

# Technical Data Sheet

## Mixed Powder EP/PE

5840 gloss  
5841 silk gloss  
5842 matt to silk matt

Mixed coating powder as a decorative all-round coating for simple interior applications



### Field of application

As a decorative interior coating on e.g. steel furniture, shelving, light frames, wire goods, tool-boxes, interior doors, fire extinguishers, heaters, computer housing, machine parts, furniture fittings, shop design, transport trucks, refrigerators, microwave ovens, etc. In the case of secondary equipment, limited exterior use is possible.

### Approvals / permits

Test and approval about the physiological safety, sort 5840, Institut für Lackprüfung, Gießen, Prüfbericht Nr.: 2-8-98A+B

### Properties

- good corrosion protection
- good resistance to chemicals
- high degree of surface hardness
- good to very good mechanical values
- good levelling properties
- after pretreatment the paint is suitable for all common metal surfaces as well as partly for ceramics
- once fully cured, the paint film is physiologically safe

### Technical data

<b>Basis</b>	A combination of polyester- and epoxy resin
<b>Colors</b>	all common color systems
<b>Degree of gloss</b>	5840 gloss: > 70 GU/60° 5841 silk gloss: 36 to 70 GU/60° 5842 matt to silk matt: < 36 GU/60° (in accordance with DIN EN ISO 2813)
<b>Density</b>	1,45 to 1,70 g/cm <sup>3</sup> (in accordance with DIN ISO 8130-2) <sup>1)</sup>
<b>Theoretical coverage</b>	approx. 635 m <sup>2</sup> /kg (with 1 µm dry film thickness) <sup>1)</sup>

<sup>1)</sup> depending on color

## Technical data

<b>Grain distribution</b>	< 11 % < 10 µm 35–50 % < 32 µm > 85 % < 90 µm (laser measuring instrument)
<b>Cross-cut test</b>	Gt 0 (in accordance with DIN EN ISO 2409)
<b>Erichsen cupping</b>	≥ 3–6 mm (in accordance with DIN EN ISO 1520) <sup>2)</sup>
<b>Buchholz hardness</b>	≥ 90 (in accordance with DIN EN ISO 2815)
<b>Pencil hardness</b>	2 H (Wolff Wilborn Typ 291)
<b>Salt spray test</b>	Delamination at the scribe ≤ 2 mm (in accordance with DIN EN ISO 4628-8), On iron-phosphated steel > 250 h (in accordance with DIN EN ISO 9227-NSS)
<b>Condensation water test</b>	Degree of Blistering 0 (S0) (in accordance with DIN EN ISO 4628-2) On iron-phosphated steel > 250 h (in accordance with DIN EN ISO 6270-2)
<b>Impact test</b>	reverse: ≥ 10 to 60 ip <sup>2)</sup> direct: ≥ 20 to 60 ip <sup>2)</sup> (in accordance with ASTM D 2794-69)
<b>Labeling</b>	See current safety data sheet

<sup>2)</sup> depending on gloss

## Coating recommendation

Substrates <sup>3)</sup>	Prime coat	Top coat <sup>4)</sup>
<b>Aluminium</b> preferably yellow- or green-chromated (in accordance with DIN EN 12487) or chromium-free no-rinse pretreatment	n/a	Mixed Powder EP/PE 5840, 5841, 5842 60 to 100 µm
<b>Steel</b> preferably iron or zinc-phosphated		
<b>Cast iron</b>		
<b>Galvanized Stahl</b> etc.		

<sup>3)</sup> Generally, the substrate shall be free from grease, oil, separating and drawing agents as well as corrosion products and other impurities (that especially applies to the use of directly fired gasovens ) and pretreated according to the corrosion protection requirements.

<sup>4)</sup> For the above applications, generally single-coat application on appropriately pre-treated substrate.

## Process

**Compatibility** Different batches or powder coat qualities 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

**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 - Powder Coats".

**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

5840 and 5841	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

5842	Duration	Object temperature
	30–50 min.	at 170 °C
	15–30 min.	at 180 °C
	10–20 min.	at 190 °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 for solid colors, 12 months for clearcoats, glazes and effect colors 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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