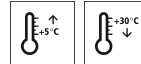


# Technical Data Sheet

## StoCrete TS 100

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



### Characteristics

#### Area of application

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

#### Properties

- polymer-modified, cementitious dry spray mortar (SPCC)
- high resistance to stress from frost/de-icing salt
- suitable for restoring fire resistance
- system test as anode and repair mortar for cathodic protection
- non-combustible, building material class A1 in accordance with DIN 1504-3
- low dust formation
- 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 construction components in accordance with RiLi-SIB, part 2 for use in the stress resistance classes M 2 and M 3 (SPCC)
- for restoring the fire resistance of the concrete construction components to be repaired, fire resistance class F 90 in accordance with DIN 4102-2

### Technical data

Criterion	Standard / test specification	Value/ Unit	Notes
Bulk density of fresh mortar	EN 1015-6	2.1 kg/dm <sup>3</sup>	
Maximum particle size		2 mm	
Bond strength (28 days)	EN 1542	> 2.0 MPa	
Compressive strength (28 days)	EN 12190	60 - 70 MPa	
Flexural strength (28 days)	TP BE SPCC	10 - 12 MPa	
Static modulus of elasticity (28 days)	EN 13412	23.0 GPa	

# Technical Data Sheet

## StoCrete TS 100

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 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 reinforcement following substrate preparation: Sa 2 1/2 in accordance with EN ISO 8501-1.

Average bond strength 1.5 N/mm<sup>2</sup>

Bond strength of the single smallest value 1.0 N/mm<sup>2</sup>

#### 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/m <sup>2</sup>

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) Corrosion protection with StoCrete TK (for exposed reinforcement)  
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.

# Technical Data Sheet

---

## StoCrete TS 100

### Application

dry spraying, application by machine using the dry spraying method

Container: sack and silo product

Information on applying the material from the silo on request.

#### 1) Substrate preparation

Derust the exposed reinforcement. The derusted reinforcement 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

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

- Spraying procedure:

Feed the dry mortar into the dry spraying machine using a rotor or feed chamber and chain sprocket.

Add water to the spraying nozzle for spraying. A machine with at least 7 m<sup>3</sup>/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

If re-working the surface of the SPCC, 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

# Technical Data Sheet

---

## StoCrete TS 100

these surfaces with e.g. plastic sheets which are fixed to falsework.

Ensure any contamination arising from rebound or spray fog 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.

A screed board can be used 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 fresh in fresh, if possible, with the same dry spray mortar.

Rework any construction joints in accordance with DIN 1045, section 10.2.3. (issue July 88), 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 straightedge and rub it down, 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 with film or mats
- b) Spray with water
- c) Curing using chemicals

Under normal conditions, curing must last at least 5 days. 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:

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

## Technical Data Sheet

---

### StoCrete TS 100

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.

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 6062 9442-0, Fax. +49 6062 9442-29, e-mail: info@wernermader.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

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.

---

**Notes, recommendations,  
special information,  
miscellaneous**

The Declaration(s) of Conformity can be obtained from the StoCretec Technisches InfoCentre.

General application instructions can be found at [www.stocretec.de](http://www.stocretec.de) (Products) and in the latest issue of the "Technical Data Sheets" manual, in the appendix.

---

# Technical Data Sheet

## StoCrete TS 100

### Delivery

**Packaging** sack

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

### Storage

**Storage conditions** Store in dry conditions.

**Storage life** In the original container until ... (see packaging).  
 This product has a low chromate content. We guarantee this property until maximum storage life expires. Please observe the guaranteed storage life data on the batch no. shown on the container.  
 Explanation of batch number: e.g. 6050017152  
 In this example, storage life until the end of week 05 in 2016 is guaranteed (digit 1 = last digit of the year, digits 2 + 3 = calendar week). For further explanation, see the price list.

### Certificates/approvals

P-56.3-9904	Concrete replacement system StoCrete TS 100 for M 2 General building inspection test certificate
ZERT 9 III 11/641	Concrete replacement system StoCrete TS 100 Certificate of Compliance
P-56.3-9905	Concrete replacement system StoCrete TS 100 for M 3 General building inspection test certificate
ZERT 9 III 11/642	Concrete replacement system StoCrete TS 100 for M 3 Certificate of Compliance

### Identification

**Product group** Repair mortar

**Composition** polymer-modified, hydraulic hardening, single-component pre-blended dry mortar on a cement base with 2 mm aggregate grain

**Safety** This product is subject to compulsory designation in accordance with the current EU directive.  
 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.

# Technical Data Sheet

---

## StoCrete TS 100

### 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.

StoCretec GmbH  
Gutenbergstr. 6  
D-65830 Kriftel

Tel.: +49 6192 401-104  
Fax: +49 6192 401-105  
stocretec@sto.com  
www.stocretec.de