

Technical Data Sheet

Universal Polyester Powder 5944

Universal-use, fine-texture coating powder (facade quality) with GSB approval Florida 1 (no. 125 k) and Qualicoat approval Class 1 (no. P-1932), dullmatt to matt (2–12 GU/60°-A.)



Field of application

For interior and exterior coatings meeting very high qualitative and optical demands for facade coating as well as for window frames, doors, gates, winter gardens, industrial components and objects, truck attachments, garden and camping furniture, lamps etc.

Approvals/permits

GSB	Florida 1 Coating Material Aluminium, approval-no.: 125 k (Gütegemeinschaft für die Stückbeschichtung von Bauteilen)
Qualicoat	Class 1, approval-no.: P-1932 (Verein für Qualitätskontrolle in der Lackier- und Beschichtungsindustrie)

Properties

- very good weather resistance
- very high gloss and color stability
- good corrosion protection
- good chemical resistance
- very good mechanical values
- 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	All common color systems
Degree of gloss	Dull matt to matt, 2–12 GU/60° (in accordance with DIN EN ISO 2813) The measured value may differ for metallic colors.

Technical Data

Density	1,45 to 1,70 g/cm ³ (in accordance with DIN ISO 8130-2) ¹⁾
Theoretical coverage	Approx. 635 m ² /kg (with 1 µm dry film thickness) ¹⁾
Grain distribution	<div>< 11 % < 10 µm</div> <div>35 to 50 % < 32 µm</div> <div>> 85 % < 90 µm</div> <div>(laser measuring)</div>
Cross-hatch test	Gt 0 C (in accordance with DIN EN ISO 2409)
Erichsen cupping	≥ 5 mm (in accordance with DIN EN ISO 1520)
Impact test	<div>reverse: ≥ 20 ip</div> <div>direct: ≥ 20 ip</div> <div>(in accordance with ASTM D 2794-69)</div>
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 300 h: residual gloss ≥ 50 % of initial gloss (in accordance with DIN EN ISO 16474-3)
Outdoor weather exposure Florida (5° south)	After 12 month: residual gloss ≥ 50 % of initial gloss (in accordance with ISO 2810)
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 a homogeneous pre-treatment, tested and admitted by GSB (Gütegemeinschaft für die Stückbeschichtung von Bauteilen)	Aluminum normally not necessary Galvanized steel ⁴⁾ Corro-Protect EP 5816 (light gray) 60 to 80 µm	Universal Polyester Powder 5944 approx. 80 µm ⁵⁾
Steel blasted (degree of purity at least SA 2 ½ according to DIN EN ISO 12944, Part 4) or zinc-phosphated	steel ⁴⁾ Zinc Prime Powder EP 5815 (dark gray) 60 to 80 µm	

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)
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Tribo application	Is possible
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Curing conditions

Duratiuon	Object temperature
20 to 50 min.	at 170 °C
10 to 40 min.	at 180 °C
8 to 30 min.	at 190 °C

This quality is suitable for directly gas-fired furnaces.

Container sizes

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
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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 4.

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