

Technical Data Sheet

StoCrete SM

Quick repair mortar, polymer-modified, cementitious,
layer thickness 3 – 40 mm



Characteristics

- Area of application**
- As a concrete restoration product for repairing concrete structures (concrete reinforced concrete, and lightweight concrete)
 - As a fine filler (3 – 5 mm)

- Properties**
- Polymer-modified, cementitious concrete repair product (PCC)
 - Very good adhesive strength on a concrete substrate
 - Very good application overhead
 - Very good resistance to flow
 - No separate bonding agent necessary
 - Quick curing
 - Can be quickly over-coated

- Application method**
- Apply by steel trowel

- Information / Notes**
- Not for surfaces subject to foot or vehicle traffic
 - Product is in accordance with EN 1504-3

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Criteria	Standard / test specification	Value / Unit	Notes
Bulk density of fresh mortar	EN 1015-6	1.9 kg/dm ³	
Maximum particle size		0.8 mm	
Bond strength (28 days)	EN 1542	> 0.8 MPa	
Compressive strength (28 days)	EN 12190	28 MPa	
Flexural strength (28 days)	TP BE-PCC	6 MPa	
Static modulus of elasticity (28 days)	EN 13412	11 GPa	

The characteristic values stated are average values or approximate values. Due to the natural raw materials in our products, the stated values can vary slightly in the same delivery batch; this does not affect the suitability of the product for its intended use.

Substrate

- Preparation**
- Requirements on the substrate:
The concrete substrate must be load-bearing and free from native and foreign substances that have a separating action, as well as from corrosion promoting components (e.g. chlorides). Remove less solid layers and laitance.
- Damp in accordance with the definition in the DAfStb (German) Repair Guideline 2001-10.
The cleanliness grade of the exposed reinforcing steel following substrate preparation:
SA 2½ in accordance with EN ISO 8501-1.

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Average bond strength 1.5 N/mm²

Bond strength of the single smallest value 1.0 N/mm²

Prepare the substrate using a suitable mechanical process, such as abrasive blasting or high-pressure water blasting (> 800 bar).

Open pores and blow-holes sufficiently. Bevel the edges of the areas of spalling under approx. 45°.

Application

Material Preparation

Decant water first and add the pre-blended dry mortar. Stir for approx. 2 minutes. Allow to mature for approx. 3 minutes. Remix for approx. 30 seconds.

Consumption

Type of application	Approx. Consumption
per mm of layer thickness	1.7 kg / m ²

Material consumption depends on the application, substrate, and consistency, among other factors. The stated consumption values are only to be used as a guide.

If required, determine precise consumption values on the basis of the specific project.

Coating Build-Up

1. Substrate preparation
2. Protection against corrosion with StoCrete TK (for exposed reinforcement)
3. Re-profiling with StoCrete SM
 - Fine filling with StoCrete SM.
 - local re-profiling: 3 - 40 mm
 - full-surface fine filling: 3 - 5 mm

Application

1. Substrate preparation

De-rust the exposed reinforcing steel in accordance with DIN EN ISO 12944-4 up to cleanliness grade SA 2½. The de-rusted reinforcing steel must be free from dust and grease.
2. Corrosion protection

Immediately after de-rusting the reinforcing steel, coat with StoCrete TK in two application cycles in accordance with DIN EN ISO 12944, part 4.

Coat the reinforcing steel completely and evenly using a paint brush.

Waiting times between the two application cycles 4.5 hours.

The corrosion protection must have hardened on the reinforcing steel to an extent that it cannot be loosened from the reinforcing steel during application cycle 2.

Application cycle 1: StoCrete TK grey,
consumption approx. 130 g/m single application Ø up to 18 mm

Application cycle 2: StoCrete TK light grey,
consumption approx. 140 g/m single application Ø up to 18 mm

or

Application cycle 1: StoCrete TK grey,
consumption approx. 150 g/m single application Ø over 18 mm

Application cycle 2: StoCrete TK light grey
consumption approx. 160 g/m single application Ø over 18 mm

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Sufficiently pre-wet the concrete substrate before applying the product (about 24 hours before the first application cycle). At the time of application, however, the concrete substrate must be dry to the point that it just appears slightly damp.

3. Re-profiling

Pre-fill the local areas of spalling with StoCrete SM then carry out re-profiling wet on wet. Apply manually using a mason's trowel, spatula, or square trowel.

To ensure adhesion, always work wet on wet.

Please note: do not dilute StoCrete SM with water once the reaction has begun, i.e. when it starts becoming stiff.

Layer thickness of StoCrete SM 3 - 40 mm.

Consumption of re-profiling mortar: approx. 1.9 kg/m² per mm of spalling depth/layer thickness (mixed material)

For full-surface application as fine filler, apply a scratch coat to seal pores and cavities, and then apply the StoCrete SM filler wet on wet in the corresponding layer thickness. To ensure a good adhesive bond, always work wet on wet.

Smoothing the surface is the final processing stage. Rub out spatula strokes with a sponge; when doing so, do not add any more water.

Layer thickness of StoCrete SM: 3 - 5 mm.

Consumption of fine filler: approx. 1.9 kg per mm of layer thickness (mixed material)

4. Subsequent treatment

Subsequent treatment procedure:

- a) Cover with film or mats
- b) Spray with water
- c) Subsequent treatment using chemicals

Under normal conditions, subsequent treatment must last at least 3 days.

Observe the relevant standard DIN 1045-3: 2001-07, the B8 data sheet "Nachbehandlung von Beton" (11.2002) published by the Bauberatung Zement, and ZTV-ING (2006- 07) (Additional technical terms of contract and guidelines for civil engineering).

Note:

Curing with chemicals may only be carried out if subsequent work is compatible with this.

A uniform colour shade of the mortar surface is not possible due to the application method.

The film must not touch the surface of the mortar.

A key part of curing is adequately wetting the concrete substrate prior to applying the mortar, so that the substrate is water-saturated and the fresh mortar does not extract mixing water.

The substrate must be "damp", as described in the section on substrate preparation, in accordance with the DAfStb (German) Repair Guideline.

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Drying, Curing , ready for next coat	At +20°C and 65 % relative humidity, over-coatable with: Mineral slurry: after 4 hours Mineral fine filler: after 4 hours Sealer: after 24 hours
Application Temperature	Minimum application temperature + 5°C Maximum application temperature + 45°C
Time for Application	At +10°C: approx. 30 minutes At +20°C: approx. 15 minutes At +30°C: approx. 10 minutes
Mixing Ratio	25 kg of material in accordance with the description 4.0 - 4.25 lit water = 1.0 : 0.16 - 0.17 parts by weight
Cleaning Tools	Clean with water immediately after use; hardened material can only be removed mechanically.
Delivery	
Packing	StoCrete SM is available in 10 kg pail StoCrete SM is available in 25 kg bag
Storage	
Storage life & conditions	This product has a shelf life of 12 months from the manufacturing date. Product should always be stored in an unopened bag, dry place, protected from rain, direct sunlight and raised off the floor.
Special notes	
Health & Safety	Please refer to Safety Data Sheet
Technical Support	Please consult the local sales office for further information and any site assistance required.

The information in this Technical Data Sheet serves to ensure the product's intended use, or its suitability for use, and is based on our findings and experience. Users are nevertheless responsible for establishing the product's suitability and use.

Applications not specifically mentioned in this Technical Data Sheet are permissible only after prior consultation. Where no approval is given, such applications are at the user's own risk. This applies in particular when the product is used in combination with other products.

When a new Technical Data Sheet is published, all previous Technical Data Sheets are no longer valid. The latest version is available on www.sto-sea.com.

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