

## Maleki-IFS 500

### Special Industrial Floor System

Item-No.: 1435

Self-leveling industrial floor for high chemical and thermal load. Hardens fast and tension-relieved with a layer thickness of 2 – 50 mm.



### Technical data

<b>Strength class</b>	CT-C50-F10 according to DIN EN 13813	<b>Mixing ratio</b>	4.5 l water per 25 kg powder
<b>Abrasion resistance according to Böhme</b>	A12	<b>Strength</b>	Compressive strength approx. >50 N/mm <sup>2</sup> Flexural strength approx. >10 N/mm <sup>2</sup>
<b>Processing time at 20°C</b> <b>Processing temperature</b>	approx. 35 min Min. +5 °C, max. +35 °C	<b>Slip resistance</b>	Without quartz sand R 10 With quartz sand R 13
<b>Application thickness</b>	2 – 50 mm	<b>Consumption</b>	approx. 2.0 kg / m <sup>2</sup> and mm layer thickness
<b>Loadability</b>	Curing at 20°C after 6 hours	<b>Density</b>	Bulk density approx. 1.1 kg/dm <sup>3</sup> Fresh mortar density approx. 2.2 kg/dm <sup>3</sup>
Walkable / Ready for covering			
Light load	1 day		
Fully loadable	4 days		
Fully loadable in exterior areas	7 days		

### Properties

- Eco-Binder technology
- environmentally friendly
- mineral
- very low emission EC 1<sup>PLUS</sup> R
- fast curing and tension-relieved
- waterproof up to 2.5 bar
- salt water resistant
- high resistance against chemicals
- fulfills the requirements for discharge capability according to DIN EN 61340-5-1
- fire-resistant up to 700°C
- high abrasion resistance
- easy application
- also processible by machine

### Range of usage

- for indoor and outdoor use
- for revision of cementitious substrates
- as coating for areas with high mechanical and chemical load like garages, warehouses, production areas, airports and power plants
- applicable in layer thicknesses of 2 – 50 mm, for larger areas a layer thickness of approx. 3 – 5 mm is recommended

### 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-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<sup>2</sup>. The substrate has to be dry for priming, and dried for 2 hours after priming with Maleki-TG 110. By priming the surface, the absorbency of the substrate is adjusted. This avoids the rising of air bubbles during the subsequent coating. In order to guarantee this on critical undergrounds, a test area of 1m<sup>2</sup> should be created. Apply a further layer of primer if necessary. The coating work on the primer has to be finished within 6 hours. Please refer to the technical data sheet of Maleki-TG 110 for more information. The edge joint must be prepared with a suitable expansion strip. Thereby attention must be paid to a clean adhesion to avoid material flowing below or behind the expansion strip. Expansion joints must be adopted. After finishing all coating works, all joints have to be filled with a permanently elastic compound. Transitions and closing edges should be protected against over- flow by installing end rails. For coatings on tiled floors the surface has to be pre-leveled with Maleki-IFS 500. For this purpose, Maleki-IFS 500 is applied by a toothed spatula or a screed rake. The layer thickness above the tile surface should be at least 1 mm. The joint profile

# Technical data sheet

TM IFS 500\_en - Version 3.4  
Revision: 10.08.2020



has to be fully covered. After curing time of approximately 6 hours the surface can be primed with Maleki-TG 110. The application of the primer with all respective waiting times has to be handled according to the normal substrate preparation. Due to the application on tiled floors attention should be paid to a crack-free underground. Loose tiles and tiles over cavities must be removed. For simultaneous work on various substrates with changing absorbencies the surface has to be pre-leveled to maintain a uniform coloring of the mortar. For this purpose, Maleki-IFS 500 is applied by a toothed spatula or a screed rake on the primed surface. The layer thickness should be 1 mm above floor level. All further procedures for application of the actual coating are done according to the coating of tiled floors.

## Mixing and application

### Manual mixing

Mix the material by using a mixing machine. First, add 4.5 liters of water per 25 kg powder material into the mixing container. Then, pour Maleki-IFS 500 inside while stirring. For applications on slopes the water amount can be reduced to 4.25 l. For applications with a hand-held mixer the Collomix mixing paddle DLX 152 HF is recommended. By using the respective mixing paddle, a proper thread adapter has to be used if necessary. 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, left to set for 2 minutes, and then mixed again for 1 more minute. Single mixing batches must be mixed fast and uniform. The material has to be poured out seamlessly within the workability time. With manual processing an aeration time of up to 5 minutes has to be maintained between the end of the mixing time and application of the material. This minimizes rising of air bubbles within the poured material. After mixing, apply Maleki-IFS 500 onto the primed surface and distribute it with a pin leveler to the intended thickness. In order to avoid processing marks in the fresh surface do not use a conventional trowel. For optimal leveling of the fresh mortar and to maintain the flatness tolerances according to DIN 18202 it is recommended to use a layer thickness of approximately 3 – 5 mm for larger areas. Thereby the required layer thickness depends on the surface quality of the substrate which has to be coated. Use a thin spiked roller on the freshly laid mortar for better adhesion and texture. Consider the spikes to be long enough. Alternatively, use a surface scraper to smoothen the surface. The coating has to be protected from too quick drying (solar radiation, draft), frost and rain for the 1<sup>st</sup> 24 hours. Do not cover the finished surface with foils or other materials.

### Application on larger areas

It is recommended to use bigger mixing devices or mixing pumps for larger areas:

- > 50 m<sup>2</sup>: Mega Hippo self-leveling compound mixer by Portamix
- > 300 m<sup>2</sup>: Continuous mixing pump duo-mix 2000 by m-tec or comparable mixing system.

For more information about the listed machines and the respective application please refer to the current installation manual for industrial floors.

## Tools and cleaning

Hand-held mixer or mixing device, stirrer, trowel, pin leveler, surface scraper, spiked roller and spiked shoes.

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

## Post-processing and coating protection

To achieve a higher abrasion resistance or chemical resistance we recommend a combined application of Maleki-DW 100 and Maleki-LL 100. For a complete sealing we recommend the use of Maleki-VS 930. Please refer to the respective data sheets for more information.

## Packaging and shelf-life

25 kg paper bag

Original packing is storable for 12 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

There is no mandatory hazard labeling for Maleki-IFS 500. 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](http://www.malekigmbh.com) for further information on safety during transportation, storage, handling and disposal. Follow instructions on the packaging.

## Notes

Some minor color differences are inevitable due to different production batches. This should be taken into account while performing work. It is necessary to work on designated sections with the same batch (see label) if a uniform color is desired. Due to different water addition during application or changing working techniques light color shades in the coating surface can occur. Please take note that this coating is a mineral product. Product colors are not fully conformed to the RAL-Map and therefore they should only be seen as estimated classifications.

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](http://www.malekigmbh.com).

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TM IFS 500\_en - Version 3.4  
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**EN 13813**

**EN 13813 CT-C50-F10-A12**

Self-leveling industrial floor for high chemical and thermal load. Hardens fast and tension-relieved with a layer thickness of 2 – 50 mm.

Fire behavior	A1
Compressive strength	C50
Flexural strength	F10
Release of corrosive substances	CT