

ESD Mixed Powder EP/PE 5654

Discharging fine texture mixed coating powder preventing discontinuous discharging in interior areas (e.g. in work and assembly stations for electronic components, so-called ESD workstations), dull matt to silk matt



Field of application

As a functional coating for interior application, e.g. work and assembly stations for electronic components (ESD workstations), dissipative components, transport equipment for electrostatically sensitive components, machines and components for avoidance of dust attraction and/or electrostatic discharging

Properties

- optimum electrical dissipation capacity (see "specific surface resistance/resistance to ground")
- avoids dust attraction
- good corrosion protection
- good chemical resistance
- high degree of surface hardness
- very good mechanical values
- covers uneven areas and substrate defects
- once fully cured, the paint film is physiologically safe
- after pretreatment the paint is suitable for all common metal surfaces

Technical Data

Basis	A combination of polyester and epoxy resin
Color	Upon request (For system reasons, all colors have a darkened appearance)
Gloss grade	Dull matt to silk matt ≤ 35 GU/60° (in accordance with DIN EN ISO 2813)
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 1µm dry film thickness) ¹⁾
Grain distribution	< 11 % < 10 µm 35 to 50 % < 32 µm > 85 % < 90 µm (Laser measuring)
Cross-hatch test	Gt 0 C (in accordance with DIN EN ISO 2409)
Erichsen cupping	≥ 4 mm (in accordance with DIN EN ISO 1520)

¹⁾ depending on color

Technical Data

Salt spray test	Delamination at the scribe ≤ 2 mm (in accordance with DIN EN ISO 4628-8) on iron phosphated Bonder-panel > 250 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 iron phosphated Bonder-panel > 250 h (in accordance with DIN EN ISO 6270-2)
Impact test	reverse: ≥ 20 ip direct: ≥ 40 ip (in accordance with ASTM D 2794-69)
Specific surface resistance/ Resistance to ground	$R_{gp} < 1 \times 10^9 \Omega$ $R_{p-p} < 1 \times 10^9 \Omega$ (in accordance with DIN EN 61340-2-3)
Labeling	See current safety data sheet.

Coating suggestion

Substrates ²⁾	Prime coat	Top coat ³⁾
Aluminium preferably yellow- or green-chromated (according to DIN EN 12487) or chromium-free no-rinse pretreatment	Normally not necessary	ESD Mixed Powder EP/PE 5653 60 to 80 μm
Steel preferably iron or zinc-phosphated or sand-blasted (degree of purity at least SA 2 1/2 in accordance with DIN EN ISO 12944, Part 4)		
Cast iron Galvanized steel etc.		

²⁾ 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).

³⁾ For the above pretreated substrates one coating should be applied.

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 %. Please note our Technical Information "Textured coating powders - Important information on use of textured 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)

Tribo application Not possible

Curing conditions

Duration	Object temperature
20 to 50 min.	at 170 °C
12 to 30 min.	at 180 °C
10 to 20 min	at 190 °C
8 to 15 min.	at 200 °C

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 7.

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