

ALPOLIC™ NC/A1

Aluminium composite panels

Technical data

ALPOLIC™ NC/A1 is the first aluminium composite material to be classified in accordance with the European fire protection standard 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™ NC/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



**OUTSTANDING:
Fire protection class A1**



Colour coating ————
LUMIFLON™ (FEVE)/DURAGLOSS® 5000

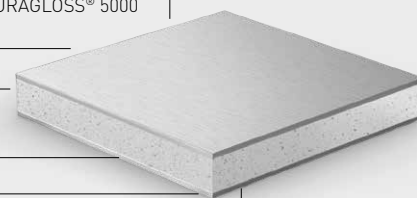
Aluminium 0.5 mm ————

Non-combustible
mineral core 3.0 mm

Aluminium 0.5 mm ————

Service coating ————

Anti-corrosion protective laquer ————



Areas of application

As non-combustible aluminium composite panel with A1 classification, ALPOLIC™ NC/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™ NC/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™ NC/A1 |
|---|-------------|-------------|----------------|
| Portion of combustible ingredients within the core material | ≤30% | ≤10% | ≤5% |
| Heat potential of the core material | ≤14MJ/kg | ≤3MJ/kg | ≤1MJ/kg |

Test reports are available on request.

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

Recycling
Our materials are nearly 100% recyclable. Even ALPOLIC™ plant waste is recycled.

Certifications



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