

Series 287

POWDER COATING FOR RAILROAD CARS BASED ON POLYURETHANE
CERTIFIED ACC. TO DBS 918 340 (DEUTSCHE BAHN STANDARD)
FOR DECORATIVE INTERIOR AND EXTERIOR APPLICATIONS

FINISH SUITABLE FOR REMOVAL OF UNWANTED GRAFFITI

Typical applications

- Railroad cars
- Decorative application as per DBS 918 340
 - Interior and exterior application on aluminum
 - Exterior application on steel
- Steel structures
- Traffic installations

Product details

Packaging	In original boxes of 20 kg, as well as in minipacks of 2.5 kg
Density (ISO 8130-2)	1.2 - 1.7 g/cm ³ depending on the shade
Theoretical coverage	With 60 µm film thickness: 9.8 - 13.8 m ² / kg depending on density (see most re- cent edition of data sheet no. 1072)
Shelf life	Use before: see date on product label (12 months); dry below 25 °C, protect against the influence of direct heat

Please note, in case of customer-specific blanket orders or storage agreements, which by their nature are stored for an extended period of time, the shelf life date is calculated from the date of the original production.

Finish

Finish	Gloss level*
Smooth <i>high gloss</i>	> 90
Smooth <i>gloss</i>	80 – 90
Smooth <i>semi-gloss</i>	60 – 75
Smooth <i>semi-matte</i>	40 – 60
Smooth <i>matte</i>	20 – 35
Fine texture <i>matte</i>	–

* Gloss level acc. to ISO 2813/60° angle (does not apply to metallic effect powder coatings). The measured gloss level of effect powder coatings can diverge from the details given in this data sheet. The production of tolerance samples is urgently recommended.

Properties

- Excellent weather resistance
- Good mechanical properties
- Good storage stability
- Good resistance to cleaning agents and graffiti removers
DBS 918 340, CAF N-10.03-BZ-06 and NF F31-112

Pretreatment (alternatives)

The overview matrix below shows the common methods depending on different substrates. Please consider the suitability of the respective powder coating series for a desired application according to the guidelines of this data sheet.

	Alu- minum		Steel	
1) 2) Chromating	○	○		
2) Chrome-free		○		
2) Pre-anodization	○	○		
Iron phosphating			○	
Zinc phosphating			○	○
Blasting			○	○
	I	E	I	E ³⁾

Typical applications: I = interior; E = exterior

1) Acc. to EN 12487

2) Acc. to the GSB and QUALICOAT quality and testing provisions.

3) For the 2-coat system of TIGER Series 270 / 271 / 272 / 273

Processing

Corona, modification for tribo processing* available on request.

Note regarding tribo processing

* Suitability for tribo processing must be verified on the coating line prior to actual application. In addition, please also consult the latest version of our metallic effect guidelines.

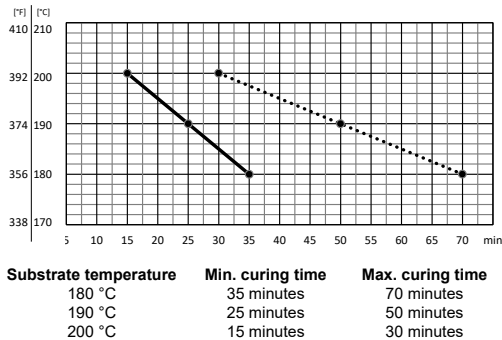
Note regarding fine textures

Verify the suitability and adhesion when using glues and screen printing.

Cure parameters

(Substrate temperature versus curing time)

smooth *high gloss* | smooth *gloss* | smooth *semi-gloss* | smooth *semi-matte* | smooth *matte* | fine texture *matte*



The curing curves must be observed.

Test results

Tested under lab conditions on 0.8 mm thick, chrome-free pretreated aluminum panels (EN AW-5005 | Nabutan 310) and zinc-phosphated steel plates (DC01 | Gardobond 26S/6800/OC). Cured according to the corresponding cure parameters. Actual product performance may vary due to product-specific properties such as gloss level, color, effect and finish as well as application- related and environmental influences.

Test method	Test	Series 287 Smooth	Series 287 Fine texture
ISO 2360	Film thickness recommended	60-80 µm	70-90 µm
ISO 2409	Crosscut test / adhesion 1 mm cutting distance	0	
ISO 1519	Mandrel bend test Cracking of coating	≤ 12 mm Not permitted	
ISO 1520	Cupping test Cracking of coating	≥ 3 mm Permitted, but no delamination from substrate	
ISO 6272-1	Direct impact test on the coating Slight cracking of coating	25 cm/1 kg Permitted, but no delamination from substrate	
ISO 9227	Corrosion resistance – Acetic acid salt spray test Aluminum AASS 1000 h	Creep at score ≤ 1 mm	
	Corrosion resistance – Neutral salt spray test Steel NSS 1000 h (2-coat)	Creep at score ≤ 1 mm	
ISO 6270-1	Determination of resistance to humidity (continuous condensation) 1000 h	No blistering and/or formation of rust	
ISO 16474-2	Accelerated weathering test Xenon arc radiation 1500 h flatbed	Residual gloss ≥ 50%	
EN 45545-2	Fire protection in railroad cars Requirements for fire behavior of materials and components	Hazard level: Hazard level: HL1 / HL2 / HL3 <u>Requirement sets for aluminum (1-coat):</u> R1, R6, R7 and R17 DB-ST-AU-20-59799-018-1.1 <u>Requirement sets for steel (1-coat):</u> R1, R6, R7 and R17 DB-ST-AU-20-59799-022-1.1 <u>Requirement sets for steel (2-coat):</u> R1, R6, R7 and R17 DB-ST-AU-20-59799-059-1.1	

Note

Effect and color differences between laboratory sampling and actual production must be expected.

Processing instructions

The guidelines for application (data sheet 1213) must be strictly observed. The latest versions of the data sheets, technical information sheets and guidelines for application are available for download at www.tiger-coatings.com.

Chemical resistance

The required chemical resistance of a powder coating depends on the product and therefore is best decided in consultation with the parties to the contract before the planning phase depending on the application and the known contaminants. Agreement is particularly important with regard to the requirements and the test method, which can be based on EN ISO 2812-1 "Paints and varnishes. Determination of resistance to liquids". The test and exposure time as well as the concentration of contaminants must also be defined.

Disclaimer

Our verbal and written recommendations for the use of our products are based upon experience to the best of our knowledge in accordance with present technological standards. These are given in order to support the buyer or user. They are non-binding and do not constitute any contractual legal relationship or additional obligation from the purchase agreement. They do not release the buyer from the responsibility to verify 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 part of our duty to inform, we modify our product information periodically according to technical progress. 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. TIGER Coatings GmbH & Co. KG reserves the right to make changes to the product data sheet without written notification.

This product data sheet replaces any and all previous product data sheets on this subject matter and is only intended to give a general product overview. Please request the respective product data sheet if using a product outside of our standard product range according to the standard product list (latest version).

The latest versions of the technical information sheets and the Terms of Delivery and Payment, available for download at www.tiger-coatings.com, form an integral part of this product data sheet.

certified according to
EN ISO 9001 / 14001
IATF 16949



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