

# ALPOLIC™



## Surface coating with LUMIFLON™ Technical Data



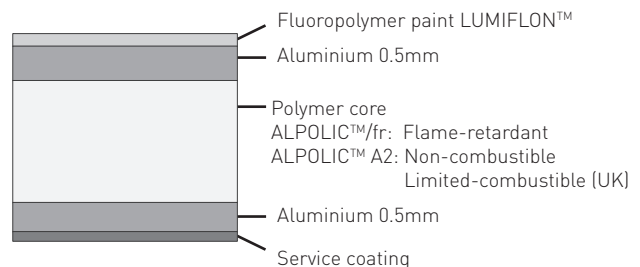
**For the colour coating of the ALPOLIC™ aluminium composite panels, which is applied using the coil-coating process, only LUMIFLON™ is used.** One of the world's highest quality coatings based on a fluoropolymer resin (FEVE).

This provides reliable protection against weathering, UV radiation, corrosion, oxidation, acid and colour bleaching and significantly reduces maintenance costs. Even after decades, façades with ALPOLIC™ aluminium composite panels still look colourfast and brilliant. The guarantee for the coating is up to 20 years.

### Features

On fluoroethylene and vinyl ether monomers based on a fluoropolymer

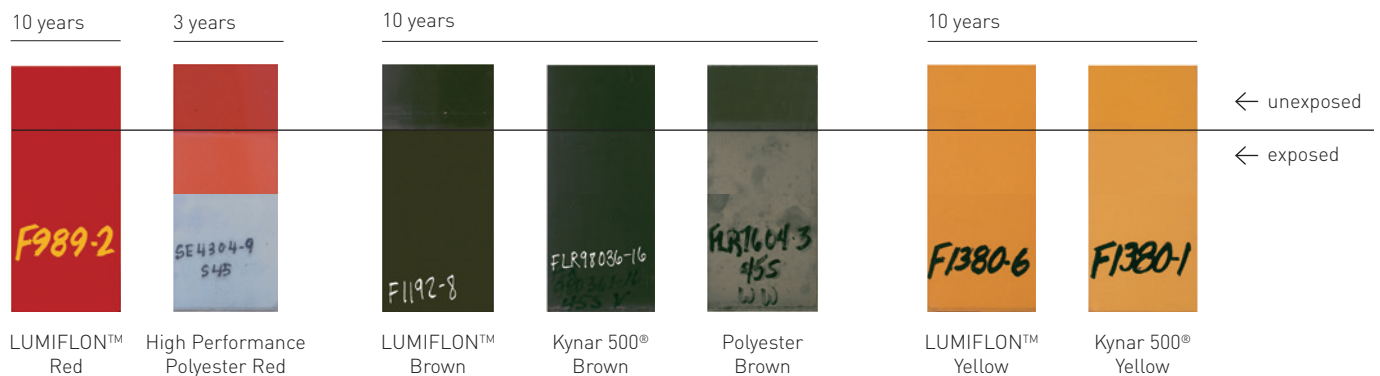
- Long-lasting colour consistency
- Outstanding UV, light and weather resistance
- High corrosion protection
- Excellent chemical resistance
- Dirt resistance



### Weathering tests

For quality reasons, our colour coatings are continuously tested. These include accelerated weathering tests or salt spray tests carried out in test chambers. In addition, long-term outdoor weathering tests with ALPOLIC™ composite panels are carried out in harsh climates of coastal areas such as the USA, Florida and Japan.

#### Test results Florida exposure



#### General comparison between conventional paints and LUMIFLON™

	LUMIFLON™	PVDF 70/30	Polyester
Weatherability	20 years	20 years	3 - 5 years
Gloss	15 - 80%	25 - 35%	25 - 90%
Colour Range	Wider	Limited	Wider
Repair Coating	Can be done	Difficult	Can be done
Pencil Hardness	H	F	2H
Bendability	2T	1T	2T

### Technical Data

The performance characteristics are measured according to ECCA (European Coil Coating Association), EN (Euro Norm) and ASTM (American Standard Test Methods).

Features	Test specification	Result
Coating thickness	EN 13523-1	Dry layer thickness of all layers: approx. 34µm (layer thickness may vary depending on colour)
Gloss (Gardner 60°)	EN 13523-2	15 bis 80%
Colour differences Top coat	EN 13523-3	Colour measured according to Cielab D65/10°: $\Delta E$ (CMC) $\leq 1$ for light colours (non-metallic colours) Metallic colours are sensitive to batches and paint direction. The evaluation is made visually by means of a standards
Pencil hardness	EN 13523-4	H
Resistance to rapid deformation	EN 13523-5	Rear impact deepening at 7.5Nm/mm: No cracks
Adhesion after indentation (deep penetration test)	EN 13523-6	Cross cut (parallel and perpendicular to the painting direction) and rear impact deepening according to EN 13523-5: Loss of adhesion: $\leq$ GT1 (more than 95% remain on the surface)
Resistance to cracking during bending	EN 13523-7	180° bending of flat material up to hardness H44 Minimum T $\geq 1,5$ (4-fold bend): No cracks Actual T-bend and corresponding bending radii depending on substrate
Resistance to salt spray	EN 13523-8	After 1,000 hours: max. 2mm (corrosion index 3 according to EN 1396, Table C.4)
Resistance to immersion in water	EN 13523-9	After 500 hours: No influence
Resistance to accelerated weathering of the top coat	EN 3523-10	After 1,000 hours (=500 hours UV-B): Slight colour change permitted and gloss reduction $\leq 10\%$ of the original gloss
Handling against solvents, (MEK.solvent stroke test)	EN 13523-11	$\leq 100$ MEK (methyl ethyl ketone) double strokes: No base material visible
Chalking resistance	EN 13523-14	Chalking out after 1,000 Q-UV test hours (= 500 Std. UV-B): $\leq 10\%$
Resistant to moisture	ASTM D2247-68	After 1,000 hours: No influence
Warranty	-	Up to 20 years

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

ALPOLIC™ is a brand of Mitsubishi Chemicals Corporation. For more than 49 years, planners, architects, builders and processors worldwide have been relying on our high-quality products for the building façade. BE.SAFE. is the claim that ALPOLIC™ not only holds as a product, but holistically as a corporate philosophy. This is backed by tangible arguments for more quality and safety for the building façade - from fire protection to sustainability



Quality  
made in  
Germany



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



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**MITSUBISHI CHEMICAL**



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