



59

IGP Powder Coatings

TDS IGP-HWFclassic 5903U-F1|240424|v1.3

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**

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Technical data sheet

## IGP-HWFclassic 5903U-F1

Matte, smooth-finish powder coating based on saturated polyester and a declaration-free hardener, with very good weather and scratch resistances.



### Characteristics

- Matte
- Smooth finish
- IGP-Effectives®
- Super durable façade quality, 3 years Florida > 50% residual gloss
- Clean Effect



### Material approvals

- GSB 173 q - Florida 3
- Qualicoat Nr. P-1137, class 2





## Powder properties

Particle size:

Solids:

Density:

Suitability for storage:

< 3.94 mil

> 99 %

10.85 lb/gal-13.35 lb/gal

min. 24 months at  $\leq 77$  °F

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 color 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:

Aluminum

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

Steel

- Zinc phosphating

Galvanized steel

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

For improved corrosion protection for applications on steel / galvanized 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 aluminum substrates / galvanized 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

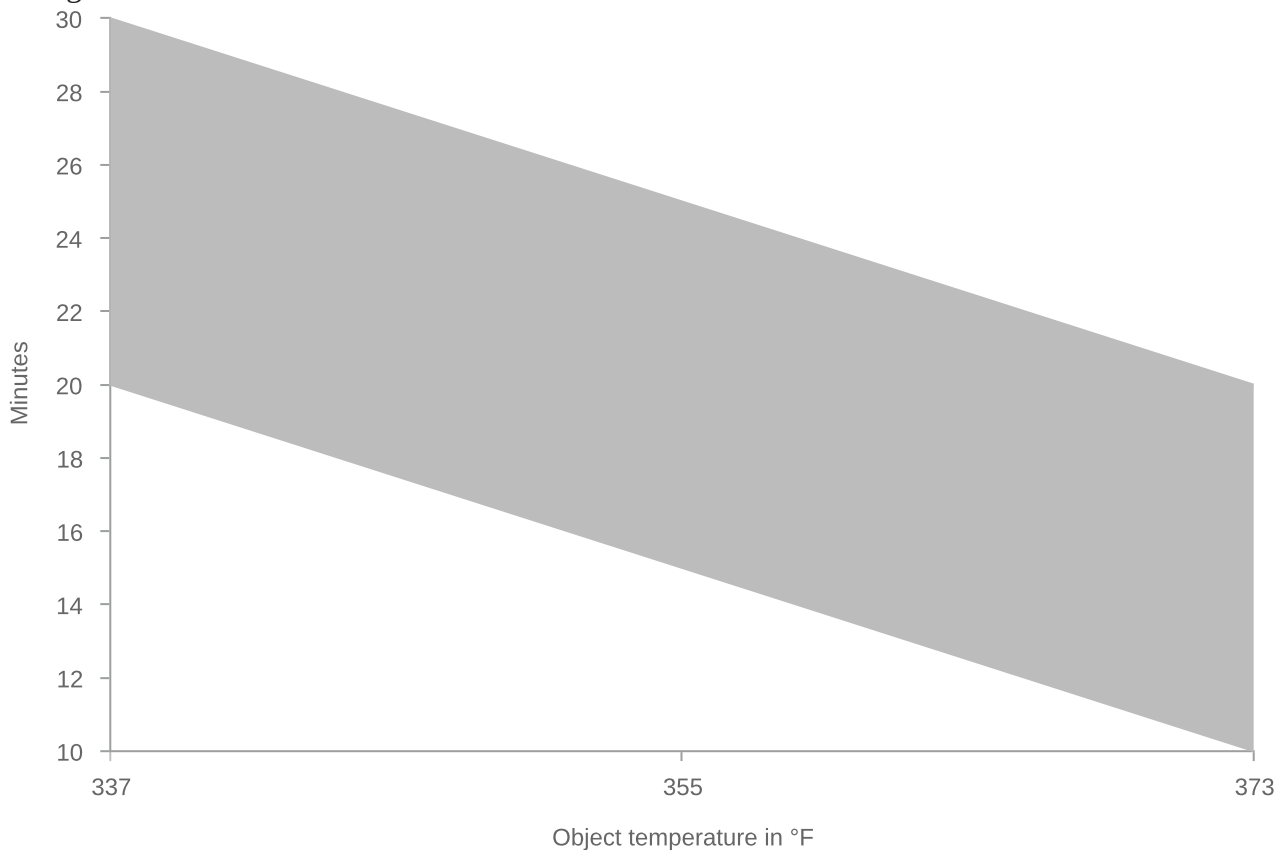
All conventional electrostatic systems with corona charging. For the construction and operation of powder coating plants, the following regulations must be complied with: ATEX RL 2014/34/EU, EN 50177, DIN EN 16985.

#### Recommended film thickness

2.36 mil - 3.15 mil

A homogeneous coating result with textured coatings or article- and color-specific differences in hiding power may require higher coating thicknesses. The corresponding processing guidelines must be observed. For a pre-calculation of the required powder coating quantity, the necessary coating thickness must be determined for each article.

#### Curing conditions



<b>T Object</b>	<b>t min</b>	<b>t max</b>
338 °F	20 minutes	30 minutes
356 °F	15 minutes	25 minutes
374 °F	10 minutes	20 minutes

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

#### Reclaimability

Due to the high bonding rate of powder grain and effect agent, the powder can be charged much more uniformly compared to other effect finishing processes. As a result, the powder can be

processed with a significantly increased recovery rate. Please also refer to the IGP processing guideline for IGP-Effectives® powder coatings: VR 201.2

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## Film properties

Tested on

Substrate:

Aluminum (AlMg1), 0.8 mm chromium-free

Film thickness:

2.36 mil - 3.15 mil

Object temperature:

356 °F, 15 min.

Appearance

Gloss level

25-35 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

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

QUV-SE-B-313, 600h

> 50 % residual gloss

DIN EN ISO 16474-3 2014-03

Corrosion tests

Condensation water test, 1000h

No infiltration, no blisters

DIN EN ISO 6270-2 2018-04

Acetic acid salt spray test, 1000h

No infiltration, no blisters  
DIN EN ISO 9227 2017-07  
Chemical tests  
Mortar resistance  
Easily removable after 24h with no residues.  
ASTM D 3260 2001

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## **More information**

### Packaging

20 kg cardboard box with inserted antistatic PE liner

### Overcoating suitability

Preliminary tests are mandatory for overcoating painted surfaces.

### 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.

Technical Information IGP-TI 106 must also be observed when dealing with pearl mica effects.

### 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.