

# BS 225

## Construction mortar, coarse

**quick-mix**  
A trademark of **sievert**



### PCC and SPCC repair mortar for manual and spray application

acc. EN 1504-3

- certified according to ZTV-ING (part 3, section 4), DAfStb Rili-SIB M3, DAfStb Rili IH, Xstat. and EN 1504-3
- coating thickness: 10-50 mm
- compressive strength:
  - 1d:  $\geq 30 \text{ N/mm}^2$  (PCC) / not determined (SPCC)
  - 7d:  $\geq 40 \text{ N/mm}^2$  (PCC) /  $\geq 45 \text{ N/mm}^2$  (SPCC)
  - 28d:  $\geq 50 \text{ N/mm}^2$  (PCC) /  $\geq 55 \text{ N/mm}^2$  (SPCC)



### APPLICATIONS

- for structurally-critical applications
- and for non-structurally critical applications
- for repairs of concrete, prestressed concrete and steel-reinforced concrete structures with structural calculation of the mortar (DAfStb Rili SIB M3)
- for outdoor and indoor applications

### PROPERTIES

- reduces the penetration of  $\text{CO}_2$  and moisture
- also easy to process on vertical surfaces and overhead
- vapour diffusion permeable
- weather and frost resistant after hardening
- frost and de-icing salt-resistant

### SUBSTRATE

- Pretreatment**
- Prepare the substrate with quick-fix BS 215 corrosion protection and bonding bridge.
  - The application of quick-mix BS 225 repair mortar, coarse, is done "wet-in-wet" into the applied bonding bridge.

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### PROCESSING

<b>Temperature</b>	<ul style="list-style-type: none"><li>■ Do not process and allow to dry out at air, material and substrate temperatures below +5 °C and with expected night frost as well as above +35 °C, direct sunlight and/or strong wind.</li></ul>
<b>Mixing / Preparation / Processing</b>	<ul style="list-style-type: none"><li>■ Pour the amount of water specified in the technical data of approx. 2.5 l apart from a residual amount (approx. 0.5 l) into a clean and suitable mixing device (e.g. compulsory mixer). Add dry mortar and mix for approx. 3 minutes. Add the rest of the water and mix for another 2 minutes until homogeneous. Maximum amount of water: 3.0 l/25-kg bag.</li></ul>
<b>Applying</b>	<ul style="list-style-type: none"><li>■ <b>Manual application (PCC):</b> Introduce BS 225 repair mortar, coarse, into the freshly applied bonding bridge to make it firmly compacted and distribute and smooth it with normal work equipment.</li><li>■ <b>Machine application (SPCC):</b> The mortar can be sprayed on with conventional delivery worm pumps with a variable-speed gear unit, which are suitable for this application. Hold the spray nozzle at right angles to the sprayed surface as far as possible. Spacing approx. 50 cm. The first sprayed mortar layer is sprayed on with high compressed air power to assist the bonding bridge effect. The next sprayed layers are applied with a pumping speed adjusted to the corresponding position of the relevant building element and adjusted compressed air assistance. The surfaces can be gone over and smoothed off straight after completing the spraying work.</li></ul>
<b>Processing / Working time</b>	<ul style="list-style-type: none"><li>■ approx. 45 minutes</li><li>■ The stated times apply for a temperature of +20°C and relative humidity of 65%.</li><li>■ Mortar that has already started to harden must never be thinned down with additional water, remixed or applied.</li></ul>
<b>Drying / Hardening</b>	<ul style="list-style-type: none"><li>■ The fresh mortar is to be post-treated over a period of at least 3 - 5 days and be protected from drying out too quickly, e.g. due to wind, draughts or sunshine.</li></ul>
<b>Cleaning the tools</b>	<ul style="list-style-type: none"><li>■ Clean all tools and equipment with water immediately after use.</li></ul>
<b>Notes</b>	<ul style="list-style-type: none"><li>■ Only use the system components tested in the concrete repair system that have been matched with each other: BS 215 corrosion protection and bonding bridge; BS 225 repair mortar, coarse; BS 230 concrete filler, fine; BS 310 concrete finish, white</li></ul>

### PACKAGING

- 25 kg/sack

### STORAGE

- Store sacks appropriately and in dry conditions on pallets.

### QUANTITY REQUIRED / YIELD

- consumption: approx. 1.85 kg/m<sup>2</sup>/mm
- yield: app. 13.5 l fresh mortar per 25 kg/sack

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### TECHNICAL DATA

<b>Grain</b>	0 – 2 mm
<b>Water requirement</b>	approx. 2.5 l per 25 kg/sack
<b>Processing temperature</b>	+5°C up to +35°C
<b>Processing time</b>	approx. 45 minutes
<b>Fresh raw density</b>	approx. 2.2 kg/dm <sup>3</sup>
<b>Layer thickness</b>	10-50 mm (total layer thickness in 2 layers)
<b>Compressive strength (after 1 day)</b>	PCC: $\geq 30$ N/mm <sup>2</sup> / SPCC: not be determined
<b>Compressive strength (after 7 days)</b>	PCC: $\geq 40$ N/mm <sup>2</sup> / SPCC: $\geq 45$ N/mm <sup>2</sup>
<b>Compressive strength (after 28 days)</b>	PCC: $\geq 50$ N/mm <sup>2</sup> / SPCC: $\geq 55$ N/mm <sup>2</sup>
<b>Flexural strength (after 1 day)</b>	PCC: $\geq 4$ N/mm <sup>2</sup> / SPCC: not be determined
<b>Flexural strength (after 7 days)</b>	PCC: $\geq 5$ N/mm <sup>2</sup> / SPCC: $\geq 5$ N/mm <sup>2</sup>
<b>Flexural strength (after 28 days)</b>	PCC: $\geq 8$ N/mm <sup>2</sup> / SPCC: $\geq 8$ N/mm <sup>2</sup>
<b>Adhesive tensile strength on concrete</b>	$\geq 2.0$ MPa
<b>E-module (static)</b>	PCC: $\geq 30,000$ N/mm <sup>2</sup> / SPCC: $\geq 35,000$ N/mm <sup>2</sup>
<b>Exposure classes</b>	X0, XC1-4, XD1-3, XS1-3, XF1-4, XA1
<b>Fire behaviour</b>	A1 (non-flammable) in accordance with EN 13501

All data are average values that were determined under laboratory conditions according to relevant test standards and application tests. Deviations are possible under practical conditions.

### SAFETY AND DISPOSAL INSTRUCTIONS

<b>Safety</b>	<ul style="list-style-type: none"><li>■ This product produces an alkaline reaction when it comes into contact with moisture/water. Therefore ensure that skin and eyes are protected. If it should come into contact with the skin or eyes, rinse them thoroughly with water. See a doctor immediately if it comes into contact with the eyes.</li><li>■ Follow further instructions in the safety data sheet.</li></ul>
<b>GISCODE</b>	<ul style="list-style-type: none"><li>■ ZP1 (products containing cement, low-chromate)</li></ul>
<b>Disposal</b>	<ul style="list-style-type: none"><li>■ Completely empty and recycle the packaging.</li><li>■ Dispose of the material in accordance with the official regulations.</li><li>■ Dispose of hardened product in accordance with the local regulations. Do not allow to enter the sewer system. Dispose of the hardened product in the same way as concrete waste and slurries. Waste code according to the Ordinance on the European Waste Catalogue depending on the origin: 17 01 01 (concrete) or 10 13 14 (concretewaste and concrete slurries).</li></ul>

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### GENERAL INFORMATION

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This information sheet provides only general recommendations. Should you have any queries relating to a specific application, please contact our technical sales advisor or call our hotline: +49 541 601-601. All of the details given are based on our current knowledge and experience and on the assumption that the materials are professionally applied and used for their normal purpose. All of the details are non-binding and do not release users from their duty to undertake their own tests to ensure suitability for the intended application. Due to the effects of different weather, processing and construction site conditions, no guarantee can be given for the general validity of all details. We reserve the right to make changes as a result of further development of the product and applications engineering. The general rules for construction engineering, the valid standards and guidelines, and the technical working guidelines must be observed. The publication of this technical data sheet renders all previous editions of this data sheet void. Please obtain the latest information from our website.