

# Technical Data Sheet

## NT Polyester Powder PE

5970 gloss

5971 silk gloss

Efficient low-cure-temperature coating powder for both interior and exterior use, available in three gloss grades



### Field of application

Interior and exterior coatings meeting the highest qualitative and optical demands, e.g. agricultural machines, fence systems, garage doors, gas cylinders, lawnmowers, fire extinguishers, garden furniture, sound insulation walls, hospital beds, shower stalls, light fixtures etc.

### Approval/Permits

**5970** Certificate of Conformity (for contact with dry foodstuff), ISEGA-Forschungs- und Untersuchungs-Gesellschaft mbH, Aschaffenburg, Prüfnummer 62970 U 24  
Confirmation of compliance with the demands on dry and non-fatty food contact materials (according FDA 21 CFR Ch. I (April 1, 2021 edition), ISEGA-Forschungs- und Untersuchungs-Gesellschaft mbH, Aschaffenburg, letter of 03/06/2022).

### Properties

- enables energy saving thanks to low cure conditions
- excellent abrasion resistance
- very good weather resistance
- high gloss and color stability
- high degree of surface hardness
- very good mechanical values
- good corrosion protection
- very good adhesion on all common metallic substrates
- once fully cured, the paint film is physiologically safe

### Technical Data

<b>Basis</b>	Polyester resin
<b>Color</b>	All common color systems
<b>Degree of gloss</b>	5970 gloss, > 70 GU/60° 5971 silk-gloss, 50 to 70 GU/60° (in accordance with DIN EN ISO 2813)

## Technical Data

<b>Density</b>	1.35 to 1.85 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 mm to 6 mm <sup>2)</sup> (in accordance with DIN EN ISO 1520)
<b>Buchholz hardness</b>	≥ 90 (in accordance with DIN EN ISO 2815)
<b>Pencil hardness</b>	2 H (Wolff Wilborn Type 291)
<b>Salt spray test</b>	Delamination at the scribe ≤ 2 mm (in accordance with DIN EN ISO 4628-8), On zinc-phosphated steel > 1.000 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 zinc-phosphated steel > 1.000 h (in accordance with DIN EN ISO 6270-2)
<b>Accelerated weathering QUV-A/SE</b>	> 1.000 h (according to DIN EN ISO 16474-3)
<b>Accelerated weathering QUV-B/SE</b>	after 250 h: residual gloss ≥ 50 % of initial gloss (according to DIN EN ISO 16474-3)
<b>Impact test</b>	reverse: ≥ 5 to 20 ip <sup>2)</sup> direct: ≥ 10 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>Aluminum</b> preferably yellow- or green-chromated (in accordance with DIN EN 12487) or chromium-free no-rinse pre-treatment	n/a	NT Polyester Powder PE 5970, 5971 60 to 100 µm <sup>5)</sup>
<b>Steel</b> preferably iron or zinc-phosphated		
<b>Cast iron</b>		
<b>Galvanized steel etc.</b>		

<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> If substrate has been pre-treated accordingly.

<sup>5)</sup> 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 % 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". When processing metallic powder coats, special processing instructions must be followed. Also refer to "Processing Instructions for Brillux Metallic - Powder Coats".

**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** is possible

## Curing conditions

duration	object temperature
10 to 40 min.	at 160 °C
8 to 25 min.	at 170 °C
6 to 15 min.	at 180 °C
4 to 10 min.	at 190 °C

## Container sizes

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

## Shelf life

12 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

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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 13.

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