

SigaMent VE 650

3-C-cold curing synthetic resin mortar

Description:

SigaMent VE 650 is a black, three-component, cold curing synthetic resin mortar, based on a unsaturated polyester and vinyl ester resin with carbon fillers. The cured mortar is electrically conductive.

Characteristics:

- High universal chemical resistance. Excellent chemical resistance, especially to oxidizing acids and acid mixtures and hydrofluoric acid as well as solvents.
- Cured mortar is electrically conductive
- Very good mechanical strength

Applications:

SigaMent VE 650 is suitable for bedding and jointing of tiles, bricks and fittings made of ceramic or carbon for the production of chemical, thermal and mechanic resistant coatings and protective linings. **SigaMent VE 650** is especially suitable for linings of neutralization and pickling lines which are exposed to high temperatures and aggressive chemicals.

Chemical resistance:

Information on the chemical resistance is available on request.

Substrate:

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

Pot life (20°C):

Product	Time (min)
SigaMent VE 650	ca. 40
SigaCid 341 PRIMER	ca. 40

The pot life of **SigaMent VE 650** can be set by addition of an inhibitor. Contact TIP TOP before adding the inhibitor.

Curing (20°C):

Load Capacity	Time
Accessible	ca. 12 h
Chemical load	ca. 8 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
SigaMent VE 650 HARDENER	0.5 kg	592 0670
SigaMent VE 650 INHIBITOR	1 kg	592 0680
SigaMent VE 650 SOLUTION	20 kg	592 0650
SigaMent VE 650 POWDER	20 kg	592 0660
SigaCid 341 SOLUTION	20 kg	592 0716
SigaMent VE 650 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
SigaMent VE 650 HARDENER	≤ +20°C	6 Months
SigaMent VE 650 SOLUTION	≤ +20°C	6 Months
SigaMent VE 650 POWDER	-	12 Months
SigaMent VE 650 UNI	≤ +20°C	24 Months
SigaCid 341 SOLUTION	≤ +20°C	6 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

Steel and concrete surfaces, plastic sheets and other sealing layers (except on VE and UP based layers) must be primed with **SigaCid 341 PRIMER** before application. The primer must be sanded with corundum (d = 0.7 – 1.2 mm) in a fresh state after the final coat. Unevenness should be compensated in the ground.

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 14879-6.

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.

SigaMent VE 650 is applied on the substrate or sealing layer by using a mortar trowel. Tiles and bricks must be free of voids, fully bedded and hollow jointed. If tiles have to be laid in alkaline mortar with open joints, make sure that the mortar is hardened, acidified and dried before applying **SigaMent VE 650**. The joints have to be square with a depth of minimum 15 mm and a width of 5 - 8 mm. The edges of the tiles have to be free from mortar and the joints must be cleaned.

4. Work tools

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Flat / wide brush
- Mortar trowel
- Grouting tool
- Miscellaneous (safety glasses, rubber gloves etc.)

5. Mixing ratio

Pour **SigaMent VE 650 SOLUTION** in a mixing vessel and add **SigaMent VE 650**

POWDER at the specified mixing ratio. The stir-ring of the merged components should be at least 3 minutes and must result in a homogeneous mixture.

Primer	kg per litre	Parts by Weight	Parts by Volume
SigaCid 341 SOLUTION	1.000	100	-
SigaMot H 910	0.020	2	-

SigaMent VE 650	kg per litre	Parts by Weight	Parts by Volume
SigaMent VE 650 SOLUTION	0.450	100	1.00
SigaMent VE 650 HARDENER	0.025	5.6	0.16
SigaMent VE 650 POWDER	1.350	300	3.25

6. Consumption

Bedding and jointing (Bed Joint 5 mm / Cross Joint 5-7 mm)

Material	Sizes (mm)	Coverage (kg/m ²)
Tiles	240 x 115 x 20	ca. 15
Tiles	240 x 115 x 40	ca. 17
Bricks	240 x 115 x 65	ca. 20
Bricks	240 x 115 x 80	ca. 22

7. Cleaning

Clean all equipment with **SigaMent VE 650 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/cm ³	1.8
Compressive Strength	EN ISO 604	N/mm ²	70
Adhesion Strength		N/mm ²	> 3
Coefficient of Thermal Expansion	-	1/K	32 × 10 ⁻⁶
Max. Operating Temperature Liquids	-	°C	+ 100

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

SigaMent VE 650; 0.00/28.08.2017. All information contained herein is based on the current state of our knowledge and practical experience at the time of release. Therefore, please make sure that this is the actual edition of the Technical Data Sheet. All data are only intended as a guideline for informational purposes and do not constitute a legally-binding warranty of the suitability for a certain purpose of use, due to its dependence on site conditions and possible processing, use and applications. All information contained in this technical datasheet is subject to change without notice.

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