

Industrial Polyester Powder 5903

Coarse-texture coating powder for both interior and exterior use,
silk-gloss to gloss



Field of application

Interior and exterior coatings meeting the highest qualitative and optical demands, e.g. construction machines, fence systems, fire-proof doors, fire extinguishers, garden furniture, sound insulation walls, hospital beds, lamps, cash boxes, safes, vending machines etc.

Properties

- good weather resistance
- high gloss and color stability
- good corrosion protection
- high degree of surface hardness
- good to very good mechanical values
- covers uneven areas and substrate defects
- very good adhesion on all common metallic substrates
- after corresponding pre-treatment suitable for all common metal substrate as well as partly glass
- once fully cured the paint film is physiologically safe

Technical Data

Basis	Polyester resin
Color	All common color systems
Degree of gloss	Silk gloss to gloss
Density	1.30 to 1.85 g/cm ³ ¹⁾ (in accordance with DIN ISO 8130-2)
Theoretical coverage	approx. 635 m ² /kg ¹⁾ (with 1 µm dry film thickness)
Grain distribution	< 11 % < 10 µm 35 to 50 % < 32 µm > 85 % < 90 µm (laser measuring)
Cross-hatch test	Gt 0 (in accordance with DIN EN ISO 2409)
Erichsen cupping	≥ 3 mm (in accordance with DIN EN ISO 1520)

¹⁾ depending on color

Technical Data

Salt spray test	Delamination at the scribe ≤ 2 mm (in accordance with DIN EN ISO 4628-8), On zinc-phosphated steel > 1.000 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 zinc-phosphated steel > 1.000 h (in accordance with DIN EN ISO 6270-2)
Accelerated weathering QUV-B/SE	after 200 h: residual gloss ≥ 50 % of initial gloss (according to DIN EN ISO 16474-3) ²⁾
Impact test	reverse: ≥ 10 ip direct: ≥ 20 ip (in accordance with ASTM D 2794-69)
Labeling	See current safety data sheet.

²⁾ The measured degree of gloss of structure powder paint depends on texturing. Therefore a visual assessment is necessary.

Coating suggestion

Substrates ³⁾	Prime coat	Top coat ⁴⁾
Aluminium preferably yellow- or green-chromated (according to DIN EN 12487) or chromium-free no-rinse pretreatment	Corro Protect EP 5816 (light-gray) 60 to 80 μm	Industrial Polyester Powder 5903 70 to 100 μm ⁵⁾
Steel preferably iron or zinc-phosphated		
Cast iron		
Galvanized steel etc.		

³⁾ Generally, the substrate shall be free from grease, oil, separating and drawing agents as well as corrosion products and other impurities (that especially applies to the use of directly fired gasovens) and pretreated according to the corrosion protection requirements.

⁴⁾ Or single layer, provided that substrate has been pre-treated accordingly.

⁵⁾ Depending on color

Process

Compatibility	Different batches or powder coat qualities cannot always be mixed/ are not always compatible to one another. Surface defects such as gloss reduction, specks, crater, orange peel effect etc. may result from incompatibility. To be sure, appropriate tests shall be carried out before application.
Application temperature	15 to 25 °C
Humidity	< 75 % relative humidity

Application

Generally, make sure the substrate is grounded properly. The fluidizing, conveying and dosing air must be free from oil and condensation water. In order to obtain a uniform coating quality, a constant fresh/recovered powder ratio should be maintained. The recovery powder portion in the circulation system should normally be less than 35 %. Please note our Technical Information "Textured coating powders – Important information on use of textured coating powders". When processing metallic powder coats, special processing instructions must be followed. Also refer to "Processing Instructions for Brillux Metallic - Powder Coats".

Corona application

Using appropriate coating programs depending on the parts' geometry and application situation (if applicable, using the current flow restriction).

For application systems without current flow restriction:

Voltage:

70 to 100 KV (for the first coating)

40 to 50 KV (for overcoating)

Tribo application

possible

Curing conditions

Duration	Object temperature
15 to 35 min.	at 170 °C
10 to 25 min.	at 180 °C
8 to 20 min.	at 190 °C
5 to 15 min.	at 200 °C

Container sizes

20 kg, 500 kg (25 polyethylene bags of 20 kg each)
Further container sizes available on request.

Shelf life

24 months for solid colors, 12 month for clearcoat, glazes and effect colors after receipt of the goods in the original sealed container.

Store in a sealed container in a dry place and at room temperature (at most 25 °C). Protect from heat sources and direct sunlight. Always keep the containers tightly sealed.

Minimum shelf life

Refer to label

Remark

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 7.

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