

# Technical Data Sheet

## StoCrete TS 200

Wet mix sprayed mortar, polymer modified cementitious, layer thickness 6 – 20 mm



### Characteristics

- |                            |   |
|----------------------------|---|
| <b>Area of application</b> | <ul style="list-style-type: none"> <li>As a concrete repair product for the repair of concrete structures (concrete and reinforced concrete)</li> </ul>   |
| <b>Properties</b>          | <ul style="list-style-type: none"> <li>Polymer-modified, cement-bound wet spray mortar (SPCC),</li> <li>Good vertical application overhead</li> <li>High resistance against frost / de-icing salt stress</li> </ul> |
| <b>Information / Notes</b> | <ul style="list-style-type: none"> <li>Product is in accordance with EN 1504-3</li> </ul>   |

### Technical Data

Criteria	Standard / test specification	Value / Unit	Notes
Apparent density of fresh mortar	EN 1015-6	2.1 kg/dm <sup>3</sup>	
Maximum grain size		2 mm	
Tensile strength (28 days)	EN 1542	> 2.0 MPa	
Compressive Strength (28 days)	EN 12190	57 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 characteristic or dissimilar separating substances as well as from corrosion-promoting components (e.g. chloride). Less solid layers and slurry accumulations must be removed.

Damp in accordance with definition of the restoration guidelines 2001-10. The purity degree of the exposed reinforcement steel following substrate preparation: SA 2 ½ in accordance with EN ISO 8501-1.

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

Smallest individual tensile strength value is 1.0 N/mm<sup>2</sup>

#### Preparation

The substrate must be prepared by a suitable mechanical process such as blasting with solid abrasives, or high-pressure water jets (> 800 bar). Pores and shrinkage holes must be opened sufficiently

The edges of the areas of spalling must be bevelled under approx. 45°.

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Application					
<b>Application temperature</b>	Lowest application temperature: +5°C Highest application temperature: +30°C				
<b>Processing time</b>	At +5°C: approx. 45 minutes At +23°C: approx. 35 minutes At +30°C: approx. 15 minutes				
<b>Mixing ratio</b>	25 kg material in accordance with description 3.25 – 3.375 L of water = 1.0 : 0.13 - 0.135 parts by weight				
<b>Material Preparation</b>	Pour water into a container and then add the dry mortar material. Stir for approx. 2 minutes then allow to mature for approx. 3 minutes. Stir again for approx. 30 seconds. Important: regular consistency must be present after mixing.				
<b>Consumption</b>	<table border="1"> <thead> <tr> <th>Type of application</th> <th>Aprprox. Consumption</th> </tr> </thead> <tbody> <tr> <td>Per mm of layer thickness (without rebound)</td> <td>2.1 kg/m<sup>2</sup></td> </tr> </tbody> </table> <p>Material consumption depends on the application, substrate and consistency, amongst other factors. The specified consumption values are only to be used as a guide. If required, precise consumption values should be determined on the project</p>	Type of application	Aprprox. Consumption	Per mm of layer thickness (without rebound)	2.1 kg/m <sup>2</sup>
Type of application	Aprprox. Consumption				
Per mm of layer thickness (without rebound)	2.1 kg/m <sup>2</sup>				
<b>Coating Procedure</b>	<ol style="list-style-type: none"> <li>Surface preparation</li> <li>Corrosion protection with StoCrete TK (in case of exposed reinforcement).</li> <li>Concrete substitute with StoCrete TS 200</li> </ol> Layer thickness : 6 – 20 mm Higher layer thickness is possible with multi-layer work build-up.				
<b>Application</b>	By machine, with the dense flow method, Machine application <ol style="list-style-type: none"> <li><u>Surface preparation</u>                De-rust the exposed reinforcement steel in accordance with DIN EN ISO 12944-4 up to purity grade SA 2 ½.                The de-rusted reinforcement steel must be free from dust and grease.</li> <li><u>Corrosion protection</u>                Immediately after de-rusting the reinforcement steel in accordance with DIN EN ISO 8501-1 coat with StoCrete TK in three application cycles.                Coat the reinforcement steel completely and evenly using a brush.                 Waiting times between the three application cycles 4.5 hours. The corrosion protection must have hardened on the reinforcement steel to an extent that it cannot loosen from the reinforcement steel during the subsequent application cycle.               <ol style="list-style-type: none"> <li>Application cycle StoCrete TK grey:</li> <li>Consumption approx. 130 g/m for single application Ø up to 18 mm</li> <li>Application cycle StoCrete TK light grey:                    Consumption approx. 140 g/m for single application Ø up to 18 mm</li> <li>Application cycle StoCrete TK grey:                    Consumption approx. 130 g/m for single application Ø up to 18 mm</li> </ol> </li> </ol>				

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or

- a) Application cycle StoCrete TK grey:  
Consumption approx. 150 g/m for single application Ø over 18 mm
- b) Application cycle StoCrete TK light grey:  
Consumption approx. 160 g/m for single application Ø over 18 mm
- c) Application cycle StoCrete TK grey:  
Consumption approx. 150 g/m for single application Ø over 18 mm.

#### 3. Concrete substitute

The concrete foundation must be sufficiently wetted before applying the product (first time about 24 hours beforehand). At the time of application, however, it must be dry to the point it only just appears slightly damp.

Spraying process:

Convey the pre-mixed mortar with a rotor and stator pump using the dense flow procedure.

Compressed air is conducted to the spray nozzle for spraying to increase the spraying speed. The output is variable between 3 to max. 9 l/min.

The feed pressure is between 15 and a max of 40 bars at a feed range between 20 and a max. of 50 m and a clear tube diameter of 35 mm.

As a compressor, a device should be available with 7 m<sup>3</sup>/min. air performances at 3 bar pressure.

Before conveying the first material, wet the hoses inside and lubricate them with wallpaper paste.

Do not convey any diluted StoCrete TS 200 material, otherwise segregation will occur and there will be a danger of clogging.

The material should be sprayed from a tested nozzle guide which significantly affects the quality / rebound of the sprayed mortar due to its nozzle distance, spray direction, mortar and water quantity. Normal nozzle distance: 0.5 - 1.0 m.

#### 1. Layer approx. 50% of the overall layer thickness, leave with a rough spray surface.

The surface, if required, should be protected according to the climatic conditions against premature drying, possibly by hanging tarpaulins against wind and direct solar radiation.

Min./max. waiting times between the first and second spraying layer at +5°C: 1 - 2 hours, +20°C: 30 min - 1 hour, +30°C: 15 - 30 min.

When spraying the second layer, the first layer should still be slightly damp and free of separating substances. If the spray mortar surface is to be finished (rubbing down or smoothing), it is then necessary to spray a double layer to avoid bonding defects.

The surface of the second layer can be troweled off and rubbed down over templates. Please ensure that structural disorders and detachments from the substrate are avoided.

Surface finishing (troweling off and reaming) must be carried out immediately after spraying the last layer. Templates must be removed.

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Any construction joints that arise are to be reworked in accordance with DIN 1045, if necessary with sandblasting using oil-free compressed air for soiling and wetting to produce a homogenous mortar layer on completion of the spray application.

A key part of subsequent treatment is adequate wetting of 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 restoration guidelines.

**Cleaning Tools** Clean with water immediately after use, hardened material can only be removed mechanically.

### Delivery

**Packing** StoCrete TS 200 is available in 25 kg

### Storage

**Storage Life & Condition** This product has a shelf life of 12 months from the manufacturing date. Product should always be stored in an unopened bag, dry place, protected from rain, direct sunlight and raised off the floor.

### Special notes

**Health & Safety** Please refer to Safety Data Sheet

**Technical Support** Please consult the local sales office for further information and any site assistance required.

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 [www.sto-sea.com](http://www.sto-sea.com).

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