SigaCid 340

Glass Mat Reinforced Vinyl Ester Lining System

Empowered by Expertise!

Description:

SigaCid 340 is an approx. 3 mm thick; glass mat reinforced lining system based on a Novolac vinyl ester resin. The coating system consists of a trowel applied primer, a laminate layer and optionally a top coat. The top coat is used optionally, if an electrical conductive or a grey surface is required.

Characteristics:

- Temperature resistant up to +100°C on steel
- Excellent chemical resistance to acids, alkalis, solvents and especially oxidizing agents
- Crack-bridging properties. Can bridge cracks of ≤ 0.25 mm in concrete according EN 14879-3
- Electrically Conductive
- Drivable
- Excellent adhesion to concrete surfaces
- Very good mechanical properties

Applications:

SigaCid 340 is designed as an internal lining for sumps and collecting basins made of reinforced concrete, and it can also be used indoors and outdoors in liquid storage areas. Furthermore, **SigaCid 340** is suitable as a flooring material where the traffic consists of vehicles with inflated or solid tyres, or with Polyurethane (Vulkollan) or polyamide wheels, mainly in galvanizing plants, pickling plants and HBV (manufacture of water polluting substances) plants where the floors are in contact with oxidizing media. The optional feature of the coating system which ensures the dissipation of static charges enables the storage of flammable liquids.

Chemical resistance:

Information on the chemical resistance is available on request.

Substrate:

Components shall be designed and manufactured in accordance with EN 14879-1. Before start of brick lining work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded.

Pot life (20°c):

Product	Time (min)
Primer	ca. 40
Laminate layer	ca. 60
Topcoat	ca. 60

Curing (20°C):

Load Capacity	Time
Accessible	ca. 4 h
Chemical load	ca. 3 Days

Packaging:

The products are supplied in the following standard package sizes:

Product	Size	Article No.
SigaMot H 910	0.1 kg	592 0455
SigaMot H 910	0.4 kg	592 0450
SigaCid 340 SOLUTION	5 kg	592 0710
SigaCid 340 SOLUTION	20 kg	592 0700
SigaCid 340 SOLUTION CONDUCTIVE	5 kg	592 0740
SigaCid 340 SOLUTION CONDUCTIVE	20 kg	592 0730
SigaCid 340 SOLUTION GREY	5 kg	592 0714
SigaCid 340 SOLUTION GREY	20 kg	592 0713
SigaCid 340 POWDER	25 kg	592 0720
SigaCid 340 UNI	8.4 kg	592 0900

Storage:

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures, a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
SigaMot H 910	≤ +20°C	12 Months
SigaCid 340 UNI	≤ +20°C	24 Months
SigaCid 340 SOLUTION	≤ +20°C	6 Months
SigaCid 340 SOLUTION CONDUCTIVE	≤ +20°C	3 Months
SigaCid 340 SOLUTION GREY	≤ +20°C	3 Months
SigaCid 340 POWDER	-	24 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

1. Surface preparation

C-STEEL

All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to “Near White Metal” in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 must be achieved. The primer must be applied immediately after the blasting.

CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm². The residual moisture content must not exceed 4%.

2. Environmental conditions

The specified environmental conditions must be observed during surface preparation and brick lining and be tested and recorded according EN 14879.

Environmental conditions	Value
Relative Humidity	≤ 80%
Surface Temperature	≥ +10°C up to +30°C
Application Temperature	+20°C ± 5°C recommended
Dew Point Distance	min. 3K

3. Application

The execution of the brick lining work is only permitted, if the requirements of “Surface Preparation” and “Environmental Conditions” are met.

SigaCid 340 PRIMER is applied onto the prepared substrate by using a roller, mortar trowel or grout spreader. As the troweled primer hardens, **SigaCid 340** solution is applied and the first layer of 450 g/m² glass mat is laid into the solution. It is then saturated with **SigaCid 340** solution and rolled on reasonably free from bubbles by using a roller (segmented roller). The glass mats need to be placed with approximately 5 cm overlapping onto each other.

Before the previous layer hardens, the second layer of 450 g/m² glass mat is placed, saturated with **SigaCid 340** solution and rolled on reasonably free from bubbles. The overlapping distance between the subsequent layers need to be minimum 50 cm. Finally, a 30 g/m² surface veil is applied onto the second glass mat, fresh in fresh and reasonably free from bubbles.

After hardening of the **SigaCid 340** two coats of grey Vinyl Ester-topcoat can be rolled on the top optionally.

To achieve a conductive top coat, self-bonding copper tapes are bonded onto the hardened **SigaCid 340** and then the first coat of conductive topcoat is applied. Following the hardening of the 1st Topcoat (approx. 3 - 5 hours), 2nd coat of the conductive topcoat can be applied.

To improve the slip resistance of **SigaCid 340**, the fresh laminate coating can be sanded with silicon carbides (0.5mm; Consumption: 1.5 kg/m²).

4. Work tools

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Flat / wide brush / roller
- Laminate roller
- Scissors
- Miscellaneous (safety glasses, rubber gloves etc.)

5. Mixing ratio

MIXING PRIMER

Pour **SigaCid 340 SOLUTION** in a mixing vessel and add **SigaMot H 910** at the specified mixing ratio. The stirring of the merged components should be at least 3 minutes and must result in a homogeneous mixture. Then add **SigaCid 340 POWDER** in the recommended mixing ratio to this mixture and stirrer again. The stirring of the merged components should be at least 3 minutes and must result in a homogeneous mixture. Then pour the mixture into a clean pail and mix again briefly.

MIXING SigaCid 340 SOLUTION

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Primer	kg per litre	Parts by Weight	Parts by Volume
SigaCid 340 SOLUTION	1.000	100	1.00
SigaMot H 910	0.020	2	0.02
SigaCid 340 POWDER	0.800	80	1.62

SigaCid 340	kg per litre	Parts by Weight	Parts by Volume
SigaCid 340 SOLUTION	1.074	100	1.00
SigaMot H 910	0.021	2	0.02

Topcoat	kg per litre	Parts by Weight	Parts by Volume
SigaCid 340 SOLUTION CONDUCTIVE	1.250	100	1.00
SigaMot H 910	0.012	1	0.01
SigaCid 340 SOLUTION GREY	1.120	100	1.00
SigaMot H 910	0.010	1	0.01

6. Consumption

Layer	Product	Coverage (g/m²)
Primer	Primer	ca. 700 - 1500
Laminate Layer	SigaCid 340	ca. 2700
	2 x Fibreglass mats 450 g/m²	ca. 1000
	1 x Surface veil 30 g/m²	ca. 33
1st Topcoat	SigaCid 340 Topcoat	ca. 300
2nd Topcoat	SigaCid 340 Topcoat	ca. 300

7. Cleaning

Clean all equipment with **SigaCid 340 UNI** immediately after use. The cleaning is done while the material is still not hardened.

8. Safety measures

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

Technical Data	Standard	Unit	Value
Resistance to Ground	DIN 14879-6	Ω	> 10^6
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm³	1.4
Compressive Strength	EN ISO 604	N/mm²	60
Hardness Shore D	-	-	> 60
Max. Operating Temperature Liquids	-	°C	+ 100

Note: The indicated temperatures are dependent on the present load and may vary

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