

PRODUCT DATA SHEET

Sika MonoTop®-612

CONCRETE REPAIR POLYMER CEMENT PATCHING MORTAR

DESCRIPTION

Sika MonoTop®-612 is a 1-component, polymer modified, containing silica fume, structural repair mortar meeting the requirements of KS F 4042.

USES

- Thick layer repair mortar for vertical and overhead applications
- Levelling of concrete and mortars surfaces before the application of coatings
- Restoration of concrete elements
- Filling joints between precast elements
- Repair of spalling and damaged concrete in buildings, bridges, infrastructure and superstructure works
- Increasing the bearing capacity of the concrete structure by adding mortar
- Increasing cover with additional mortar and replacing contaminated or carbonated concrete

CHARACTERISTICS / ADVANTAGES

- Easy to apply
- Ready to use, only need to add clean water
- High mechanical resistances
- Excellent bonding with concrete substrate
- Suitable for hand and machine application
- Excellent finishing
- Non- corrosive

APPROVALS / CERTIFICATES

Conforms to KS F 4042

PRODUCT INFORMATION

Composition	Cement, polymer, selected aggregates and additives
Packaging	25 kg bags
Appearance / Colour	Grey powder
Shelf life	12 months
Storage conditions	Store properly in undamaged original sealed packaging, in dry cool conditions
Density	Fresh mortar density 2.0 kg/L at +20 °C

TECHNICAL INFORMATION

Compressive Strength	~50 N/mm ²	(KS F 4042)
Tensile Strength in Flexure	~8.0 N/mm ² after 28 days	(KS F 4042)

Tensile Adhesion Strength	~1.5 MPa	(KS F 4042)
Capillary Absorption	~0.2 kg. m ⁻² .h ^{-0.5}	(KS F 4042)

SYSTEMS

System Structure	Sika MonoTop®-612 is part of the range of Sika mortars complying with the relevant part of European Standard KS F 4042 and comprising of:	
	Bonding Primer/ Reinforcement	
	Corrosion Protection	
	Sika Monotop®- 610	Normal Use
	Repair Mortar	
	Sika MonoTop®-612	concrete repair hand and machine applied
	Levelling Mortar	
	Sika Monotop®- 620	Normal use

APPLICATION INFORMATION

Mixing Ratio	4.0~4.5 litres (16~18%) of water for 25 kg powder	
Fresh Mortar Density	~2.0 kg/liter	
Consumption	This depends on the substrate roughness and thickness of layer applied. As a guide ~20 kg of powder per cm thick per m ²	
Layer Thickness	minimum 5 mm / maximum 40 mm	
Ambient Air Temperature	+5 °C minimum; +30 °C maximum	
Substrate Temperature	+5 °C minimum; +30 °C maximum	
Pot Life	Temperature	Time
	5 °C	60 min
	20 °C	30 - 40 min
	30 °C	15 -20 min

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

The concrete shall be thoroughly clean, free from dust, loose material, surface contamination and materials which reduce bond or prevent suction or wetting by repair materials. De-laminated, 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.

MIXING

Sika MonoTop®-612 can be mixed with a low speed (<500 rpm) hand drill mixer or for machine application, using a force action mixer 2 to 3 bags or more at once depending the type and size of mixer. Pour the recommended water in a suitable mixing container. While stirring slowly, add the powder to the water and mix thoroughly at least for 3 minutes to the required consistency.

APPLICATION

Bonding Primer:

On a well prepared and roughened substrate a bonding primer is generally not required for this product. When a bonding primer is required, refer to the **System Information** above for compatible Sika products and refer to the relevant Product Data Sheet for instructions.

Sika MonoTop®-612 can be applied either manually using traditional techniques or mechanically using wet spray equipment. Thoroughly pre-wet the prepared substrate a recommended 2 hours before application. Keep the surface wet and do not allow to dry. Before application remove excess water e.g. with a clean sponge. The surface shall appear a dark matt appearance without glistening and surface pores and pits shall not contain water.

When manually applying the mortar first make a scratch coat by firmly scrapping the repair mortar over the substrate surface to form a thin layer and fill any pores or pits in the surface. The surface can be finished according to the requirements using a float or with a relevant wooden or plastic float or damp sponge.

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 mechanically removed.

IMPORTANT CONSIDERATIONS

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

BASIS OF PRODUCT DATA

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

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for the exact product data and uses.

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 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.

Sika Korea Ltd.

135 gil 16, Nonhyun-ro
Gangnam-ku, Seoul, Korea
Tel : +82 2 6912 1500
Fax: +82 2 6912 1555
web: <http://kor.sika.com>



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