

PRODUCT DATA SHEET

Sika MonoTop®-1010

Bonding primer and reinforcement corrosion protection cement based slurry containing recycled waste materials

PRODUCT DESCRIPTION

Sika MonoTop®-1010 is a 1-part, cementitious, polymer modified coating material used as bonding primer and reinforcement corrosion protection. It contains recycled waste materials which leads to a reduced carbon footprint compared to an equivalent performing mortar.

USES

Sika MonoTop®-1010 may only be used by experienced professionals.

- Bonding primer as part of a concrete repair system.
- Reinforcement corrosion protection as part of a concrete repair system.
- Suitable for control of anodic areas (Principle 11, method 11.1 of EN 1504-9).
- Interior and exterior use.

CHARACTERISTICS / ADVANTAGES

- Uses recycled waste materials.
- Easy to use, just add water.
- Good adhesion to concrete and steel.
- Good resistance to water and chloride penetration.
- Can be applied with a brush or by wet spray technique.

ENVIRONMENTAL INFORMATION

Conformity with LEED v4 MRc 2 (Option 1): Building Product Disclosure and Optimization – Environmental Product Declarations.

APPROVALS / STANDARDS

CE Marking and Declaration of Performance to EN 1504-7 - Product for reinforcement corrosion protection.

PRODUCT INFORMATION

| | | |
|-------------------------------------|---|---------------|
| Product Declaration | Pass | (EN 1504-7) |
| Chemical Base | Portland cement, cement replacement, re-dispersible polymer powder, selected aggregates and additives. | |
| Packaging | 12 kg recycled plastic pail 25 kg bag | |
| Shelf Life | 12 months from date of production. | |
| Storage Conditions | Product must be stored in original, unopened and undamaged packaging in dry conditions at temperatures between +5 °C and +35 °C. Always refer to packaging. | |
| Appearance / Colour | Grey powder. | |
| Soluble Chloride Ion Content | ≤ 0,01 % | (EN 1015-17)) |

TECHNICAL INFORMATION

| | | |
|--------------------------------------|------------------------------|------------|
| Compressive Strength | ~50 MPa after 28 days | (EN 12190) |
| Tensile adhesion strength | ~2,0 MPa after 28 days | (EN 1542) |
| Lap Shear Strength | Pass | (EN 15184) |
| Diffusion Resistance to Water Vapour | ~100 $\mu\text{H}_2\text{O}$ | |
| Lap Shear Strength | ~1200 μCO_2 | |
| Corrosion Test | Pass | (EN 15183) |

SYSTEM INFORMATION

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|--------------------|--|--------------------------|
| System Structure | Sika MonoTop®-1010 is part of the range of Sika Mortars and comprising of: | |
| | Bonding Primer/ Reinforcement Corrosion Protection | |
| | Sika MonoTop®-1010 | Reduced carbon footprint |
| | Repair Mortar | |
| | Sika MonoTop®-4012 | Reduced carbon footprint |
| | Smoothing/ levelling mortar | |
| Sika MonoTop®-3020 | Reduced carbon footprint | |

APPLICATION INFORMATION

| | | |
|--|---|---|
| Mixing Ratio | For brush application | ~5,25 L water (21 %) per 25 kg bag |
| | For spraying application | ~5,0 L water (20 %) per 25 kg bag |
| Fresh mortar density | ~2,0 kg/l | |
| Consumption | Bonding Primer | ~1,5–2,0 kg of powder per m ² per 1 mm layer thickness Depends on substrate roughness and thickness of layer applied. |
| | Reinforcement Corrosion Protection | ~2,0 kg of powder per m ² per 1 mm layer thickness. |
| Consumption depends on the roughness and absorbency of the substrate. This figure is theoretical and does not allow for any additional material due to surface porosity, surface profile, variations in level or wastage, etc. | | |
| Yield | ~14,3 L per 25 kg of powder | |
| Layer Thickness | Bonding primer: sufficient to coat the concrete surface in a thin layer filling pores and voids. Reinforcement: corrosion protection - 2 mm minimum thickness. | |
| Ambient Air Temperature | +5 °C minimum / +30 °C maximum | |
| Substrate Temperature | +5 °C minimum / +30 °C maximum | |
| Pot Life | ~90 minutes for 20 % water (machine applied) ~120 minutes for 21 % water (manual application) | |
| Waiting Time / Overcoating | Apply concrete repair mortar wet on wet onto bonding primer. Apply concrete repair mortar wet on dry onto reinforcement corrosion protection. | |

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.

FURTHER DOCUMENTS

- Sika Method Statement: Concrete Repair Using Sika MonoTop® System.
- EN 1504-7 - Reinforcement corrosion protection.

LIMITATIONS

- Avoid application in direct sun and/or strong wind and/or rain.
- Do not add water over recommended dosage.
- Apply only to stable, prepared substrates.

ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

Concrete

The concrete must be thoroughly clean, 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 must be removed by suitable means. Ensure sufficient concrete is removed from around corroded reinforcement to allow cleaning for corrosion protection (where required) and compaction of the repair material.

Steel reinforcement

Rust, scale, mortar, concrete, dust and other loose and deleterious material which reduces bond or contributes to corrosion must be removed. Surfaces must be prepared using abrasive blast cleaning techniques or high pressure waterblasting to Sa 2 (ISO 8501-1). Reference must be made to EN 1504-10 for specific requirements.

MIXING

Mix with a low speed (<500 rpm) electric single or double paddle mixer or by hand for small quantities. Pour the recommended water quantity in a suitable mixing container. While stirring slowly, add the powder to the water and mix thoroughly for at least for 3 minutes.

APPLICATION

Bonding primer

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 must appear a dark matt appearance without glistering. Surface pores and voids must not contain water. Using a suitable clean brush, roller or suitable spraying equipment, cover the substrate in a thin layer filling all unevenness, pits and voids.

Reinforcement corrosion protection

Using a suitable clean brush or spraying equipment, apply a first coat to cover the reinforcement bars ~1 mm thick. When first coat is finger nail hard, apply a second layer ~1 mm thick. If using a spray method, protect substrate from excessive over-spray. Wait until completely dry before applying repair mortar.

CURING TREATMENT

Reinforcement corrosion protection: protect fresh coating immediately from premature drying and contamination using an appropriate curing method.

CLEANING OF TOOLS

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

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.

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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