BUILDING TRUST

PRODUCT DATA SHEET

Sika MonoTop®-1010 ES

Cement-based bonding primer and reinforcement protection slurry containing recycled raw materials and corrosion inhibitors

DESCRIPTION

Sika MonoTop®-1010 ES is a 1-part, cementitious, polymer-modified coating material. It is used as bonding primer and as reinforcement corrosion protection. It contains corrosion inhibitors and recycled raw materials, resulting in a lower carbon footprint than a comparable mortar of equal performance.
Packaging made from recycled materials in its composition.

USES

As part of a concrete repair system, Sika MonoTop®-1010 ES is used as:
- Bonding primer on concrete surfaces
- Reinforcement corrosion protection
- Interior and exterior use

The Product may only be used by experienced professionals.

FEATURES

- Uses recycled raw materials
- Easy to use, just mix with water
- Good adhesion to concrete and steel
- Good resistance to water and chloride penetration
- Applied with a brush or by wet spray equipment

SUSTAINABILITY

- Contributes towards satisfying Materials and Resources (MR) Credit: Building product Disclosure and optimization — Environmental Product Declarations under LEED® v4
- Contributes towards satisfying Materials and Resources (MR) Credit: Building Product Disclosure and Optimization — Sourcing of Raw materials under LEED® v4
- Contributes towards satisfying Materials and Resources (MR) Credit: Building Product Disclosure and Optimization — Material Ingredients under LEED® v4

CERTIFICATES AND TEST REPORTS

- CE marking and declaration of performance based on EN 1504-7:2006 Products and systems for the protection and repair of concrete structures — Reinforcement corrosion protection
- CE marking and declaration of performance based on EN 1504-4:2004 Structural bonding products for bonded mortar or concrete for use in buildings and civil engineering works

PRODUCT INFORMATION

Composition	Portland cement, cement replacement, re-dispersible polymer powder, selected aggregates and additives
Packaging	4kg container made out of recycled materials
Shelf life	12 months from date of production
Storage conditions	The Product must be stored in original, unopened and undamaged packaging in dry conditions at temperatures between +5°C and +35°C. Always refer to the packaging

	Refer to the current Safety Data Sheet for information on safe handling and storage.	
Appearance and colour	Grey powder	
Soluble chloride ion content	≤0.01 %	(EN 1015-17)

TECHNICAL INFORMATION

Compressive strength	≥45 MPa after 28 days	(EN 12190)
Flexural-strength	≥8.5 MPa after 28 days	
Tensile adhesion strength	≥2.5 MPa after 28 days	(EN 1542)
Shear adhesion strength	Pass	(EN 15184)
Pull-out resistance	≥3.5 MPa after 28 days ≥3.0 MPa after 7 days	
Corrosion test	Pass	(EN 15183)

SYSTEM INFORMATION

System structure	Bonding primer / Reinforcement corrosion protection	Sika MonoTop®-1010 ES
	Repair mortar	Sika MonoTop® Range
	Smoothing / Levelling mortar	Sika MonoTop® or coatings Sika Range

APPLICATION INFORMATION

Fresh mortar density	2.0 kg/l	
Consumption	Bonding Primer	~1.5 – 2.0 kg of powder per m² per 1 mm layer thickness Depends on substrate roughness and thickness of layer applied
	Reinforcement Corrosion Protection	~2.0 kg of powder per m² per 1 mm layer thickness
	Note: Consumption data is theoretical and does not allow for any additional material due to surface porosity, surface profile, variations in level, wastage or any other variations. Apply the Product to a test area to calculate the exact consumption for the specific substrate conditions and proposed application equipment.	
Yield	4 kg of powder ~2.0 L of mortar	
Ambient air temperature	Maximum	+30 °C
	Minimum	+5 °C
Mixing ratio	Machine applied	0.84 L per 4 kg container (21 % water addition)
	Brush applied	0.8 L per 4 kg container (20 % water addition)
Substrate temperature	Maximum	+30 °C
	Minimum	+5 °C
Pot Life	~75 minutes at 20 °C	

Waiting time to overcoating	Apply concrete repair mortar wet on wet onto bonding primer. Apply concrete repair mortar wet on dry onto reinforcement corrosion protection.

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.

FURTHER DOCUMENTATION

Before using the product check the latest version of the method Statement Concrete Repair in our website

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 PREPARATION

CONCRETE

1. Clean the substrate thoroughly so it is free from dust, loose material, surface contamination and material which reduces adhesion, prevents suction or wetting by the repair materials.
2. Remove delaminated, weak, damaged and deteriorated concrete and, where necessary, sound concrete. Remove using mechanical hand-held tools, high or ultra-high-pressure water blasting equipment.
3. Remove sufficient concrete from around corroded reinforcement to allow cleaning, application of a corrosion protection coating (where required) and compaction of the concrete repair mortar.
4. Prepare repair surface areas in simple square or rectangular layouts to avoid shrinkage stress concentrations and cracking while the repair material cures. This can also avoid structural stress concentrations from thermal movement and loading during the service life.

STEEL REINFORCEMENT

1. Remove rust, scale, mortar, concrete, dust and other loose and deleterious material which reduces bond or contributes to corrosion.
2. Prepare surfaces to bright steel, Sa 2 (ISO 8501-1), using abrasive blast cleaning or high-pressure water blasting equipment.

MIXING

1. Pour the minimum amount of water into a suitable clean mixing container or equipment.
2. Gradually add the powder to the water while stirring slowly.
3. Mix thoroughly for at least for 3 minutes, add additional water if necessary. Note: Do not add more water than the maximum specified amount.
4. Adjust to the required consistency to achieve a smooth, consistent mix.
5. Check the consistency after every mix

APPLICATION

IMPORTANT

Strictly follow installation procedures

Strictly follow installation procedures as defined in Method Statements, application manuals and working instructions which must always be adjusted to the actual site conditions.

IMPORTANT

Risk of cracking due to exposure to frost

Protect freshly applied material from freezing and frost.

IMPORTANT

Risk of cracking due to application in direct sun or strong winds

Do not apply the Product in direct sun, strong winds or both.

IMPORTANT

Poor Product performance due to insufficient substrate pre-wetting

Insufficient substrate saturation prior to application will cause the mortar to not gain its full mechanical properties.

1. Only apply the Product to stable, prepared substrates.
2. Thoroughly pre-wet the prepared substrate for a minimum of 2 hours before application.
3. Keep the surface wet and do not allow to dry.
4. The final pre-wetted surface must achieve a dark matt appearance (saturated surface dry).

BONDING PRIMER APPLICATION

1. Remove excess water from within the surface pores and cavities with a clean sponge.
2. Use a brush, roller or spray equipment to apply the Product over the complete substrate surface to form a thin layer to fill surface pores or cavities.

REINFORCEMENT CORROSION PROTECTION

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

CURING TREATMENT

Protect fresh mortar immediately from premature drying using an appropriate curing method, such as curing compound, moist geotextile membrane or polythene sheet.

Do not use curing compounds if they could adversely affect subsequently applied products and systems.

CLEANING OF EQUIPMENT

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

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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