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IGP Powder Coatings

TDS IGP-DURA®sky 9503A-A7|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-DURA®sky 9503A-A7

Ultra-resistant powder coating for the durable finishing of high-quality objects with the highest resistance to climatic, mechanical and chemical influences.



Characteristics

- Matte
- Smooth finish
- Uni colours
- Ultra super durable facade quality, 10 years Florida
- Chemical resistant
- Clean Effect
- Abrasion resistant
- Antigraffiti



Material approvals

- Qualicoat Nr. P-1967, LIGHT, class 3
- Qualicoat Nr. P-1968, MEDIUM, class 3
- Qualicoat Nr. P-1969, DARK, class 3
- AAMA 2605-20, independent test report



Powder properties

Particle size:

Solids:

Density:

Suitability for storage:

< 100 µm

> 99 %

1.2 kg/l-1.6 kg/l

min. 18 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 white and light IGP-DURA®sky qualities, the use of IGP-KORROPRIMER 6007A90104A00 is recommended as a primer.

For improved corrosion protection for applications on steel / galvanised steel, the use of corrosion protection primer 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.

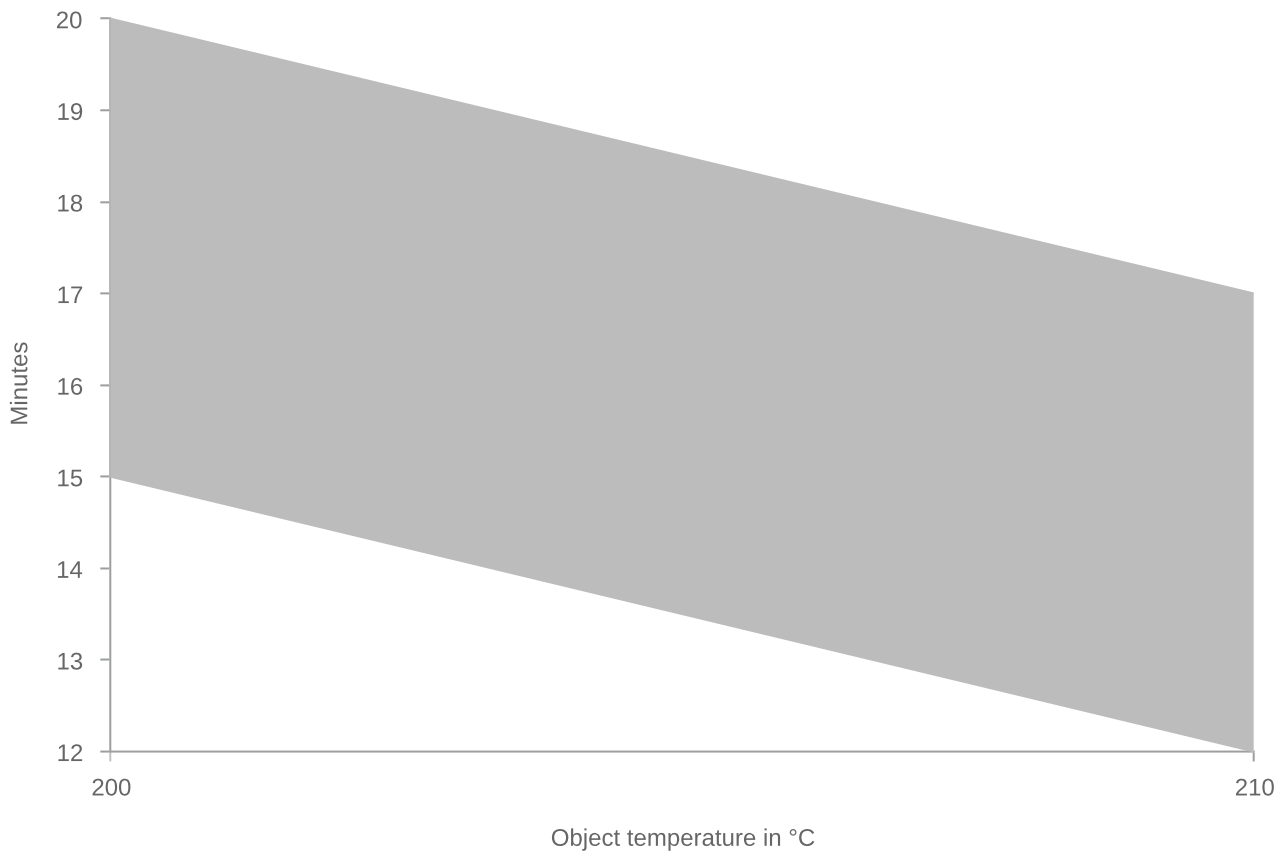
Recommended film thickness

50 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}
200 °C	15 minutes	20 minutes
210 °C	12 minutes	17 minutes

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

Due to e-caprolactam emissions during the curing process it is necessary to take care for a good ventilation to comply with the permitted occupational exposure limits concentrations.

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:

200 °C, 15 min.

Appearance

Gloss level
25-35 R'/60°
DIN EN ISO 2813 2015-02

Mechanical tests

Film Adhesion
passed
AAMA 2605-20; 8.4 2020

Impact test
3 mm
AAMA 2605-20; 8.5 2020

Abrasion Resistance
> 40 mil
AAMA 2605-20; 8.6 2020

Cross-cut adhesion test
Gt 0
DIN EN ISO 2409 2020-12

Buchholz hardness
≥ 80
DIN EN ISO 2815 2003-10

Mandrel bending test / Tapetest
≤ 5 mm
DIN EN ISO 1519 2011

Erichsen cupping / Tape Test
≥ 5 mm
DIN EN ISO 1520 2007-11

Weathering
10 years Florida, 45° south
> 50 % residual gloss
AAMA 2605-20; 8.9 2020

Xenon-arc lamps, 10000h
> 50 % residual gloss
DIN EN ISO 16474-2 2014-03

QUV-SE-B-313, 5000h
> 50 % residual gloss
DIN EN ISO 16474-3 2014-03

Corrosion tests
Cyclic Corrosion Testing, 2000h
ASTM G85, creeping < 2mm,
AAMA 2605-20; 8.8.2 2020

Condensation water test, 4000h
Blister Size „Few“
ASTM D2247, Blister Size No. 8
Figure No.4
AAMA 2605-20; 8.8.1 2020

Chemical tests
Mortar resistance
Can be easily removed after 24 hours without leaving any residue. No visible changes in gloss or color tone.
ASTM C 207-18 2018

Chemical resistance
Generally good resistance to acids, alkalis and oil.
AAMA 2605-20 8.7.1-8.7.5 2020



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.

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.

Graffiti removal

The following procedure should be observed when removing graffiti:

- The contact time of the graffiti with the surface must be kept as brief as possible
- Preliminary tests to select a suitable graffiti remover
- Thorough rinsing of the cleaned areas with water
- The contact time of the graffiti remover with the surface must be kept as brief as possible

IGP recommendation:

- Elite 007 graffiti remover from Crous Chemicals GmbH
- Socostrip T4210P from Socomore
- Bonderite S-ST 1302 and Bonderite C-MC 400 from Henkel AG
- or a different non-abrasive cleaner

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.