

PRODUCT DATA SHEET

SikaTop[®]-122 HS

POLYMER MODIFIED ONE COMPONENT REPAIR MORTAR FOR HAND AND MACHINE APPLICATION

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 INFORMATION

Chemical Base	Portland cement, polymer redispersable powder, selected aggregates and additives.
Packaging	30 kg Bag
Appearance / Colour	Grey Powder
Shelf Life	6 months from date of production if stored as per recommendations.
Storage Conditions	Store properly in undamaged original sealed packaging, in dry conditions at temperatures between +5°C and +40°C.
Bulk Density	~ 1.3 kg/l @ 27 °C

TECHNICAL INFORMATION

Compressive Strength	Ambient Temperature : +30 °C	ASTM C 109, 70mm Cube	
	1 day	7 days	28 days
	~ 20 N/mm ²	~ 35 N/mm ²	~ 55 N/mm ²
Flexural Toughness	Ambient Temperature : + 30 °C (Flexural Strength)	ASTM C 293-79	
	7 days	28 days	
	~ 3 N/mm ²	~ 5 N/mm ²	

APPLICATION INFORMATION

Consumption	~ 2100 kg/m ³ At Water : Powder ratio of 0.13
Ambient Air Temperature	+5 °C min/ +40 °C max
Substrate Temperature	+5 °C min/ +40 °C max
Pot Life	~ 30 min @ +20 °C

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.

Substrate 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 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) or by applying Sika® Rust off 100 to remove rust (Refer to the relevant Product Data Sheet)

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 / Sikadur® 32 LP / Sika® Hibond/ SikaTop Aramtec 110 EpoCem 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).

MIXING

Water : Powder = 0.13 by weight (3.9 l water per bag)
Mix for at least 3 minutes minimum

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 SikaTop®-122 HS 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.

APPLICATION

SikaTop®-122 HS can be applied either manually using traditional techniques or mechanically using wet spray equipment.

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.

Finishing with both hand and machine application should be done as soon as mortar has started to stiffen.

CURING TREATMENT

Protect the fresh mortar from excess evaporation from the surface and early dehydration using the relevant curing method.

CLEANING OF TOOLS

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

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.

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.

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.

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 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.

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