

Technical data sheet

IGP-DURA®sky 9503E-A3

Matte effect powder coating with outstanding weather resistance and excellent anti-graffiti properties.



Characteristics

- Matte
- Smooth finish
- Pearl mica, Premium
- Ultra super durable facade quality, 10 years Florida
- Chemical resistant
- Clean Effect
- Abrasion resistant
- Anti-Graffiti
- for use in indirect-fired gas oven



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](#)
- [EPD IGP-DURA®sky 95 EPD IGP-DURA®sky 95](#)



Powder properties

| | |
|--------------------------|--|
| Particle size: | < 100 µm |
| Solids: | > 99 % |
| Density: | 1.2 kg/l-1.6 kg/l |
| Suitability for storage: | min. 18 months at ≤ 25 °C in an unopened original container |
| Color tones: | RAL Metallic and individual metallic colors on request |



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 6007A90164A01 is mandatory 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.

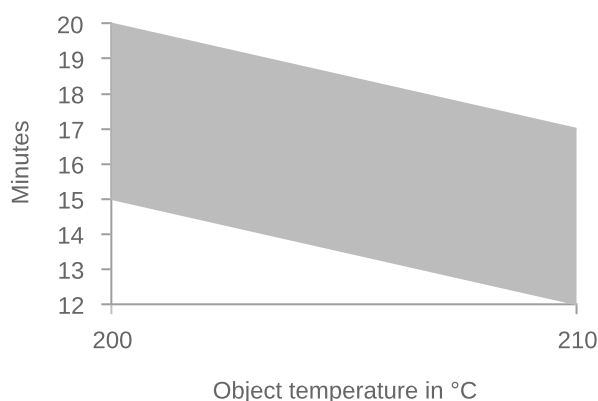
Recommended film thickness

50 µm - 80 µm

A homogeneous coating result with textured paints or colour or article-specific differences in hiding power may require higher Film thicknesses. The corresponding processing guidelines must be observed.

For a preliminary calculation of the required powder coating quantity, the required Film thickness must be determined for each specific 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 indirect fired.

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.

Application

VR206 Processing guideline for IGP-DURA®sky 9503.

Reclaimability

Small portions of recovered powder can be added, automatically if possible, to the fresh powder. Important: Keep overspray to an absolute minimum. Processing instruction VR206 must be observed.



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 (Anhang A) |
| Mandrel bending test / Tape test | ≤ 5 mm | DIN EN ISO 1519 2011 |
| Erichsen cupping / Tape test | ≥ 5 mm | DIN EN ISO 1520 2007-11 |

Weathering tests

| | | |
|-----------------------------|-----------------------|----------------------------|
| 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 suitability

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

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.

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**