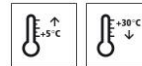


Technical Data Sheet

StoCrete TS 100

Dry-mix sprayed mortar, polymer-modified, cementitious, layer thickness 6-50 mm



Characteristics

Area of application

- as a concrete repair product for the repair of structurally and non-structurally relevant concrete structures (concrete and reinforced concrete)
- as a concrete repair product in the case of additional demands on structural support
- for establishing/restoring fire resistance

Properties

- polymer-modified, cementitious dry-mix spray mortar (SPCC / SRM)
- high resistance to stress from frost/de-icing salt
- suitable for restoring fire resistance
- building material class A1 in accordance with EN 13501-1
- little rebound

Information/notes

- product is in accordance with EN 1504-3
- fire resistance is proven in accordance with the standard temperature-time curve and the hydrocarbon curve
- as a repair system to restore the structural integrity of concrete members in accordance with RiLi-SIB, part 2 for use in the stress resistance classes M 2 and M 3 (SPCC / SRM)
- for restoring the fire resistance of the concrete members to be repaired, fire resistance class F 90 in accordance with DIN 4102-2
- The following exposure classes are fulfilled: XALL, XC2-XC4, XBW1-XBW2, XF1-XF4, XW1-XW2, XSTAT, XD1-XD3, XS1-XS3, XDYN, XM1. The basis is basic testing in accordance with TL/TP BE-SPCC.
- externally monitored: system A (DIN 18200)

Technical data

Criterion	Standard / test specification	Value/ Unit	Notes
Bulk density of fresh mortar	EN 1015-6	2,1 kg/dm ³	
Maximum particle size		2 mm	
Bond strength	EN 1542	> 2,0 MPa	
Compressive strength	EN 12190	60 - 70 MPa	
Flexural strength	TP BE SPCC	10 - 12 MPa	

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Static modulus of elasticity	EN 13412	23,0 GPa
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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

Requirements

Requirements on the substrate:

The concrete substrate must be load-bearing and free from native and foreign substances that could interfere with adhesion, as well as from corrosion-promoting components (e.g. chlorides). Remove less strong layers and laitance.

Damp in accordance with the definition in the DAfStb (German) Repair Guideline 2001-10.

Preparation grade of the exposed reinforcement after substrate preparation: Sa 2½ in accordance with EN ISO 8501-1.

Average bond strength: 1.5 N/mm²

Bond strength, lowest single value: 1.0 N/mm²

Preparations

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

Application temperature

Lowest application temperature: +5 °C

Highest application temperature: +30 °C

Material preparation

With approved dry spraying machine

Mixing occurs in the spray nozzle.

Consumption

Type of application

Approx. consumption

per mm of layer thickness (without rebound)

2,1

kg/m²

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: StoCrete TK (in case of exposed reinforcement)

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Please observe: StoCrete TK: 3 applications
 3) Concrete replacement with StoCrete TS 100
 layer thickness: 6 - 50 mm
 Higher layer thicknesses are possible due to multi-layer work.

Application

dry spraying, application by machine using the dry-mix process

Container: sack and silo product
 Information on applying the material from the silo on request.

1) Substrate preparation

Derust the exposed reinforcement. The derusted reinforcing steel must be free from dust and grease.

The cleanliness grade of the exposed reinforcement following substrate preparation:

Sa 2 in accordance with EN ISO 8501-1 for restoration principle R
 Sa 2½ in accordance with EN ISO 8501-1 for restoration principle C

2) Corrosion protection

Immediately after derusting the reinforcement, coat with StoCrete TK in three layers.

Use a paint brush to coat the reinforcing steel evenly and without gaps.

Waiting time between the layers is approx. 4.5 hours.

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

3) Concrete repair product StoCrete TS 100

Approx. 24 h before applying the product, sufficiently pre-wet the concrete substrate for the first time. At the time of application, however, it must be dry to the point that it just appears slightly damp.

- Spraying procedure:

Convey the dry mortar into the dry-mix spraying machine using a rotor or conveying chamber and chain sprocket.

Add water to the spraying nozzle to spray. A machine with at least 7 m³/min. airflow at 3 bar pressure is required as a compressor.

Spraying must be carried out by a tested nozzle operator.
 Normal nozzle distance: 0.5 - 1.0 m.

4) Surface finishing

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If re-working the surface of the SPCC / SRM, spray a double layer in order to avoid disrupting the bond with the substrate. When spraying layer 2, the surface of layer 1 should still be slightly damp.

Remove any contamination which impairs adhesive bonding, such as dust, by taking suitable measures (e.g. oil-free compressed air).

During spraying work in interiors, and where there is a risk of contaminating the remaining concrete surfaces in exterior areas which are to be sprayed later, cover these surfaces with e.g. plastic sheets which are fixed to falsework.

Ensure any contamination arising from rebound or overspray does not stick to the surfaces to be coated, as it impairs the adhesive bond. Take suitable measures such as grit blasting to remove it.

Use a screed board to strike off the surface of the second layer. When doing so, take care not to disturb the structure or strip anything from the substrate.

If falsework was anchored in the application areas to help comply with the layer thicknesses, remove it after the spraying work is completed. Any remaining parts must end at least 5 cm below the sprayed concrete surface. Close the holes and recesses which arise wet on wet, if possible, with the same dry-mix sprayed mortar.

Rework any construction joints if necessary by grit blasting oil-free compressed air to remove soiling, and then wetting the area. This should help result in a homogenous mortar layer after spray application.

In general, leave the surface with a rough spray texture (see DIN 18551), unless otherwise required. Dispose of the rebound!

After a certain curing time (depending on temperature, humidity, application thickness, and substrate), strike off the surface using a screed board and trowel it, while taking care not to disturb the structure or strip anything from the substrate.

Respray any gaps. Do not use any rebound for reprofiling!

If a float-finished surface finish is required, StoCrete TS 100 can be reworked with StoCrete TF 200 or StoCrete TF 204 manually or by wet spray application. Clean the surface with a high-pressure cleaner (removal of fine spray dust).

5) Curing

Curing procedure:

- a) Cover the surface with sheeting or mats.
- b) Spray the surface with water.
- c) Chemical curing

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Curing duration: min. 5 days under normal conditions. Observe the relevant standard DIN 1045-3: 2012-03, the B8 data sheet "Nachbehandlung und Schutz des jungen Betons" (4.2014) published by the Bauberatung Zement, and ZTV-ING (2014/12) (Additional technical terms of contract and guidelines for civil engineering, in German only).

Note:

Chemical curing 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 sheeting must not touch the surface of the mortar.

A key part of curing is adequately wetting the concrete substrate before applying the mortar. The substrate must be saturated with water so that it does not extract mixing water from the fresh mortar that is to be applied.

Observe the explanations in ZTV-W LB 219 (2013) (available in German only).

Recommended dry-mix spraying equipment:

a) Werner Mader, dry-mix spraying machine

Type WM 05 or type WM 14

Sales and leasing Germany

Werner Mader GmbH Mörtel u. Betonspritzmaschinen

Bullauer Str. 6

D-64711 Erbach

Tel. +49 (0)6062/9442-0, Fax. +49 (0)6062/9442-29 ,

e-mail: info@werner-mader.de

b) Clever & Co. dry-mix spraying machine,

Type SOVE used with a high-pressure water pump type SAN 1100 and "Ultra" high-pressure eddy mixing nozzle

Sales Germany / Europe:

Clever & Co. GmbH

Laubenhof 14 - 18

D-45326 Essen

Tel.: +49 (0)201/83574-0, Fax: +49 (0)201/83574-444

e-mail: info@clever-co.de

c) Velco GmbH, dry-mix spraying machine

ROTAMAT 04 type 25 tb with GUNMIX moistening system

Sales Germany:

Velco GmbH

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Haberstrasse 40
D-42551 Velbert
Tel.: +49 (0)2051/2087-0, Fax: +49 (0)2051/2087-20
e-mail: info@velco.de

Cleaning the tools	Clean the spray nozzle with water. Collect cleaning water/rinsing water and dispose of it professionally.
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Notes, recommendations, special information, miscellaneous	The declaration(s) of performance can be obtained from the StoCretec Technisches InfoCenter General application instructions are available at www.stocretec.de and in the notes of the latest Technical Manual.
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Delivery

Packaging	sack
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	Article number	Name	Container
	00793-001	StoCrete TS 100	25 kg bag

Storage

Storage conditions	Store in dry conditions.
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Storage life	In the original container until ... (see packaging). This product has a low chromate content. The product quality is best guaranteed in its unopened original container until its shelf life has expired. The first digit of the batch number is the final digit of the year. The second and third digits indicate the calendar week. Example: 1450013223 - shelf life until end of calendar week 45 in 2021. For further explanation, see the price list.
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Identification

Product group	Repair mortar
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Composition	polymer-modified, hydraulic hardening, single-component pre-blended dry mortar on a cement base with 2 mm aggregate grain
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GISCODE	ZP1
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Safety

This product is subject to compulsory labelling in accordance with the current EU regulation.
You will receive an EU Safety Data Sheet with your first order.
Please observe the information regarding the handling of the product, its storage, and disposal.

Special notes

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 the Internet.

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