

TECHNICAL DATA SHEET

Article No.: 12959
 Leaflet No.: 2198
 Version: 9

POLYFLEX® PES-50-Electrostatic discharge (ESD) powder structure fine dissipative Corona matt

Description:	Electrostatic discharge (ESD) hybrid powder for indoor use based on polyester and epoxy resin. Results in coatings with fine matt texture, and very good film elasticity and resistance to yellowing. This quality is used where the best possible conductivity is desired.	
Applications:	Metal furniture, shelving elements, machine enclosures and many more	
Colours:	Many colours (with restrictions in light shade area)	
Surface:	Fine structure	
Gloss:	Visually matt	
Powder properties:	Particle size distribution (HELOS H1708)	smaller 29 µm: 45 – 50 % smaller 122 µm: 98 – 100%
	Density	1.4 – 1.7 g/cm³ can vary depending on the colour; can be specified for each individual colour
Material consumption:	g/m² =	density (g/cm³) x film thickness (µm)
Coating thickness:	Recommended	70 – 90 µm depending on the colour tone
Application:	The application can be made with the usual electrostatic powder coating systems. Please read our application instruction for structured powder VR001D. To avoid any surface disturbances, we recommend not to mix this type of product with any other powder.	
Packaging:	<ul style="list-style-type: none"> - 20/25 kg cardboard - 500 kg Octobox - 450/500 kg Big Bag Other packaging variations are available on request.	
Curing time:	Recommended	15 min at 180 °C object temperature
Curing conditions:	Object temperature	Minutes hold time
	210 °C	4 min. hold time
	200 °C	6 min. hold time
	190 °C	10 min. hold time
	180 °C	15 min. hold time
	170 °C	25 min. hold time
Substrates:	Various metals, but primarily as top coat on a KTL pre-treated surface. The substrate to be coated has to be free of oil, grease and oxidation products. Under exposure to corrosion, we recommend the following pre-treatment:	
	Aluminum	A suitable chemical pretreatment
	Steel/Iron	Iron or zinc phosphating

TECHNICAL DATA SHEET

Physical properties:	Cross cut test	GT 0
Tested on: Steel sheet 0.8mm ST1405 double-pickled V1094	(DIN ISO 2409)	
	Mandrel bending test	1) ≤ 5 mm
	(DIN ISO 1519)	
Layer thickness: 70 – 90 µm	Impact resistance	1) front ≥ 5.0 Nm (~44 inchpound)
	ASTM D 2794	1) reverse ≥ 5.0 Nm (~44 inchpound)
	Ericksen cupping	1) ≥ 5 mm
	(DIN ISO 1520)	
	Surface conductivity	approx. 1 x 10 ³ Ohm to 1 x 10 ¹² Ohm
	according DIN IEC 61340-5-1 Standard	
	Film conductivity	approx. 1 x 10 ³ Ohm to 1 x 10 ¹¹ Ohm
	according DIN IEC 61340-5-1 Standard	
Resistance:	Condensation water test	500 h no blistering Infiltration on the scratch track under 1 mm
Tested on: iron phosphate steel sheet	DIN ISO 6270	
	Salt spray test	240 h no blistering Infiltration on the scratch track under 1 mm
	DIN ISO 9227	
Material approvals:	This article has passed the fire test according to DIN EN 45545-2 (R1 / HL3) and is therefore especially suitable for use in rail vehicles.	
Post treatment of coated parts:	Appropriate preliminary tests are recommended for printing, gluing, labeling, film lamination, overcoating and other post treatments. Suitable plasticizer free materials are to be used for the packaging. Avoid condensation.	
Repairs:	For repairs (conveyors hangers touch ups) our 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.
	Shelf life	18 months from the date of production under the mentioned conditions.
Safety recommendations.	Lower explosive limit	Please refer to the safety data sheet.
	Further information can be found in the safety data sheet and the CEPE brochures “safe powder coating guideline” and “results of the experimental toxicological studies on thermosetting powder coatings”.	
Comments:	The information on this technical data sheet is relative to the properties and application of the product concerned are made on hand of our knowledge, development and practical experience. Because of the multiple possible applications, it is impossible for us to present them all in detail. Our technical consultants are at your disposal for any question you might have. Furthermore, 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.	