

PRODUCT DATA SHEET

Sika MonoTop® R

HIGH PERFORMANCE POLYMER MODIFIED REPAIR MORTAR

DESCRIPTION

Sika MonoTop® R is a one component, thixotropic, polymer modified, fibre reinforced, cementitious mortar containing silica fume.

USES

- Fast repairs to horizontal or vertical concrete or mortar surfaces above and below ground level
- Filling / repair mortar for voids, honeycombed areas, etc.
- Repair of spalled concrete caused by reinforcement corrosion
- Repairs with improved resistance to oils, sewage, chemicals, etc.

CHARACTERISTICS / ADVANTAGES

- Fast and easy to apply
- Requires only the addition of clean water
- Adjustable consistency
- Compatible with thermal expansion properties of concrete
- Chloride-free, non-corrosive
- Non-toxic
- Fibre incorporated to prevent micro crack
- Minimized shrinkage tendency
- High bond strength
- Greatly reduced water and carbon dioxide permeability
- Good sulfate resistance
- Improved resistance to oils and chemicals

PRODUCT INFORMATION

Packaging	25 kg bag
Appearance / Colour	Powder / Grey
Shelf life	Min. 6 months if stored properly in unopened, original packaging
Storage conditions	Dry, cool, shaded place
Density	~ 1.45 kg/l (bulk density of powder) ~ 2.15 kg/l (density of fresh mortar)

TECHNICAL INFORMATION

Compressive Strength	1 day	~ 15.0 N/mm ²	ASTM C-349/ C109
	28 days	~ 45.0 N/mm ²	
Tensile Strength in Flexure	~ 8 N/mm ² (28 days)		ASTM C-348
Tensile Adhesion Strength	~ 1.5 N/mm ² (on concrete surface with bonding bridge)		

APPLICATION INFORMATION

Mixing ratio	Water : Sika MonoTop® R powder = 1 : 7.15–7.40 (parts by weight) Water : Sika MonoTop® R powder = 1 : 4.95–5.10 (parts by volume) 3.40–3.50 L of clean water per 25 kg bag
Consumption	1 bag yields approx. 13.3 L of mortar Approx. 75 bags required for 1 (one) m ³ of mortar
Layer Thickness	Minimum 5 mm Maximum 30 mm
Substrate Temperature	+6 °C min. / +40 °C max.
Pot Life	~ 30 minutes (at 27 °C / 65 % r.H)

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

Surface preparation

All concrete and mortar substrate must be sound, clean and free from oil, grease and surface contaminants. All loose materials and surface laitance must be removed. For large areas, grit or grit-water blasting or scabbling is recommended. For small areas and for “spot” repairs, needle gunning or jack-hammering is effective. The concrete or mortar substrate must have a minimum compressive strength of 20 MPa. The prepared substrate should be thoroughly soaked with clean water until uniformly saturated but with no surface water. This condition is referred to as saturated surface dry and care should be taken to remove any cement slurry or dust produced during surface preparation. Steel reinforcements should have all traces of rust removed and be primed with two coats of Sika MonoTop®-610.

Priming

Concrete

Prior to the application of Sika MonoTop® R, Sika MonoTop®-610 should be applied as bonding bridge. Always work “wet on wet” on priming coats (refer to Sika MonoTop®-610 Data Sheet).

Reinforcement

Two coats of Sika MonoTop®-610 should be brush applied to the prepared steel (refer to Sika MonoTop®-610 Data Sheet).

MIXING

Sika MonoTop® R should be mechanically mixed in a clean container using a low-speed electric mixer (max. 500 rpm). Place quantity of water required (3.4–3.5 L for 25 kg of Sika MonoTop® R) into a clean container and then add Sika MonoTop® R slowly while mixing. A minimum mixing time of 3 minutes is recommended to thoroughly blends the components.

APPLICATION

Brush apply a bonding coat onto the saturated surface dry substrate.

Then, working wet-on-wet, work the mixed mortar well into the substrate using a rendering rather than a placing technique to fill all pores and voids. Compact well. Force material against the edge of the repair,

working towards the centre. For repairs in excess of 20 mm deep, apply in layers ensuring previous layers are well keyed and hardened. Finish lower layers with a heavy brush stipple to form a key for subsequent layers. If previous layers are over 48 hours old, needle gun the surface and dampen. Steel trowel the final coat if required.

CURING TREATMENT

To achieve the full potential of any cement based material, curing is essential. In warm or windy weather, the use of standard curing methods are necessary (use of polythene sheets or damp hessian) to prevent premature drying out of mortar.

CLEANING OF TOOLS

Remove non-hardened Sika Monotop products from tools and equipment with water. Hardened material can only be removed mechanically.

IMPORTANT CONSIDERATION

- Mix to a uniform consistency (no lumps). A small reduction in the water gives a stiffer mix.
- Repairs with Sika Monotop system cannot bridge live cracks or moving joints, etc.
- Repairs in excess of 20 mm deep must be layered as indicated above.
- Sika Monotop® mortars that are wetted during the initial cure period may produce a white “bloom” on the surface which does not affect the long term properties of the mortar.

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

Ecology: Water poluting

Transportation class: Non-hazardous

Waste disposal: According to local law

Important notes: Sika MonoTop® R is cement based and is therefore alkaline. Suitable precautions should be taken to minimize direct contact with the skin. If the material gets into the eyes, rinse immediately with clean water and seek medical attention.

The strength values mentioned are average values of laboratory tests.

The results on the site may vary due to different environment, curing conditions and testing.

Trials should be always conducted before application. Always refer to the latest updated product data sheet.

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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