

TECHNICAL DATA SHEET

Article No.: 12959

Version: 9

POLYFLEX® PES-50 ESD structure fine Corona matt

Description:	Electrostatically discharging (ESD) powder for indoor use based on polyester and epoxy resins. Gives matt surfaces with fine structure. A slight speckled effect can be visible in light shades. Stabilized against overcuring and discolouration in directly gas fired ovens.		
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)	29 µm: 45 – 50 % 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 depending on the colour tone	
Application:	The application can be made with all standard powder coating systems. Please observe our processing instructions for textured powder coatings VR001D. In order to avoid surface defects and not to change the properties, we recommend not mixing this type of powder coating with other powder coatings.		
Packaging:	- 20/25 kg cardboard box - 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		
	Object temperature	Minutes hold time min	Minutes hold time max
	210°C	4 min	6 min
	200°C	6 min	9 min
	190°C	10 min	14 min
	180°C	15 min	21 min
	170°C	25 min	35 min
Substrates:	Various metals or also as a top coat, e.g. on a KTL primer. The substrate to be coated must be free of oil, grease and oxidation products. We recommend the following pre-treatments under load:		
	Aluminium	A suitable wet-chemical pretreatment or sweeping	
	Steel	Iron or zinc phosphating	
Physical properties:	Tested on 1): Steel panel 0.8 mm ST1405 pickled twice V1094 Layer thickness: 70 – 90 µm		
	Cross Cut test (DIN ISO 2409)	1) GT 0	
	Mandrel bending test (DIN ISO 1519)	1) ≤ 5 mm	

	Impact resistance (ASTM D 2794)	1) front	≥ 5 Nm	(~44 Inchpound)
		1) reverse	≥ 5 Nm	(~44 Inchpound)
	Erichsen cupping (DIN ISO 1520)	1) ≥ 5 mm		
	Surface Conductivity according to DIN IEC 61340-5-1 standard	ca. 1 x 10 ³ Ohm – 1 x 10 ⁶ Ohm		
	Film Conductivity according to DIN IEC 61340-5-1 standard	ca. 1 x 10 ³ Ohm – 1 x 10 ⁵ Ohm		
Resistance:	Tested on: Steel panel iron phosphated			
	Condensation water test (DIN ISO 6270)	500 h no blistering Infiltration on the scratch track under 1 mm		
	Salt spray test (DIN ISO 9227)	240 h no blistering Infiltration on the scratch track under 1 mm		
Material Approvals:	-			
Repairs:	For repairs (conveyors hangers touch ups) the repair kit, art. No 10006124 is available.			
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.			
Storage:	Storage instruction:	In the original containers, store in a cool and dry environment at 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 powdercoatings”.			
Comments:	The information in this technical data sheet 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.			
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