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 water management, wastewater treatment plants

Properties

- polymer-modified, cementitious concrete repair product (PCC), very good adhesive strength on the concrete substrate, good application overhead, high resistance to flow, high protection against stress from frost/de-icing 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/dm³	
Maximum particle size		4 mm	
Bond strength (28 days)	EN 1542	> 2.0 MPa	
Compressive strength (28 days)	EN 12190	58 MPa	
Flexural strength (28 days)	TP BE-PCC	10 MPa	
Static modulus of elasticity (28 days)	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 release agents, as well as from corrosion-promoting components (e.g. chlorides).

	Remove weak 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 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. 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 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 guide. If required, determine precise consumption values on the basis of the specific project.

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Coating build-up	1) Substrate preparation 2) Protection against corrosion with StoCrete TK (for 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 the reinforcing steel in accordance with DIN EN ISO 12944, part 4, coat with StoCrete TK in two application cycles. Coat the reinforcing steel completely and evenly using a paint brush. Waiting time between the two application cycles: 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 application cycle 2. Application cycle 1: StoCrete TK grey, consumption approx. 130 g/m single application Ø up to 18 mm Application cycle 2: StoCrete TK light grey, consumption approx. 140 g/m single application Ø up to 18 mm or Application cycle 1: StoCrete TK grey, consumption approx. 150 g/m single application Ø over 18 mm Application cycle 2: StoCrete TK light grey consumption approx. 160 g/m single application Ø over 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). At the time of application, however, the concrete substrate must be dry to the point that it just appears 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 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
subsequent treatment procedure:
a) cover with sheets or mats
b) spray with water
c) chemical subsequent treatment

Under normal conditions, the time for subsequent treatment to be observed is 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 Conformity can be obtained from the StoCretec Technisches InfoCenter General application instructions can be found at www.stocretec.de (Products) and in the latest issue of the "Technical Data Sheets" manual, in the appendix.

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). 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

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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 mortar

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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