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IGP Powder Coatings

TDS IGP-DURA®mix 3902A-S1|240424|v1.2

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®mix 3902A-S1

Matt, highly abrasion-resistant powder coating with a smooth finish, ideal for interior applications with challenging design requirements.



Characteristics

- Matte
- Smooth finish
- Uni colours
- Indoor quality
- Increased scratch resistance



Powder properties

Particle size:

Solids:

Density:

Suitability for storage:

< 100 µm

> 99 %

1.3 kg/l-1.6 kg/l

min. 12 months at ≤ 25 °C

in an unopened original container

Color tones:

RAL and NCS-S shades, individual 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
- Iron 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.

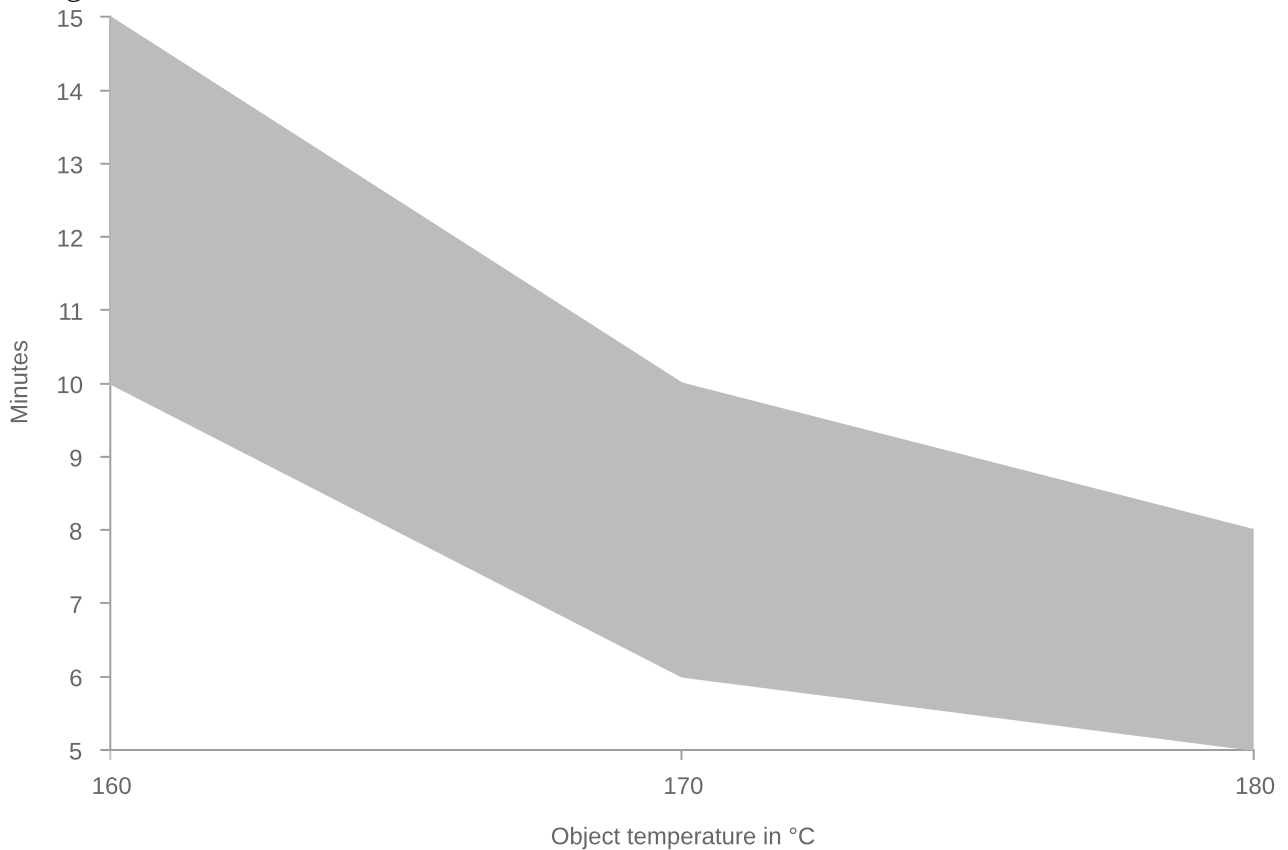
Recommended film thickness

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}
160 °C	10 minutes	15 minutes
170 °C	6 minutes	10 minutes
180 °C	5 minutes	8 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:

Steel, 0.5mm

Film thickness:

60 µm - 80 µm

Object temperature:

160 °C, 10 min.

Appearance
Gloss level
15-25 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
≤ 5 mm
DIN EN ISO 1519 2011
Impact test
≥ 10 inchp.
ASTM D 2794 1993
Erichsen cupping
≥ 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
Corrosion tests
Condensation water test, 500-1000h*
No infiltration, no blisters. *depending on pretreatment
DIN EN ISO 6270-2 2018-04
Natural salt spray test, 500-1000h*
No infiltration, no blisters.
*depending on pretreatment.
DIN EN ISO 9227 2017-07
Chemical tests
Acids and alkalis
Good resistance to many dilute acids and alkalis.
Organic solvents
Limited resistance to organic solvents.
Additional properties
Continuous heat resistance
> 120°C allmähliche Vergilbung



Further information

Packaging
20 kg cardboard box with inserted antistatic PE liner
400 kg cardboard container with 20 antistatic PE-liners each 20kg
500 kg cardboard container with 25 antistatic PE-liners each 20kg
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.