

PRODUCT DATA SHEET

Sika® MonoSeal-101

ONE COMPONENT OSMOTIC CEMENTITIOUS MORTAR FOR CONCRETE AND MASONRY WATER-PROOFING

DESCRIPTION

Sika® MonoSeal-101 is pre batched admix of special cements and aggregates, added with water-repellent and waterproof synthetic products, When mixed with water, it becomes a brushable paste with osmotic properties.

USES

Sika® MonoSeal-101 is suitable for stiff waterproofing on concrete, masonry and rendered substrates. Suitable in case of capillary rise from the ground or low-pressure water infiltration and for positive and negative waterproofing.

Sika® MonoSeal-101 white version is suitable for contact with drinking water according to Italian regulation DM n.174 - 6/04/2004.

Some typical examples of Sika® MonoSeal-101 waterproofing include the following:

- cellars and basements
- elevator shafts
- ground facing walls
- trenches and pits
- tanks and basins

CHARACTERISTICS / ADVANTAGES

Efficient, cost-effective waterproofing of existing structures

- Simple, easy application by brush
- Withstands the pressure developed by the rise of underground water or by the presence of stagnant water

SUSTAINABILITY

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

APPROVALS / CERTIFICATES

Approval for contact with drinking water according to Italian regulation: DM n.174 date 6/04/2004 - DL 131 date 2/02/2001

PRODUCT INFORMATION

Packaging	White:	20 kg bags
	Grey:	25 kg bags
Appearance / Colour	White (W) or grey (G) powder	
Shelf life	12 months from date of production	
Storage conditions	The packaging must be stored properly in original, unopened and undamaged sealed packaging, in dry and cool conditions.	
Density	Fresh mortar:	
	White:	1.9 - 2.05 kg/l
	Grey:	2.0 - 2.15 kg/l

TECHNICAL INFORMATION

Compressive Strength		7 days	28 days
	White:	≥ 20 MPa	≥ 25 MPa
	Grey:	≥ 25 MPa	≥ 30 MPa
Tensile Adhesion Strength	White:	~ 0.6 MPa	
	Grey:	~ 0.6 MPa	
Water Penetration under Pressure	Grey:	No penetration (1.5 bar / 7 days)	(EN 14891 A.7 method)
Water Penetration under Negative Pressure	White:	No penetration (2.5 bar)	(UNI 8298-8)
	Grey:	No penetration (2.5 bar)	

APPLICATION INFORMATION

Mixing Ratio	White:	5.4 - 5.8 l of water per 20 kg bag	
	Grey:	6.0 - 6.5 l of water per 25 kg bag	
Consumption	~1.5 Kg of Sika® MonoSeal-101 per square meter per millimeter. Reccomended thickness is 3mm.		
Flowability	White:	~ 210 mm	
	Grey:	~ 160 mm	
	Note: no shakes; +20°C, r.h. 50%; values depending on water amount used for the mix		
Consistency	Brushable / trowable paste		
Ambient Air Temperature	+5°C / +35°C		
Pot Life	White:	~ 60 minutes	
	Grey:	~ 45 minutes	
Waiting Time / Overcoating	max 2h (1h suggested, in case of wind or strong environmental conditions)		

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

Clean surfaces by sandblasting, high-pressure water-jetting (400 bar), wire-brushing, sanding on ceramic tiles, etc. in order to eliminate dust deposits, previous coatings, traces of grease, rust, form-removal agents, paintings, cement laitance and other substances which may harm Sika® MonoSeal-101 adhesion onto the substrate.

Repair concrete substrate, if necessary, with cementitious mortar from Sika MonoTop® or SikaRep® range or to eliminate all clacks, cavities, gaps between bricks, etc. and to smooth down all corners or sharp profile variation (floor and wall intersections, etc.) shaping them in the form of concave coves.

Dampen up to saturation of the underlying subgrade before applying Sika® MonoSeal-101; never apply the product in the presence of any amount of ponding water.

MIXING

Sika® MonoSeal-101 can be mixed using an electric low speed stirrer (~500 r.p.m.), adding the right quantity of water according consistency required. Once an homogeneous mix is obtained, still mix for 3-4 min;

the mortar must be homogeneous and grumes free. Don't add any further additive. Mix the whole bag, in order to avoid a dishomogeneous distribution of particles and aggregates.

APPLICATION

Mortar can be applied by brush, flat brush or soft-haired broom.

The first coat of product shall carefully penetrate in the dampened subgrade; work accurately on corners and edges. Generally 2 or 3 layers are required. Mortar coats should be laid off crossing them one on another.

Instruction for joints:

Corresponding to possible joints subject to limitate displacements and other critical zones (for instance interface with vertical surfaces), the waterproof layer must be reinforced by means of specific waterproofing tape Sika® Bandella RL120, applied by SikaCeram adhesive and then coated by Sika® MonoSeal-101. On structural joints (subject to high displacements) the use of Sikadur-Combiflex®-SG is mandatory.

CLEANING OF EQUIPMENT

Tools shall be thoroughly cleaned with water before material setting. Hardened mortar can be only mechanically removed.

IMPORTANT CONSIDERATIONS

- Sika® MonoSeal-101 cannot be applied at temperature below +5°C (temperature of both environment and substrate).
- Sika® MonoSeal-101 cannot be applied for waterproofing an oozing subgrade, because the mortar would be washed away prior to hardening.
- As all hydraulic-setting materials, Sika® MonoSeal-101 must be protected from fast evaporation.
- Being a waterproofing material, Sika® MonoSeal-101 can be neither overpainted with water-based paints nor plastered. Whenever required, overpaint it with a solvent-based lacquer.

For further details, apply to our Technical Service.

However, in order that osmotic cement treatment ensures good results under practical conditions, subgrade must be perfectly homogeneous, free from cracks, and not subject to any stains or settling displacement; moreover, subgrade cleaning must be very accurate, and material is to be laid in a strictly consistent layer thickness.

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 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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