

Product Data Sheet
Edition 18/07/2007
Identification no:
02 03 02 04 001 0 000000
SikaTop®-122 HS

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Polymer modified one component repair mortar for hand and machine application

Product Description SikaTop®-122 HS is a pre-batched one component polymer modified repair mortar.

Uses ■ Repair of spalling and damaged concrete in buildings, bridges, infrastructure and superstructure works

Characteristics / Advantages

- Easy to use (only to be mixed with water)
- Structural and cosmetic repairs
- Can be applied up to 40 mm thick in vertical layers
- Good adhesion
- Suitable for hand and machine application by wet spray application

Product Data

Form

Appearance /Colour Grey powder

Packaging 25 kg bag

Storage

Storage Conditions/ Shelf-Life 6 months from date of production if stored properly in undamaged original sealed packaging, in dry conditions at temperatures between +5°C and +40°C.

Technical Data

Chemical Base Portland cement, polymer redispersable powder, selected aggregates and additives.

Density Fresh mortar density: ~ 2.09 kg/l at 27 °C

Grading 2.36 mm down

Mechanical / Physical Properties

Compressive Strength (According to ASTM C109)

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|---------|------------------------|
| 1 day | ~ 15 N/mm ² |
| 7 days | ~ 35 N/mm ² |
| 28 days | ~ 55 N/mm ² |



Flexural Strength

(According to ASTM C293-79)

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|---------|-----------------------|
| 7 days | ~ 3 N/mm ² |
| 28 days | ~ 5 N/mm ² |

System Information**Application Details**

Consumption Dependent on the substrate profile and the thickness of the layer applied. As a guide, ~ 1.9 kg of powder per m² per mm thickness.

Productiveness 1 bag yields ~13.5 litres of mortar.

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, mill scale, mortar and concrete residues, dust and other loose or friable material which reduces bond or contributes to corrosion shall be removed to a standard equivalent to SA2.5.

Substrate Preparation

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 SikaTop®-122 HS repair mortar.

Ensure sufficient concrete is removed from around embedded or exposed steel reinforcement to allow application of the anti corrosion coating when required and adequate compaction of the repair material.

Steel reinforcement:
Surfaces should be prepared using abrasive blast cleaning techniques or high pressure water-blasting techniques (up to 60 MPa).

Where exposed reinforcement is contaminated with chlorides or other material which may cause corrosion, the reinforcement should also be cleaned by low pressure water-blasting (up to 18 MPa)

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

Application Conditions / Limitations

Substrate Temperature +5°C min. / +40°C max.

Ambient Temperature +5°C min. / +40°C max.

Application Instructions

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| Mixing | ~ 3.25 litres of water for 25 kg powder |
| Mixing Time | Pour the water in the correct proportion into a suitable mixing container. While stirring slowly, add the powder to the water. Mix thoroughly for at least for 3 minutes to the required consistency. |
| Mixing Tools | SikaTop®-122 HS should be mixed with a low speed (< 500 rpm) hand drill mixer or for machine application, using a forced action mixer with 2 to 3 bags or more at once dependent on the type and size of mixer. In small quantities, SikaTop®-122 HS can also be mixed manually by hand. |
| Application Method / Tools | SikaTop®-122 HS can be applied either manually using traditional techniques or mechanically using wet spray equipment. When a bonding bridge is required, 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. Finishing with both hand and machine application, can be done with as soon as the mortar has started to stiffen. |
| Cleaning of Tools | Clean all tools and application equipment with water immediately after use. Hardened material can only be removed mechanically. |
| Potlife | +20°C : ~ 30 minutes |
| Notes on Application / Limitations | 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. |

Curing Details

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| Curing Treatment | Protect the fresh mortar from excess evaporation from the surface and early dehydration using the relevant curing method. |
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Value Base

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.

Health and Safety Information

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

