IGP Powder Coatings
TDS IGP-HWFclassic 5903A-I7|240424|v1.2

Technical data sheet

IGP-HWFclassic 5903A-I7

Super-durable powder coating for matte and smooth surfaces, specially pigmented with increased IR reflectance.

Characteristics

- Matte
- Smooth finish
- Uni colours
- Super durable facade quality, 3 years Florida > 50% residual gloss
- IR-optimized
- Clean Effect
- Increased scratch resistance

Material approvals

- GSB 173 a - Florida 3

- Qualicoat Nr. P-1531, class 2
- AAMA 2604-13, independent test report

Powder properties

Particle size:	< 100 µm
Solids:	> 99 %
Density:	1.3 kg/l-1.6 kg/l
Suitability for storage:	min. 24 months at ≤ 25 °C min. 24 months at ≤ 25 °C 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

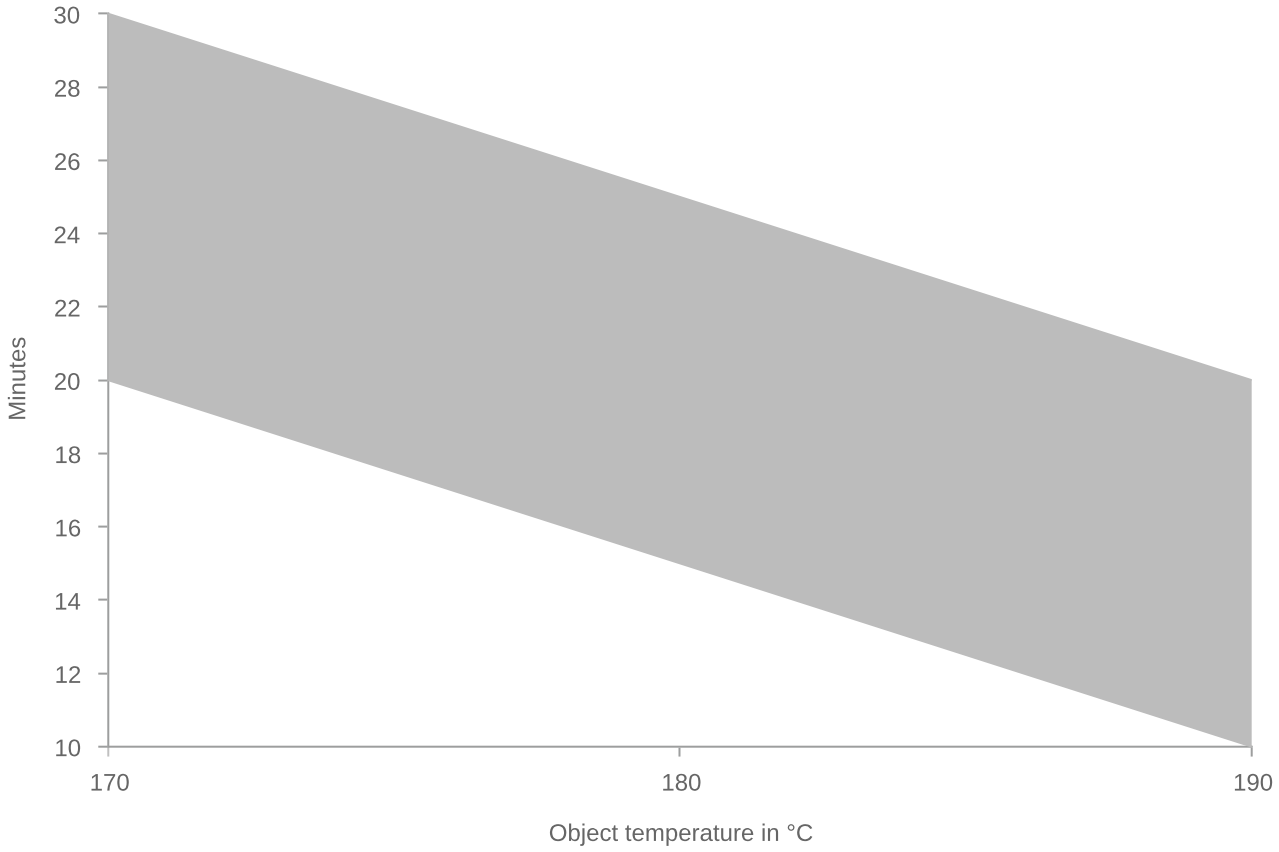
- Zinc phosphating

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
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



T_{Object}	t_{min}	t_{max}
170 °C	20 minutes	30 minutes
180 °C	15 minutes	25 minutes
190 °C	10 minutes	20 minutes

In order to determine ideal curing conditions, we recommend practical trials with the respective object and curing oven.
Reclaimability
Small portions of recycled powder can be added, automatically if possible, to the fresh powder.
Important: Keep overspray to an absolute minimum.

Film properties

Tested on
Substrate:
Aluminum (AlMg1), 0.8 mm chrom-free
Film thickness:
60 µm - 80 µm
Object temperature:
180 °C, 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 / Tapetest
≤ 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
Robustness according to Martindale, residual gloss_50%
≥ 50 %
IGP AA341.62
Weathering
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

Further information

Packaging
20 kg cardboard box with inserted antistatic PE liner
Overcoating
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.
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.