Maleki-TPC 200

Silicate acid protection **Item-No.: 1310**

High performance and extreme acid resistant mortar for protection of mineral substrates in acid-proof installations or industrial areas. High chemical resistance according to DIN EN 12808.

Technical data

Mixing ratio Slurry Creamy	0.80 - 0.85 l water per 5 kg powder 0.85 – 0.95 L 0.80 L	**Color**	Grey
Processing temperature **Relative humidity**	min. +10 °C max +35 °C Max. 60%	**Processing time at 20°C**	approx. 45 min
Layer thickness	1.5 – 3 mm (in 2 layers)	**Consumption per mm**	approx. 1.8 kg/m²
Loadability /chem. resistance Walkable Fully loadable Water resistant	Curing at 20°C 1 day 7 days 9 days	**Density** Bulk density Fresh mortar density	 approx. 1.3 kg/dm³ approx. 2.0 kg/dm³

Properties

- Silicate-Technology
- environmentally friendly
- mineral
- VOC – and APEO-free
- extreme high chemical resistance at the range of pH 0 – 14 according to DIN EN 12808
- fulfils the requirements for discharge capability according to BGR 132
- salt water resistant
- extreme high adhesion on substrate according to DIN EN 1015
- fire-resistant up to 1350°C without cracks
- high surface hardness and abrasion resistance
- easy application

Range of usage

- for indoor use
- for protection against acids and abrasion on concrete surfaces and masonry
- extreme acid-proof installations
- pipelines and wastewater pipes
- laboratories
- breweries
- fire protection areas

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/mm. Pre-wetting of the substrate is not necessary and may cause poor adhesion and curing of the mortar.

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-TPC 200 for complete protection against damaging chemicals.

Mixing and application

Mix the material by using a mixing machine. First, add 0.80 – 0.95 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

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minute. Mix only as much material as can be applied within 45 minutes. Maleki-TPC 200 must not be mixed with cement-based products. Do not mix Maleki-TPC 200 with any other liquid component except water.
Maleki-TPC 200 is applied in at least two layers. The single layer thickness for each layer is about 1.5 mm. The maximum thickness of the whole coating is 3 mm. The consumption should be approx. 1.8 kg/m² per application. 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 1.5 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.
Apply a minimum of 2 layers within 4 hours. If the second layer has to be applied later, observe a waiting time of at least 4 days.

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.
After application the surface must be kept dry at 60% relative humidity and 20°C for 7 days and must be protected from direct sunlight for additional 2 days before it can be loaded with water. If the humidity is higher or the temperature is lower, the loadability times of the mortar will increase.
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-TPC 200 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

Maleki-TPC 200 is not suitable for exposed outdoor surfaces or on areas with permanent water load.

Do not mix with cement-based products. Do not apply Maleki-TPC 200 on frozen substrates or in freezing conditions and do not apply during rain. Use structural provisions such as expansion joints to avoid cracks in the coating. Sealing of joints has to be done with flexible or permanently elastic sealing materials. Maleki-TPC 200 is a special-purpose product which requires previous work instructions before first use.

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No. 1310 EN

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

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