

SigaMent EP 673

3-C-cold curing mortar

Description: **SigaMent EP 673** is a three-component, cold curing synthetic mortar based on epoxy resin and depending on the application with different fillers.

- Characteristics:**
- Excellent adhesion to concrete and ceramic
 - Good chemical resistance
 - Nearly shrinkage-free curing

Applications: **SigaMent EP 673** is suitable as bedding and jointing mortar for tiles, bricks and fittings made of ceramic, to construct a chemically, thermally and mechanically resistant layer or lining. In addition, **SigaMent EP 673** can be used on cement based substrates as filling and leveling mortar with the thicknesses of 2 to 5 mm as well as a thin **SigaMent EP 673** (coating thickness of about 0.3 - 0.7 mm).

Chemical resistance: Information on the chemical resistance is available on request.

Substrate: Components to be brick lined or laminated shall be designed and manufactured in accordance with EN 14879-1. Before start of coating work or 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)
SigaMent EP 670 Primer	ca. 30-60
SigaMent EP 673	ca. 30

Curing (20°C):

Load Capacity	Time
Accessible	ca. 16 h
Over workable	ca. 16 h
Chemical load	ca. 7 Days

Packaging: The products are supplied in the following standard package sizes:

Product	Size	Article No.
SigaMent EP 670 HARDENER	5 kg	592 0520
SigaMent EP 670 HARDENER	20 kg	592 0510
SigaMent EP 670 SOLUTION	20 kg	592 0500
SigaMent EP 673 POWDER 10	25 kg	592 0590
SigaMent EP 673 POWDER FINE GREY	25 kg	592 0560
SigaMent EP 673 POWDER FINE BLACK	25 kg	592 0580
SigaMent EP 673 POWDER FINE WHITE	25 kg	592 0570
SigaMent EP 673 CLE	25 kg	592 0920
SigaMent EP 673 DEF	0.25 kg	592 0921

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
SigaMent EP 673 POWDER 10	-	24 Months
SigaMent EP 670 HARDENER	≤ +25°C	24 Months
SigaMent EP 670 SOLUTION	≤ +25°C	24 Months
SigaMent EP 673 POWDER FINE GREY	-	24 Months
SigaMent EP 673 POWDER FINE BLACK	-	24 Months
SigaMent EP 673 POWDER FINE WHITE	-	24 Months
SigaMent EP 673 CLE	-	24 Months
SigaMent EP 673 DEF	≤ +20°C	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

Unevenness or surface defects such as rock pockets, casting failures, laitance and other failures which degrade the rigidity of the surface shall be removed and repaired. The repairs can be performed with **SigaMent EP 674** or **SigaMent EP 672**, on top of the primer application. Larger defects need to be remedied with **SigaMent EP 673 notched trowel**, **SigaMent EP 673 screed** or concrete to flatten. The steel structures connected to the component or mounted in the concrete have to be cleaned down to white metal (SA 2½).

Concrete and cement-base areas:

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 in the concrete shall not exceed 4%. New casted concrete surfaces should be kept for at least 28 days to dry. All surfaces on the substrate shall be free of cracks.

2. Environmental conditions

The specified environmental conditions must be observed during surface preparation and lining work 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 lining work is only permitted, if the requirements of "Surface Preparation" and "Environmental Conditions" are met.

SigaMent EP 670 PRIMER

The **SigaMent EP 670 PRIMER** is applied onto the substrate or onto the lined membrane firmly and uniformly by means of a masonry brush, paste brush, paint

brush, roller or paint pad. The consumption is about 300 to 400 g/m².

SigaMent EP 673

SigaMent EP 673 is applied onto the primer layer or onto the previous layer cross-wise, firmly and uniformly by means of a masonry brush, paste brush, or roller. The pot life depends on the substrate and the ambient temperature. If acid-proof bricks or tiles are going to be lined over the **SigaMent EP 673**, flame dried silica sand (0.7 -1.2 mm) has to be broadcasted onto the very top fresh layer of the coating. The consumption is about 400 g / m².

Exposure of the fresh protective coating to direct sunlight has to be avoided to prevent blistering. If possible, the coated surfaces may be shaded.

4. Work tools

The following tools are essential for the application:

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

5. Mixing ratio

Pour **SigaMent EP 670 SOLUTION** in a mixing vessel and add **SigaMent EP 670 HARDENER** 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 **SigaMent EP 670 POWDERS** 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. When mixing larger quantities, a forced mixer should be used.

SigaMent EP 670 PRIMER	KG per Litre	Parts by Weight	Parts by Volume

SigaMent EP 670 SOLUTION	0.300	100	-
SigaMent EP 670 HARDENER	0.060	20	-

SigaMent EP 673 GREY/WHITE	KG per Litre	Parts by Weight	Parts by Volume
SigaMent EP 670 SOLUTION	0.250	100	-
SigaMent EP 670 HARDENER	0.050	20	-
SigaMent EP 673 POWDER FINE GREY or WHITE	0.100	40	-

1 ST SigaMent EP 673 BLACK	KG per Litre	Parts by Weight	Parts by Volume
SigaMent EP 670 SOLUTION	0.220	100	-
SigaMent EP 670 HARDENER	0.044	20	-
SigaMent EP 673 POWDER FINE BLACK	0.136	60	-

2 ND and 3 RD SigaMent EP 673 GREY/WHITE	KG per Litre	Parts by Weight	Parts by Volume
SigaMent EP 670 SOLUTION	0.220	100	-
SigaMent EP 670 HARDENER	0.044	20	-
SigaMent EP 673 POWDER FINE GREY or WHITE	0.136	60	-

2 ND and 3 RD SigaMent EP 673 BLACK	KG per Litre	Parts by Weight	Parts by Volume
SigaMent EP 670 SOLUTION	0.170	100	-
SigaMent EP 670 HARDENER	0.034	20	-
SigaMent EP 673 POWDER FINE BLACK	0.204	120	-

6. Cleaning

Clean all equipment with or **SigaMent EP 673 CLE** immediately after use. The cleaning is done while the material is still not hardened.

7. 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
Flexural Strength	EN ISO 178	N/mm ²	40
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm ³	2.05
Compressive Strength	EN ISO 604	N/mm ²	100
E-Modulus	-	N/mm ²	1.4 × 10 ⁴
Coefficient of Thermal Expansion	-	1/K	45 × 10 ⁻⁶
Thermal Conductivity	-	W/(m.K)	1.7
Tensile Strength	EN ISO 527	N/mm ²	40
Max Operating Temperature Dry	-	°C	+60 / +120**

** In combination with ceramic tiles or bricks

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

SigaMent EP 673; 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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