SERIES 40 - neons & fluorescent

POLYESTER TGIC-FREE POWDER COATING WITH HIGH LUMINESCENT EFFECT FOR EXTERIOR APPLICATIONS

Typical applications

- sporting goods
- safety railings
- fishing lures
- surfaces not permanently exposed to UV light

Product details

Standard packaging	in original 22 and 44 lb (10 and 20 kg) box and 5 lb (2.5 kg) minipack
Specific gravity (ASTM D792)	approximately 1.4-1.8 g/cm^3 depending on pigmentation
Theoretical coverage	at 2.5 mils (60 µm) film thickness: **51.5 ft^2/lb (11.1 m^2/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

- TGIC-free
- high luminescent quality and effect
- good flow
- good coverage

Finish

finish	gloss
smooth *glossy*	80-95+*

* *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.*

one-coat system

product description	product ID
Neon Yellow	40/21043**
Yellow	40/22200**
Red Orange	40/24620**
Neon Pink	40/31075**

** *Limited hiding and UV stability.*

Available as stock-product in a limited selection of colors (see color charts).

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	o			o				o		
1) Chromating	o	o	o	o	o	o	o			
2) Pre-Anodizing	o	o	o							
2) Chrome free	o	o	o	o	o					
Iron Phosphating								o		
Zinc Phosphating				o	o	o	o	o	o	o
Blasting								o	o	o
3) Sweeping				o	o	o	o			
	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*

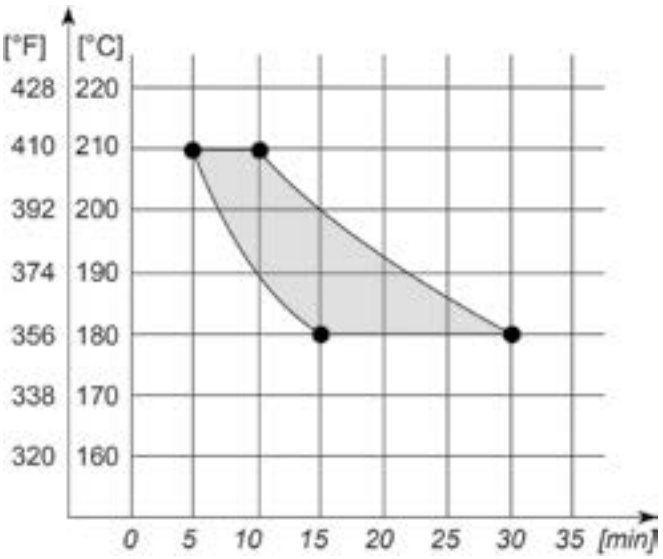
* *Since not all powder coatings are suitable for recycling/reclaim, please verify before ordering.*

Product data sheet

Cure parameters

(substrate temperature versus curing time)

Neon Yellow 40/20042



substrate temp.	min. curing time	max. curing time
356 °F (180 °C)	15 minutes	30 minutes
410 °F (210 °C)	5 minutes	10 minutes

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 40 neons & fluorescent	
		Single Coat System	**Two Coat System**
ISO 2360	**recommended film thickness**	2.5-3.5 mils (60-80 µm)	5-7 mils (120-180 µm)
ASTM D523	**gloss - 60°**	80-95+	
ASTM D3359 method B	**cross cut tape test** 1mm cutting distance	5B	
ASTM D2794	**ball impact test** cracking of coating	20 in/lb, no appearance of cracks	
ASTM D3363	**pencil hardness**	H minimum	
ASTM D2247	**determination of resistance to humidity** 500 hours	maximum undercutting 1/32 inch (1 mm), no blistering	
ASTM B117	**salt spray resistance** 500 hours	maximum undercutting 1/32 inch (1 mm), no blistering	

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

** Due to the raw materials necessary to achieve the fluorescence effect, impact resistance may be compromised in some cases. In such cases a lack of mechanical performance is not a reflection of a lack of cure, as is normally the case with polyester-based powder coatings, but inherent to the formulation. Extra care is required to assure adequate cure of parts. It is recommended to use a chemical resistance based test (such as PCI method #8 or similar) to assure an adequate cure.*

Series 40

Please note

It is the responsibility of the buyer/applicator to determine whether the UV stability of the TIGER Drylac® Series 40 Fluorescent powder coating is appropriate for the intended end use. Due to the inherent limitations of pigments used to generate the fluorescent effect, the UV stability is reduced in comparison to standard opaque colors, such as the RAL range. This reduction can vary from color to color.

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, 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

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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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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