ALPOLIC™ A1

Non Combustible Aluminium Composite Material

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Classified **Euroclass A1**
(EN 13501-1)

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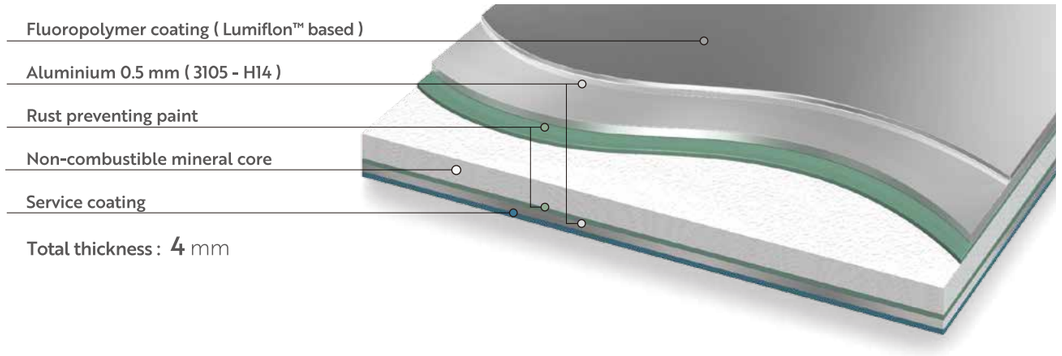
ALPOLIC™ A1

Non Combustible
Aluminium Composite Material

The World' s First : ALPOLIC™ Achieves European Fire Standard " **Euroclass A1** "

ALPOLIC™ A1 is a fire safe aluminium composite material with a non-combustible mineral core that contains zero polyethylene.
ALPOLIC™ A1 can be used as an exterior or interior cladding and roof coverings in both new buildings and re-clad applications wherever a non-combustible material is required.

Composition of ALPOLIC™ A1



Total thickness : 4 mm

Dimension (standard)

Thickness (tolerance ±0.2mm)	Standard width (tolerance; ±2.0mm)	(Bow tolerance)
4 mm	**1270, 1575 mm**	**±0.5 % of the length or width**
Skin thickness	Length (tolerance; ±1.0mm/m)	(Diagonal difference)
0.5 mm	**1800 - 7200 mm**	Max **5.0 mm**

Characteristic (for standard dimension)

		Method	Unit	
Physical properties	Thickness	–	–	**4 mm**
	Specific gravity	–	–	**2.15**
	Weight	–	kg/m²	**8.6**
	Thermal expansion	ASTM D696	×10⁻⁶/°C	**20.6**
	Thermal conductivity	Calculated value	W/m-K	**0.4**
	Deflection temperature	ISO 75-2	°C	**115**
Mechanical properties of composite material	Tensile strength	ASTM E8	MPa, N/mm²	**48.2**
	0.2% proof stress	ASTM E8	MPa, N/mm²	**46.5**
	Elongation	ASTM E8	%	**2.7**
	Flexural elasticity, E	ASTM D7250	GPa, kN/mm²	**45.6**
Sound transmission loss		ASTM E413	STC	**27**
Metal thickness with equivalent rigidity		Calculated value		**Aluminium 3.3mm**

FIRE SAFETY

Classified **Euroclass A1** (EN 13501-1)

- Passed **BS 476 Part 4** (core only)
- Passed **AS 1530.1** (core only)

FLATNESS

ALPOLIC™ A1 has the excellent flatness derived from the continuous laminating process.

COLOR UNIFORMITY

The state of the art Die-Coater coil coating process ensures complete color consistency.

FINISH DURABILITY

Molecular structure of Lumiflon™ has a higher bond energy than UV ray, thus provides superior UV resistance and enhance finish durability.

ANTI CORROSION

Coating on reverse side of ALPOLIC™ prevents galvanic corrosion with dissimilar metals on the building structure.

WORKABILITY

Easy to process with ordinary fabrication machines and tools.

RIGIDITY

ALPOLIC™ A1 has superior rigidity.
4mm thick panel is equivalent to 3.3mm thick solid aluminum in rigidity

ECOLOGY

Recyclable and environmentally friendly.
CO2 emission during manufacturing process is 48.2 % lower than 3.3 mm thick solid aluminium. (18.95 kg - CO2 / m2 vs 36.57 kg - CO2 / m2)

WARRANTY

ALPOLIC™ A1 is backed by globally trusted brand -MITSUBISHI CHEMICAL-.
The 20-year coating warranty is available.

ISO 9001 : 2015 Certified

The production of ALPOLIC™ is ISO 9001 : 2015 compliant throughout the design, development, manufacture and sales.

ISO 14001 : 2015 Certified

ALPOLIC™ are produced in plants that have ISO 14001 : 2015 certificate.