

Maleki-SWP 270

Silicate waterproofing

Item-No.: 1312

Innovative waterproofing with high chemical resistance for canal and industrial construction. Waterproof up to 1.5 bar at a layer thickness of 4 mm.

Technical data

Mixing ratio	0.75 – 0.85 l water per 5 kg powder	Resistance	
Slurry	0.85 L	Salt water	after 7 days
Creamy	0.75 – 0.8 L	Chemicals	after 7 days
Compressive strength	≥ 35 N/mm ²	Flexural strength	approx. 4.5 N/mm ²
Processing temperature	min. +10 °C max +35 °C	Processing time at 20°C	approx. 35 min
Relative humidity	Max. 80%		
Single layer thickness	2 mm	Consumption per mm layer thickness	approx. 2 kg/m ²
Total application thickness	max. 4 mm (2 layers necessary)		
Loadability*	Curing at 20°C	Density	
Walkable	1 day	Bulk density	approx. 1.3 kg/dm ³
Water load	2 days	Fresh mortar density	approx. 2.0 kg/dm ³
Fully loadable	3 days		
Chemical load	7 days		

* In closed vessels without ventilation the loadability times could increase by 1 – 2 days depending on prevailing humidity.

Properties

- Silicate-Technology
- environmentally friendly
- mineral
- VOC – and APEO-free
- high chemical resistance at the range of pH 0 – 14
- sulfate resistant according to DIN 4030
- suitable for drinking water according to KTW-criteria
- suitable for bathing pool water according to KSW-criteria
- fulfils the requirements for discharge capability according to BGR 132
- salt water resistant
- waterproof up to 1.5 bar
- extreme high adhesion on substrate
- high surface hardness and abrasion resistance
- easy application even on wet substrates

Range of usage

- for indoor and outdoor use
- as waterproofing for building constructions against ground moisture and seeping or pressing water
- surface protection against aggressive chemicals in acid-proof installations, pipelines and wastewater pipes, laboratories, sewage plants, breweries, agricultural installations

Preparation of substrate

Prior to coating, ensure that the surface is stable and has sufficient surface tensile strength. The surface should also be ready for coating, dry or matt damp, clean and free from all kinds of debris. Mechanical surface preparation e.g. shot-blasting is recommended. Due to roughening the surface, the adhesion for the subsequent layer can be improved.

Deeper ruptures must be filled with Maleki-RM 500 or Maleki-VM 530. The surface should be permanently vibration-free and crack-free. Already existing cracks must be repaired professionally. The adhesive strength of the substrate must be at least 1.5 N/mm². Application of waterproofings for areas with water under pressure is only possible on concrete surfaces. Pre-wet absorbent surfaces until the surface is matt damp. Avoid puddles. In case of pressing water or acute leakages the substrate must be pre-filled before application of Maleki-SWP 270. Therefore, the specific spots are treated or filled with water stop cement to ensure sufficient curing of the subsequent waterproofing. In case of internal waterproofings against negative water pressure, the substrate must provide a sufficient bonding strength.

Rounding of edge areas

For rounding of wall-floor or wall-wall transitions use Maleki-DS 220 for preparation of coves. Please refer to the technical data sheet of Maleki-DS 220 for more information. All cove areas must be fully covered with two layers of Maleki-SWP 270 for a complete waterproofing and protection against damaging chemicals.

Mixing and application

Mix the material by using a mixing machine. First, add 0.75 – 0.85 liters of water per 5 kg powder material into the mixing container. Then, pour the powder inside while stirring. For applications with a hand-held mixer the Collomix mixing paddle KR 140 HF is recommended. By using the respective mixing paddle a proper thread adapter must be used if necessary. For mixing of partial quantities in smaller containers the mixing paddle KR 90 S for drilling machines is recommended. The material has to be mixed intensely for 1 minute.

In the beginning the mortar looks dry to semi-dry. After a setting time of 3 minutes the material is mixed again for 1 more minute. Mix only as much material as can be applied within 35 minutes. Maleki-SWP 270 must not be mixed with cement-based products. Do not mix Maleki-SWP 270 with any other liquid component except water.

Maleki-SWP 270 is applied in at least two layers. The single layer thickness for each layer is about 2 mm. The maximum thickness of the whole coating is 4 mm. In specific cases (very uneven substrates) it is possible to increase the maximum thickness up to 6 mm. A third layer of Maleki-SWP 270 has to be applied if necessary.

For optimal adhesion and for complete filling of the substrate to be coated the first layer is applied by fulling with a brush. Therefore, the material is mixed as a slurry. Each layer must have the minimum thickness of 2 mm across all points. The second coating is applied by trowel. If both layers are applied one after another, do not pre-wet the surface between application of each layer. Please refer to the table above for the required mixing ratio for each procedure.

Open Maleki-SWP 270 bags must be sealed airtight or have to be processed within 6 hours. For applications in higher layer thicknesses we recommend the use of Maleki-SBS 860.

Post-processing and coating protection

If smoothing of the surface is necessary after the end of the processing time, this step should be carried out without additional water.

The coating has to be protected from too quick drying (solar radiation, draft), frost and rain for 2 days. Do not cover the finished surface with foils or other materials. If Maleki-SWP 270 is applied in closed vessels without any air circulation, an additional ventilation or drying system is necessary. Otherwise there would be a danger of moisture condensation. In this case the loadability times of the mortar could increase by 1 – 2 days (see table).

For early loading (water and acid load) of new surfaces apply a protective layer of Maleki-VS 930 after one day. The-ready-to use mixture is applied in two steps. The consumption is approx. 50 g/m². The treated surfaces are loadable after one day. For further information about the application of Maleki-VS 930 please refer to the corresponding technical data sheet.

Tools and cleaning

Hand-held mixer, stirrer, brush, trowel.

All equipment should be washed clean and dried before and after application.

Packaging and shelf-life

3x 5 kg bags of mortar in a bucket.

Original packing is storable for 9 months in dry and controlled temperate areas (not below 0 °C, recommended 10 – 25 °C). Reseal opened containers immediately and use within a very short time.

Safety notes

Maleki-SWP 270 reacts alkaline with moisture/water. Avoid inhaling dust when opening packaging. Protect skin and eyes during the mixing process.

Please refer to the Material Safety Data Sheet which can be requested on www.malekigmbh.com for further information on safety during transportation, storage, handling and disposal. Follow instructions on the packaging.

Notes

Because of different properties of the substrates and the environment we cannot guarantee a uniform coloring. The appearance should be tested on a separate location if required. Therefore, this product is not suitable for decorative purposes.

Do not mix with cement-based products. Do not apply Maleki-SWP 270 on frozen substrates or in freezing conditions and do not apply during rain. Use structural measures such as expansion joints to prevent formation of cracks in buildings. An appropriate flexible or permanently elastic sealant must be used to waterproof joints. Usually the waterproofing is carried out on the water-facing side (positive stress). If an internal waterproofing of buildings is required (negative stress) - in particular, for renovation of existing buildings - the building structure must be able to withstand the water pressure.

The selection of a suitable waterproofing depends on the water load, the composition of the ground and the structural design. All these factors should be taken into account before starting work. Maleki-SWP 270 is a special-purpose product which requires previous work instructions before first use. The use of Maleki-SWP 270 is permitted up to an acid concentration of 5%.

The content of this technical data sheet corresponds to the latest development and our applications experience. All information is based on ideal conditions and therefore does not apply for every application purpose. Due to different materials, substrates and different actual site conditions no warranty is given for the customer's application. In particular, we assume no liability based on this information or any verbal statements. The only exception is when we can be blamed for the case of intent or gross negligence. In that case the customer has to prove that he has transmitted all required information completely and in a timely manner for a proper and promising evaluation by Maleki GmbH. Any further details regarding the application of our products have to be confirmed in writing by Maleki GmbH. The customer must test the product's suitability for the intended application and purpose. We reserve the right to change the product specifications due to the ongoing development. Apart from that our general terms and conditions are valid. This data sheet supersedes all earlier technical data on this product. The technical data sheet can be requested on www.malekigmbh.com.

Technical data sheet

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EN 1504-3:2005

Concrete protection and repair product for
statically non-relevant restoration.

EN 1504-3: ZA.1a

Compressive strength	Class R2
Chloride ion content	≤ 0,05 %
Adhesion	≥ 0,8 MPa
Impaired expansion	≥ 0,8 MPa
Carbonization resistance	NPD
Elastic modulus	NPD
Fire behavior	A1