

ESD Mixed Powder EP/PE 5653

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

Basis

A combination of polyester and epoxy resin

Colors

Upon request
(For system reasons, all colors have a darkened appearance)

Gloss grade

Silk gloss to gloss

Properties

- optimum electrical dissipation capacity (see "specific surface resistance/resistance to ground")
- very good adhesion on all common metallic substrates
- high degree of surface hardness with good to very good mechanical values
- high gloss and color stability
- covers uneven areas and substrate defects
- once fully cured, the paint film is physiologically safe

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

Technical data

Density

1.45 to 1.70 g/cm³ ¹⁾
(in accordance with DIN ISO 8130-2)

Theoretical coverage

approx. 635 m²/kg ¹⁾
(with 1 µm dry film thickness)

Grain distribution

< 11 %	< 10 µm
35 to 50 %	< 32 µm
> 85 %	< 90 µm

(laser measuring instrument)

Cross-cut test

Gt 0 C (in accordance with DIN EN ISO 2409)

Erichsen cupping

≥ 3 mm (in accordance with DIN EN ISO 1520)

Salt spray test

> 250 h ²⁾ (in accordance with DIN EN ISO 9227-NSS)

Condensation water test

> 250 h ²⁾ (in accordance with DIN EN ISO 6270-2)

Impact test

reverse: ≥ 10 ip
direct: ≥ 20 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.

¹⁾ depending on color

²⁾ on iron phosphated Bonder-panel

Coating recommendation

Substrates ¹⁾	Prime coat	Topcoat ²⁾
<p>Aluminum preferably yellow- or green-chromated (in accordance with DIN EN 12487) or chromium-free no-rinse pretreatment</p> <p>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)</p> <p>Cast iron</p> <p>Galvanized steel etc.</p>	n/a	ESD Mixed Powder EP/PE 5653 70 to 90 µm

¹⁾ Generally, the substrate should 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.

²⁾ 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, craters, orange peel effect, etc., may result from incompatibility. To be sure, appropriate tests must be carried out before application.

Application temperature

15 to 25 °C

Air humidity

< 75 % r. h.

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

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

Packaging

20 kg, 500 kg (25 x 20 kg)
Further container sizes available
upon request.

Storage

1 year after receipt.
Store in original closed contain-
er, dry and at room temperature
(no more than 25 °C). Protect
against heat and direct sunlight.

Remarks

This Technical Data Sheet is
based on intense development
work and many years of practi-
cal experience. The contents do
not constitute any contractual re-
lationship. 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 be-
come invalid.

If you need the current version,
please contact your Brillux con-
sultant.

Version 5.

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