SURFORMA®
Shaping Spaces

SURFORMA® METALS

Decorative HPL Metals for interior applications

DESCRIPTION

SURFORMA® Metals laminates are high-pressure decorative laminates according to EN 438 with metal surface.

This metal layer is applied on a phenolic resin core with high pressure.

The metal surface is produced by anodizing (for mirror quality) or by painting. Since anodizing is an integral part of the top layer, this provides permanent protection against external influences.

Special stove enamel on an epoxy resin basis or a PU-lacquer is also used to protect the metal surface.

This product is characterized, inter alia, by a “slight surface unevenness“ and slight differences in the gloss level.

Small indentations on the surface are unavoidable and normal with today‘s technology. The same applies to the colour for the products listed here. This may vary slightly due to the manufacturing process, but the overall appearance is generally not disturbed.

It is not a reason to complain.

Metal HPL is cured and therefore chemically inert. Laminates surfaces are physiologically safe and therefore, contact with food is harmless.

SURFORMA® decorative laminates are available in a variety of colours and textures, providing varied options for architects and designers.

Please check the offer & service brochure for information on sizes and thicknesses available.

APPLICATIONS

Decorative Metals laminates are intended for use in indoor applications, such as furniture and decoration, where the design and appearance are important features.

They are not suitable for Outdoor uses, areas subject to wear, or for long-term exposure to wet conditions or temperatures exceeding 60°C.

Metal laminates are directional in surface finish or colour and they shall be installed in the correct orientation.

LBM MIRROR

These products are very sensitive and must be handled and processed with great care to avoid damaging the surface, particularly scratches.

Metal Mirror laminates are suitable only for light vertical applications.

AFM ANTI-FINGERPRINT with HIGH-SCRATCH Resistance

These products are coated with special lacquer with high scratch hardness and **can be used either horizontally and vertically**.

In AFM aluminum HPL – supermatt and anti-fingerprint – a background noise may occur under various lighting conditions.

This is due to the production process and is customary in the industry. It emphasizes the uniqueness of the material and is not a cause for complaint.

AM BRUSHED

This classic Metal laminates range is suitable just for vertical applications.

PROPERTIES

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RECOMMENDATIONS

The advice and recommendations are of advisory nature only

Handling & Storage

Laminates should be stored so they are protected from moisture, humidity and direct sunlight.

Laminates must be stored in a closed room at temperatures between 18 and 25°C and a relative humidity of 50 - 60%. They must be stored flat and horizontally over the entire surface, with at least 200 mm distance to the floor.

They should not be stored rolled as this may induce a permanent bend.

Special care must be taken for MIRROR laminates. Bending radii of less than 200 mm can provoke fine hairline cracks in the surface barely detectable with the naked eye. These are a specific characteristic of anodized surfaces and do not indicate a defect.

The metallic laminates are supplied with a protective peel coat. It's recommended to let it for protection during handling, transport and panels fabrication. Remove it after the finished product is installed and ready for use.

Processing

Metal laminates can be swanned, drilled or milled as with all standard laminates (HPL), whereby the use of carbide-tipped cutting tools is recommended.

When cutting, the decor side should always be facing up.

Gloves and safety glasses should be worn because the material has very sharp edges. Precautions should be taken to prevent dust during processing.

The standard safety directives regarding dust extraction and fire protection are to be complied with during the processing and finishing of HPL.

When processing, always observe the same working direction, otherwise there will be changes in appearance.

Due to technical characteristics in the production process, metal laminates show slight deviations in appearance that cannot be avoided. We recommend to use décors from one batch.

Special note for MIRROR Laminates

When bonding MIRROR aluminium laminates on suitable base material take care of absolute cleanliness.

Particularly, when using a block press you must take care that no dust particles adhere to the lower side or back of the sandwich board; they can transfer marks to the next polished aluminium surface. Impurities in the adhesive must be avoided.

Balancing

Stresses always arise between two different materials that are joined together. Therefore, a substrate must be covered on both sides with the same type of laminate, means, materials that are subject to the same dimensional changes under the influence of heat and moisture (conditioning of all materials together for at least 48 hours) to avoid warping.

The use of other materials as backing cannot be recommended because the results can never be predicted with certainty.

Maintenance & Cleanning

The surface of metallic laminates can be cleaned with warm water and then wiped with a paper towel or soft cloth.

Persistent contamination can usually be eliminated with non-abrasive household cleaners. Solvents cleaners must be used with care and should be tried first on a scrap off-cut to ensure that no surface damage results.

Abrasive cleaning agents, acids and alkalis, especially chlorine-containing products, must not be used.

Transportation, Recovery and Disposal

In terms of transport regulations, HPL is not classified as a hazardous material; therefore, labelling is not necessary.

Laminates are an article and not a chemical substance and therefore the REACH regulation does not apply.

Due to their high calorific value (18-20 MJ/kg) laminates are suitable for thermal recycling.

Laminates can be brought to controlled waste disposal sites according to current national and/or regional regulations.

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GENERAL FEATURES

PROPERTIES	TEST METHOD	UNIT (MAX OR MIN)		**AFM** ANTI-FINGERPRINT **AM** BRUSHED	**LBM** MIRROR
Dimensional tolerance requirements (EN 438-2:2016, Clause n.°)					
Thickness	EN 438-2:5	mm (max. variation)	0.8 ≤ t ≤ 1.0	± 0.15	
Length and with	EN 438-2:6	mm		+ 10 / - 0	
Edges straightness	EN 438-2:7	mm/m (max. deviation)		1.5	
Edges squareness	EN 438-2:8	mm/m (max. deviation)		1.5	
Flatness	EN 438-2:9	mm/m (max. deviation)		100	
General Requirements					
Resistance to immersion in boiling water	EN 438-2:12	Appearance, rating (min.)	Core delamination Pass or Fail	Pass	
Resistance to water vapour	EN 438-2:14	Appearance, rating (min.)		3	2
Dimensional stability at elevated temperature	EN 438-2:17	Cumulative dimensional change % (max.)	Longitudinal	0.75	
			Transversal	1.25	
Resistance to scratching	EN 438-2:25	Rating (min.)		1 AM 3 AFM	1 LBM
Resistance to staining	EN 438-2:26	Appearance, rating (min.)	Group 1 & 2 Group 3	4 4	4 1 (NAOH damages the surface)
Density	EN ISO 1183-1	Density, g/cm3 (min.)		1.35	
Additional requirements for postformable - Type P laminates					
Formability	EN 438-2:31 or 32	Radius, mm	Longitudinal	≤ 10 x laminate nominal thickness	
			Transversal	≤ 20 x laminate nominal thickness	
Resistance to blistering	EN 438-2:33 or 34	Time to blister, seconds (t2 – t1)	Thickness ≥0.8 mm	≥ 15	

SURFORMA® Laminates are classified in accordance with EN 438 – Sheets based on thermosetting resins (Usually called Laminates) – Part 8: Classification and specifications for design laminates. The physical and mechanical properties vary depending on the substrate used. For more information about these properties, please refer to the corresponding Technical Data Sheet.

Our due diligence system for tracing the origin of wood - FSC® & PEFC standards:

The well-known certification systems for sustainable forest management FSC and PEFC are equally evaluated by us to ensure traceability of timber throughout the supply chain, from harvest through to the finished product as a proof that the wood originally comes from certified and sustainably managed forests and other controlled sources.

In addition to providing assurance, FSC and PEFC certified materials can also support customers' LEED and BREEAM certification strategies.

CERTIFICATIONS