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SERIES 59 WEATHER RESISTANT

A POWDER COATING FOR EXTERIOR APPLICATION (NON-ARCHITECTURAL APPLICATION)
BASED ON POLYESTER

Typical application

- ACE (agricultural and construction equipment)
- automotive accessories
- patio furniture
- garden equipment
- sporting goods

Product details

Standard Packing	in 20 kg cartons, 2,5 kg minipack
Specific Gravity (ISO 8130-2)	1,2–1,7 g/cm³ depending on pigmentation
Theoretical Coverage	at 60 µm film thickness: 9,8–13,8 m²/kg depending on specific gravity (please see also Information Sheet no. 1072 in latest edition)
Storage Stability	6 months from date of delivery under dry conditions at no more than 25 °C, avoid direct and extended heat exposure.

(The shelf life of custom made blanket orders or other stock agreements which by their nature are stored over longer periods is determined by the original production date.)

Features[1)]

- good weather resistance (for architectural applications products of series 29 and 17 must be used)
- good mechanical properties
- good flow properties
- highly reactive
- good storage stability
- batch consistency of RAL colors acc. to VdL guidance no. 10

Finish | Colors

- smooth flow-glossy surface, approx. 80–95*
- smooth flow - semi gloss surface, approx 70±5*
- smooth flow - matte surface, approx. 25±5*
- rough texture - glossy surface
- fine texture , approx. 8±5*

Available from stock in all RAL Colors in a smooth glossy surface. Any other color can be custom made with a minimum order of 60 kg.

* Gloss level acc. to ISO 2813/60° 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 datasheet. The creation of tolerance samples is urgently recommended)

[1)] Please also see Product Data Sheets for: 59 Antico Effects | 59 Dormant Transparent Effects

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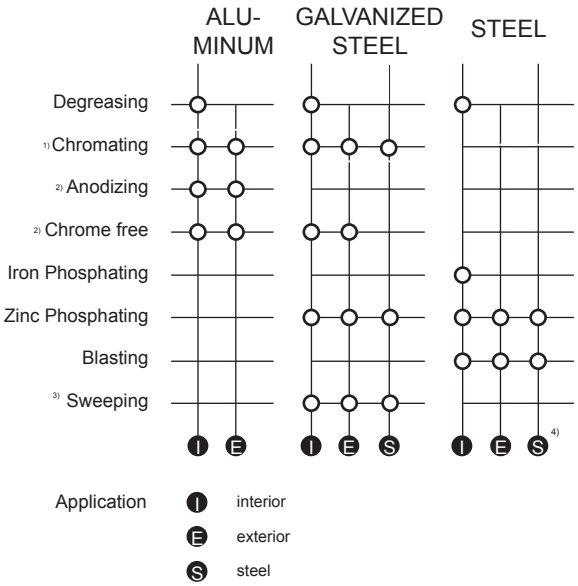
Pretreatment (alternatives)

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 adesired application according to the guidelines on page one of this Product Data Sheet.



1. acc.to DIN 50939
2. acc. 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
4. for a two-coat process / TIGER Shield

Processing

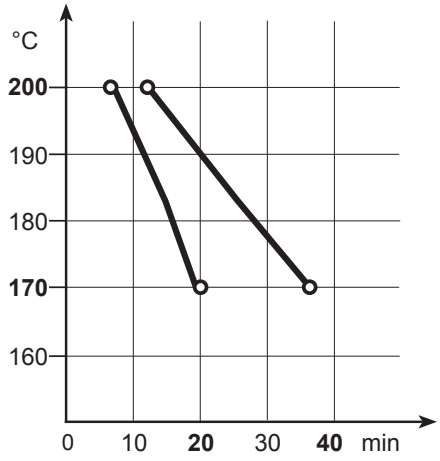
Corona, Tribostatic*

* Suitability of metallic effects for tribo processing must be verfied prior to application. Please consult with the relevant information Sheets, latest edition.

Cure parameters

(substrate temperature)

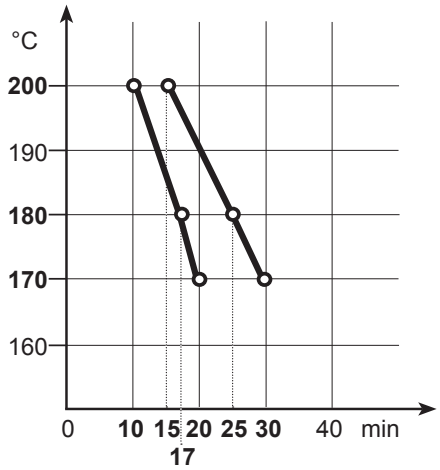
TIGER Drylac® Series 59 smooth flow-glossy I semi gloss I rough texture glossy



Substrate versus curing time

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

TIGER Drylac® Series 59 smoothflow-matte I fine texture



Substrate versus curing time

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Please Note

When post bending of work pieces takes place, the suitability of the coating must be checked on original pieces before undertaking series production because the alloying, pre-treatment, bending radius, bending (environmental) conditions, temperature, wall thickness, film thickness, curing conditions, color, storage time and other factors influence flexural behavior. Microscopic cracks in the surface of the powder coating can lead to corrosive damage.

Non-colored coatings, e.g. clear coatings may be prone to stress cracks due to the difference in material tension between the substrate and the powder coating. In order to minimize the risk of stress cracks it is recommended to cure the clear and/or transparent top-coat only at the upper end of the relevant cure window as set forth in this Product Data Sheet.

Assurance must be given that sufficient and suitable non-plasticizing packing materials, as well as foils and labels, auxiliary agents and transport means, the suitability of which is to be checked in pre-trials, is used properly and can be easily removed at the given time (e.g. labels, adhesive tapes, etc.). In unfavorable storage conditions, especially outside, the interaction of water accumulation (e.g. beneath packaging foils) and heat may lead to milky-white stains. This possible and occasional physical process is often reversible through thermal influence (e.g. re-tempering in the oven, industrial blower), respectively, can be reduced or hindered through the use of perforated foils.

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 which may damage the finish. Prior to coating a suitability test at the applicator is therefore highly recommended.

Pay attention to pigment related color differences especially of bright red-orange-yellowed shades between TIGER Drylac® for architectural application and TIGER Drylac® for weather resistant application and adhere to one product throughout each coating job. Please mind the effect and color differences between a lab match versus an actual production.

A top-coat with a clear exterior grade powder coating over an interior grade powder coating does not produce a weather resistant coating.

Note that for any and all metallic effect powder coatings that are not explicitly marked as a one-coat system, a top-coat with a clear powder coating is imperative. Please also see the information Sheets on the subject matter, latest edition.

Two-coat systems: first coat: apply only half of the curing time acc. to the corresponding Product Data Sheet (provided that no other information is given therein). Second coat: requires then full cure acc. to the relevant Product Data Sheet. Please note, the exact cure conditions (curing time and cure temperature) need to be established individually based on the application and the coating line. Check continuously for intercoat-adhesion!

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Test Results

Checked under laboratory conditions on a chromated 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 results	test method	Series 59 smooth glossy	Series 59 smooth semi glossy	Series 59 smooth matte	Series 59 fine texture	Series 59 rough texture
film thickness	ISO 2360	60-80 µm	60-80 µm	60-80 µm	70-90 µm	90-120 µm
gloss 60°	ISO 2813	80-95	70±5	25±5	8±5	visually glossy
cross cut test 1 mm	ISO 2409	0	0	0	0	0
impression hardness	ISO 2815	≥ 87	≥ 87	≥ 87	not available	not available
mandrel bending test	ISO 1519	≤ 5 mm	≤ 5 mm	≤ 6 mm	≤ 10 mm	≤ 5 mm
cupping test	ISO 1520	≥ 5 mm	≥ 5 mm	≥ 5 mm	≥ 3 mm	≥ 5 mm
impact test 20 inch/pound	ASTM D 2794	no appaerance of cracks down to the substrate	no appaerance of cracks down to the substrate	no appaerance of cracks down to the substrate	minor cracking acceptable	cracking, but no lift off
mortar resistance	ASTM D 3260	ok	ok	ok	ok	ok
drill mill test		ok	ok	ok	ok	ok
pencil hardness	ASTM D 3363	-	-	-	-	-
determination of resistance to humidity 1000 h	ISO 6270-1	max blistering ≤ 1 mm	max blistering ≤ 1 mm	max blistering ≤ 1 mm	max blistering ≤ 1 mm	max blistering ≤ 1 mm
salt spray test 1000 h	ISO 9227	max undercutting ≤ 1 mm	max undercutting ≤ 1 mm	max undercutting ≤ 1 mm	max undercutting ≤ 1 mm	max undercutting ≤ 1 mm

Chemical resistance

The required chemical resistance of a powder coating is, among other things, product-dependent and according to the situation and awareness of all pollutions must therefore be brought to agreement between the contract partners as soon as possible, at best during the projecting phase. Agreement is especially necessary in respect of the requirements profile and the monitoring method, which can take place according to EN ISO 2812-1 „Paint and Paint Materials Definition of Durability Against Fluids.“
Moreover, the duration of monitoring and effectiveness and concentration of the pollution mediums is to be established.

Our verbal and written recommendations for the use of our products are based upon experience and in accordance with present technological standards. These are given 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 our products for the intended application. We warrant that our products are free of flaws and defects to the extent as stipulated in our Terms of Delivery and Payment.

As a part of our product information program each of our Product Data Sheets are periodically updated, so that the latest version shall prevail. Therefore, please visit the download area of www.tiger-coatings.com to make sure you have the most current version of this Product Data Sheet. The information in our Product Data Sheets is subject to change without notification.

This Product Data Sheet substitutes any and all previous Product Data Sheets and notes for customers published on this subject matter and is only intended to give a general product overview. Please request specific information for products outside of our standard product list (latest version).

The Technical Information Sheets and the Terms of Delivery and Payment each in their latest version, available as a download at www.tiger-coatings.com, form an integral part of this Product Data Sheet.

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certified according to
EN ISO 9001 / 14001

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