

## Technical data sheet

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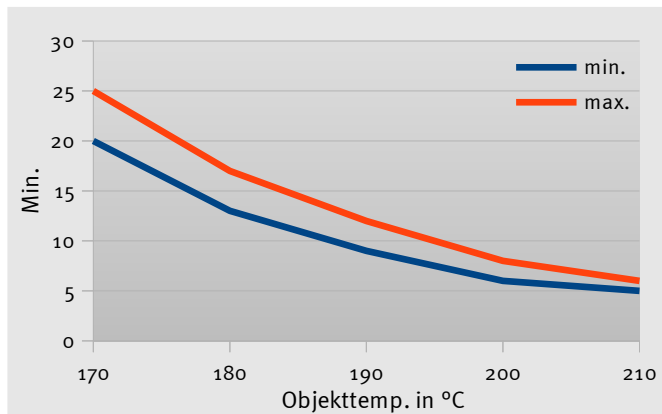
### POLYFLEX® PES-50-DS smooth thin-film non-yellowing Corona silk-matt 20

Powder coating with very low calorific value for indoor use based on polyester and epoxy resins with very good hiding power. Outstanding overbake stability with respect to gloss and yellowing. The product is mainly used for the coating of metal ceilings.

<b>Applications</b>	Metal Ceilings
<b>Colours</b>	many colours with few restrictions
<b>Surface</b>	smooth
<b>Gloss</b>	silk matt, 17-23 gloss units (60°)
<b>Powder properties</b>	<p><b>Particle size distribution</b> smaller 7 µm: 8 – 13%  <small>(HELOS H1708)</small> smaller 31 µm: 61 – 66%</p> <p><b>Density</b> 1.4 – 1.8 g/cm<sup>3</sup> different depending on the colour;                  can be specified per colour</p>
<b>Material consumption</b>	g/m <sup>2</sup> = Density (g/cm <sup>3</sup> ) x coating thickness (µm)
<b>Coating thickness</b>	Recommended 30 – 50 µm depending on colour (in white rather more) maximum 100 µm
<b>Application</b>	The application can be made with the usual electrostatic powder coating systems. To avoid any surface disturbances, we recommend not to mix it with any other powder paint. Do not burn with other powder coatings together in the same oven!
<b>Packaging</b>	<ul style="list-style-type: none"> <li>- 20/25 kg cardboard</li> <li>- 500 kg Octobox</li> <li>- 450/500 kg Big Bag</li> </ul> Other packaging variations are available on request.

#### Baking diagram

**Curing time recommendation: 13 min at 180 °C object temperature**



#### Curing operation:

210°C	5 min. hold time
200°C	6 min. hold time
190°C	9 min. hold time
180°C	13 min. hold time
170°C	20 min. hold time

## Substrates

Different metals also as top-coat, for example on cathodic anti-corrosion dip-coating. The support to be coated has to be free of oil, grease and oxidation products. Under strain we recommend following pretreatments:

**Aluminum** a suitable chemical pretreatment  
**Steel/Iron** Iron or zinc phosphating

The pretreatment can be applied by dip-coating or spray method.

## Physical properties

tested on:

iron steel 0.8mm ST1405 pickled twice V1094

Film thickness  
50 – 70 µm

**Cross cut test** GT 0  
(DIN ISO 2409)

**Mandrel bending test** ≤ 5 mm  
(DIN ISO 1519)

**Impact resistance** front ≥ 5 Nm (~44 inchpound)  
ASTM D 2794 reverse ≥ 5 Nm (~44 inchpound)

**Erichsen cupping** ≥ 3 mm  
(DIN ISO 1520)

**Buchholz hardness** ≥ 90  
(DIN ISO 2815)

## Resistances

tested on:

iron phosphate steel sheet

**Condensation water test** 500 h no bubble building  
DIN ISO 6270 Infiltration on the scratch track under 1 mm

**Salt spray test** 240 h no bubble building  
DIN ISO 9227 Infiltration on the scratch track under 1 mm

## Post treatment of coated parts

To print, to paste, to label, to foil laminate, and any other post treatment, some preliminary testing is recommended. For packaging only use appropriate plasticizers-free materials. Perspiration water should be avoided.

## Repairs

For repairs (conveyors hangers touch ups) the repair kit, Art. no 12155 is available

## Storage

**Storage instruction:** In the original containers, store in a cool and dry environment by max. 25°C. No direct sun exposure  
**Shelflife** 18 months from the date of production under the conditions mentioned above

## Safety recommendations

**Lower explosive limit** please refer to the safety data sheet

Further information are to find in the safety data sheet and the CEPE booklet „Safe powder coating“ and „Results of the experimental toxicology study on thermosetting powder coatings“.

Comments:

The information on this technical data sheet about the properties and application of the product in question are made on hand of our knowledge, development and practical experience. Because of the multiple possible application, it is impossible for us to present them all in detail. Our technical consultants are at your disposal for any question you might have. Further more, our general sales and delivery conditions apply.

This technical data sheet is revised periodically. If necessary, our sales department will confirm the validity of this document.



KARL BUBENHOFER AG, Hirschenstrasse 26, CH-9201 Gossau SG  
Tel. +41 71 387 41 41, Fax +41 71 387 43 05, www.kabe-farben.ch