

Product Data Sheet

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dekorial

stratos

Product description

Under the name **dekorial stratos** is to be understood real aluminum laminated plastic boards (HPL) in different surface treatment and colors. This metal layer is applied on a phenolic resin core with high pressure.

All implementations are coated with a UV-paint on acrylic base. The paint has an abrasive hardness according to DIN EN 438 of
> 1.5 N.

The painted surface is resistant to all usual household cleaning agents, solvents and alcohol. Small gloss-level differences (in case of the light silk gloss) are conditional through variations in the surface roughness of the aluminium foil.

Smaller impressed dents are unavoidable and normal, in accordance with the present state of the art. The same applies for the color of the products listed here. This can vary minimally manufacture-related, however, the general impression is not disturbed by that as a rule.

This real metal surface is suitable for individual interior design.

Counter-surface for **stratos**:

A 209 real aluminum smooth and coated (natural color)

This aluminum quality can be recommended as a low-cost counter-surface in smooth finish and also in hammered structure.

Form of delivery and quality

stratos plates are supplied in the standard dimensions 2440 x 1220 mm.

The tolerance for the length and width nominal dimension must correspond to DIN EN 438, with the limits
0 mm and + 10 mm.

The plate thickness in case of **stratos** - plates is produced as 0.8 mm as standard (Weight: 1.4 kg/m²).

The limits apply also for the thickness deviations according to DIN EN 438.

Nominal thickness	Limiting deviations
0.6 Mm - 1.0	± 0.10 mm
> 1.0 Mm - 2.0	± 0.15 mm
> 2.0 Mm - 2.5	± 0.18 mm
> 2.5 Mm - 3.0	± 0.20 mm

The purchase of **thicker** stratos plates can be clarified by an in-house inquiry.

Thermal resistance

All **stratos** products are resistant with a constant loading of
-24°C to +90°C

Short-term loading to
-35°C and +120°C
is possible.

The combustion characteristics of the **stratos** standard quality corresponds to the Classification B2 - B1, in accordance with DIN 4102.

stratos plates in the quality "flame-retardant" can be clarified through a direct inquiry. This quality is certified by Lloyd's Register and meets the requirements of IMO FTC.

A lamination with a protective foil is compulsory in case of **stratos**. At the latest, after 6 months, the foil is to be removed, since otherwise damage can arise on the aluminum surface in case of later stripping.

All *stratos* implementations are produced in standard quality only

Applications and processing directives

The employment of **dekorial stratos** is provided for decorative vertical surfaces in interior finish. Also slightly stressed surfaces can be covered with **stratos**. Typical application examples are: Wall panels, ceiling covers, home furniture, hotel and restaurant furniture, drawer fronts, company signboards, paneling in shelf construction, counters and displays in store construction, door and frame paneling, ship building, freight-car construction etc.

For a stressed working area with **stratos** a glass pane or similar is recommended for protection. See also our **dekobond** series. Most very high-quality surfaces harmonize with the well known properties of glass to a compound which satisfies the properties of safety glass.

The stratos laminates can be sawed, shaped and ground with carbide-tipped tools.

In case of bonding in surface presses, the following is to be considered in case of stratos:

Maximum temperature 60° C

Contact pressure 0.15 - 0.20 N/mm² (1.5 bar - 2.0)

It is absolutely necessary to ensure that the pressing surfaces are clean

All standard adhesives and glues are suitable for bonding, which are also employed in case of the bonding of classic high-pressure-laminated plastic boards.

Adhesive types : Water-based adhesives (PVAc)
Condensation resin adhesives (Urea-formaldehyde resin)
Contact adhesives
Reaction adhesives
Hot-melt adhesives

PU adhesive residues must be removed completely from the surface before the curing.

In the case of bonded elements, attention must be paid to a symmetrical structure, i.e. the rear side is bonded to a corresponding counter-plate. A good plane level is achieved in case of utilization of similar plate quality on the element rear side with a 2nd selection plate or with the counter-plate A 209.

Bonding HPL plates with metal foil

The bonding of real metal HPL with

- Contact adhesives (solvent-content)
- Condensation adhesives (resorcinal-phenolic adhesive)

requires special care and adherence to the specifications of the adhesive manufacturer. To be specially noted are uniform not too thick adhesive application, sufficient ventilation (insufficient ventilation can result in time in bubble formation between the metal foil and laminate core and/or detachment of the metal foil from the laminate core Discussions with manufacturer possibly required

Standard value table for the adhesion of HPL with real metal surfaces on Wooden materials (Chipboard 20, chipboard 100, plywood, hard fiber, solid wood)

Adhesive	Condensation adhesive		
	Urea-formaldehyde resin approx. 10 % filled	Urea melamine resin	Resorcinal-phenolic adhesive
Stressing acc. to EN 204	D 3	D 3	D 3 / D 4
Temperature resistance	- 20 °C to + 150 °C		- 20 °C to + 150 °C
	~ Adhesive application 90-150 g/m ² on HPL or substrate material		100-180 g/m ²
	~ open waiting time 2-20 min		2-15 min
	~ Pressure 3-5 bar		3-5 bar
	~ Pressure temperature/ Pressure time 20 °C / 15-180 min 40 °C / 5-30 min 60 °C / 1-12 min		20°C/approx. 9 h 80°C/approx. 10 min 110°C/approx. 5 min
	~ open wait time and pressure time dependent on the curing agent addition		
Adhesive	Contact adhesive		
	Without curing agent	With curing agent	With integrated resin curing
Stressing acc. to EN 204	No classification according to EN 204		
Temperature resistance	- 20 °C to + 70 °C	- 20 °C to + 100 °C	Inquiry with manufacturer
	~ Adhesive application 150-200 g/m ² resp. on HPL or substrate material		It involves special adhesive settings, for which no standard values can be given
	~ open waiting time dependent on ambient temperature and adhesive type (finger test)		
	~ Pressure: min. 5 bar		Inquiry
	~ Pressure temperature: 20 / 40 / 60 °C		with adhesive manufacturer required
	~ Press time: short (preferably roller press)		

Cleaning and maintenance

The cleaning of the **stratos** surface is implemented with a clean cloth, a soft sponge with soap and plenty of water or with a glass cleaner.

Scrubbing cleaning agents, acids and caustic solutions should not to be employed.

Storage

The **stratos** laminated plastic boards must be stored horizontally supported over the entire surface, with 200 mm separation from the floor, in a closed room at 18-25°C and 50-60% relative humidity. Base material and laminated plastic should be stored, as far as possible, in the same room. A uniform environmental conditioning is guaranteed in this case.

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The plate packs

- are to be protected against moisture
- must not be exposed to any direct solar radiation
- must not be placed in a hot air stream.

If a horizontal storage is not possible, an oblique position of approx. 80° with whole-surface support and lower support is recommended.

Waste disposal

stratos waste can be **incinerated** in officially approved industrial incineration systems.

stratos waste can be **deposited** in waste dumps, considering the local waste specifications.

In accordance with TA – Waste, Version 28.3.91, Category I, No. 571, HPL- residues are classified as "other hardened plastic waste". Category I means that a material is similar to domestic waste.

If you have questions, please refer to our service department.

If you require viewing samples, you can request these in the form of patterns or manual specimens in DIN A5 or DIN A4 from the house of Dekodur®.