

Technical Data Sheet

Premium Polyester Powder 5934

Highly weather resistant fine-texture coating powder with Qualicoat approval Class 2 (no. P-1992) for exterior use in extreme climatic conditions, dull matt to matt (2–12 GU/60°-A.)



Field of application

For interior and exterior coatings meeting the highest qualitative and optical demands, e.g. structural elements/structural sections, vehicle attachments, sound insulation walls, lamps, vending machines etc.

Approvals/permits

Qualicoat approval: class 2, approval-no.: P-1992 (Verein für Qualitätskontrolle in der Lackier- und Beschichtungsindustrie).
Product approvals: Deutschen Bahn for coating powder in accordance with DBS 918 340 technical interior and exterior use aluminum, technical interior use steel and technical exterior use steel.

Properties

- maximum weather resistance
- excellent gloss and color stability
- good protection against corrosion
- good chemical resistance
- high degree of surface hardness
- covers uneven areas and substrate defects
- after pre-treatment suitable for all common metallic substrates
- once fully cured, the paint film is physiologically safe

Technical Data

Basis	Polyester resin						
Color	Due to the limited availability of weather-proof pigments, the product range only includes a limited number of different tints.						
Degree of gloss	Dull matt to matt, 2–12 GU/60° (in accordance with to DIN EN ISO 2813) The measured value may differ for metallic colors.						
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	<table><tr><td>< 12 %</td><td>< 10 µm</td></tr><tr><td>22 to 55 %</td><td>< 32 µm</td></tr><tr><td>> 84 %</td><td>< 90 µm</td></tr></table> (laser measuring)	< 12 %	< 10 µm	22 to 55 %	< 32 µm	> 84 %	< 90 µm
< 12 %	< 10 µm						
22 to 55 %	< 32 µm						
> 84 %	< 90 µm						

Technical Data

Cross-hatch test	Gt 0 (in accordance with DIN EN ISO 2409)
Erichsen cupping	≥ 5 mm (in accordance with DIN EN ISO 1520)
Salt spray test	Delamination at the scribe ≤ 1 mm (in accordance with DIN EN ISO 4628-8), On aluminium substrate ²⁾ > 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 aluminium substrate ²⁾ > 1.000 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 weather exposure Florida (5° south)	After 3 years residual gloss ≥ 50 % of initial gloss (in accordance with ISO 2810)
Impact test	reverse: ≥ 22 ip direct: ≥ 22 ip (in accordance with ASTM D 2794-69)
Labeling	See current safety data sheet.

¹⁾ depending on color

²⁾ With suitable chrome free passivation

Coating suggestion

Substrates ³⁾	Prime coat	Top coat
Aluminum/ galvanized steel preferably yellow-chromated (according to DIN EN 12487) or chromium-free no-rinse pretreatment Steel blasted (degree of purity at least SA 2 1/2 according to DIN EN ISO 12944, Part 4) or zinc-phosphated	<u>Aluminum</u> normally not necessary <u>Galvanized steel⁴⁾</u> Corro Protect EP 5816 light gray 60 to 80 µm <u>Steel, blasted⁴⁾</u> Zinc Prime Powder EP 5815 dark gray 60 to 80 µm <u>Steel, zinc-phosphated⁴⁾</u> Corro Protect EP 5816 light gray 60 to 80 µm	Premium Polyester Powder 5934 60 to 110 µm ⁵⁾

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⁾ At reduced demands on corrosion protection the prime coat is not always necessary.

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
25 to 40 min.	at 170 °C
20 to 35 min.	at 180 °C
15 to 30 min.	at 190 °C
10 to 25 min.	at 200 °C

Container sizes

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

Shelf life

24 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

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 13.

Brillux GmbH & Co. KG Industrial Coatings
Otto-Hahn-Straße 14
59423 Unna. Germany
Phone +49 2303 8805-0
Fax +49 2303 8805-119
info@brillux-industrial-coatings.com
www.brillux-industrial-coatings.com