Series 285

POWDER COATING FOR RAILROAD CARS BASED ON POLYESTER CERTIFIED ACC. TO DBS 918 340 FOR TECHNICAL INTERIOR AND EXTERIOR APPLICATIONS

Applications

- Railroad cars
- Technical area DBS 918 340
  - Product qualification no. 11 on aluminum
  - Product qualification no. 12/13 on steel
- Steel structures
- Traffic installations

Product details

Packaging	In original boxes of 20 kg each as well as in mini packs of 2.5 kg each
Density (ISO 8130-2)	1.2 - 1.7 g/cm3 depending on shade
Theoretical coverage	with 60 µm film thickness: 9.8 - 13.8 m^2/kg depending on density (see most recent edition of data sheet no. 1072)
Shelf life	Use by: see date on Product label; dry below 25°C, do not expose to 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.)

Surface

Surface	Gloss level
smooth *gloss*	80 – 95*
smooth *semi-gloss*	60 – 75*
smooth *semi-matte*	40 – 60*
smooth *matte*	20 - 35*
fine texture *matte*	–

*Gloss level acc. to ISO 2813/60° angle (not applicable 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 production of tolerance samples is urgently recommended.

Properties

- highly weather resistant
- resistance to cleaning products as per DBS 918 340
- very good mechanical properties
- good storage stability

Pretreatment (alternatives)

The overview matrix below shows the common methods depending on different substrates. In selecting the proper type of pretreatment please observe the suitability of the type of powder coating for a desired application according to the guidelines of this Product Data Sheet.

	Aluminum		Steel	
[1)+2)] Chromating	○	○		
[2)] Pre-anodization		○		
[2)] Chrome-free	○	○		
Iron phosphating			○	
Zinc phosphating			○	○
Blasting			○	○
	I	A	I	A[3)]

Applications: I = interior; A = exterior

1. acc. to EN 12487
2. acc. to the GSB and QUALICOAT quality and testing provisions
3. for the 2-layer structure of TIGER series 270 / 271 / 272 / 273

Processing

Korona, modification for tribo processing* available on request

Note regarding tribo processing

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

Note regarding fine textures

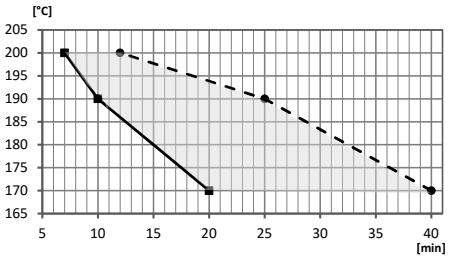
Verify the suitability and adhesion when using glues and screen printing.

Product data sheet

Cure parameters

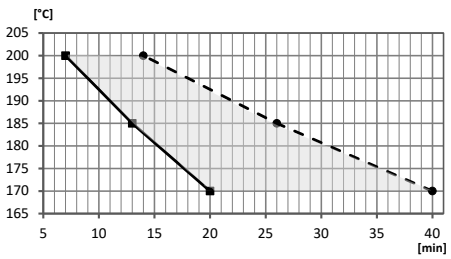
(Substrate temperature versus curing time)

smooth *gloss*



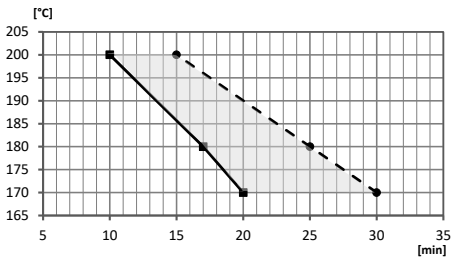
Substrate temp.	min. curing time	max. curing time
200°C	7 minutes	12 minutes
190°C	10 minutes	25 minutes
170°C	20 minutes	40 minutes

smooth *semi-gloss*



Substrate temp.	min. curing time	max. curing time
200°C	7 minutes	14 minutes
185°C	13 minutes	26 minutes
170°C	20 minutes	40 minutes

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



Substrate temp.	min. curing time	max. curing time
200°C	10 minutes	15 minutes
185°C	17 minutes	25 minutes
170°C	20 minutes	30 minutes

Please observe curing parameters closely!

Note

Variations in effect and color between laboratory sampling and actual production must be expected.

Test results

Tested on a 0.8-mm thick, chrome-free pretreated aluminum panel and Zn-phosphated steel plate based on tests performed under laboratory conditions. 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 method	Test	Series 285 smooth *gloss*	Series 285 smooth *semi-gloss*	Series 285 smooth *semi-matte* smooth *matte*	Series 285 fine texture *matte*
ISO 2360	**Film thickness recommended**	60-80 µm	60-80 µm	60-80 µm	70-90 µm
ISO 2813	**Gloss level - 60°**	80-95	60-75	40-60 *semi-matte* 20-35 *matte*	matte look
ISO 2409	**Crosscut test / adhesion** 1 mm cutting distance	0			
ISO 1519	**Mandrel bend test** Cracking of coating	≤ 8 mm not permitted			
ISO 1520	**Cupping test** Cracking of coating	≥ 6 mm not permitted			
ASTM D 2794	**Dynamic impact test** Cracking of coating	25 cm/1 kg not permitted			
ISO 9227	**Corrosion resistance – acetic salt spray test** Aluminum AASS 1000h	creep at score ≤ 1 mm			
	Corrosion resistance – neutral salt spray test Steel NSS 1000h	creep at score ≤ 1 mm			
ISO 6270-2 (CH)	**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 1000 h	Residual gloss ≥ 50%			

Series 285

Test method	Test	Series 285 smooth *gloss*	Series 285 smooth *semi-gloss*	Series 285 smooth *semi-matte* smooth *matte*	Series 285 fine texture *matte*
EN 45545-2	**Fire protection in railroad cars – Requirements for fire behavior of materials and components**	Hazard level: HL1 / HL2 / HL3 Requirement sets for steel (1 layer): R1, R6 and R7 DB-ST-AU-17-52391-019-2.1; DB-ST-AU-17-5291-019-2.2 Requirement sets steel (1 layer): R1, R6, R7 and R17 DB-ST-AU-19-57482-008-1.1 Requirement sets steel (2-layer): R1, R6, R7 and R17 DB-ST-AU-19-57482-055-1.1			

Processing instructions

The guidelines for application (data sheet 1213) must be strictly observed. The Product Data Sheets, Technical Information Sheets and the guidelines for application each in their latest version, are available as a download at www.tiger-coatings.com.

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 purchaser from verifying the suitability of our products for the intended application at his own responsibility. We warrant that our products are free of flaws and defects to the extent as stipulated in our Terms of Delivery and Payment.
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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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