IGP Powder Coatings
TDS IGP-DURA®pol 681TE-C1|240424|v1.3

Technical data sheet

# IGP-DURA®*pol* 681TE-C1

Matt, low-temperature powder coating with a fine texture and electrostatic dissipative properties (ESD).

## Characteristics

- Deep matte
- Fine texture
- Pearl mica
- Mica Bond
- Industrial outdoor quality
- Electric. discharging

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## Powder properties

Particle size:
Solids:

Density:
Suitability for storage:
< 3.94 mil
> 99 %
10.85 lb/gal-13.35 lb/gal
min. 24 months at ≤ 77 °F
in an unopened original container
Color tones:
On request

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# 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:
Aluminum

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

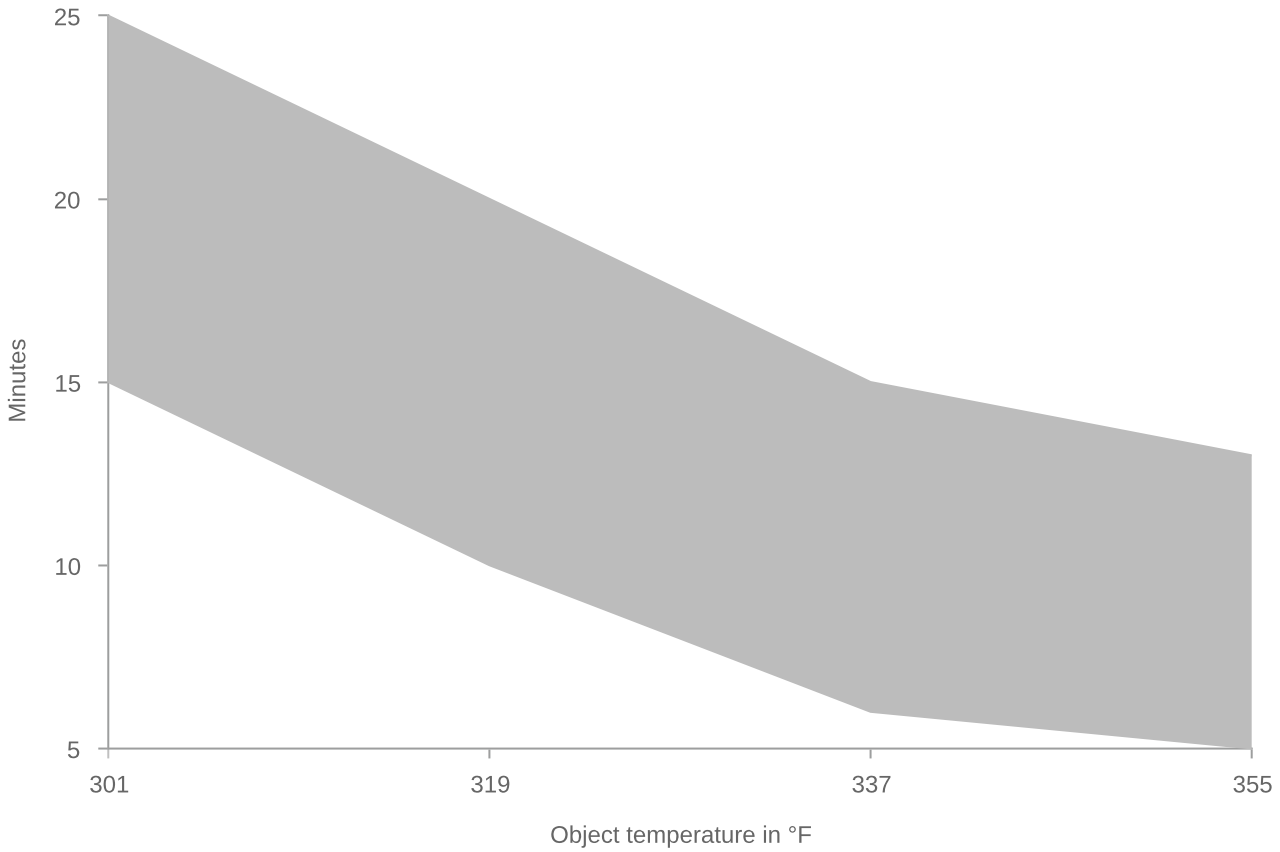
Steel

- Zinc phosphating

Galvanized 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
2.36 mil - 3.15 mil
With higher layers, the powder coating becomes insulating.
Curing conditions




| $T_{Object}$ | $t_{min}$ | $t_{max}$ |
|---|---|---|
| 302 °F | 15 minutes | 25 minutes |
| 320 °F | 10 minutes | 20 minutes |
| 338 °F | 6 minutes | 15 minutes |
| 356 °F | 5 minutes | 13 minutes |

In order to determine ideal curing conditions, we recommend practical trials with the object in question 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. Processing instruction VR 214 & VR 201.1 must be observed.

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# Film properties

Tested on
Substrate:
Aluminum (AlMg1), 0.8 mm, chromated
Film thickness:
2.36 mil - 3.15 mil
Object temperature:
320 °F, 10 min.
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
Weathering tests
QUV-SE-B-313, 200h
> 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
Natural salt spray test, 1000h
No infiltration, no blisters
DIN EN ISO 9227 2017-07
Additional properties
electrostatic discharge resistance
TI 101
DIN EN 61340-2-3 2017-05

# More information

Packaging
20 kg cardboard box with inserted antistatic PE liner
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. Technical Information IGP-TI 106 must also be observed when dealing with pearl mica effects.
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.