

PRODUCT DATA SHEET

Sika MonoTop®-50 R

General Purpose, Shrinkage Controlled, Fibre-reinforced Patch Repair Mortar

DESCRIPTION

Sika MonoTop®-50 R is a single component, fibre reinforced, shrinkage controlled patch repair mortar.

USES

- Fast repairs to overhead, horizontal or vertical concrete or mortar surfaces above and below ground level
- Suitable for restoration work. Repair of spalling and damaged concrete in buildings, bridges, infrastructure and superstructure works
- Securing foundation and anchor bolts, pipe clips, sanitary wares, etc.
- Repair concrete conduits, tanks, drains, etc.
- Reprofile damaged corners of precast panels
- Repair of surface irregularities including exposed aggregates, joints between new and old concrete, protruding steel, tie-rod holes in formwork concrete, etc.

CHARACTERISTICS / ADVANTAGES

- Superior workability
- Suitable for hand application
- Can be applied up to 30 mm thick per application layer
- Very low shrinkage behaviour
- Low permeability
- Chloride free

PRODUCT INFORMATION

Packaging	25 kg bag
Appearance / Colour	Grey powder
Shelf Life	6 months from date of production
Storage Conditions	Store properly in original, unopened and undamaged sealed packaging in dry conditions. Keep away from water, rain and direct sunlight.
Maximum Grain Size	2.2 mm

TECHNICAL INFORMATION

Compressive Strength	1 day	~15 N/mm ²	(EN 12190)
	7 days	~40 N/mm ²	
	28 days	~50 N/mm ²	
Modulus of Elasticity in Compression	~24.7 GPa		(EN 13412, 2016)

SYSTEM INFORMATION

System Structure

Sika MonoTop®-50 R is part of the range of Sika mortars comprising of:

Bonding primer / Corrosion Protection

Sika MonoTop®-610 MY

Normal use

SikaTop® Armatec® 110 EpoCem®

Demanding requirements

Repair mortar

Sika MonoTop®-50 R

Hand applied repair mortar

Fairing coat

Sika MonoTop®-620 MY

Pore sealer and smoothing mortar

APPLICATION INFORMATION

Mixing Ratio

3.5–3.8 L of water for 25 kg powder

Fresh Mortar Density

~2.10 kg/l

Consumption

Depends on the substrate roughness and thickness of layer applied. As a guide, ~19 kg of powder per cm thick per m²

Yield

1 bag yields approximately 13.7 L of mortar

Layer Thickness

6 mm min. / 30 mm max.

Ambient Air Temperature

+6 °C min. / +40 °C max.

Substrate Temperature

+6 °C min. / +40 °C max.

Pot Life

~30 minutes at +23 °C

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

Concrete

The concrete shall be free from dust, loose material, surface contamination and materials which reduce bond or prevent suction or wetting by repair materials. Delaminated, weak, damaged and deteriorated concrete and where necessary sound concrete shall be removed by suitable means.

Steel reinforcement

Rust, scale, mortar, concrete, dust and other loose and deleterious material which reduces bond or contributes to corrosion shall be removed. Surfaces shall be prepared using abrasive blast cleaning techniques or high pressure water-blasting to SA 2 (ISO 8501-1).

Bonding primer

On a well prepared and roughened substrate, apply bonding primer, Sika MonoTop®-610 MY (refer to the relevant Product Data Sheet) or other equivalent product from Sika. Before applying bonding primer, pre-wet the substrate to saturated-surface-dry condition. The surface shall not be allowed to dry before application of the concrete repair mortar. The surface shall achieve a dark matt appearance without glistening and surface pores and pits shall not contain water. The bonding primer shall be applied well into the concrete substrate with a stiff brush.

Reinforcement coating

Where a reinforcement coating is required as a barrier

(e.g. in the case of insufficient concrete cover), apply two coats of Sika MonoTop®-610 MY (Refer to the relevant Product Data Sheet) to the entire exposed circumference of the reinforcement.

MIXING

Sika MonoTop®-50 R can be mixed with a low speed (< 500 rpm) hand-drill mixer fixed to a mixing paddle or using a force-action mixer, 2 to 3 bags or more at once depending the type and size of mixer. In small quantity, Sika MonoTop®-50 R can also be mixed manually using a trowel or scrapper in a clean container. Pour the water in the correct proportion into a clean mixing container. While stirring slowly, add the powder to the water. Mixed thoroughly for a minimum of 3 minutes, until the required consistency.

APPLICATION

Sika MonoTop®-50 R can be applied manually using traditional techniques. After applying bonding primer, ensure it is still tacky when the repair material is applied (wet on wet technique). Press the repair mortar with a trowel, working it well into the substrate. Finishing can be done with the relevant roughcast as soon as the mortar has started to stiffen.

CURING TREATMENT

Protect the fresh mortar from 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 mechanically removed.

IMPORTANT CONSIDERATIONS

- Refer to the Method Statement for Concrete Repair using Sika MonoTop® system for more information regarding substrate preparation
- Avoid application under direct sun and/or strong wind
- Apply only to sound and well prepared substrate
- Do not add additional water during the surface finishing phase as this will cause discoloration and cracking
- Protect freshly applied material from freezing

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 performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

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.

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

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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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