TIGER Drylac® Powder Coatings

SERIES 38 - super durable

POLYESTER TGIC SUPER DURABLE POWDER COATING COMPLIANT TO AAMA 2604 WITH EXCELLENT WEATHER RESISTANCE PROPERTIES FOR HIGH PERFORMANCE ARCHITECTURAL EXTERIOR APPLICATIONS

Typical applications

- metal façades
- steel constructions
- stadium seating and railings
- residential windows and doors
- patio furniture and garden equipment
- railings
- playground equipment
- agriculture equipment
- external ship components, communication towers, doors and railings
- military camouflage

Product details

Standard packaging	in original 20 kg (44 lb) box and 2.5 kg (5 lb) minipack
Specific gravity (ASTM D792)	approximately 1.2-1.8 g/cm^3 depending on pigmentation
Theoretical coverage	at 60 µm (2.5 mils) film thickness: **9.8 m²/kg (30.2 ft²/lb)**. Refer also to "Theoretic Powder Coating Coverage Chart" version 00-1000 (metric) version 00-1001 (imperial)
Storage stability	12 months at no more than 25 °C (77 °F) avoid direct and extended exposure to heat

Features

- excellent weather resistance
- excellent UV-light resistance
- AAMA 2604* compliant
- 5 years South Florida exposure
- very smooth flow
- good storage stability
- good yellowing stability

** AAMA 2604 compliance dependent upon the colour and/or effect.*

Finish

finish	gloss
smooth *glossy*	80-95+*
smooth *semi-gloss*	60±5*
smooth *matte*	20±5*

** Gloss level according to ASTM 523 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.*

Available as stock-product in smooth glossy, semi-gloss and matte in 70 colours. It can be custom-matched in limited colours (minimum order quantity and colour limitation apply).

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 >45 µm (>1.8 mils)
4) for a two-coat process/TIGER Shield

Processing

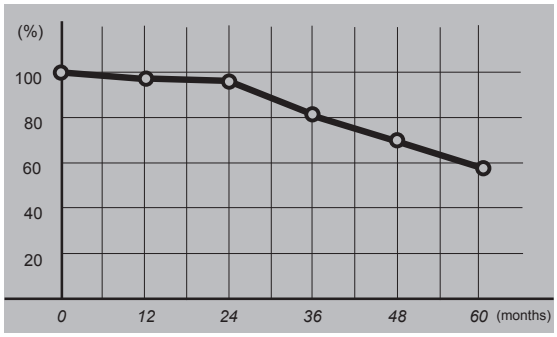
Corona and Tribostatic*

** 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.

Weather resistance

Florida exposure at 45° angle, facing south (RAL 8014)



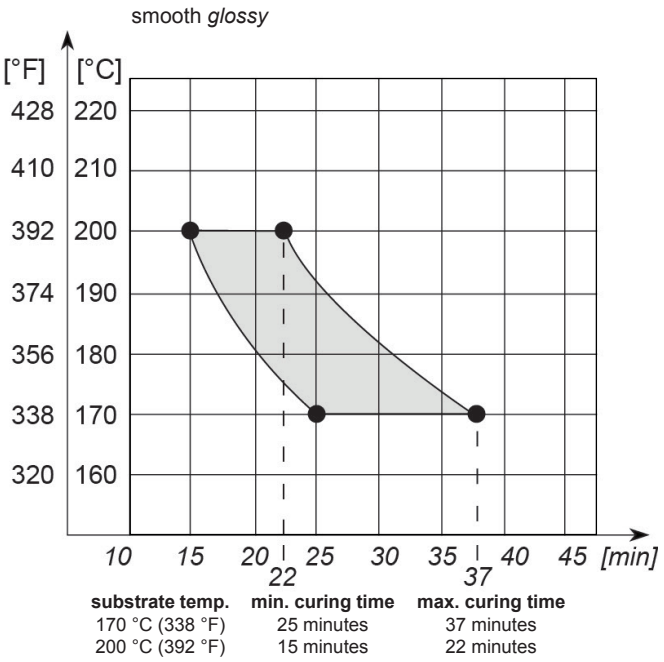
remaining gloss *versus* months

The remaining gloss values that can be expected may vary depending on the original gloss level and colour. A reasonable degree of gloss loss and colour variation owing to long term UV exposure should be expected.

Product data sheet

Cure parameters

(substrate temperature versus curing time)



substrate temp.	min. curing time	max. curing time
170 °C (338 °F)	25 minutes	37 minutes
200 °C (392 °F)	15 minutes	22 minutes

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

Test results

Checked under laboratory conditions on 0.7 mm (1/64 inch) thick yellow chromated aluminum test panel. Actual product performance may vary due to product-specific properties such as gloss, colour, 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 38** smooth *glossy*
ISO 2360	**recommended film thickness**	60-80 µm (2.5-3.5 mils)
ASTM D523	**gloss - 60°**	80-95+
ASTM D3359 method B	**cross cut tape test** 1mm cutting distance	5B
ASTM D522	**mandrel bending test** cracking of coating	3 mm (1/8 inch)
ASTM D2794	**ball impact test** cracking of coating	up to 40 in.lb., cracking at the perimeter of the concave area but no cracking pick off
ASTM D3363	**pencil hardness**	2H minimum
ASTM D2247	**determination of resistance to humidity** 3,000 hours	maximum undercutting 1 mm (1/32 inch)
ASTM B117	**5% salt spray solution** 3,000 hours	maximum undercutting 1 mm (1/32 inch)
ASTM D2244	**natural weathering** in Florida 5 years	colour change ≤Δε 5.0 (Hunter)
ASTM D523	**natural weathering** in Florida 5 years	gloss retention >30%

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

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Special applications

Objects directly exposed to salt/fog conditions in a marine environment or need heavy corrosion protection must be coated with TIGER Shield system. Refer to the latest editions of TIGER Drylac® Product Data Sheets.

Please consult the manufacturer before applying any 2-coat systems that feature (i) a primer or e-coat as base coat and (ii) a metallic effect powder coating as a top coat.

Please note

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.

In general, colours in the red, orange and yellow range may require an increased film thickness to achieve full hiding.

Any post-mechanical processing of already coated parts, such as sawing, drilling, milling, cutting and bending will result in damage of the coated surface and will subsequently weaken the corrosion protection.

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.

As part of TIGER product information program, each Product Data Sheet is updated periodically. The latest version shall prevail. It is recommended to always check for the latest editions on TIGER's website download area www.tiger-coatings.com to make sure you have the most current version of this Product Data Sheet. The information on TIGER's Product Data Sheets are subject to change without notification.

This Product Data Sheet supersedes and replaces all previous Product Data Sheet versions and notes to customers published in relation to this product and is only intended to provide a general overview on the product.

Latest versions of Technical Information Sheets and Terms of Delivery and Payment are downloadable from www.tiger-coatings.com and form an integral part of this Product Data Sheet.

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Certified according to ISO 9001 | 14001

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