

SERIES 418 SD - interior and exterior applications

POLYESTER TGIC WEATHER RESISTANT POWDER COATING FORMULATED WITH SUPER DURABLE RESINS FOR INTERIOR AND EXTERIOR APPLICATIONS

Typical applications

- residential windows and doors
- lawn mowers and garden equipment
- patio furniture
- automotive accessories
- bicycles and motorcycles
- agricultural machinery
- sporting goods
- internal ship components

Product details

Standard packaging in original 44 & 55 lb (20 & 25 kg) boxes and 5 lb (2.5 kg) minipack

Specific gravity (ASTM D792) approximately 1.2-1.8 g/cm³ depending on pigmentation

Theoretical coverage at 2.5 mils (60 µm) film thickness: **51.5 ft²/lb (11.1 m²/kg)**. Refer also to "Theoretic Powder Coating Coverage Chart" version 00-1001 (imperial) version 00-1000 (metric)

Storage stability 12 months at no more than 77 °F (25 °C) avoid direct and extended exposure to heat

Features

- good weather resistance
- good mechanical properties
- good flow
- good coverage
- good storage stability
- available in Out Gassing Forgiving (OGF) formulation

Finish

Can be formulated only as custom-product in a variety of gloss levels in selected colors depending on availability of super durable resins (minimum order quantity applies).

Pretreatment

The following table reflects the common methods of pre-treatment with regards to various substrates and applications. In selecting the proper type of pretreatment, the suitability of the type of powder coating for a desired application according to the guidelines on this page should be observed.

	Aluminum			Galvanized Steel				Steel		
Degreasing	○			○				○		
¹) Chromating	○	○	○	○	○	○	○			
²) Pre-Anodizing	○	○	○							
²) Chrome free	○	○	○	○	○					
Iron Phosphating								○	○	
Zinc Phosphating				○	○	○	○	○	○	○
Blasting								○	○	○
³) Sweeping				○	○	○	○			
	I	E	A	I	E	A	S	I	E	S ⁴

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

- 1) according to ASTM B 449
- 2) according to GSB quality and test regulations. The suitability of this type of pretreatment needs to be established through a boiling water test and subsequent cross-hatch adhesion and adhesive tape removal test
- 3) only for zinc coated parts >1.8 mils (>45 µm)
- 4) for a two-coat process/TIGER Shield

Processing

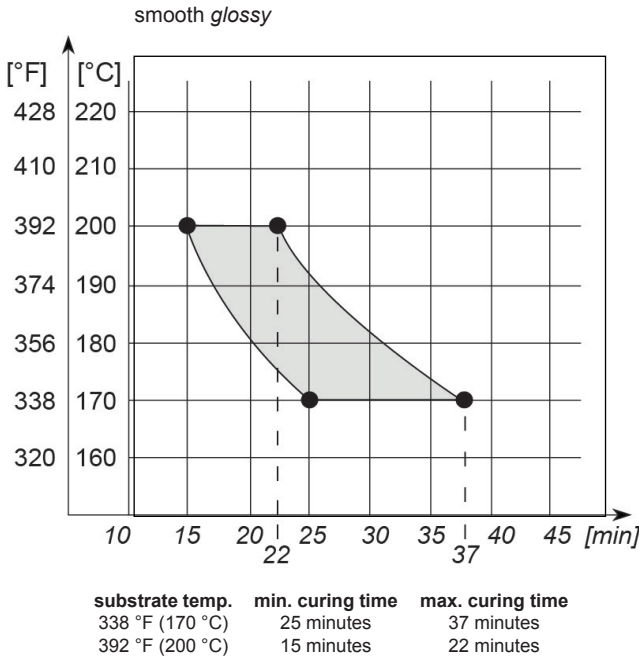
Corona and Tribostatic*

* For Tribostatic powder coatings, confirm before ordering. Suitability of metallic effects for Tribostatic processing must be verified prior to actual application. Please refer to the latest edition of the relevant application guidelines for metallic effect powder coatings.

Since not all powder coatings are suitable for recycling/reclaim, please verify before ordering.

Cure parameters

(substrate temperature versus curing time)



Cure parameters must be closely observed since mechanical properties will develop before full cross-linking.

Test results

Checked under laboratory conditions on iron phosphated steel test panels Bonderite B-1000 or equivalent. Cure conditions are according to the cure curves. 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. When used as a two-coat system, the increase in film thickness will result in a decrease of mechanical properties.

test method	test	Series 418 SD smooth glossy	Series 418 SD smooth semi-gloss	Series 418 SD smooth matte
ISO 2360	recommended film thickness	2.5-3.5 mils (60-80 µm)	2.5-3.5 mils (60-80 µm)	2.5-3.5 mils (60-80 µm)
ASTM D523	gloss - 60°	80-95+	55-65	15-25
ASTM D3359 method B	cross cut tape test 1mm cutting distance	5B	5B	5B
ASTM D522	mandrel bending test cracking of coating	≤1/8 inch (≤3 mm)	≤5/32 inch (≤4 mm)	≤3/16 inch (≤5 mm)
ASTM D2794	ball impact test cracking of coating	80 in/lb no appearance of cracks down to the substrate	80 in/lb no appearance of cracks down to the substrate	80 in/lb no appearance of cracks down to the substrate
ASTM D3363	pencil hardness	2H minimum	2H minimum	2H minimum
ASTM D2247	determination of resistance to humidity 1,000 hours	maximum undercutting 1/8 inch (3 mm), no blistering	maximum undercutting 1/8 inch (3 mm), no blistering	maximum undercutting 1/8 inch (3 mm), no blistering
ASTM B117	salt spray resistance 1,000 hours	maximum undercutting 1/8 inch (3 mm), no blistering	maximum undercutting 1/8 inch (3 mm), no blistering	maximum undercutting 1/8 inch (3 mm), no blistering

Cleaning recommendations: refer to the latest edition of TIGER "Cleaning Recommendations" information sheet, Version 00-1005.

Please note

Due to the limited availability of super durable pigments, bright yellow and orange colors can be prone to limited hiding properties and over bake stability. The minimum recommended film thickness for those colors is 4.0 mils (102 µm). In general, colors in the red, orange and yellow range may require an increased film thickness to achieve full hiding.

For metallic finishes, it is recommended to observe the guidelines published in the latest edition of TIGER Drylac® "Application guidelines for metallic effect powder coatings".

Top coating with a clear exterior grade powder coating over an interior grade powder coating does not result into a weather resistant coating system.

Post-bending properties of any part must be verified prior to application. Minor cracks in the coated surface may lead to corrosion.

Joint sealants and any other auxiliary products, such as glazing aids, gliding waxes, drilling and cutting lubricants, which come in contact with the coated surface, must be pH-neutral and free of substances that may damage the finish. Therefore, a suitability test at the applicator's end, prior to coating, is highly recommended.

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Please read and understand the Safety Data Sheet (SDS) before use.

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

TIGER's verbal and written recommendations for the use of its products are based upon experience and in accordance with current technological standards. These are provided in order to support the buyer or user. They are non-committal and do not create any additional commitments to the purchase agreement. They do not release the buyer from verifying the suitability of TIGER products for the intended application. TIGER warrants that its products are free of flaws and defects to the extent stipulated in the Terms of Delivery and Payment.

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