

Zinc Priming Powder EP 5815

Zinc epoxy primer for ultimate corrosion protection for use on sand-blasted steel and passivated aluminum



Field of application

In combination with weather-resistant powder coating systems for all areas where long-term corrosion protection with immaculate aesthetics is required, e.g., structural sections/elements, construction and agricultural machinery, vehicle components, steel cylinders, etc. Single layers are not suitable for exterior use.

Properties

- excellent corrosion protection properties
- very good protective effect against filiform corrosion on suitably passivated aluminum
- high chemical resistance
- very good mechanical values
- after pre-treatment suitable for sand-blasted steel as well as passivated aluminium
- once fully cured, the paint film is physiologically safe

Approvals/permits

Test certificate in accordance with DIN EN ISO 129446 part 6, corrosivity category C5 high; tested in two-layer build-up with Brillux Universal Polyester Powder 5940 or 5910 (Institut für Korrosionsschutz Dresden GmbH).

Technical Data

Basis	Epoxy resin
Color	Dark gray
Degree of gloss	Glossy
Density	2.64 to 2.70 g/cm ³ (in accordance with DIN ISO 8130-2)
Theoretical coverage	approx. 370 m ² /kg (with 1 µm dry film thickness)
Grain distribution	< 28 % < 10 µm 54 % < 32 µm > 94 % < 90 µm (laser measuring)

Technical Data

Cross-hatch test	Gt 0 C (in accordance with DIN EN ISO 2409)
Erichsen cupping	≥ 6 mm (in accordance with DIN EN ISO 1520)
Buchholz hardness	≥ 90 (in accordance with DIN EN ISO 2815)
Pencil hardness	2 H (Wolff Wilborn type 291)
Salt spray test	Corrosion at the scribe ≤ 1 mm (in accordance with DIN EN ISO 4628-8), on SA 2 ^{1/2} sand-blasted steel ¹⁾ > 1.440 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 SA 2 ^{1/2} sand-blasted steel ¹⁾ > 1.000 h (in accordance with DIN EN ISO 6270-2)
Impact test	reverse: ≥ 60 ip direct: ≥ 60 ip (in accordance with ASTM D 2794-69)
Labeling	See current safety data sheet.

¹⁾ In conjunction with a suitable top coat

Coating suggestion

Substrates ²⁾	Prime coat ³⁾	Top coat ⁴⁾
Steel Sand-blasted (degree of cleanliness min. SA 2 ½ in accordance with DIN EN ISO 12944, part 4) Aluminium Suitably passivated	Zinc Primer Powder EP 5815 (Dark gray) 60-80 µm	Industrial Polyester Powder 5900, 5901, 5902 approx. 60 µm
		Industrial Polyester Powder 5903, 5905 approx. 80 µm
		Industrial Polyester Powder 5904. approx. 60 µm
		Universal Polyester Powder 5940, 5941, 5910, 5911 approx. 60 µm

²⁾ Generally, the substrate shall be free from grease, oil, separating and drawing agents as well as corrosion products and other impurities and pretreated according to the corrosion protection requirements.

³⁾ When using a directly heated gas oven, the intercoat adhesion on the top coat can be reduced due to pressurized combustion products. The adhesion must therefore be tested in a representative pretest.

⁴⁾ 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 %.

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

Curing of the prime coating before application of the final coating:

Duration	Object temperature
15 to 30 min.	at 170 °C
10 to 20 min.	at 180 °C
7 to 12 min.	at 200 °C

Alternatively, complete curing can take place after application of the final coating, if the primer was gelled beforehand (110–130 °C object temperature, with a holding time of 8–10 min.). The curing must then be carried out in accordance with the specifications for the top coat, but at least applied in accordance with the stoving conditions of the primer.

Container sizes

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

Shelf life

6 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 8.

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