

ALPOLIC™ A1

Aluminium composite panels

Technical data

UNIQUE:
Fire protection class A1



PCS
ProCompositeSolutions

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ALPOLIC™ A1 is the first aluminium composite material to be classified in accordance with the European fire protection standard DIN EN 13501-1 for building material or fire protection class A1 („Euroclass A1“). This means that the product is non-combustible and does not produce any smoke in the event of fire. It therefore offers an ideal sustainable alternative to façade materials made of metal or other cladding materials used for ventilated rainscreen cladding façades systems.

ALPOLIC™ A1 is manufactured from two 0.5 mm thick aluminium cover sheets. These are applied to the non-combustible mineral core in a special fusing process. The front is usually coated with LUMIFLON™ – based on a transparent fluoropolymer resin (FEVE) – or with DURAGLOSS® 5000.

Product features

- Excellent flatness
- High rigidity
- Low weight
- Robust and durable
- Impact and fracture resistant
- Corrosion, weather, UV- and graffiti-resistant
- Easy to process
- Fire protection class A1 (non-combustible)
- High-quality surface coating
- Consistent colour quality and consistency
- Wide variety of colours and designs
- Approved by building authorities
- Almost 100% recyclable
- EPD certified

Surface coating



The front of the ALPOLIC™ aluminium composite panel is usually colour-coated with LUMIFLON™ or DURAGLOSS® 5000.

Both coatings guarantee high colour stability, provide reliable protection against the effects of weather, UV radiation, corrosion and acids and are efficiently resistant to chalking. The coating is guaranteed for up to 20 years. LUMIFLON™ is one of the world's highest quality coatings, based on a transparent fluoropolymer resin (FEVE). The reverse side of the composite panels is coated with a polyester-based coating to protect against corrosion.

Further technical details on LUMIFLON™ can be found in the corresponding data sheet, which you can download from the website: www.alpolic.eu



Areas of application

As non-combustible aluminium composite panel with A1 classification, ALPOLIC™ A1 is particularly suitable for areas where a very high level of fire protection is required or the use of non-combustible façade materials is prescribed. This applies in particular to buildings such as high-rise buildings, high-risk buildings, stairwells and similar applications. Thanks to its outstanding product and processing properties and the wide range of finishes available, ALPOLIC™ A1 opens up almost unlimited architectural design possibilities – both in refurbishment and new buildings.

- Ventilated rainscreen cladding
- Façade and roof cladding
- Veneers
- Corporate Identity
- Interior architecture

Colours and surfaces

The range comprises more than 200 colours and surface designs in various degrees of gloss (15 - 30%): solid colours, metallic, sparkling, prismatic and pattern finishes.

The entire product range can be found on our website, where you can order samples and download colour charts and technical information.



Specifications

Dimensions	Standard	Unit	Value	
Total Thickness	-	mm	4 (± 0.2 mm)	
Cover sheet thickness	-	mm	0.5	
Core thickness	-	mm	3	
Width	-	mm	1,250 / 1,500 (± 2 mm)	
Length	-	mm	max. 7,300 (± 1 mm/m)	
Bow tolerance	-	mm	max. 0.5% (5 mm/m) of the length or width	
Squareness tolerance	-	mm	max. 5	
Technological Value				
Weight	-	kg/m ²	8.6	
Specific gravity	-		2.15	
Tensile strength	DIN EN 1396	N/mm ²	150	
0.2% proof stress	DIN EN 1396	N/mm ²	130	
Elongation	DIN EN 1396	%	3	
Flexural elasticity, E	ASTM D7250	kN/mm ²	45.6	
Deflection temperature	ISO 75-2	°C	115	
Thermal expansion	ASTM D696	10 ⁻⁶ /°C	20.6	
Thermal Conductivity	Calculated Value	W/m-K	0.4	
Acoustical Properties				
Sound Transmission Loss	ASTM E413	STC	27	
Surfaces				
Coil-Coating Lacquering	-	-	LUMIFLON™ Fluoropolymer coating (FEVE)	DURAGLOSS® 5000 Polymer-coating
Aluminium alloy	-	-	3105 H44 and 3005 H44	
Gloss (measured at 60°)	ASTM D523	%	15 - 30	High gloss, silk matt, matt and MattExtreme
Pencil hardness	ASTM D3363	-	H	>HB

International fire classifications

Country	Test Standard ...	Results & Classification	Remarks
EU	EN 13501-1 (below tests as required)	Reaction to fire classification: A1	
	EN ISO 1182	Passed	Core test
	EN ISO 1716	Passed	Heat potential value
	EN 13823	Passed	Panel test
Australia	AS 1530.1	Passed	Core test
	AS 1530.3	Ignitability Index 0, Spread of Flame Index 0, Heat Evolved Index 0, Smoke Developed Index 0	Panel test
Singapore	BS 476 Part 4	Passed	Core test

Large fire testing

Country	Test & Certificate
France	LEPIR2, IT249 APL n° EFR-22-002172
Great Britain	BS 8414-1

Certifications and approvals

Country	Certifications and approvals
Germany	General building approval, DIBt
Great Britain	BBA
International	Environmental Product Declaration (EPD)

Core material combustibility comparison

	ALPOLIC™/fr	ALPOLIC™ A2	ALPOLIC™ A1
Portion of combustible ingredients within the core material	≤30%	≤10%	≤5%
Heat potential of the core material	≤14MJ/kg	≤3MJ/kg	≤1MJ/kg

ALPOLIC™ – the world's first address for aluminium composite panels

Recycling

Our materials are 100% recyclable. Even waste from ALPOLIC™ plants is recycled.

Certifications

DIBt **CSTB** **BBA** **TSGG** **LUMIFLON** Trademark of AGC Chemicals, Asahi Glass Co., Ltd.

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