IGP POWDER COATINGS

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Technical data sheet

IGP-HWF*smart* 591TC-L8 Living Surfaces

Superdurable low-cure polyester powder coating with a coarse texture and speckled finish, creating vibrant, plaster-like surfaces.

Characteristics

- Deep matte
- Grain 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:	< 1 000 µm
Solids:	> 99 %
Density:	1.3 kg/l-1.6 kg/l
Suitability for storage:	min. 36 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

For this product, a substrate-specific pretreatment and corresponding primer application is highly recommended. The single-layer application is carried out at the user's own responsibility.

Aluminium

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

Steel

- Zinc phosphating

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

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).

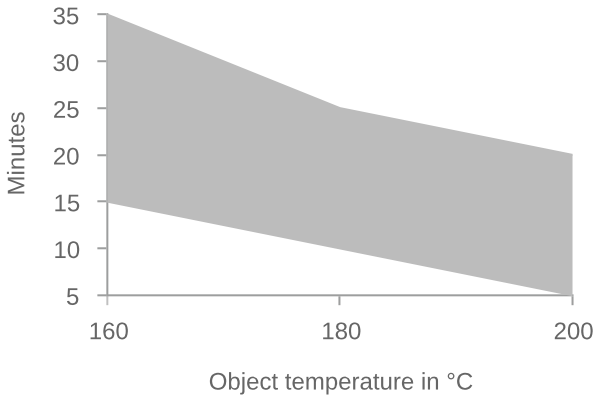
Coating devices
All conventional electrostatic systems with corona charging.
For the construction and operation of powder coating plants, the following regulations must be complied with: ATEX RL 2014/34/EU, EN 50177, DIN EN 16985.

Recommended film thickness
100 µm - 300 µm

Aluminium substrate:
For the application of IGP-HWFsmart 591T...L81 on Aluminum, the use of a colour similar super durable fine structure as primer, either IGP-HWFsmart 591TA...L10 or also 591TC... L11 with a minimum coating thickness of 60 µm is recommended. In this case, the minimum coating thickness of the Top-Coat 591TC...L81 must be less than 130 µm after testing. The processing guideline VR 213 must also be observed.

Steel substrate:
For the application of IGP-HWFclassic 591T...A81 on bare or Galvanised steel, the use of the corrosion protection primer IGP-KORROPRIMER 60 in a minimum coating thickness of 80 µm is mandatory. For the application of IGP-KORROPRIMER 60, the technical data sheet IGP-KORROPRIMER 60 and the processing guideline VR 213 must also be observed.

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
To achieve these unique surface structures, specific requirements must be met regarding powder feeding and application parameters. Please refer to the processing category on the container label and the recommendations in Processing Guideline VR213 and technical information TI112.

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	0-6 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	No infiltration, no blisters	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

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
see TI115

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**