Technical Data Sheet
StoCrete TS 108

Dry-mix sprayed mortar, polymer-modified, cementitious, layer thickness 20-60 mm

Characteristics

Area of application

- as concrete repair product for the repair of concrete structures (concrete and reinforced concrete)
- particularly suitable for hydraulic structures in fresh and sea water

Properties

- polymer-modified, cementitious dry-mix sprayed mortar (SPCC)
- high resistance to stress from frost/de-icing salt
- non-combustible
- low dust formation
- little rebound

Information/notes

- product is in accordance with EN 1504-3

Technical data

Criterion	Standard / test specification	Value/ Unit	Notes
Bulk density of fresh mortar	EN 1015-6	2.1 kg/dm³	
Maximum particle size		6 mm	
Bond strength (28 days)	EN 1542	> 2.0 MPa	
Compressive strength (28 days)	EN 12190	74 MPa	
Flexural strength (28 days)	TP BE SPCC	9 MPa	
Static modulus of elasticity (28 days)	EN 13412	27 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

Requirements

Requirements on the substrate:
The concrete substrate must be load-bearing and free from native and foreign release agents, as well as from corrosion-promoting components (e.g. chlorides). Remove weak layers and laitance.

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

The preparation grade of the exposed reinforcing steel following substrate preparation:
Sa 2 in accordance with EN ISO 8501-1 for repair principle R.
Sa 2½ in accordance with EN ISO 8501-1 for repair principle C.

Average pull-off resistance: 1.5 N/mm²
Lowest single pull-off resistance value: 1.0 N/mm²

Application

Application temperature

Lowest application temperature: +5 °C
highest application temperature: +30 °C

Mixing ratio

25 kg of material in accordance with the description/water = 1.0 : 0.13 parts by weight

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) Protection against corrosion with StoCrete TK (only for the repair principle C)
Please observe: StoCrete TK: 3 applications
2) Concrete repair with StoCrete TS 108
Due to the application method, an even colour shade is not possible (see DIN 18551, Section 5.5.4)
Layer thicknesses: 20 - 60 mm, partially max. 100 mm
Higher layer thicknesses are possible due to multi-layer work.

Application

application by machine using the dry-mix process

1) Substrate preparation
Prepare the concrete substrate using a suitable method in accordance with ZTV-ING Part 3, section 4. Open pores and blow-holes sufficiently.
Bevel the edges of the areas of spalling under approx. 45°.

Derust the exposed reinforcing steel in accordance with DIN EN ISO 12944-4 up to

preparation grade Sa 2½. The derusted reinforcing steel must be free from dust and grease.

2) Corrosion protection
Derust the reinforcing steel to preparation grade Sa 2½ in accordance with EN ISO 8501-1. Then immediately coat with StoCrete TK in 3 application cycles.
Use a paint brush to coat the reinforcing steel evenly and without gaps.

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. (at 23 °C approx. 5 hours).

StoCrete TK grey or light grey: consumption approx. 130 - 200 g/m per application cycle

3) Concrete repair:
- 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 qualified nozzle operator who can skilfully control the quality/rebound of the sprayed mortar using the nozzle distance, spray direction, mortar, and water quantity.
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 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, it is possible to rework StoCrete TS 108 with StoCrete TF 204 manually or using the wet-mix process.
Clean the surface with a high-pressure cleaner (removal of fine spray dust).

5) Curing
Curing procedure:
a) Cover with film or sheeting
b) Spray with water
c) Chemical curing

Under normal conditions, curing must last at least 10 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 Verein Deutscher Zementwerke e.V., and ZTV-ING (2014/12) (available in German only).

Note:
Chemical curing may only be carried out if the subsequent work is compatible with this.
A uniform colour shade of the mortar surface is not possible due to the application method.
The foil must not touch the surface of the mortar.

A key part of curing is adequately wetting the concrete substrate before applying the mortar, so that the substrate is water-saturated and the fresh mortar does not extract mixing water.
Note the information in ZTV-W LB 219 (2013) (German only).

Recommended dry spraying equipment:

Mader WM 05 Mortar and concrete dry spraying machine, Mader WM 14 Mortar and concrete spraying machine

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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@wernermader.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 InfoCenter For general application instructions, see www.stocretec.de (Products) and in the latest issue of the “Technical Data Sheets” manual, in the appendix.

Delivery

Packaging sack silo

Article number	Name	Container
00756-001	StoCrete TS 108	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.

Identification

Product group	Repair mortars
Composition	Polymer-modified, hydraulic hardening, single-component, pre-mixed dry mortar on a cement basis
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.

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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.

Sto Ltd.
Unit 3, Lyon Road
Linwood Industrial Estate
GB - Paisley PA3 3BQ
Telephone : (44) 1505 324 262
Telefax : (44) 1505 323 618
www.sto.co.uk