IGP POWDER COATINGS

42

app.print.technical_data_sheet.title

# IGP-DURA®*xal* 4201E-L3

Deep matte, highly weather-resistant powder coating for high-quality façades and design objects with the appearance of anodized aluminum.

## app.print.technical_data_sheet.characteristics.title

- Deep matte
- Smooth finish
- Pearl mica, Premium
- Super durable facade quality,
  3 years Florida > 50% residual gloss
- Lower cure
- Touchproof

## app.print.technical_data_sheet.approvals.title

- Qualicoat Nr. P-2055, class 2
- AAMA 2604-13, independent test report
- EPD IGP-DURA®xal 42

## app.print.technical_data_sheet.powder_properties.title

| | |
|---|---|
| app.print.technical_data_sheet.powder_properties.particle_size: | ≤ 100 µm |
| app.print.technical_data_sheet.powder_properties.solid: | ≥ 99 % |
| app.print.technical_data_sheet.powder_properties.gel_density: | 1.3 kg/l ± 0.1 kg/l |
| app.print.technical_data_sheet.powder_properties.storage_suitability: | app.print.technical_data_sheet.powder_properties.storage_suitability.prefix<br>18 months<br>app.print.technical_data_sheet.powder_properties.storage_suitability.at<br>25 °C<br>in an unopened original container |
| app.print.technical_data_sheet.powder_properties.colors: | RAL Metallic and individual metallic colors on request |

## app.print.technical_data_sheet.processing.title

**app.print.technical_data_sheet.processing.substrates**
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 improved corrosion protection for applications on steel / galvanised steel, the use of corrosion protection primer IGP-KORROPRIMER 10 or IGP-KORROPRIMER 60 is recommended.

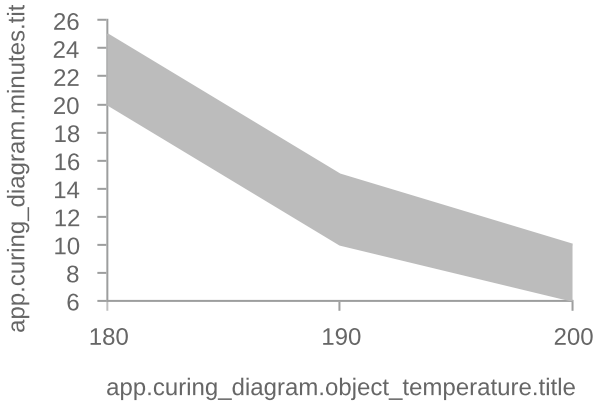
The suitability of the pretreatment method used is generally to be tested by the coater in advance with appropriate test methods. The minimum requirement for aluminium substrates / galvanised steel components is to carry out a boiling water test with a subsequent cross-cut adhesion and tape test. We 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).

**app.print.technical_data_sheet.processing.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.

**app.print.technical_data_sheet.processing.recommended_film_thickness**
60 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.

**app.print.technical_data_sheet.processing.curing_condition_recommendation**




| app.print.technical_data_sheet.processing.curing_conditi |
|---|
| 180 °C |
| **190 °C** |
| 200 °C |

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

Additional information regarding processing can also be found in the IGP processing instruction VR207.2
“IGP-DURA®xal”. Our Technical Customer Service Department will be happy to help you.

**app.print.technical_data_sheet.processing.application_instruction**
IGP processing instruction for “IGP-DURA®xal”: VR207.2.

**app.print.technical_data_sheet.processing.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 VR201.1 must be observed.

## app.print.technical_data_sheet.film_properties.title

**app.print.technical_data_sheet.film_properties.tested_on.title**

app.print.technical_data_sheet.film_properties.tested_on: Aluminium (AlMg1), 0.8 mm, chrom-free
app.print.technical_data_sheet.film_properties.film_thickness: 60 µm - 80 µm
app.print.technical_data_sheet.film_properties.object_temperature: 190 °C - 210 °C

**app.print.technical_data_sheet.film_properties.appearance**

| | | |
|---|---|---|
| app.print.technical_data_sheet.film_properties.gloss_level | 3 - 11 R/60° | DIN EN ISO 2813 2015-02 |

**app.print.technical_data_sheet.film_properties.mechanical_tests**

| | | |
|---|---|---|
| Cross-cut adhesion test | Gt 0 | DIN EN ISO 2409 2020-12 |
| Mandrel bending test / Tape test | ≤ 5 mm | DIN EN ISO 1519 2011 |
| Impact test / Tape test | ≥ 2.5 Nm | ASTM D 2794 1993 |
| Erichsen cupping / Tape test | ≥ 5 mm | DIN EN ISO 1520 2007-11 |

**app.print.technical_data_sheet.film_properties.weathering_tests**

| | | |
|---|---|---|
| 3 years Florida, 5° south | > 50 %<br>app.print.technical_data_sheet.film_properties.residual_gloss | DIN EN ISO 2810 2021-01 |
| Xenon-arc lamps, 1000h, 90% | > 90 %<br>app.print.technical_data_sheet.film_properties.residual_gloss | DIN EN ISO 16474-2 2014-03 |

**app.print.technical_data_sheet.film_properties.corrosion_tests**

| | | |
|---|---|---|
| Condensation water test, 1000h | No infiltration, no blisters | DIN EN ISO 6270-2 2018-04 |
| Acetic acid salt spray test, 1000h | No infiltration, no blisters | DIN EN ISO 9227 2017-07 |

**app.print.technical_data_sheet.film_properties.chemical_tests**

| | | |
|---|---|---|
| Mortar resistance | Easily removable after 24h with no residues. | ASTM D 3260 2001 |

## app.print.technical_data_sheet.more_information.title

**app.print.technical_data_sheet.packaging.title**
20 kg cardboard box with inserted antistatic PE liner
300 kg Big Bag

**app.print.technical_data_sheet.processing.overcoating**
Preliminary tests are mandatory for overcoating painted surfaces.

**app.print.technical_data_sheet.processing.printing_and_glueing**
Preliminary tests are mandatory for printing and glueing of painted surfaces.

**app.print.technical_data_sheet.more_information.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.

**app.print.technical_data_sheet.more_information.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.

**app.print.technical_data_sheet.more_information.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.

app.print.technical_data_sheet.infobox