

# Technical Data Sheet

## NT Mixed Powder EP/PE

5870 glossy  
5871 silk gloss  
5872 silk matt

Efficient low-cure-temperature mixed coating powder as decorative coating for interior use



### 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

**5870/5871**

Certificate of compliance for lacquering of machines processing dry foodstuffs of ISEGA-Forschungs- und Untersuchungs-Gesellschaft mbH, Aschaffenburg, Prüfnummer 60209 U 23.  
Confirmation of compliance with the demands on dry and non-fatty food contact materials (in accordance with FDA 21 CFR, Ch. I, edition April 1, 2021), ISEGA-Forschungs- und Untersuchungs-Gesellschaft mbH, Aschaffenburg (letter of 03/06/2022)  
Confirmation of compliance with the demands on dry and non-fatty food contact materials (in accordance with Japan Food Sanitation Act No. 223 of 1947, including the amendment Act No. 46 of 2018, Article 18 (3)), ISEGA-Forschungs- und Untersuchungs-Gesellschaft mbH, Aschaffenburg (letter of 24/10/2022)

### Properties

- particularly economical curing conditions
- good corrosion protection
- good chemical resistance
- high surface hardness
- good to very good mechanical parameters
- very good adhesion on all common metallic substrates, as well as partly plastics, glass and ceramics
- after full curing / cross-linking, the paint film is physiologically safe

## Technical Data

<b>Basis</b>	A combination of polyester- and epoxy resin	
<b>Color</b>	All common color systems	
<b>Degree of gloss</b>	5870 gloss, >70 GU/60° 5871 silk gloss, 36 to 70 GU/60° 5872 silk matt, 16 to 35 GU/60° (in accordance with DIN EN ISO 2813)	
<b>Density</b>	1.45 to 1.70 g/cm <sup>3</sup> <sup>1)</sup> (in accordance with DIN ISO 8130-2)	
<b>Theoretical coverage</b>	approx. 635 m <sup>2</sup> /kg <sup>1)</sup> (with 1 µm dry film thickness)	
<b>Grain distribution</b>	< 11 %	< 10 µm
	35 to 50 %	< 32 µm
	> 85 %	< 90 µm
	(laser measuring)	
<b>Cross-cut test</b>	Gt 0 (in accordance with DIN EN ISO 2409)	
<b>Erichsen cupping</b>	≥ 3 to 5 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>	2H (Wolff Wilborn Type 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: ≥ 5 to 10 ip <sup>2)</sup> direct: ≥ 20 to 40 ip <sup>2)</sup> (in accordance with ASTM D 2794-69)	
<b>Labeling</b>	See current safety data sheet.	

<sup>1)</sup> depending on color  
<sup>2)</sup> depending on gloss

## Coating suggestion

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  <b>Steel</b> preferably iron or zinc-phosphated  <b>Cast iron</b> <b>Galvanized steel</b> <b>etc.</b>	n/a	NT Mixed Powder EP/PE 5870, 5871, 5872 80 to 100 µm

<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 pretreated substrates one coating must be applied.

## Process

<b>Compatibility</b>	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.
<b>Application temperature</b>	15 to 25 °C
<b>Humidity</b>	< 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". When processing metallic powder coats, special processing instructions must be followed. Also refer to "Processing Instructions for Brillux Metallic - Powder Coats".

<b>Corona application</b>	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)
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<b>Tribo application</b>	is possible
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## Curing conditions

<b>5870</b>	Duration	Object temperature
	30 to 60 min.	at 140°C
	15 to 40 min.	at 150°C
	10 to 30 min.	at 160°C
	7 to 20 min.	at 170°C
<b>5871</b>	Duration	Object temperature
	30 to 60 min.	at 140 °C
	15 to 40 min.	at 150 °C
	10 to 30 min.	at 160 °C
	7 to 20 min.	at 170 °C
<b>5872</b>	Duration	Object temperature
	30 to 60 min.	at 150 °C
	15 to 40 min.	at 160 °C
	13 to 30 min.	at 170 °C
	10 to 20 min.	at 180 °C

## 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 15.

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