

PRODUCT DATA SHEET

Sika MonoTop®-122 F BD

DUAL SHRINKAGE COMPENSATED, TROWELABLE FIBRE REINFORCED THIXOTROPIC REPAIR MORTAR

DESCRIPTION

Sika MonoTop®-122 F BD trowelable mortar is a dual shrinkage compensated, thixotropic high strength formulation for structural concrete repairs. Sika MonoTop®-122 F BD is suitable for placing in thicknesses of 5mm to 50 mm vertically and 5mm to 15 mm overhead.

USES

- Repair of spalling and damaged concrete in buildings, bridges, infrastructure and super structure works
- Use in horizontal, vertical and overhead applications without the need of formworks.
- Repairing concrete defects like pores, honeycombs and level irregularities.
- Use as high adhesion render, with high abrasion resistance, waterproof to protect, repair and maintain concrete structures.

FEATURES

- Easy to use (only to be mixed with water)
- Excellent workability
- Adjustable consistency
- Structural and Cosmetic repairs
- Applicable in layers up to 50 mm thickness (vertical surface)
- Good adhesion strength
- High abrasion, wear and impact resistance
- Ideal where the repairs are more than 5 mm
- Non corrosive, non toxic
- Increase resistance to salt water, chlorides and carbonation
- Sprayable - able to repair complex profiles easily with minimal rebound

PRODUCT INFORMATION

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|-----------------------|--|
| Composition | Cement, selected aggregates and additives |
| Packaging | 30 kg bag. |
| Appearance and colour | Grey powder |
| Shelf life | 6 months from date of production if stored as per recommendation. |
| Storage conditions | Store properly in undamaged original sealed packaging, in dry conditions at temperatures between +5°C and +40°C. |

TECHNICAL INFORMATION

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|----------------------|---------------------------------|----------|--------------|
| Compressive strength | 1 day | ≥ 20 MPa | (ASTM C 109) |
| | 7 days | ≥ 35 MPa | |
| | 28 days | ≥ 50 MPa | |
| | * Ambient Temperature : + 30 °C | | |

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|-------------------|--------------------------------|----------|-------------|
| Flexural-strength | 7 days | ≥ 6 MPa | (EN 196-1) |
| | 28 days | ≥ 8 MPa | |
| | * Ambient Temperature : +30 °C | | |
| Tensile strength | 7 days | ≥ 8 MPa | (ASTM C882) |
| | 28 days | ≥ 12 MPa | |
| | * Ambient Temperature: +30 °C | | |

APPLICATION INFORMATION

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|-------------------------|---|------------|----------|----------|
| Mixing ratio | Water : Powder = 0.15- 0.165 by weight (4.50 – 4.95 ltr of water per bag) | | | |
| Consumption | ~2200 kg/m ³ At Water: Powder ratio 0.16 | | | |
| Yield | 30 kg of product yields approximately 14 litres of mortar | | | |
| Layer thickness | | Horizontal | Vertical | Overhead |
| | Min. | 5 mm | 5 mm | 5 mm |
| | Max. | 50 mm | 40-50 mm | 15 mm |
| Ambient air temperature | +10°C min. / +40°C max. | | | |
| Substrate temperature | +10°C min. / +40°C max. | | | |
| Pot Life | ~ 20 minutes @ +20°C | | | |

BASIS OF PRODUCT DATA

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

IMPORTANT CONSIDERATIONS

- Avoid application in direct sun and/or strong winds.
- Do not add water over recommended dosage.
- Do not add additional water during the surface finishing as this will cause discoloration and cracking.
- Cure freshly applied material correctly and protect from freezing etc.

ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

Substrate Quality :

Concrete:

The concrete shall be free from dust, loose or friable material, surface contamination or other materials which reduce bond or prevent suction or wetting by repair materials.

Steel Reinforcement:

Rust, mild scale, mortar and concrete residues,

dust and other loose or friable material and other contamination which reduces bond shall be removed.

Pre- Treatment :

Concrete:

Delaminated, weak, damaged and deteriorated concrete and where necessary sound concrete shall be removed by suitable mechanical or very high pressure water-blasting techniques (up to 110 MPa). Tie wire fragments, nails and other metal debris embedded in the concrete should be removed. The edges around areas of concrete removal should be angle cut at a minimum of 90° to avoid undercutting and a maximum angle of 135° (with the top surface of the adjacent sound concrete), to reduce the possibility of de-bonding. They should then be roughened sufficiently to provide a mechanical key between the original material and Sika MonoTop®-122 F BD repair mortar.

Bonding primer:

On a well prepared and roughened substrate a bonding primer is generally not required. When a bonding primer is not required pre-dampen the surface to a saturated surface dry condition. The surface should not be allowed to dry before application of the concrete repair mortar. The surface should have a darkened matt appearance without glistening and the surface should not have free-standing water. When a bonding primer is necessary, apply Sika® Latex / Sikadur® 32 LP / Sika® Hibond- (Refer to the relevant Product Data Sheet). Pressed well on to the substrate.

In all cases, subsequent application of the repair mortar should be done 'wet on wet'.

Measured 'pull off' values - Structural Repairs minim-

um value 1.2 - 1.5 MPa; Non Structural repairs minimum value 0.7 MPa (Dependent on the strength of the concrete being repaired).

MIXING

Mix powder mechanically in the correct ratio with water with low speed (max. 500 rpm) electric drill to avoid entraining too much air. In case of 2 or more bags at once use forced action mixer. Put around 80 to 90% of required water in the mixing drum, followed by Sika MonoTop®-122 F BD and then add the balance water.

Don't use concrete tilting mixer.

Do not mix more material which cannot be used within Pot Life.

DO NOT ADD EXTRA WATER.

Mix for at least 3 minutes.

APPLICATION

Apply Sika MonoTop®-122 F BD manually using traditional techniques. When a bonding primer is used, ensure it is still 'tacky' when the repair material is pressed on ('wet on wet' technique). When applied manually, press the repair mortar firmly with a trowel, pushing it well on to the substrate.

Smoothing with trowel or finishing by Float or sponge can be done as soon as mortar has started to stiffen.

CURING TREATMENT

Protect the fresh mortar immediately from premature drying using an appropriate curing method e.g. curing compound, moist geotextile membrane, polythene sheet, etc.

CLEANING OF EQUIPMENT

Clean all tools and application equipment with water immediately after use. Hardened material can only be removed mechanically.

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data.

LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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Product Data Sheet

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