

Technical Data Sheet

StoCrete TG 254

Repair mortar, sulphate-resistant, polymer-modified, cementitious, layer thickness 12-50 mm



Characteristics

Area of application

- as concrete repair product for the repair of concrete structures (concrete and reinforced concrete)
- for extremely aggressive water, e.g. in wastewater management, wastewater treatment plants

Properties

- polymer-modified, cementitious concrete repair product (PCC / RM)
- very good adhesive strength on a concrete substrate
- very good application overhead
- very good non-sag properties
- provides highly effective protection when exposed to ice and salt
- resistant to water containing sulphuric acid, ammonium, and sulphate in line with exposure class XA3 in accordance with EN 206-1:2001-07

Information/notes

- product is in accordance with EN 1504-3
- class R 4
- as concrete repair mortar for extremely aggressive sulphate-laden water in accordance with DIN 4030-1:2008-06

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		4 mm	
Bond strength (28 days)	EN 1542	> 2,0 MPa	
Compressive strength	EN 12190	58 MPa	
Flexural strength	TP BE-PCC	10 MPa	
Static modulus of elasticity	EN 13412	21 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

Technical Data Sheet

StoCrete TG 254

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 EN 1504-10.

Preparation grade of the exposed reinforcing steel 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.

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
At +30 °C: approx. 45 minutes

Mixing ratio

25 kg of material in accordance with the description / 2.75 - 3.0 l water = 1.0 : 0.11 - 0.12 parts by weight

Material preparation

Compulsory mixer: decant water and add pre-blended dry mortar. Mix for approx. 2 minutes. Allow to mature for approx. 3 minutes. Remix for approx. 30 seconds.

If using hand-held paddle 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.

Consumption

Type of application

Approx. consumption

per mm layer thickness

2,0

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

Technical Data Sheet

StoCrete TG 254

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)
 - 3) Mineral bonding agent with StoCrete TH 250
 - 4) Concrete repair with StoCrete TG 254
 - 5) Fine filler using StoCrete TF 250
- Layer thickness: 12-50 mm, partially up to 100 mm
Higher layer thicknesses are possible due to multi-layer work.

Application

apply with a plastering trowel

1) Substrate preparation

2) Protection against corrosion

Immediately after derusting of the reinforcing steel in accordance with EN ISO 12944, Part 4, coating with StoCrete TK is carried out in two application cycles. The reinforcing steels are coated uniformly without gaps using a paint brush.

Waiting time between the two application cycles is 4.5 hours.

The protection against corrosion must be sufficiently hardened on the reinforcing steel so that it cannot detach from the reinforcing steel during the second application cycle.

First application cycle: StoCrete TK grey Consumption approx. 130 g/m one-time application Ø to 18 mm

Second application cycle: StoCrete TK light grey consumption approx. 140 g/m one-time application Ø to 18 mm

or

First application cycle: StoCrete TK grey consumption approx. 150 g/m one-time application Ø above 18 mm

Second application cycle: StoCrete TK light grey consumption approx. 160 g/m one-time application Ø above 18 mm

3) Mineral bonding agent

Sufficiently pre-wet the concrete substrate before applying StoCrete TH 250 (about 24 hours before the first application cycle).

However, when applying the product, the concrete substrate must be dry enough that it appears only slightly damp.

Apply the StoCrete TH 250 bonding agent using a suitable tool such as a paint brush or brush.

Remove any cured bonding agent by blasting abrasive and renew it.

Consumption approx. 1.9 kg/m² (dry material)

4) Concrete repair

StoCrete TG 254 is applied to the fresh bonding bridge. Apply with a mason's

Technical Data Sheet

StoCrete TG 254

trowel, spatula or square trowel. To ensure adhesive bond always work fresh in fresh.

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

Then roughly trowel off the surface without smoothing to ensure bonding to the subsequent smoothing filler.

- 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 3 days.

Note:
Chemical curing may only be carried out if the subsequent work is compatible with this.
It is not possible to achieve a uniform colour shade of the mortar surface for procedural reasons.
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.

Drying, curing, ready for next coat	At +20 °C and 65 % relative humidity, over-coatable with: StoCrete TF 250 after 5 days
Cleaning the tools	Clean tools with water immediately after use.
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.

Delivery

Packaging sack

Article number	Name	Container
00724-001	StoCrete TG 254	25 kg bag

Storage

Storage conditions Store in dry conditions.

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

Technical Data Sheet

StoCrete TG 254

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.

Identification

Product group Repair mortar

GISCODE ZP1

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.

StoCretec GmbH
Gutenbergstr. 6
D-65830 Kriftel

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