

SERIES 75 - hyper durable

FLUOROPOLYMER HYPER DURABLE POWDER COATING DESIGNED TO MEET AAMA 2605 PRESCRIBED PERFORMANCE LEVELS WITH SUPERIOR WEATHERABILITY FOR ARCHITECTURAL EXTERIOR APPLICATIONS

Typical applications

By approved applicators only:

- highest performance architectural coatings
- curtain walls
- store fronts
- metal façades
- window frames
- railings
- light poles
- marine equipment

Product details

Standard packaging in original 44 lb (20 kg) box and 5 lb (2.5 kg) minipack

Specific gravity (ASTM D792) approximately 1.4-1.8 g/cm³ depending on pigmentation

Theoretical coverage at 2.5 mils (60 µm) film thickness: **45.2 ft²/lb (9.2 m²/kg)**. Refer also to "Theoretic Powder Coating Coverage Chart" version 00-1001 (imperial) version 00-1000 (metric)

Storage stability 6 months at no more than 77 °F (25 °C) avoid direct and extended exposure to heat

Features

- outstanding resistance to fading
- outstanding resistance to chalking
- good chemical resistance
- very good edge coverage
- good storage stability

Finish

finish	gloss
smooth <i>semi-gloss</i>	30-50*
solid colors and special effects	visual

* 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.

Due to hyper durable pigment limitation, a limited amount of colors can be custom-matched in limited colors (minimum order quantity applies).

Pretreatment (on aluminum)

- yellow chromating according to DIN 50939
- green chromating, pre-anodization and chrome-free pretreatment must not be used

Verify the suitability of the pretreatment according to the test specification of AAMA 2605 points 7.8.1. and 7.8.2.

Surfaces to be coated should be clean, dry and free of contamination. Remove grease, oil, rust and other interfering deposits and residues.

Health and safety environment

For HSE-relevant information consult the Safety Data Sheet. Work place regulations are the responsibility of the applicator.

Processing

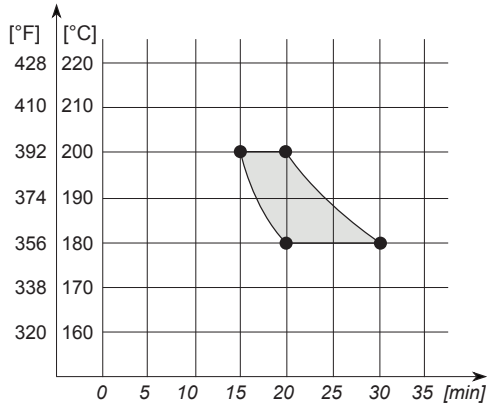
Corona

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

Cure parameters

(substrate temperature versus curing time)

smooth *semi-gloss*



substrate temp.	min. curing time	max. curing time
392 °F (200 °C)	15 minutes	20 minutes
356 °F (180 °C)	20 minutes	30 minutes

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

Test results

Checked under laboratory conditions on 1/64 inch (0.7 mm) thick yellow chromated aluminum test panel. 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 75 smooth <i>semi-gloss</i>
ISO 2360	recommended film thickness (one coat system)	2.5 mils (65 µm)
AAMA 2605 section 7.2	gloss - 60°	30-50
AAMA 2605 section 7.4.1.1	dry adhesion	no removal
ASTM D3363	pencil hardness	2H
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
AAMA 2605 section 7.8.1	determination of resistance to humidity 4,000 hours	no more than a few blisters size #8
AAMA 2605 section 8.8.2	salt spray resistance 2,000 hours	<5/64 inch (<2 mm) creepage minimum blister rating #8
ASTM G-53	QUV-B resistance 3,000 hours	>75% gloss retention
ASTM G-53	QUV-A resistance 11,000 hours	>75% gloss retention
ASTM G155	Xenon test 4,000 hours	>90% gloss retention

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

Please note

Top coating with a Series 75 clear exterior grade powder coating over an interior grade powder coating does not result into a weather resistant coating system.

When a two-coat system consisting of an epoxy primer for corrosion protection and a Series 75 top coat are applied, UV transmission of the top coat has to be controlled by pigmentation and film thickness.

Series 75 is slightly incompatible with other powder coatings. It is therefore highly recommended to thoroughly clean the entire coating line prior to, and after, the powder application.

The curing of Series 75 will result in the emission of small doses of e-caprolactam which may cause minor smoke and odour. Provide sufficient ventilation and observe maximum allowable concentration guidelines.

Experience has shown that degradation similar to 10-year Florida exposure can be expected with 11,000-hour accelerated weathering test with UV-A lamps or 3,000-hour with UV-B lamps. Performance can be reasonably anticipated based on accelerated weathering data with QUV-A and B tests, as well as references with related coating technologies using comparable polymer systems.

Due to the extreme durability requirements, there are limitations in achieving certain colors. Bright colors are difficult or impossible to formulate with appropriate durability. This applies to the majority of the color spectrum.

Due to the chemical design of Series 75, flexibility is decreased when compared to polyester-based products. Post-forming operations need to be verified for feasibility beforehand. Cracks in the coating can 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.

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".

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.

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

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

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