

Maleki-VM 530

All-round pouring mortar

Item-No.: 1442

Shrinkage-free fast-setting mortar for construction. Hardens fast and with high early strength. Can be mixed with quartz sand for higher layer thicknesses.



Technical data

Early strength class	Class B ≥ 25 N/mm ²	Mixing ratio	max. 4.5 – 5.5 l water per 25 kg powder
Compressive strength		Flexural strength	
1 day	≥ 30 N/mm ²	1 day	≥ 4.5 N/mm ²
7 days	≥ 35 N/mm ²	7 days	≥ 9.5 N/mm ²
28 days	≥ 50 N/mm ²	28 days	≥ 13 N/mm ²
Processing temperature	min. +2 °C, max. +35 °C	Processing time at 20°C	approx. 10 min
Grain	0 – 0.5 mm	Consumption	approx. 2.0 kg per liter cavity
Loadability	after 30 min	Density	
		Bulk density	approx. 1.3 kg/dm ³
		Fresh mortar density	approx. 2.0 kg/dm ³

Properties

- Eco-Binder technology
- environmentally friendly
- mineral
- very low emission EMICODE EC 1^{PLUS}
- low in chromate according to DIN EN 196-10
- fast curing and tension-relieved
- highly resistant to mechanical stress
- waterproof up to 1.5 bar
- early loadable, high final strength
- good flowability
- easy application
- also processible by machine

Range of usage

- for indoor and outdoor use
- repairs on mineral surfaces in dry, damp and permanently wet conditions
- for under filling and encapsulation of bolts, foundation for machinery, crane rails, pillars and other steel constructions
- filling of construction joints between precast or precast slabs, basements ceiling tiles and soles
- repairs on defects in concrete, screed, masonry, natural and artificial stones
- force-locked crack repair
- quick creation of small point foundations
- suitable for work under time constraint

Product systems

- Industrial Flooring System
- Maleki-CP OS 8 (Car park coating)
- Lithokor Design floor
- Lithokor Terrazzo
- Acid protection
- General use: Substrate preparation for Maleki products

Preparation of substrate

Cavities and ruptures

Prior to filling or coating, ensure that the surface is stable and has sufficient surface tensile strength. The surface should also be ready for coating and must be dry or matt damp. Ensure that cavities, joint and crack edges are free of dust, cement, gypsum, bulk or clinging dirt. Edges should be free of oil and grease. New concrete or screed should have a minimum age of 28 days. The adhesive strength of the substrate must be at least 1.5 N/mm². Pre-wet the substrate before application until the surface is matt damp. Avoid puddles. In case of highly absorbent substrates use Maleki-TG 110 as primer. Observe drying times of the primer.

Force-locked crack repair

Prior to application it must be ensured that the crack width is not subjected to any further changes. Open the crack with a standard angle grinder or a suitable milling machine to a width of at least 3 mm (ideal: 5 mm). The cutting depth depends on the occurring crack pattern and on the respective floor. In case of floating or heated screed constructions, the height of the complete structure must be observed carefully. Improper cuts could lead to a damage of insulation panels or pipes of the installed underfloor heating system.

Afterwards apply vertical cuts at right angles to the opened cracks. Therefore, the floor is cut at a distance of 15 – 30 cm.

Also observe cutting depth for this step. Finally, all prepared cracks and slits must be vacuumed to remove all existing dust and mortar residues. Prior to filling with Maleki-VM 530 all cutting edges and parts of the surface next to the cuts must be pre-wetted like described above. In case of highly absorbent substrates and for better binding of fine dust it is recommended to prime the surface with Maleki-TG 110.

Please refer to the technical data sheet of Maleki-TG 110 for more information about priming.

Mixing and application

Cavities and ruptures

Mix the material by using a mixing machine. First, add 4.5 – 5.5 liters of water per 25 kg powder material into the mixing container. Then, pour Maleki-VM 530 inside while stirring. For manual applications the hand-held mixer BSM 2882 by Baier Tools and the Collomix mixing paddle DLX 152 HF are recommended. By using the respective mixing paddle a proper thread adapter must be used. For mixing of partial quantities in smaller containers the mixing paddle DLX 90 S for drilling machines is recommended. The material has to be mixed intensely for 2 minutes. Remove adhering powder residues from the mixing container.

Mix again until a uniform, lump-free mortar is formed. After mixing pour Maleki-VM 530 into prepared cavities or ruptures without any interruptions and spread evenly. The edges of the fresh mortar can be treated with a damp sponge after the end of the processing time to ensure uniform transitions to the surround material. Possibly used shuttering formwork should be airtight and non-absorbent.

For deeper ruptures Maleki-VM 530 can be mixed with coarse quartz sand. Therefore, 12.5 kg of Maleki-VM 530 are mixed with 2.5 – 2.75 L of water. The material is mixed according to described mixing procedure. After dissolution of all powder particles mix in 12.5 kg of quartz sand (grain size: 1 – 4 mm) while stirring. Total mixing time is about 2 minutes.

Force-locked crack repair (Crack width 5 mm)

For filling of cracks Maleki-VM 530 is mixed with 5.5 L of water per 25 kg powder material. The material is mixed according to the described mixing procedure. Pour the fresh mortar into the prepared slits within the given workability time. Fill all cuts to the top edge of the floor. Smooth the surface with a trowel/spatula as required to distribute existing excess material evenly.

The fresh surfaces can be re-coated after 30 minutes (at 20°C) for both applications described in this section. Depending on the ambient temperature and relative humidity the specified waiting time may vary.

Tools and cleaning

Hand-held mixer, stirrer, trowel, spatula, sponge.

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

Packaging and shelf-life

25 kg paper bag

Original packing is storable for 6 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.

Associated products

Maleki-TG 110 Item-No. 1110

Maleki-VM 530 Item-No. 1442

Safety notes

Maleki-VM 530 contains cement and 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.

Relevant regulations and fact sheets

When applying Maleki-VM 530 and subsequently reworking it with other coverings, the following regulations and fact sheets must generally be observed, unless otherwise specified in this technical data sheet:

Maleki data sheets

Lithokor Installation Manual for design floors

Lithokor Installation Manual for Terrazzo

System Installation Manual – Industrial Flooring System

System Installation Manual – Maleki-CP OS 8

Notes

Do not use mortar under +2 °C or more than +35°C. Do not use on frozen surfaces, frost, very high temperatures and wind or in connection with heating- or warm-water tubes or even different surface temperatures like solar irradiation.

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.