

Technical Data Sheet

Premium Polyester Powder 5936.-.9902, RAL 9021-F9

Highly weather-resistant powder coating with approval in accordance with VG 95211 for camouflage for exterior use under extreme climatic conditions, dull matt



Field of application

For exterior and interior coatings with the highest quality and visual requirements for repair and for camouflage painting of military equipment and vehicles.

Properties

- excellent weather resistance
- excellent gloss and color stability
- excellent camouflage effect in the near infrared spectral range
- good corrosion protection properties
- good chemical resistance
- very high surface hardness
- good mechanical resistance
- excellent cleanability
- outstanding leveling properties
- after appropriate pretreatment, suitable for various metallic substrates (see Coating recommendation)

Approvals/Permits

Approval in accordance with VG 95211, fulfils the requirements of the Bundeswehr-TL 8010-0002 class IV Typ 3 (approval-no.: WIWeB 440.17.02P43A3.2 (first approval: WIWeB report no. R1/0000027047-26 of October 27, 2021))

The approval does not include resistance to chemical warfare agents according to STANAG 4360.

Technical Data

Basis	Polyester resin
Colours	RAL 9021-F9 (tar black)
Degree of gloss	dull matt, ≤ 2 GU/60° and ≤ 8 GU/85° (in accordance with DIN EN ISO 2813)
Density	1.21 to 1.27 g/cm ³ (in accordance with DIN ISO 8130-2)

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Theoretical coverage	approx. 805 m ² /kg (with 1 µm dry film thickness)
Grain distribution	< 12 % < 10 µm 41 to 43 % < 32 µm > 94 % < 90 µm (Laser measuring device)
Cross-cut test	Gt ≤ 1 (in accordance with DIN EN ISO 2409) ¹⁾
Erichsen cupping	≥ 3 mm (in accordance with DIN EN ISO 1520) ¹⁾
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 (Tape test) (in accordance with ASTM D 2794-69) ¹⁾
Labeling	See current safety data sheet.

¹⁾ at 60 µm film thickness
²⁾ with suitable passivation

Coating recommendation

Substrates ³⁾	Prime Coat ⁴⁾	Top Coat
Aluminium/Galvanized steel preferably passivated	generally not required	Premium Polyester Powder 5936.-.9902 approx. 60 to 100 µm ⁵⁾
Steel/Stainless steel sand-blasted (degree of cleanliness min. SA 2 ½ in accordance with DIN EN ISO 12944, Part 4)	if required, Corro Protect EP 5816 (light gray) 60 to 80 µm	
Steel stained or sand blasted (degree of cleanliness min. SA 2 ½ in accordance with DIN EN ISO 12944, Part 4) and zinc phosphated	Cathodic electrodeposition paint (based on epoxy resin) 15 to 40 µm Steel, stained and zinc phosphated even without Prime Coat possible.	

³⁾ The substrate must generally be free of grease, oil, 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⁾ Steel: with prime coat for highest corrosion protection requirements

⁵⁾ For an optimal camouflage effect, a layer thickness of at least 60 µm is required.

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 %.

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 to 100 kV (for the first coating)
40 to 50 kV (for overcoating)

Curing conditions

Duration	Object temperature
10 to 40 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 1

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