LACK– UND KUNSTSTOFF– CHEMIE GMBH

TECHNICAL INFORMATION

WIEREGEN-D84

2C-PUR Coating on Steel
DBS 918 084 (Blatt 84)

■ FIELDS OF APPLICATION

WIEREGEN-D84 is used to produce high-quality, viscoplastic, and mechanically highly resilient coatings on steel. WIEREGEN-D84 is approved in accordance with Deutsche Bahn Standard Blatt 84 for coating riveted and welded railroad bridges with ballast beds (ballast troughs). WIEREGEN-D84 is applied directly to steel in accordance with DBS 918 084 or optionally to the primer GEHOPON-E84R.

■ PRODUCT PROPERTIES

WIEREGEN-D84 is a solvent-free coating material based on 2-component polyurethane. The cured coatings exhibit very high corrosion resistance, optimum adhesion to sweep-blasted steel substrates, very good chemical resistance, and excellent mechanical resistance. Coatings made from WIEREGEN-D84 are abrasion-, impact-, and shock-resistant. Due to its rapid curing, crushed stones can be filled in after just 16 hours.

Test certificates

WIEREGEN-D84 has been thoroughly tested in accordance with DBS 918 084 and is approved by DB Netz AG for coating ballast troughs. The coating materials are subject to regular external control.

■ PRODUCT DATA

	WIEREGEN-D84	Curing agent
Product number and colour	D84-7201 grey, Code no. 684.32 comp. A	DX-84 Code no. 684.32 comp. B
Mixing ratio	2.5 parts by weight	1 part by weight

Delivery form ready for use after mixing with curing agent

Shelf life In original cans at standard temperature at least 12 months

Theoretical parameters

WIEREGEN-D84, D84-7201

Density (g/mL)	Solid content (weight %)	VOC content (weight %)	VOC content per 10 µm DFT* (g/m²)	Solid content by volume (%)	Solid content by volume (mL/kg)
1.2	100	0	0	100	833

DFT (µm)	Calculated wet film thickness (µm)	Consumption (kg/m²)	Spreading rate (m²/kg)
2000	2000	2.4	0.41
4000	4000	4.8	0.21

Remarks

- All values are relevant for the mixture in case of two-pack materials
- DFT: dry film thickness

* Baseline for calculation: consumption in g/m² at DFT 10 µm

Notes referring to 2004/42/EG ChemVOCFarbV „Decopaint Directive“

Subcategory as referred to in Annex IIA	VOC limit value (Phase II from 2010)	Max. VOC content of the product in its ready for use condition (including the max. amount of diluents as given in „Application methods“)
J (Two-pack reactive coatings) Type Lb	500 g/L	< 500 g/L

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Coating systems

Substrate	Steel	
Surface preparation	Sweeping in surface preparation grade Sa 2 ½ or in accordance with the requirements of Deutsche Bahn standard DBS 918 084	
	Product	**NDFT (µm)**
Primer coating (optional)	GEHOPON-E84R-Metallgrund	80
Top coating	WIEREGEN-D84 in one working operation	2000 (vertical surfaces) 4000 (horizontal surfaces)

The coating system mentioned is an example that has been tried and tested in practice and can generally be modified. The choice of coating materials and their number and thickness depends on the expected load, any existing regulations, and the working procedures.

■ INSTRUCTIONS FOR APPLICATION

Surface preparation

Steel surfaces:
Sweeping with surface preparation grade Sa 2 ½ according to DIN EN ISO 12944-4 or DIN EN ISO 8501-1

In accordance with DBS 918 084:
For ballast troughs according to Blatt 84, the roughness grade "coarse" (G) according to DIN EN ISO 8503-1 is required.

Existing optional primer or coating:
Adhesion-reducing substances must be removed.
If the permissible reworking time is exceeded, thorough mechanical surface preparation by sweep blasting or grinding with subsequent cleaning is required.

Air and surface temperatures

optimal at 20 to 25 °C, not below 10 °C

Relative humidity

max. 85 %

During application, the surface temperature of the parts to be coated must be at least 3 °C above the dew point of the air (see corrosion protection basic standard DIN EN ISO 12944-7).

If the fresh film is exposed to moisture, surface defects such as discolouration, blooming, and slight scarring may occur.

Processing instructions

Processing methods

Means of application / parameters		Recommended nominal dry film thickness per working operation
Airless spraying: Nozzle: Material pressure: Maximum hose length: Hose diameter:	 0.53 to 0.91 mm minimum 400 bar 20 m ≥ 3/8 inches (9.5 mm)	2000 µm (vertical surfaces) 4000 µm (horizontal surfaces)
Rolling: Brushing: Only recommended for small areas, for example for pre-painting corners and edges		500-1000 µm 1000-2000 µm
Filling: For repairs, WIEREGEN-D84 can be levelled by adding up to 2 % actuating agent RS 219		2000 µm (vertical surfaces) 4000 µm (horizontal surfaces)

Remarks

- This information refers to temperatures of approx. 20 °C.
- At low ambient temperatures, we recommend storing the materials at at least 20 °C and using instantaneous heaters, heated hoses or similar.
- Stirring the basecoat and mixing with the hardener is best done mechanically using a suitable stirrer. Alternatively, mixing is possible with suitable 2K mixing equipment.

Cleaning of equipment

Immediately after use with thinner V-584

Processing time

Ambient temperature	+ 10 °C	+ 20 °C	+ 30 °C
Pot life	20-30 min.	15-20 min.	10-15 min.

Waiting time before overcoating

Ambient temperature		+ 10 °C	+ 20 °C	+ 30 °C
Waiting time at 2000 µm	minimum	16 hrs.	4 hrs.	3 hrs.
Waiting time at 4000 µm	minimum	16 hrs.	8 hrs.	5 hrs.
Waiting time	maximum	7 d	7 d	7 d

Drying and curing time

Ambient temperature	+ 10 °C	+ 20 °C	+ 30 °C
Fully resistant to stress at 2000 µm	16 hrs.	4 hrs.	3 hrs.
Dry to walk on at 4000 µm	16 hrs.	8 hrs.	5 hrs.
Weathering / filling with rail track ballast	24 hrs.	16 hrs.	16 hrs.

■ SAFETY MEASURES

The relevant data concerning safety measures can be found in the Material Safety Data Sheet of this product.
The currently valid issue of the Material Safety Data Sheet is available from our website www.geholit-wiemer.de.

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