

Sika MonoTop®-610

Cementitious Steel Reinforcement Primer and Bonding Bridge

Product Description

Sika MonoTop® -610 is a one component cementitious, polymer modified primer for reinforcement protection and also a bonding bridge for MonoTop concrete repair mortars.

Uses

Sika MonoTop® -610 may be used to bond MonoTop concrete repair mortars to existing cementitious or steel substrates and provide additional corrosion protection to reinforcement in MonoTop concrete repair mortars especially in areas of low concrete cover and in the presence of chlorides.

Characteristics / Advantages

- Only requires mixing with water
- Active corrosion inhibitors for added protection
- Sprayable by wet spray method
- Adjustable consistency
- Suitable for drinking water contact

Tests

Approval / Standards

Approved for potable water contact as part of a system
Reinforcement corrosion protection according to EN 1504-7(2006),
DoP 02 03 02 02 001 0 000001.

Product Data

Form

Appearance /Colours Light Grey (Powder)

Packaging 25 kg & 10 kg bags

Storage

Storage Conditions/ Shelf-Life 12 months from date of production if stored properly in original unopened, sealed and undamaged packaging in dry and cool conditions.

Technical Data

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

Density Fresh mortar density: ~ 2.0 kg/l

Layer Thickness 0.5 mm min. / 1.0 mm max.



Mechanical / Physical Properties

Bond Strengths Concrete ~ 1.0 – 2.5 N/mm² Steel ~ 1.0 – 2.0 N/mm²

System Information

System Structure

Sika MonoTop® -610 is part of the Sika® MonoTop Concrete Repair System

Sika® MonoTop-610: Bonding primer and reinforcement coating

Sika® MonoTop-612: Hand and wet spray applied repair mortar

Sika® MonoTop-615: Hand and wet spray applied high build repair mortar

Sika® MonoTop-620: Smoothing coat

Sika® FerroGard®-903+: Corrosion inhibitor

Application Details

Consumption

This depends on the substrate roughness and thickness of layer applied.
As a guide,

Reinforcement Coating: ~ 2.0 kg/m² per coat

Bonding Primer: ~ 1.5 – 2.0 kg/m²

Substrate Quality

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.

Steel reinforcement
Rust, scale, mortar, concrete, dust and other loose and deleterious material which reduces bond or contributes to corrosion shall be removed to a minimum standard of SA2.

Reference should also be made to BS EN1504-10:2003 for specific requirements.

Substrate Preparation / Bonding Primer/ Reinforcement Coating

Concrete:
Delaminated, weak, damaged and deteriorated concrete and where necessary sound concrete shall be removed by suitable mechanical or very high pressure waterblasting [up to 110 mPa (16500 psi)] techniques.

Tying wire fragments, nails and other metal debris embedded in the concrete should be removed where possible.

The edges where concrete is removed should be cut at a minimum angle of 90° to avoid undercutting and a maximum angle of 135° to reduce the possibility of debonding with the top surface of the adjacent sound concrete and should be roughened sufficiently to provide a mechanical key between the original material and Sika MonoTop repair mortars.

Ensure sufficient concrete is removed from around reinforcement to allow coating and compaction of the repair material.

Steel reinforcement:
Surfaces should be prepared using abrasive blast cleaning techniques or high pressure waterblasting [up to 60 mPa (9000 psi)] techniques.

Where exposed reinforcement is contaminated with chloride or other material which may cause corrosion, the reinforcement shall be cleaned by low pressure waterblasting [up to 18 mPa (2700 psi)].

Bonding primer:
Pre-wet the concrete substrate. The surface should not be allowed to dry before application of the concrete repair mortar. The surface should achieve a dark matt appearance without glistening and surface pores and pits should not contain water.

Reference should also be made to BS EN1504-10:2003 for specific requirements.

Application Conditions / Limitations

Substrate Temperature +5°C min. / +30°C max.

Air Temperature +5°C min. / +30°C max.

Application Instructions

Mixing Water: Powder: 1:4.13 by volume
For brush application: 1:4.75 by weight (5.25 litres of water per 25 kg bag)
For spray application: 1:5 parts by weight, 1:4.35 by volume (5 litres of water per 25 kg bag)

Mixing Time Sika MonoTop® -610 can be mixed with a slow speed (< 500 rpm) electric drill mixer.

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 3 minutes to the required consistency.

Application Method / Tools**Reinforcement Corrosion Protection/Primer:**

Apply first layer approx. 1 mm thick, using medium hard brush or spray gun to the cleaned reinforcement. Apply 2nd layer when the first coat is fingernail hard (~2 - 3 hours at +20°C). If the second coat of Sika MonoTop® -610 is allowed to dry prior to repair mortar application, then a fresh coat must be applied.

Bonding Primer/Bridge:

Apply using medium hard brush or spray gun to prepared substrate. To achieve good bond, Sika MonoTop® -610 must be applied well into the substrate, filling all pores.

Reference shall be made to BS EN1504-10:2003 for specific requirements.

Cleaning of Tools

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

Potlife ~ 90 - 120 minutes (at +20°C)

Notes on Application / Limitations

Avoid application in direct sun and/or strong wind and/or rain.

Do not add water over recommended dosage.

Apply only to sound, prepared substrates.

Protect freshly applied material from freezing.

The bonding primer application also forms the second coat for the reinforcement coating.

Care should be taken to ensure continuous application behind the reinforcement bars.

When used as a bonding primer, the "grab" properties of the Sika MonoTop® -610 will reduce if it dries out before the repair mortar application. Repeat application if necessary.

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.

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.

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.

CE Labelling The harmonised European standard EN 1504-7 "Products and systems for the protection and repair of concrete structures – Definitions, requirements, quality control and evaluation of conformity – Part 7 Reinforcement Corrosion Protection" specifies the requirements for active barrier coatings for protection of existing uncoated steel reinforcement and embedded steel in concrete structures under repair.

Reinforcement corrosion protection used as repair of concrete structures under this specification – they need to be CE-labelled as per Annex Za.2, table Za.2 conformity 2+ and fulfil the requirements of the given mandate of the Construction Product Directives (89/106/EEC).

CE	
0086	
Sika Ltd Welwyn Garden City, Herts AL7 1BQ, UK	
09	
0086-CPD-541325 BS EN 1504-7 Reinforcement corrosion protection	
Corrosion protection	Pass
Dangerous substances	Comply with 5.3



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