IGP POWDER COATINGS

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Technical data sheet

# IGP-HWF*smart* 591TC-L1 Living Surfaces

Superdurable low-cure polyester powder coating with a fine texture and speckled finish, creating vibrant surfaces with distinctive character.

## Characteristics

- Deep matte
- Fine texture
- Speckled
- Super durable facade quality,
  3 years Florida > 50% residual gloss
- Lower cure
- More robust & pliable

## Material approvals

- Qualicoat Nr. P-2133, class 2
- AAMA 2604-13, independent test report
- EPD IGP-HWFsmart 59

## Powder properties

| | |
|---|---|
| Particle size: | < 100 µm |
| Solids: | > 99 % |
| Density: | 1.3 kg/l-1.6 kg/l |
| Suitability for storage: | min. 36 months at ≤ 25 °C<br>in an unopened original container |
| Color tones: | Due to the limited volume of highly weather-resistant pigments, the product portfolio only has a small amount of different shades in accordance with the special IGP colour range. |

## Processing

**Pre-treatment**

The substrate must be free from oil, grease and oxidation products. The pretreatment depends on the type of substrate and the corrosion protection to be achieved. We recommend the following pretreatments:

Aluminium

- Chromating according to DIN EN 12487
- Pre-anodization
- Chrome-free pretreatment according to GSB International and QUALICOAT specifications

Steel

- Zinc phosphating

Galvanised steel
- Zinc phosphating
- Chrome (III) passivation
- Chromating according to DIN EN 12487

For improved corrosion protection for applications on steel / galvanised steel, the use of corrosion protection primer IGP-KORROPRIMER 10 or IGP-KORROPRIMER 60 is recommended.

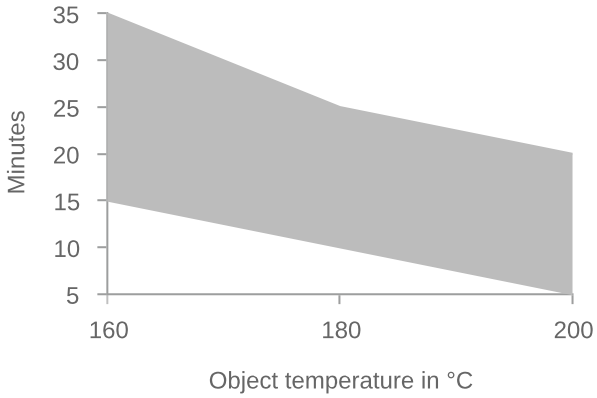
The suitability of the pretreatment method used is generally to be tested by the coater in advance with appropriate test methods. The minimum requirement for aluminium substrates / galvanised steel components is to carry out a boiling water test with a subsequent cross-cut adhesion and tape test. We refer to the guidelines of the GSB International, Qualicoat and Qualisteelcoat certifications. For further information: see also our special leaflet on pre-treatment (IGP-TI 100).

**Coating devices**
All conventional electrostatic systems with corona charging.
For the construction and operation of powder coating plants, the following regulations must be complied with: ATEX RL 2014/34/EU, EN 50177, DIN EN 16985.

**Recommended film thickness**
60 µm - 80 µm

To achieve a uniform finish with textured coatings, or where there are colour- or product-specific differences in hiding power, higher film thicknesses may be required. The relevant processing guidelines must be followed. To estimate the quantity of powder coating required in advance, the necessary Film thickness must be determined on a product-by-product basis.

**Curing conditions**




| $T_{Object}$ | $t_{min}$ | $t_{max}$ |
|---|---|---|
| 160 °C | 15 minutes | 35 minutes |
| **180 °C** | **10 minutes** | **25 minutes** |
| 200 °C | 5 minutes | 20 minutes |

In order to determine ideal curing conditions, we recommend practical trials with the respective object and curing oven.

**Application**
For an optimal coating and surface quality, please refer to the application category on the container label and the recommendations in the VR213 processing guideline.

**Reclaimability**
Group A products can be processed to a limited extent in reclaiming mode.

Due to the manufacturing processes used for Group D products – which give them their unique look and feel – the powder coating materials can only be processed in loss mode.
Please refer to the processing group indicated on the container label and to processing guideline VR213.

# Film properties

**Tested on**

| | |
|---|---|
| Substrate: | Aluminum (AlMg1), 0.8 mm chrom-free |
| Film thickness: | 60 µm - 80 µm |
| Object temperature: | 180 °C, 10 min. |

| **Appearance** | | |
|---|---|---|
| Gloss level | 1-35 R'/60° | DIN EN ISO 2813 2015-02 |

| **Mechanical tests** | | |
|---|---|---|
| Cross-cut adhesion test | Gt 0 | DIN EN ISO 2409 2020-12 |
| Mandrel bending test / Tape test | ≤ 5 mm | DIN EN ISO 1519 2011 |
| Impact test / Tape test | ≥ 20 inchp. | ASTM D 2794 1993 |
| Erichsen cupping / Tape test | ≥ 5 mm | DIN EN ISO 1520 2007-11 |
| Buchholz hardness | ≥ 80 | DIN EN ISO 2815 2003-10 (Anhang A) |

| **Weathering tests** | | |
|---|---|---|
| 3 years Florida, 5° south | > 50 % residual gloss | DIN EN ISO 2810 2021-01 |
| Xenon-arc lamps, 1000h, 90% | > 90 % residual gloss | DIN EN ISO 16474-2 2014-03 |

| **Corrosion tests** | | |
|---|---|---|
| Acetic acid salt spray test, 1000h | No infiltration, no blisters | DIN EN ISO 9227 2017-07 |
| Condensation water test, 1000h | Gt ≤ 1 | DIN EN ISO 6270-2 2018-04 |

| **Chemical tests** | | |
|---|---|---|
| Mortar resistance | Easily removable after 24h with no residues. | ASTM D 3260 2001 |

# Further information

**Packaging**
20 kg cardboard box with inserted antistatic PE liner
500 kg cardboard container with 25 antistatic PE-liners each 20kg
400 kg cardboard container with 20 antistatic PE-liners each 20kg

**Printing and glueing**
Preliminary tests are mandatory for printing and glueing of painted surfaces.

**Protection of coated parts**
Coated parts should be packed after cooling with suitable materials without plasticizers. They should be stored protected from the weather to avoid the formation of condensation and thus water spots on the coating.

**Cleaning**
The coated parts must be cleaned according to the directives RAL-GZ 632 or SZFF 61.01.

**Paint removal and disposal**
After use, coated goods should be supplied to the normal recycling process. The disposal methods for sludges or residual powders must be observed in accordance with the local official provisions whilst taking Waste Code "080201 Coating Powder Wastes" in accordance with the European Waste Catalogue into consideration.

This application-related advice is given to the best of our knowledge. However, this information is non-obligatory and does not exempt you from carrying out your own tests. Application, use and processing of these products are beyond our control and are therefore on your responsibility.

Consult the Safety Data Sheet prior to use. Article-specific safety data sheet and comprehensive risk management measures available at: **igp-powder.com**