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MAPEFLOOR I 910

Two-component low-yellowing epoxy binder for making resin mortar screeds



WHERE TO USE

Mapefloor I 910 is used as an adhesion promoter and low-yellowing binder when mixing resin mortar with consistency similar to a mortar screed.

Some application examples

- Binder for epoxy mortar used to repair and/or form protective coatings on industrial floors.
- Adhesion promoter for floors made from synthetic mortar.

TECHNICAL CHARACTERISTICS

Mapefloor I 910 is a two-component epoxy resin-based binder according to a formula developed in the MAPEI R&D laboratories. It is used to mix mortar with a consistency similar to a mortar screed to form protective and decorative coatings on resin mortar screeds and to repair old floors.

Mapefloor I 910 complies with the principles defined by EN 13813 "Screed material and floor screeds - Screed material - Properties and requirements", which specifies the requirements for screed material to be used for installing internal floors.

RECOMMENDATIONS

- Do not apply **Mapefloor I 910** on damp substrates or on substrates with capillary rising damp (please contact our Technical Service).
- Do not dilute **Mapefloor I 910** with solvent or water.
- Do not apply **Mapefloor I 910** on dusty or crumbling substrates.
- Do not apply **Mapefloor I 910** on substrates with oil or grease stains or stains in general.
- Do not mix partial quantities of the components to avoid mixing errors; the product may not harden correctly.
- Do not expose the mixed product to sources of heat.
- Even though **Mapefloor I 910** is low-yellowing, coatings made from this product may change colour or fade if exposed to sunlight but this has no effect on its performance characteristics.
- The colour and finish of the coating may also change if it comes into contact with aggressive chemicals. A change in colour, however, does not mean that it has been damaged by the chemical.
- If rooms where the product is being used need to be warmed up, do not use heaters that burn hydrocarbons, otherwise the carbon dioxide and water vapour given off into the air will affect the shine on the finish and ruin its appearance. Use electric heaters only.
- Remove aggressive chemicals as soon as possible after they come into contact with **Mapefloor I 910**.
- Use suitable specific cleaning equipment and detergent to clean the product, depending on the type of dirt or stain to be removed.
- Protect the product from water for at least 24 hours after application.
- Only apply **Mapefloor I 910** on substrates that are perfectly dry.
- The temperature of the substrate must be at least 3°C higher than the dew-point temperature.

APPLICATION PROCEDURE

Preparation of the substrate

The surface of concrete floors must be dry, clean and sound and have no crumbling or detached portions. The compressive strength of the substrate concrete must be at least 25 N/mm² and its tensile strength must be at least 1.5 N/mm². The strength of the substrate must also be suitable for its final use and the types of load to which it will be subjected.

Cementitious substrates must be dry and there must be no capillary rising damp (check by testing it with a sheet of polythene).

The surface of the floor must be prepared with a suitable mechanical process (e.g. shot-blasting or a diamond grinding wheel) to remove all traces of dirt and cement laitance and crumbling or detached portions, and to make the surface slightly rough and absorbent. Before applying the coating, remove all dust from the surface with a vacuum cleaner.

Any cracks must be repaired by filling them with **Eporip**, while any deteriorated areas of the concrete must be repaired with epoxy mortar made from **Mapefloor I 910** and quartz sand.

Before applying **Mapefloor I 910**, remove all traces of dust from the surface with a vacuum cleaner.

Preparation of the product

The two components which make up **Mapefloor I 910** must be blended together just before application. Mix component A thoroughly and add the contents of component B. Mix again with an electric mixer at low speed (300-400 revs./min) for at least 2 minutes until the mix is completely blended.

Pour the mix into a clean container and briefly mix again.

Do not mix the product for too long to prevent entraining too much air into the mix.

Apply the mix within the pot life indicated in the table (refers to a temperature of +20°C). Higher surrounding temperatures will reduce the pot life of the mix, while lower temperatures will increase its pot life.

Use the product as a primer or add a mixture of graded spheroid sand to the mix as soon as it has been prepared, such as **Quartz 1.9** or coloured quartz sand or aggregates at a resin : sand ratio of 1 : 8 - 1 : 10 by weight up to a maximum of 1 : 13, and mix again to form a consistency similar to screed mortar. We recommend using a vertical mortar mixer for this operation.

Application of the product

Apply 1-2 coats of neat **Mapefloor I 910** with a roller on the surface to be treated until the pores are completely saturated and there is a thin, even film of resin binder on the surface.

Pour the resin mortar prepared as above on the product while it is still wet and spread the mortar over the surface in an even coat using an aluminium straight edge and suitable spacers to form the required thickness. While the mix is still wet, compact and smooth it over the surface with a power floater with suitable blades or manually with a smooth straight trowel. The thickness of the spacers must be approximately 20% more than the final thickness of the coating to compensate for the drop in the level of the mortar during the compacting and smoothing process.

The surface will be porous after this phase. To form a washable, impermeable surface, apply at least two coats of **Mapefloor I 910** to fill and seal the pores. To form a non-slip effect, broadcast the first coat with a suitable grade of quartz sand.

CLEANING

Clean tools used to prepare and apply **Mapefloor I 910** with alcohol immediately after use. Once hardened, the product may only be removed using mechanical means.

CONSUMPTION

Primer and adhesion promoter for resin mortar:

1-2 coats

Mapefloor I 910 0.5-0.7 kg/m² per coat

Binder for epoxy mortar:

Mapefloor I 910 + 0.15-0.17 kg/m² per mm of thickness

Quartz sand* 1.5-1.7 kg/m² per mm of thickness

* considering a filler rate of 1 : 10 in weight.

Finishing coat:

1-2 coats

Mapefloor I 910 0.3-0.5 kg/m² per coat

The consumption rates above are for indication purposes only and are influenced by the condition of the surface to be treated, the roughness and absorbency of the substrate, the type of sand used to mix the epoxy mortar and its porosity after compacting, the actual conditions on site, etc. We recommend carrying out preliminary tests with the sand and relative filler rates that will actually be used on site.

PACKAGING

15 kg kits: component A = 10 kg; component B = 5 kg.

STORAGE

Mapefloor I 910 may be stored for 24 months in its original packaging in a dry place and at a temperature of between +5°C and +30°C.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Mapefloor I 910 component A is irritant for the eyes and skin. **Mapefloor I 910** component B is corrosive and it may cause burns and damage to the eyes. Furthermore, it is hazardous if swallowed. Both component A and B may cause sensitization when in contact with the skin of those predisposed. The product contains low molecular weight epoxy resins that may cause sensitization if cross-contamination occurs with other epoxy compounds.

When applying the product, it is recommended to wear protective gloves and goggles and to take the usual precautions for handling chemicals. If the product comes in contact with the eyes or skin wash immediately with plenty of water and seek medical attention. When the product reacts it generates considerable heat. After mixing components A and B we recommend applying the product as soon as possible and to never leave the container unguarded until it is completely empty.

Furthermore, **Mapefloor I 910** component A and B are dangerous for aquatic life. Do not dispose of them in the environment.

For further and complete information about the safe use of our product please refer to the latest version of our Material Safety Data Sheet.

PRODUCT FOR PROFESSIONAL USE.

TECHNICAL DATA (typical values)		
PRODUCT IDENTITY		
	component A	component B
Colour:	neutral	straw-yellow
Appearance:	liquid	liquid
Density (g/cm ³):	1.20	0.99
Viscosity at +23°C (mPa·s):	1.500 ÷ 2.000 (# 2 - rpm 10)	200 ÷ 300 (# 2 - rpm 50)
APPLICATION DATA (at +23°C and 50% R.H.)		
Mixing ratio:	component A : component B = 2 : 1	
Colour of mix:	transparent, straw	
Consistency of the mix:	thick fluid	
Dry solids content (%):	approx. 100	
Density of the mix (kg/m ³):	1,100	
Viscosity of the mix (mPa·s):	900 ÷ 1,200 (# 2 - rpm 50)	
Surface temperature:	from +8°C to +35°C	
FINAL PERFORMANCE DATA (A+B)		
Pot life of mix at +23°C and 50% R.H.:	20 minutes	

Hardening time at +23°C and 50% R.H.: – dust dry: – set to foot traffic: – full hardening time:		2-4 hours approx. 12 hours approx. 7 days	
FINAL PERFORMANCES OF THE MORTAR - realized using MAPEFLOOR I 910 charged with QUARTZ 1.9 - 1 : 10 by weight			
Flexural strenght (after 7 days at +23°C) (EN 196-1) (N/mm ²):		20	
Compressive strenght (after 7 days at +23°C) (EN 196-1) (N/mm ²):		67	
Impact resistance (EN ISO 6272) (Nm):		20	
Wear resistance-BCA (EN 13892-4) (µm):		30	
Fire reaction class (EN 13501-1):		B _{FL} -s1	
Essential characteristics (A+B)	Test method	Requirements according to EN 13813 for synthetic resin-based screeds	Performance of product
BCA wear-resistance:	EN 13892-4	≤ 100 µm	23 µm
Adhesion strength:	EN 13892-8; 2004	≥ 1.5 N/mm ²	≥ 2.5 N/mm ²
Impact strength:	EN ISO 6272	≥ 4 Nm	10 Nm
Fire reaction class:	EN 13501-1	from A1 _{FL} to F _{FL}	E _{FL}

The times above are for indication purposes only and are influenced by actual site conditions (e.g. temperature of the surroundings and substrate, relative humidity of the surrounding air, etc.).

WARNING

Although the technical details and recommendations contained in this product data sheet correspond to the best of our knowledge and experience, all the above information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical application; for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application. In every case, the user alone is fully responsible for any consequences deriving from the use of the product.

Please refer to the current version of the Technical Data Sheet, available from our website www.mapei.com

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The most up-to-date TDS can be downloaded from our website www.mapei.com.

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