MITSUBISHI PLASTICS

URL:http://www.alpolic.com

ALPOLIC® A2

RECYCLABLE MATERIAL / ALPOLIC and its affiliated materials are 100% recyclable. Scraps generated from ALPOLIC plants are collected and brought to the recycling facility for recycling.
ISO 9001: 2008 CERTIFIED / ALPOLIC's design, development, manufacturing and sales are managed with ISO 9001:2008
ISO 14001: 2004 / ALPOLIC and iits affiliated materials are produced in the plant that has ISO 14001: 2004 certificate

For further information, please contact:

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ALPOLIC® A2

HIGH FIRE RETARDANT
ALUMINUM COMPOSITE MATERIAL
WWW.ALPOLIC.COM

Think More,
Fire Safety & Sustainability
A Clue Is...

ALPOLIC® A2

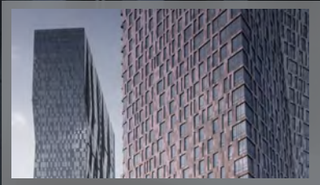
High Fire Retardant Aluminum Composite Material

ALPOLIC A2 is an aluminum composite material (ACM) with a high fire retardant core,used as exterior and interior claddings and roof covering in new buildings and retrofit applications. ALPOLIC A2 has been classified as a superior fire-safe grade among various types of ACM around the world. The material is manufactured by Mitsubishi Plastics, Inc.,and furnished by approved distributors.

ALPOLIC A2 has the following features:

FLATNESS

ALPOLIC A2 has the excellent flatness derived from the continuous laminating process.



RIGIDITY

As one of the attributes of composite panels, ALPOLIC A2 is rigid and lightweight. 4mm thick panel is equivalent to 3.3mm thick solid aluminum in rigidity, and reduces the weight by 10%.

COLOR UNIFORMITY

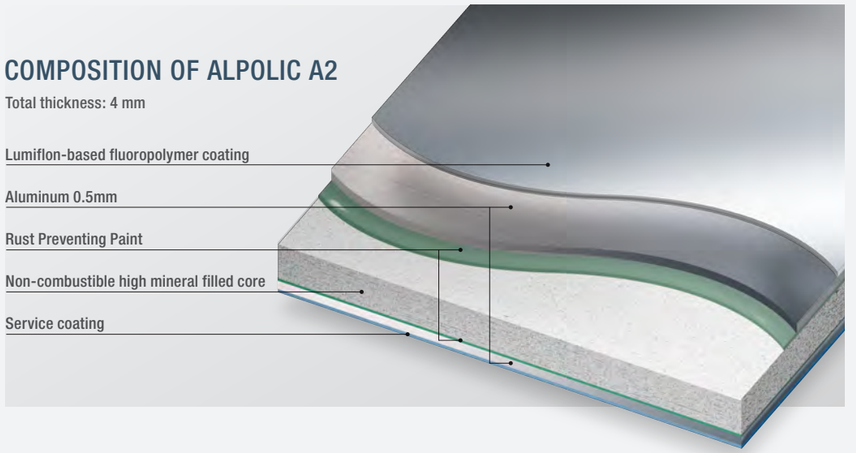
The coil coating process ensures complete color consistency.

FIRE SAFETY

With its non-combustible high mineral-filled core, ALPOLIC A2 has been ranked up to class A2 which is one of highest fire-safe grades in accordance with European Norm (EN) standard.

COMPOSITION OF ALPOLIC A2

Total thickness: 4 mm



DIMENSION (STANDARD)

Thickness (tolerance: ± 0.2mm)	Standard Width (tolerance: ±2.0mm)	(Bow tolerance)
4mm	1235, 1270, 1500mm	(± 0.5% of the length and/or width)
Aluminium Skin thickness	**Length (tolerance: ±0.4mm)**	**(Squareness tolerance)**
0.5mm	1800 – 7200 mm	(± 5.0mm)

CHARACTERISTICS (FOR STANDARD DIMENSION)

	(4mmt)	Method	Unit	ALPOLIC A2
Physical properties	Specific gravity	–	–	2.03
	Weight	–	kg/m²	8.1
	Thermal expansion	ASTMD696	x 10⁻⁶/℃	19
	Thermal conductivity	ASTMD976	W/(m.K)	0.63
	Thermal resistance	ASTMD976	m².K/W	0.16
	Deflection temperature	ISO 75-2	℃	110
Mechanical properties of composite material	Tensile strength	ASTM E8	MPa, N/mm²	43
	0.2% proof stress	ASTM E8	MPa, N/mm²	41
	Elongation	ASTM E8	%	3.8
	Flexural elasticity, E	ASTM C393	GPa, kN/mm²	38.5
	Flexural rigidity, EI	ASTM C393	kN.mm²/mm	204
	Punching Shear resistance	ASTM D732	MPa, N/mm²	37
Sound Transmission Loss		ASTM E413	STC	27
Metal thickness with equivalent rigidity				Aluminium 3.3mm
Metal amount required for Alpolic products				30%
Minimum bendable radius				Consult our office

FIRE PERFORMANCE OF ACM SERIES

Core Material	ALPOLIC PE	ALPOLIC/fr	ALPOLIC A2
Approx. portion of combustible ingredients within the core material	100%	< 30%	**< 10%**
			
Heat Potential of the core material	>45 MJ/kg	<15 MJ/kg	**< 3 MJ/kg**
Reference Fire Classification	Euroclass C - D (EN 13501-01:2007)	Euroclass B (EN 13501-01:2007)	**Euroclass A2 (EN 13501-01:2007)**