

Technical Data Sheet

StoCrete TG 203

Repair mortar, polymer-modified, cementitious,
layer thickness 6 - 30 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
- for concrete repair of storage, filling, and transfer points of water-polluting substances

Properties

- polymer-modified, cementitious concrete repair product (PCC)
- very good adhesive strength on a concrete substrate
- good application overhead
- good resistance to flow
- high resistance to stress from frost/de-icing salt
- suitable for restoring fire resistance
- system test as anode and repair mortar for the repair principle of cathodic protection
- building material class A2-s1, d0 (non-combustible) in accordance with EN 13501-1

Information/notes

- general test certificate for use in LAU facilities (storage, filling, and transfer points of water-polluting substances) and petrol stations
- product is in accordance with EN 1504-3
- as a repair system to restore the structural integrity of concrete construction components in accordance with Rili-SIB, part 2 for use in stress resistance class M 2 and M 3 (PCC II)
- for restoring the fire resistance of the concrete members to be repaired, fire resistance class F 90 in accordance with DIN 4102-2

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Technical data

Criterion	Standard / test specification	Value/ Unit	Notes
Bulk density of fresh mortar	EN 1015-6	2.2 kg/dm ³	
Maximum particle size		2.0 mm	
Bond strength (28 days)	EN 1542	> 2.0 MPa	
Compressive strength (28 days)	EN 12190	55 - 65 MPa	
Flexural strength (28 days)	TL/TP PCC	9 - 11 MPa	
Static modulus of elasticity (28 days)	EN 13412	25 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.
 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
 Lowest single bond strength 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°.
 Note:
 Rework any treated surfaces using a suitable process (abrasive blasting) if the substrate preparation process has led to joint faults in the area of the remaining existing concrete close to the surface. These can result from chiselling, knocking, milling, or flame cleaning.

Application

Application temperature

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

Time for application

At +5 °C: approx. 90 minutes
 At +23 °C: approx. 60 minutes

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At +30 °C: approx. 30 minutes

Mixing ratio	25 kg material / 3.00 - 3.25 l water = 1.0 : 0.12 - 0.13 parts by weight	
Material preparation	<p>Compulsory mixer: decant water and add dry mortar. Stir for approx. 2 minutes, allow to mature for approx. 3 minutes, and then stir again for approx. 30 seconds. If using hand-held compulsory mixers, they should be counter-rotating and interlocking. Ensure that the mixing paddles of the mixer are at least 1/3 of the diameter and at least 2/3 of the height of the mixing container. If using single mixing paddles, these must have two stirring rings that act using the principle of countercurrent flow. The speed should be up to approx. 500 rpm.</p>	
Consumption	Type of application	Approx. consumption
	per mm layer thickness	2.0 kg/m ²
<p>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.</p>		
Coating build-up	<ol style="list-style-type: none"> 1) Substrate preparation 2) Protection against corrosion with StoCrete TK (for exposed reinforcement) 3) Mineral bonding agent with StoCrete TH 200 4) Concrete repair with StoCrete TG 203 <p>Layer thickness: 6 - 30 mm, partially up to 100 mm Higher layer thicknesses are possible due to multi-layer work.</p>	

Application

1) Substrate preparation

2) Protection against corrosion (for exposed reinforcement).
Immediately after derusting the reinforcement, coat with StoCrete TK in two layers. Use a paint brush to coat the reinforcing steel evenly and without gaps. Waiting time between the two application cycles is 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) Mineral bonding agent
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.

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Apply the StoCrete TH 200 bonding agent using a suitable tool, such as a paint brush or brush.

It is important to apply the following mortar wet on wet.

Dried-out or cured bonding agents are not effective and must be removed by blasting with blasting abrasive, then renewed.

Consumption approx. 1.9 kg/m²

4) Concrete repair

Apply StoCrete TG 203 to the fresh bonding agent. Apply with a mason's trowel, spatula, or square trowel.

Consumption: approx. 22 kg/m² per cm spalling depth/layer thickness (mixed and compacted material).

Compact in layers, then trowel off the surface without smoothing. This ensures that the fine filler applied afterwards can adhere.

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 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).

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).

Drying, curing, ready for next coat	At +20 °C and 65 % relative humidity, over-coatable with: StoCrete TF 200 or StoCrete TF 204 after 5 days
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Cleaning the tools	Clean tools with water immediately after use.
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Notes, recommendations,	For general application instructions, see www.stocretec.de (Products) and in the
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**special information,
miscellaneous**

latest issue of the "Technical Data Sheets" manual, in the appendix.

Delivery

Article number	Name	Container
00474-002	StoCrete TG 203	25 kg bag

Storage

Storage conditions Store in dry conditions.

Storage life Best quality in 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.
In the original container until ... (see packaging).

Certificates/approvals

Z-74.11-88	StoCretec PCC II.1 System National technical approval
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Identification

Product group Repair mortars

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.

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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