

# ALPOLIC™ A2

## Aluminium composite panels

### Technical data

**ALPOLIC™ A2 aluminium composite panels consist of two 0.5mm thick aluminium cover sheets which are applied to a non-combustible (UK: very limited combustible) mineral core in a fusing process. They can be supplied up to a width of 2m, which is unique worldwide.**

The front is usually coated with LUMIFLON™ – based on a transparent fluoropolymer resin (FEVE) – or with DURAGLOSS® 5000. The production is carried out using the coil-coating process with state-of-the-art technology. The composite panels are approved by the building authorities and meet the fire protection requirements of **EN 13501-1, class A2 - s1, d0 (non-combustible / UK: very limited combustible)**. They are therefore particularly suitable for all areas where a high level of fire protection is required. Due to the special product properties such as high flatness, easy to process, low weight and high UV and corrosion resistance, they offer limitless design possibilities for exterior and interior applications in futuristic building architecture.

### 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 A2 - s1, d0 (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

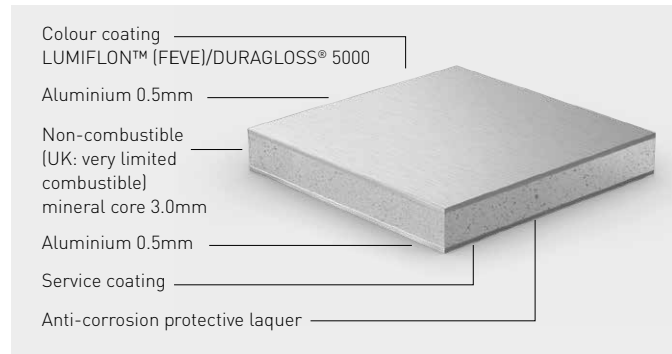
### Surface coating



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](http://www.alpolic.eu)



### Areas of application

ALPOLIC™ A2 aluminium composite panels are the ideal material for cladding high-rise buildings and high-risk buildings where the use of non-combustible façade materials according to Euroclass A1 and A2 with low calorific value (PCS) is mandatory. They are also suitable for other areas of application: sophisticated design of ventilated rainscreen cladding façades system and decorate façade for both internal and external applications. The product is suitable for both new and refurbishment projects.

- rear-ventilated façades
- 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 - 80%): solid colours, reAL Anodised, metallic, sparkling, prismatic and decors. The entire product range can be found in our website, where you can order samples and download colour charts and technical information.



WITH AN UNLIMITED VARIETY OF DESIGNS AND COLOURS

BE.SAFE.

#### Specifications

| Dimensions                       | Standard    | Unit                 | Value  |   |
|----------------------------------|-------------|----------------------|--|---|
| Total thickness                  | -           | mm                   | 4 (± 0.2 mm)   |   |
| Cover sheet thickness            | -           | mm                   | 0.5  |   |
| Core thickness                   | -           | mm                   | 3  |   |
| Width                            | -           | mm                   | 1,000/1,250/1,500/1,750/2,015 (± 2 mm)                             |   |
| Length                           | -           | mm                   | max. 7,300 (±1mm/m)  |   |
| Bow tolerance                    | -           | mm                   | max. 0.5 % (5mm/m) of the length or width                          |   |
| Squareness tolerance             | -           | mm                   | max. 5   |   |
| Technological Value              |             |                      |  |   |
| Weight                           | -           | kg/m <sup>2</sup>    | 8.4  |   |
| Tensile strength                 | DIN EN 1396 | N/mm <sup>2</sup>    | 150  |   |
| 0.2% proof stress                | DIN EN 1396 | N/mm <sup>2</sup>    | 130  |   |
| Elongation                       | DIN EN 1396 | %                    | 3  |   |
| Flexural elasticity, E           | ASTM D393   | kN/mm <sup>2</sup>   | 38.5   |   |
| Deflection temperature           | ISO 75-2    | °C                   | 110  |   |
| Thermal expansion                | ASTM D696   | 10 <sup>-6</sup> /°C | 19   |   |
| Heat potential of the core       | -           | MJ/kg                | < 3  |   |
| Surfaces                         |             |                      |  |   |
| Coil-Coating                     | -           | -                    | LUMIFLON™ Fluoropolymer coating (FEVE)                             | DURAGLOSS® 5000 Polymer coating             |
| Aluminium alloy                  | -           | -                    | 3105 H44 and 3005 H44  |   |
| Gloss (measured at 60°)          | EN 13523-2  | %                    | 15 - 80  | High gloss, silk matt, matt and MattExtreme |
| Pencil hardness                  | EN 13523-4  | -                    | H  | >HB   |
| Resistance to rapid deformation  | EN 13523-5  | -                    | Rear impact deepening at 7.5Nm/mm: No cracks                       |   |
| Resistance to immersion in water | EN 13523-9  | -                    | After 500 hours: No influence                                      |   |
| Chalking resistance              | EN 13523-14 | -                    | Chalking out after 1,000 Q-UV test hours (= 500 hours UV-B): ≤ 10% |   |

#### International fire classifications

| Country   | Test standard ...   | Results & Classification   |
|---|---|--|
| EU (applicable in Europe, Switzerland and Turkey) | EN 13823, EN ISO 11925-2, EN 13501-1                              | Class A2 - s1, d0  |
| Switzerland                                       | VKF   | RF 1   |
| France  | -   | M0   |
| Great Britain                                     | BS 476 Part 6 & 7, BS 8414-1, BS 8414-2                           | BR 135   |
| Russia  | GOST 30244-94 method II, SNIP 21-01-97, TsNIISK Natural fire test | Class G1 „Flame-retardant materials which do not burn without a source of fire“. |
| USA   | NFPA 285 (ISMA Test)  | passed   |

#### Large fire testing

| Country | Test & Certificate                                       |
|---------|--|
| France  | LEPIR2, IT249<br>APL n° EFR-22-002172 & n° EFR-21-002195 |

#### Certifications and approvals

| Country       | Certifications and approvals            |
|---------------|---|
| Germany       | General Construction Approval, DIBt     |
| Great Britain | BBA                                     |
| France        | Avis techniques                         |
| International | Environmental Product Declaration (EPD) |

Test reports are available on request.

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

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



#### Certifications



**ALPOLIC™** | MITSUBISHI POLYESTER FILM GmbH  
Kasteler Straße 45/E512 | 65203 Wiesbaden, Germany  
phone: +49 611 962-3482 | fax: +49 611 962-9059 | info-alpolic@mcgc.com | www.alpolic.eu

