SERIES 049 Exterior Applications

POLYESTER TGIC POWDER COATING FOR EXTERIOR APPLICATIONS

Typical applications

- lighting
- electric tool
- patio furniture
- garden equipment
- sporting goods
- security equipment

Features

- good weather resistance
- good mechanical properties
- good flow properties
- good storage stability

Product details

Standard Packaging	20KG boxes and 2.5 kg minipack
Specific gravity (ISO8130-2)	approximately 1.2-1.7g/cm³ depending on pigmentation
Theoretical coverage	at 60 µm film thickness: 9.8-13.8m²/kg depending on specific gravity
Storage stability	Use before: see printed date on product label; under dry conditions at no more than 25°C, avoid direct and extended heat exposure

Pre-treatment

The following table reflects the common methods of pretreatment with regards to various substrates and applications. In selecting the proper type of pretreatment please observe the suitability of the type of powder coating for a desired application according to the guidelines of this Product Data Sheet.

	Aluminum			Galvanized Steel				Steel		
Degreasing	○			○				○		
(1)Chromating	○	○	○	○	○	○	○			
Pre-Anodizing	○	○	○							
Chrome free	○	○	○	○	○					
Iron Phosphating								○		
Zinc Phosphating				○	○	○	○	○	○	○
Blasting								○	○	○
(2)Sweeping				○	○	○	○			
	I	E	A	I	E	A	S	I	E	S[3]

I = interior; E = exterior; A=architectural; S = steel

1) according to DIN 50939
2) only for zinc coated parts >45 µm
3) for a two-coat process/TIGER shield

Finish

Finish	Gloss
smooth glossy	80 – 95*
smooth semi-gloss	40 – 79*
smooth matte	15 – 39*
smooth flat matt	8 – 14*
fine texture	–

* Gloss level according to ISO 2813 at 60° angle (doesn't apply to metallic effect powder coatings). The measured gloss level of effect powder coatings can diverge from the details given in this Product Data Sheet. The creation of tolerance samples is recommended.

Processing

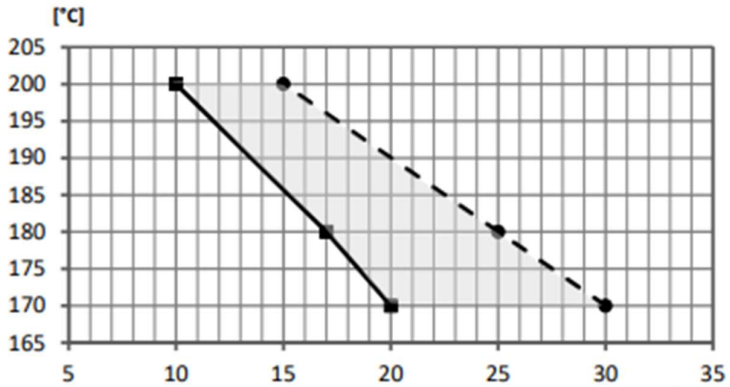
- Corona
- Tribostatic*

* Suitability of metallic effect powder coatings must be verified prior to actual application. Please consult with the relevant application guidelines.

Product data sheet

Cure parameters

(Substrate temperature versus curing time)



substrate temp.	min. curing time	max. curing time
200°C	10 minutes	15 minutes
180°C	17 minutes	25 minutes
170°C	20 minutes	30 minutes

Please observe cure parameters closely since mechanical properties will develop before full cross-linking!

Test results

Checked under laboratory conditions on a chromized aluminum test panel which is 0.7 mm thick. Actual product performance may vary due to product specific properties such as gloss, color, effect and finish as well as application related and environmental influences.

test	Test method	Series 49 smooth glossy | semi-gloss	Series 49 smooth matte | flat matt	Series 49 fine texture	Series 49 rough texture
film thickness recommended	ISO 2360	60-80 µm	60-80 µm	70-90 µm	90-120 µm
cross cut test/adhesion 1 mm cutting distance	ISO 2409	0	0	0	0
mandrel bending test cracking of coating	ISO 1519	≤5 mm not permitted	≤5 mm permitted	≤10 mm permitted	≤10 mm permitted
cupping test cracking of coating	ISO 1520	≥5 mm not permitted	≥5 mm permitted	≥3 mm permitted	≥3 mm permitted
ball impact test cracking of coating	ASTM D 2794	20 Inch/pound not permitted	20 Inch/pound permitted	20 Inch/pound permitted	20 Inch/pound permitted
determination of resistance to humidity 1000 h	ISO 6270-1	Blister grade not exceeding 2(S2) according to ISO 4628-2			
neutral salt spray test 1000 h	ISO 9227	delamination around scribe max. 2 mm			

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Chemical resistance

The required chemical resistance of a powder coating depends,among other things, on its formulation. Chemical resistance requirements must be considered according to processing conditions and final use of the finished product. This is best established during the product specification process. Agreement between all parties involved must be reached about the requirements for such chemical resistance as well as the test method, which may be performed in accordance with PCI test method #8 “Solvent Cure Test”. Furthermore, the test duration and concentration of the test
media need to be agreed upon.

Disclaimer

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