



IGP-HWF*thermofer* 531M

Highly Weather-resistant special quality

IGP-HWF*thermofer* 531M is a highly weather-resistant, matt and semi-transparent fine structure coating powder able to accept attractive surface patterns in a wide range of grains and colorations with the help of a thermo-transfer printing process.

Technical Data Sheet

IGP-HWF*thermofer* 531M enables the durability and longevity of metals to be ideally combined with the appearance of natural woods or natural stone such as marble, granite etc.

Properties

- Very good light and weather resistance
- Impact-resistant surface with excellent decorative flow
- Excellent mechanical properties

Applications

- Window & door elements and similar structural members
- Roller shutters
- Wall and ceiling panels
- Finishing strips for carpet and parquet floors
- Interior furnishings, in general
- As well as wall claddings for boats, aircraft, vehicles etc., wherever stringent fire protection regulations prohibit the use of wood for example.

Product range

Surface appearance

- **531MB**, fine structure, matt

Colour shades

As per customer specifications

Powder specification

Particle size:	< 100 µm
Solids:	approx. 98%
Density accord. to shade:	> 1,2 kg/l
Storage stability:	at least 12 months
Storage temperature:	< 25° C

Packing

- Carton with anti-static PE bag liner, capacity 15 kg.
- Carton container with 20 antistatic PE bags, 15 kg each; Contents 300 kg.

Material approvals:
Qualicoat No. P-0540, class 1

Safety data sheet: SD 110



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IGP-HWFthermofer 531M

Processing instructions

Pre-treatment

The substrate to be coated must be free of oxidation products, scale, oil, grease, stripping agents and other residues.

For outdoor use, pre-treatment suitable for the substrate is absolutely necessary:

- Aluminium: chromatising DIN EN ISO 12487
- Galvanised sheet metal: likewise DIN EN ISO 12487,
- Steel: zinc or Fe phosphating, also coated with IGP Korroprimer 10.

For further information: refer to our special information sheet about pre-treatments (IGP-TI 100).

Application

Base coat with IGP-HWFthermofer 531M, coating thickness approx. 60-80 µm.

After stoving and cooling of the coated substrate, „transfer printing“ - i.e. the transfer of a specific pattern, e.g. timber graining, on paper or film onto or into the substrate with the help of heat - takes place.

The respective printing papers are part of the scope of supply of the machine supplier.

Coating equipment

All commercially available electrostatic systems with a „corona“ charge system.

Applicable regulations: VDE requirements and VDM data sheet 24371.

Recycling

Small proportions of recycled powder should be added, automatically if possible, to virgin powder.

Important: keep overspray to an absolute minimum.

Stoving conditions

The temperature and time combinations resulting in optimum cross-linking of the coating are given below.

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Object temperature	Retention time at object temperature	
	minimum	maximum
180°C	10 Min. *	30 Min.
190°C	8 Min.	20 Min.
200°C	5 Min.	10 Min.

* Recommended curing conditions.

You are advised to carry out practical trials adapted to the object in question and the stoving oven in order to determine the optimum stoving conditions. Our Technical Department will be glad to help.

Technological values

To determine the following data, IGP-HWFthermofer 531M was applied as follows:

- Aluminium sheet (AlMg1) 0.8 mm, chromatised
- Shade: yellow, as per sample
- Coating thickness 60-80 µm
- Object temperature of 180°C, 10 min./ IGP-HWFthermofer 531MB

Cross-cut adhesion test, DIN EN ISO 2409,

Tapetest Gt 0

Mandrel bending test, DIN EN ISO 1519,

Tapetest ≤ 5 mm

Impact penetr., ASTM D2794, Tapetest > 2,5 Nm

Erichsen cupping, DIN EN ISO 1520,

Tapetest ≥ 5 mm

Buchholz hardness, DIN EN ISO 2815,

Tapetest > 80

Accelerated weathering test:

WOM, DIN EN ISO 11341: after 1000 hrs > 90% residual gloss

1000 hr condensation water test, DIN EN ISO 6270-2 : no infiltration, no blisters.

1000 hr salt spray test, DIN EN ISO 9227:1990 : no infiltration, no blisters.

Cleaning

The coated parts are to be cleaned in compliance with instructions RAL-GZ 632 or SZFF 61.01.

Note

Our technical application advice is provided to the best of our current knowledge but is to be regarded solely as non-binding information and does not absolve you from the need to carry out your own tests and trials.

The application, use and processing of products takes place beyond our control and therefore lies exclusively within your own responsibility.



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