

Surface coating with LUMIFLON™ Technical Data



LUMIFLON™ or HDP is used for the colour coating of ALPOLIC™ aluminium composite panels, which is applied using the coil coating process. LUMIFLON™ is 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.

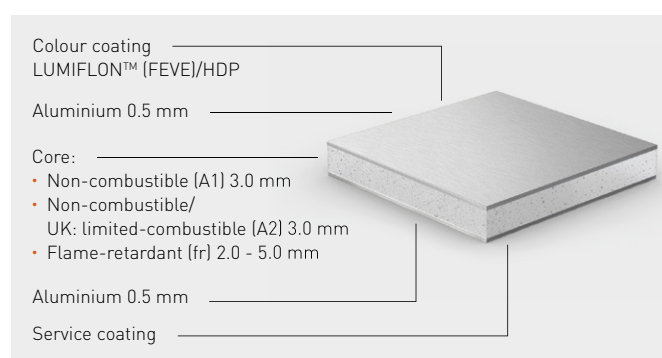
Features

On fluoroethylene and vinyl ether monomers based on a fluoropolymer

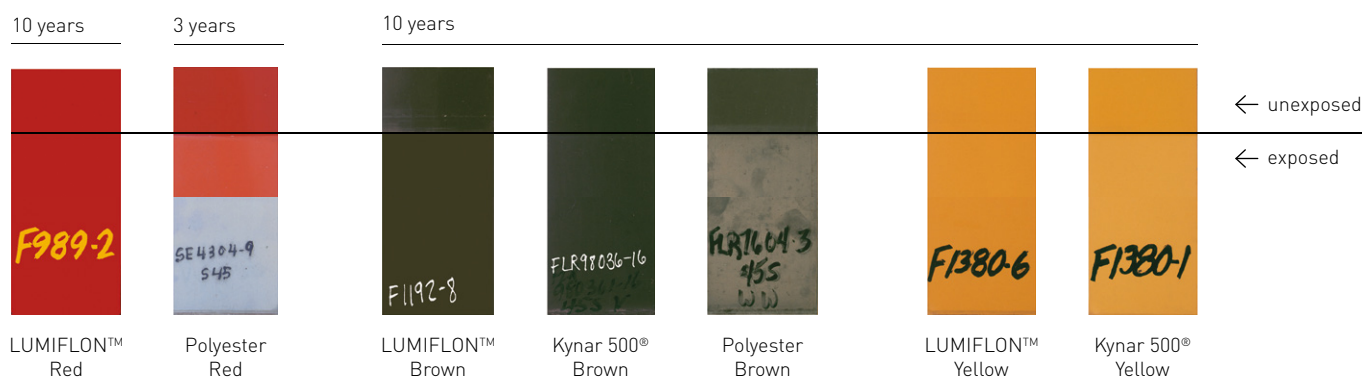
- Long-lasting colour consistency
- Outstanding UV, light and weather resistance
- High corrosion protection
- Excellent chemical resistance
- Dirt resistance

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™ (FEVE)	Kynar 500® (PVDF)	Polyester
Weatherability	up to 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 - 80%
Colour differences Top coat	EN 13523-3	Colour measured according to Cielab D65/10°: ΔE (CMC) ≤ 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: ≤ 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 ≥ 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 ≤ 10% of the original gloss
Handling against solvents, (MEK.solvent stroke test)	EN 13523-11	≤ 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): ≤ 10%
Resistant to moisture	ASTM D2247-68	After 1,000 hours: No influence
Warranty	-	Up to 20 years

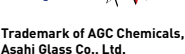
ALPOLIC™ – the world's first address for aluminium composite panels



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



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