when deposits of atmospheric pollution or matter washed down from building surfaces are apparent. Regular cleaning of organic coatings will maintain the surface in a satisfactory state.

- Washing operations have to be carried out progressively from top to bottom. Wipe along the polishing direction, not across it. Work from top to bottom in overlapping strokes.
- Cleaning agent depends on the site location and on the degree of contamination. Only water based mild cleaning agents should be used for cleaning organic coated flat products. The manufacturer advice should be sought in other cleaning agents especially solvents. Do not use swimming pool water for cleaning. Do not use chlorine containing cleaning agents such as bleach or strong acids (e.g. mortar removers).
- Harsh scrubbing or the use of abrasive or solvent cleaners, which will change the finish, should be avoided. Do not use wire wool or hand objects to remove stubborn stains.
- Rinse away cleaning chemicals with liberal amounts of tap water. Wipe dry, if possible.





Composition Reynobond® aluminium composite panel				
Panel thickness		3 mm	4 mm	6 mm
Coated aluminium sheet thickness		0.5 mm (±0.01 mm)		
Alloy & temper		3000 series		
Core		PE or FR (fire-retardant)		
Front side finish*		DURAGLOSS® 5000 (35 µm) or PVDF 70/30 (25 µm) and anti-corrosion treatment		
Reverse side finish		Washcoat and anti-corrosion treatment		
Characteristics Reynobond® aluminium composite panel				
Width		1,000 mm / 1,250 mm / 1,500 mm / 1,750 mm / 2,000 mm (-0/+3 mm)		
Length		2,000 mm up to 6,050 mm (< 4 m: -0/+3 mm; > 4 m: -0/+6 mm)		
Weight in FR		6.04 kg/m²	7.64 kg/m²	10.84 kg/m²
Weight in PE		4.69 kg/m²	5.61 kg/m²	7.46 kg/m²
Tolerance in squareness		≤ 3 mm		
Tolerance in bow		≤ 2 mm / 500 mm on the width and the length		
Performance Reynobond® aluminium composite panel				
Bond integrity	PE: ASTM D1876 FR: ASTM D903	4.37 N/mm (mini) or 25 lbs/inch (mini)		
Tensile strength	ASTM D6 38-82a	46.26 Mpa		
Moment of inertia (R _m)		0.31 cm⁴/m		
Tensile yield		44.16 Mpa		
Stiffness (EI)	CSTB, DIBT	0.125 kN/m²/m	0.242 kN/m²/m	0.596 kN/m²/m
Flexural modulus	ASTM C393 (& ASTM D790)	41,400 Mpa		
Surface coefficient of heat transfer U		5.7 W/m²K	5.6 W/m²K	5.4 W/m²K
Thermal expansion		2.4 mm/m for a temperature variation of 100 °C		
Sound attenuation (R _w)	ASTM E90, ASTM D6 38-82a	25 dB	26 dB	27 dB
Temperature resistance		-40 °C / +80 °C		
Maximum allowable deflection		L / 30 (allows higher wind pressure or bigger sized elements)		
Performance and durability Reynolux® pre-painted aluminium sheet				
Specular gloss*	EN 13523 – 2 ASTM D 523	DURAGLOSS® 5000: from 3 % to 80 % PVDF 70/30: from 25 % to 30 %		
Durability class	NF EN 1396	Class 4: severe industrial – extreme conditions / very severe costal marine (less than 3,000 m from the sea) / high UV plus severe conditions		
Pencil hardness	EN 13523 – 4	HB – F		
Resistance to cracking on rapid deformation	EN 13523 – 5	No cracking, no loss of adhesion		
Adhesion after indentation	EN 13523 – 6	100 % of adhesion		
Resistance to cracking on bending	EN 13523 – 7	Very good flexibility: 0.5 T depending on thickness		
Acetic salt spray fog resistance	EN 13523 – 8	1,000 h: no effect		
Water immersion resistance	EN 13523 – 9, AAMA 620	3,000 h: no effect		
Humidity resistance	ASTM D 224, AAMA 620	3,000 h: no effect		
Mortar test	AAMA 620	No effect		
Acid resistance	AAMA 620 ASTM D 1308	Nitric acid: ΔE < 5 units except some blue and metallic colours; hydrochloric acid: no effect		
Detergent resistance	AAMA 620	No effect		
Colour fastness on natural weathering	5 years 45° South Florida	Colour variation: 5 to 10 units (ΔE) depending on colour		
Resistance to chalking on natural weathering	5 years 45° South Florida	Rating ≥ 8		
Fire certificates for Reynobond® aluminium composite panel				
Europe	EN 13501	FR: B-s1, d0		
France	NF P 92-501	PE & FR: M1 Combustible; non-inflammable		
Germany	DIN 4102	PE: B2 – FR: B1		
Switzerland	Directive VKF	PE: 4.2 – FR 5.3		
Great Britain	BS476 part 6 & 7	PE & FR: Class 0		
Poland	PN-90 / B-02867	FR: NRO		
USA	ASTM E 84	Meets requirements		
Austria	ÖNORM 3800	FR: PASS		
Russia	TR	FR: G1		

* For other paint options, such as 2-coat polyester, please check the relevant datasheets.

Reynolux® Building:

For Reynolux® Building, the project and your expectations in terms of design will determine the metal to use: alloy from 3000 and 5000 thickness from 0.2 mm to 2 mm. See “Performance of pre-painted aluminium sheet” part in the Reynolux® Building technical data.

Fire resistance:

Reynolux® Building pre-painted aluminium sheet allows you to meet the strictest of fire codes: the product is not combustible. Reaction to fire certifications: Europe A1 (EN 13501), France MO incombustible (NF P 92-501).

Technical service:

Our service is at your disposal to help with static wind resistance calculations, panel cutting optimisation and advice in the details of installation on specific parts of the building.

CAD files and 3D objects:

You can find all the CAD system files for riveted and screwed installation as 3D objects in electronic form on our website at www.reynobond.eu.

The technical data refer to currently available products. Please notice that the specific characteristics of each project have to be taken into account (country, delivery time, size of transport containers etc.).

Alcoa Architectural Products

1 rue du Ballon
68500 Merxheim, France
Tel. +33 (0) 3 89 74 47 63
Fax +33 (0) 3 89 74 46 90
Reynobond.Service@alcoa.com
Reynolux.Service@alcoa.com
www.alcoaarchitecturalproducts.eu

