

Technical Data Sheet

Universal Polyester Powder 5940 glossy 5941 silk gloss



Universal-use, glossy respectively silk-gloss coating powder (facade quality, 71–90 resp. 60–70 GU/60°-A.) with GSB approval Florida 1 (no. 125 g) and Qualicoat approval Class 1 (no. P-1645 resp. no. P-1646)



Field of application

As light and weather-resistant GSB powder coating quality with very good gloss and color stability for facade coating as well as for window frames, doors, gates, winter gardens, gas tanks, utility vehicles etc.

Approvals/permits

GSB	Florida 1 Coating Material Aluminium, approval-no.: 125 g (Gütegemeinschaft für die Stückbeschichtung von Bauteilen)
Qualicoat	Class 1 approval-no.: P-1645 for 5940 and P-1646 for 5941 (Verein für Qualitätskontrolle in der Lackier- und Beschichtungsindustrie)

Properties

- very good weather resistance
- very high gloss and color stability
- good corrosion protection
- high degree of surface hardness
- very good mechanical values
- excellent abrasion resistance
- very good screen printing properties
- very good adhesion of glues and sealing materials
- very good levelling properties
- after pretreatment the paint is suitable for all common metal surfaces, e. g. plastic, glass and ceramics
- once fully cured, the paint film is physiologically safe

Technical Data

Basis	Polyester resin
Color	All common color systems.

Degree of gloss	5940: Glossy, 71 to 90 GU/60° 5941: Silk-gloss, 60 to 70 GU/60° (in accordance with DIN EN ISO 2813) The measured gloss value may deviate in the case of metallic colors.
Density	1.30 to 1.85 g/cm ³ (in accordance with DIN ISO 8130-2) ¹⁾
Theoretical coverage	approx. 635 m ² /kg (with 1 µm dry layer) ¹⁾
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	≥ 5 mm (in accordance with DIN EN ISO 1520)
Buchholz hardness	≥ 80 (in accordance with DIN EN ISO 2815)
Pencil hardness	2 H (Wolff Wilborn Typ 291)
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)
Accelerated weathering Xenon	after 1000 h residual gloss ≥ 50 % of initial gloss (in accordance with DIN EN ISO 16474-2)
Outdoor weather exposure Florida (5° south)	after 12 months residual gloss ≥ 50 % of initial gloss (in accordance with ISO 2810)
Impact test	reverse: ≥ 20 ip direct: ≥ 20 ip (in accordance with ASTM D 2794-69)
Labeling	See current safety data sheet.

1) depending on color

2) with a suitable chromate-free passivation

Coating suggestion

Substrates ³⁾	Prime coat	Top coat
Aluminium preferably yellow- or green-chromated (according to DIN EN 12487) or a homogeneous pre-treatment, tested and admittetd by GSB (Gütegemeinschaft für die Stückbeschichtung von Bauteilen)	Normally not necessary	Universal Polyester Powder 5940, 5941 60 to 100 µm
Steel Preferably iron- or zinc-phosphated		
Cast		
Galvanized steel etc.		

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

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

Air 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 %. When processing metallic powder coats, special processing instructions must be followed. Also refer to "Processing Instructions for Brillux Metallic Coating Powders".

Corona application Depending on geometry of parts and application use corresponding coating-programs (as the case may be with utilisation of limitation of spraying current).

For application-systems without limitation of spraying current:

Voltage:

70 to 100 kV (in the case of first coat)

40 to 50 kV (in the case of overcoating)

Tribo application is possible

Curing conditions

(take note of the GSB guidelines)

Duration	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 single cardboard box
500 kg cardboard box containing 25 polyethylene bags of 20 kg each
Additional 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 against 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 4.

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