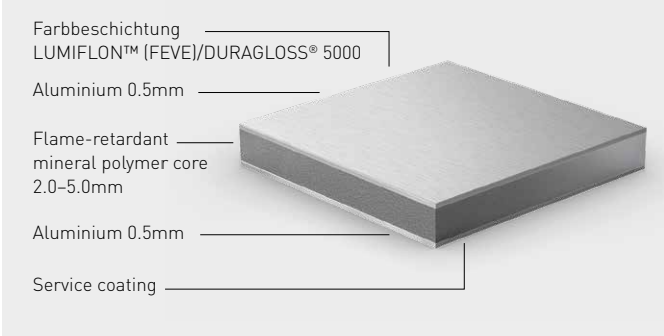
ALPOLIC™/fr

Aluminium composite panels
Technical data

ALPOLIC™/fr aluminium composite panels consist of two 0.5mm thick aluminium cover sheets which are applied to a flame-retardant mineral polymer core in a fusing process.

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 meet the fire protection requirements of **EN 13501-1, class B - s1, d0 (flame-retardant)** and are approved by the building authorities (DIBt, Berlin). Due to their special product properties such as excellent flatness, easy to process, low weight and high UV and corrosion resistance, they are the ideal material for exterior and interior applications in demanding 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 B - s1, d0 (flame-retardant)
- High-quality surface coating
- Consistent colour quality and consistency
- Wide variety of colours and designs
- Approved by building authorities
- Almost 100% recyclable
- EPD certified

Areas of application

ALPOLIC™/fr aluminium composite panels are ideally suited for the sophisticated design of rear-ventilated façades systems and decorate façade for both internal and external applications. The product is suitable for both new and refurbisment projects.

- Rear-ventilated façades
- Façade and roof cladding
- Veneers
- Corporate Identity
- Interior architecture

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

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, decors and real metals. The entire product range can be found in our website, where you can order samples and dowload colour charts and technical information.

MITSUBISHI CHEMICAL GROUP

ALPOLIC™/fr

Aluminium composite panels
Technical data

Specifications

Dimensions	Standard	Unit	Value	
Total thickness	–	mm	3* / 4 / 6 (± 0.2 in 3 and 4) (± 0.3 in 6)	
Cover sheet thickness	–	mm	0.5	
Core thickness	–	mm	2/3/5	
Width	–	mm	1,035 / 1,285 / 1,535 / 1,785 / 2,050 (± 2mm)	
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/m²	6.0/7.6/10.9	
Tensile strength	DIN EN 1396	N/mm²	150	
0.2% proof stress	DIN EN 1396	N/mm²	130	
Elongation	DIN EN 1396	%	3	
Flexural elasticity, E	ASTM D393	kN/mm²	49/39.8/29.1	
Deflection temperature	ISO 75-2	°C	115/116/109	
Thermal expansion	ASTM D696	10^{-6}/°C	24	
Heat potential of the core	–	MJ/kg	< 15	
Surfaces				
Coil-Coating	–	–	LUMIFLON™ Fluorpolymer 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 Matt-Extreme
Pencil hardness	EN 13523-4	–	H	>HB
Resistance to rapid deformation	EN 13523-4	–	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%	

*3mm does not correspond with the general building authority approval DIBt, Berlin.

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 B - s1, d0
Germany	DIN 4102-1	B1
Switzerland	VKF	RF2
France	–	M1
Great Britain	BS 476 Part 6 & 7, BS 8414-1, BS 8414-2	BR 135
Poland	PN/B-02867	–
Czech Republic	CSN 73 0862, CSN 73 0863	Class C1
Hungary	MSZ 14800-6:2009	passed
Austria	OENORM B 3800-5	passed
Russia	GOST 30244-94 method II, SNIP 21-01-97, TsNIISK Natural Fire Test	Class G1 „Hardly Inflammable Materials"
USA	NFPA 259-93 (British Thermal Unit)	passed
	ASTM D1781-76 (Climbing Drum Peel Test)	passed
	ASTM E-84 (Steiner Tunnel Test)	Class A/Class 1
	ASTM E-108 Modified	passed
	UBC 26-9 & NFPA 285 (ISMA Test)	passed
	ASTM E108 (Fire Test for Roof Covering)	Class A
	ASTM E119 (1 hr and 2 hrs Fire Rating)	passed
	UBC 26-3 (Interior Room Corner Test)	passed
	Combustion Toxicity Test New York State Uniform Fire Prevention and Building Code	passed

Large fire testing

Country	Certificates	Standards
France	LEPIR2, APL n° EFR-22-002172 & n° EFR-21-002195	IT 249

Certifications and approvals

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

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

Recycling

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

Certifications

Trademark of AGC Chemicals, Asahi Glass Co., Ltd.

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

MITSUBISHI CHEMICAL GROUP