

Technical Data Sheet

Premium Polyester Powder 5936

Highly weather-resistant powder coating for exterior use under extreme climatic conditions, dull matt



Field of application

For exterior and interior coatings with the highest quality and visual requirements, e.g., facade elements, window elements, large-scale constructions, truck attachment parts, agricultural machinery, fences, garage doors, noise barriers, etc.

Properties

- excellent weather resistance
- excellent gloss and color stability
- good corrosion protection properties
- good chemical resistance
- very high surface hardness
- good mechanical resistance
- excellent cleanability
- very good screen printability
- very good adhesion, film and seal material properties
- outstanding leveling properties
- after appropriate pretreatment, suitable for all standard metallic substrates
- after complete curing/cross-linking, the paint film is physiologically harmless

Technical Data

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| Basis | Polyester resin |
| Colours | Due to the limited selection of weather-resistant pigments, the product range includes a limited selection of color shades. |
| Degree of gloss | dull matt, 1–5 GU/60° (in accordance with DIN EN ISO 2813) For metallic colour shades the measured degree of gloss may differ from these specifications. |
| Density | 1.22–1.55 g/cm ³ ¹⁾ (in accordance with DIN ISO 8130-2) |
| Theoretical coverage | approx. 720 m ² /kg ¹⁾ (with 1 µm dry film thickness) |

¹⁾ dependent on the colour

Technical Data

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|---|---|
| Grain distribution | < 11 % < 10 µm 35–50 % < 32 µm > 85 % < 90 µm (Laser measuring device) |
| Cross-cut test | Gt 0 (in accordance with DIN EN ISO 2409) |
| Erichsen cupping | ≥ 5 mm (Tape test) (in accordance with DIN EN ISO 1520) |
| Buchholz hardness | ≥ 90 (in accordance with DIN EN ISO 2815) |
| Salt spray test | delamination at the scribe ≤ 1 mm (in accordance with DIN EN ISO 4628-8) on aluminum substrate ²⁾ > 1000 h (in accordance with DIN EN ISO 9227-NSS) |
| Condensation water test | degree of blistering 0 (S0) (in accordance with DIN EN ISO 4628-2) on aluminum substrate ²⁾ > 1000 h (in accordance with DIN EN ISO 6270-2) |
| Accelerated weathering QUV-B/SE | after 600 h residual gloss ≥ 50% of initial gloss (in accordance with DIN EN ISO 16474-3) |
| Outdoor weathering exposure Florida (5° South) | after 3 years residual gloss ≥ 50% of initial gloss (in accordance with ISO 2810) |
| Impact test | direct: ≥ 20 ip (in accordance with ASTM D 2794-69) |
| Labeling | See current safety data sheet. ²⁾ with suitable chromium-free passivation |

Coating recommendation

| Substrates ³⁾ | Prime Coat | Top Coat |
|---|---|--|
| Aluminium/Galvanized steel preferably passivated | <u>Aluminum</u> generally not required | Premium Polyester Powder 5936 approx. 70 to 100 µm ⁵⁾ |
| | <u>Galvanized steel</u> ⁴⁾ Corro Protection EP 5816 (light gray) 60–80 µm | |
| Steel sand-blasted (degree of cleanliness min. SA 2 ½ in accordance with DIN EN ISO 12944, Part 4) or zinc- phosphated | <u>Steel</u> ⁴⁾ Zinc Primer Powder EP 5815 (dark gray) 60–80 µm | |

³⁾ The substrate must generally be free of fats, oils, separating and drawing agents, as well as dirt and corrosion products and other contaminants (this applies, in particular, to using directly heated gas ovens) and pretreated in accordance with the corrosion protection requirement.

⁴⁾ Also possible as one layer for reduced corrosion protection requirements.

⁵⁾ Dependent on the color.

Process

Compatibility There is not any miscibility/compatibility of different batches and powder paint qualities. Surface appearances such as gloss reduction, specks, craters, orange peel effect can result in incompatibility. Appropriate preliminary tests are therefore to be performed, as required.

Application temperature 15–25 °C

Humidity < 75 % r. h.

Application

It is generally important to ensure good grounding of the substrate. The fluidizing, conveying, and dosing air must be oil- and condensate-free. In order to achieve a consistent coating quality, it is important to ensure a constant ratio between fresh and recycled powder. The fraction of recycled powder in circulation should generally be below 35 %. Special application instructions must be followed when applying metallic powder paints. See “Metallic powder paints – Special features for the application of metallic powder paints”.

Corona application Using appropriate coating programs depending on the parts geometry and application (if applicable, using the current flow restriction). For application systems without current flow restriction:

Voltage:
70–100 kV (for the first coating)
40–50 kV (for overcoating)

Tribo application is possible

Curing conditions

| Duration | Object temperature |
|------------|--------------------|
| 20–40 min. | at 180 °C |
| 15–30 min. | at 190 °C |
| 10–20 min. | at 200 °C |

Packaging

20 kg single cardboard box, 500 kg cardboard box containing 25 polyethylene bags á 20 kg.
Additional container sizes available on request.

Shelf life

12 months after receipt.
Store in a sealed container in a dry place and at room temperature (at most 25 °C). Protect from heat sources and direct sunlight.

Minimum shelf life refer to label

This Technical Data Sheet is based on intense development work and many years of practical experience. The contents do not constitute any contractual relationship. The user/buyer is not released from his/her obligation to test our products for suitability for the intended application. In addition, our General Terms and Conditions shall apply.

As soon as a new edition of this Technical Data Sheet is issued, the previous specifications become invalid. If you need the current version, please contact your Brillux consultant.

Version 6

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