

# TECHNICAL DATA SHEET

## IGP-DURA<sup>®</sup>face 581M

Fine structure, matt, facade quality



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Ein Unternehmen der DOLD GROUP

Matt, weather-resistant fine structure powder on saturated polyester resin base, incl. the appropriate hardener, and special heat, light and chalk resistant pigments.

### Product Description

- Excellent light and weather resistance
- Impact-proof surface with decorative fine structure effect
- Good elasticity
- Non-yellowing in direct-heat gas ovens

### Application

- Facade elements, window profile sections
- Garden and camping furniture
- Machine casings, switchgear cabinets
- Lights
- Bicycle frames
- Agricultural machinery
- Railing sections

### Product Range

#### Surface aspects:

|              |   |
|--------------|---|
| <b>581MA</b> | Fine structure, matt                        |
| <b>581ME</b> | Fine structure, matt with pearl mica effect |

#### Shades:

Mainly RAL and NCS shades, colour shades as shown in the IGP colour chart "pearl mica", as well as special house shades.

### Powder Specification

|                                   |                |
|-----------------------------------|----------------|
| <b>Particle size</b>              | < 100 µm       |
| <b>Solids</b>                     | approx. 99%    |
| <b>Density according to shade</b> | 1.3 – 1.6 kg/l |
| <b>Suitability for storage</b>    | 24 months*     |
| <b>Storage temperature</b>        | < 25°C         |

\*in an unopened original container

### Curing Conditions

Time and temperature combinations that result in an ideal cross-linking of the coat are displayed.

| Object temperature | Retention time at object temperature |         |
|--------------------|--------------------------------------|---------|
|                    | Minimum                              | Maximum |
| 170°C              | 15 min.                              | 30 min. |
| <b>180°C</b>       | <b>10 min.</b>                       | 20 min. |
| 190°C              | 5 min.                               | 10 min. |

In order to determine ideal curing conditions, we recommend always performing practical trials that are adapted to the respective object and the stoving oven. Our Technical Customer Service Department is happy to help you.

### Film Properties

To determine the following data, IGP-DURA<sup>®</sup>face 581MA/E was applied as follows:

- Aluminium sheet (AlMg1) 0.8 mm, chrome-free
- Coating thickness 80 µm
- Object temperature 180 °C, 10 min

#### Gloss level, DIN EN ISO 2813

|       |                |
|-------|----------------|
| 581MA | 10 - 20 R°/60° |
| 581ME | 5 - 25 R°/60°  |

#### Mechanical tests

|  |           |
|--|-----------|
| Cross-cut adhesion test, DIN EN ISO 2409 | Gt 0      |
| Mandrel bending test, DIN EN ISO 1519    | < 5 mm    |
| Impact penetration, ASTM D2794           | 20 inchp. |
| Erichsen cupping, DIN EN ISO 1520        | > 5 mm    |
| Buchholz hardness, DIN EN ISO 2815       | > 80      |

#### Weathering

|   |                      |
|---|----------------------|
| Long-term exposure, 1 year Florida, 5° south, DIN EN ISO 2810                       | > 50% residual gloss |
| Accelerated weathering test, QUV/SE-B- 313, 300h, DIN EN ISO 16474-3 /ASTM G-53-88: | > 50% residual gloss |
| Accelerated weathering test, 1000h DIN EN ISO 16474-2                               | > 50% residual gloss |

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### Chemical tests

|   |   |
|---|---|
| 1000h condensate water test*,<br>DIN EN ISO 6270-2: | No infiltration,<br>No blisters                 |
| 1000h salt spray test*,<br>DIN EN ISO 9227:         | No infiltration,<br>No blisters                 |
| Mortar resistance,<br>ASTM D 3260:                  | Easily removable after 24h<br>with no residues. |

\* depending on pre-treatment

### Processing Information

#### Pre-treatment:

The substrate to be coated must be free of oxidation products, or residue from scale, oil, grease or release agents.

#### Aluminium substrate:

|                            |  |
|----------------------------|--|
| Chrome-free pre-treatment: | Preferred approved systems<br>from GSB and Qualicoat |
| Chromatising:              | DIN EN 12487   |
| Pre-anodisation:           | Also available                                       |

#### Steel substrate:

Zinc or iron (Fe) phosphating  
Galvanised sheet metal: Chromatising in accordance with DIN EN 12487

For improved corrosion protection for applications on steel / galvanised steel, the use of corrosion protection primer IGP-KORROPRIMER 10 is recommended. The suitability of the pre-treatment 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 intended for architectural applications is performing a boil test / pressure cooker test with a subsequent cross-cut adhesion and pull-off test. We refer to the guidelines of the GSB certifications and Qualicoat. For further information: see also our special leaflet on pre-treatment (IGP-TI 100).

#### Coating equipment

All commercially available electrostatic systems, both corona and Tribo charge systems. Exceptions are Pearl Mica effects, IGP-DURA<sup>®</sup>face 581ME which must be processed only 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.

#### Recyclability

Small portions of recycled powder should be added, automatically if possible, to the fresh powder. Important: Keep overspray to an absolute minimum. Processing instruction VR 201 must be observed.

### Cleaning

Coated parts to be cleaned in compliance with the regulations RAL-GZ 632 or SZFF 61.01. For pearl-mica effect, the Technical Information IGP-TI 106 must also be observed.

### Stripping and Subsequent Use Phase

The high resilience of IGP-DURA<sup>®</sup>cryl 40 poses special demands on the paint stripping procedure. Thermal paint stripping of support/product carriers is recommended. Chemical paint stripping is also possible under suitable conditions. 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.

### Packing

- Carton with inserted antistatic PE liner, content 20 kg
- Carton container with 25 antistatic PE liners, content 500 kg

### Material Approval

Qualicoat P-0561, class 1 (Location Switzerland)  
Qualicoat P-1871, class 1 (Location Poland)  
GSB Nr. 109n, class «Standard»

Blasted bright steel - Qualisteelcoat:  
PE-0015 with Korroprimer 1001  
PE-0016 with Korroprimer 6007  
Galvanized und swept steel- Qualisteelcoat:  
PE-0017 with Korroprimer 1001  
PE-0018 with Korroprimer 6007

#### Safety information:

Article-specific safety data sheet and comprehensive risk management measures available at: [www.igp-powder.com](http://www.igp-powder.com)

#### Note:

This application-related consulting is provided to the best of knowledge. However, it only represents non-binding information and does not release you from the need to perform your own tests. Application, use and processing of the products take place outside our ability to supervise and are therefore exclusively your own responsibility.