

MAPEFINISH

Two-component cementitious mortar for finishing concrete.



WHERE TO USE

Superficial protection and levelling of concrete surfaces.

Some application examples

- Smoothing surface defects in concrete before painting.
- Smoothing and finishing concrete repaired with **Mapegrout** line mortar.
- Protect the concrete against mildly-aggressive agents from the surrounding environment.
- Repairs to the wear layer of concrete industrial floors.

TECHNICAL CHARACTERISTICS

Mapefinish is a two-component mortar based on high strength cements, selected aggregates, special additives and synthetic polymers in water dispersion prepared from a formula developed in MAPEI's Research Laboratories.

On mixing the two parts (powder component A and liquid component B), a mortar is obtained, which can be easily applied on all surfaces, including vertical ones, in thicknesses up to 2-3 mm in one coat. Due to the high content of synthetic resins, **Mapefinish** has excellent adhesion to all concrete surfaces and after hardening becomes a compact and tough layer, resistant to water and atmospheric gases.

Mapefinish corresponds to the principles defined in EN 1504-9 (*"Products and systems for protecting and repairing concrete structures: definitions, requirements, quality control and conformity assessment. General principles for the use of products and systems"*) and the requirements of EN 1504-3 (*"Structural and non-structural repairs"*) for R2-class non-structural mortars and of EN 1504-2 coating (C) according to the MC and IR principles (*"Protection systems for concrete surfaces"*).

RECOMMENDATIONS

- Do not use **Mapefinish** for very thick coats (use products from the **Mapegrout** line).
- Do not apply **Mapefinish** at temperatures below +5°C.
- Do not add cement, aggregates or water to **Mapefinish**.

APPLICATION PROCEDURE

Preparing the Substrate

To guarantee good adhesion of the product particular care must be taken with the preparation of the substrate.

The surface to be treated must be perfectly clean and sound.

For best results the most suitable preparation is by sand-blasting or a vigorous washing with water under pressure.

Completely eliminate all powder, laitances, traces of form release oil, cement tears, loose particles and rust from cement or concrete surfaces.

Where necessary, reconstruct and repair highly deteriorated areas using products from the **Mapegrout** range (see relevant technical data sheet).

Soak concrete or other porous substrates with water.

Wait for the excess water to evaporate. If necessary use compressed air or a sponge to facilitate the elimination of free water.

Mortar must not be applied on substrates which show a film of surface water.

Preparing the mortar

Pour component B (liquid) into a suitable clean container and while mixing, slowly add component A (powder).

Carefully mix **Mapefinish** for several minutes, scraping any unmixed powder off the sides of the mixer and remixing.

The mixing should be continued until complete homogeneity of the mix (total absence of lumps) is obtained. For this operation it is essential to use a low speed mechanical mixer to avoid entraining an excess of air into the mix.

Refrain from preparing the mix by hand. In cases where this is unavoidable, use a gauging trowel and press the mortar against the walls of the container to break any lumps and then mix well until complete homogeneity of the mix is obtained.

Applying the mortar

Spread the mortar with a flat trowel onto the prepared surface with a maximum thickness of 2-3 mm per coat. Greater thicknesses must be formed with several coats or preferably with products from the **Mapegrout** range.

The smoothing operation can be carried out with the same flat trowel or with a small sponge float some minutes after application.

If the surface should dry during the smoothing operation water can be sprayed over it to facilitate the use of the sponge float.

In hot weather, on windy or sunny days, it is advisable to spray water onto the surface during the first hours of curing to avoid rapid evaporation of moisture from the mix, as this could cause cracks.



Application with trowel



Smoothing with sponge float



Smoothing with sponge float

PRECAUTIONS TO BE OBSERVED DURING APPLICATION AND CURING

- No special precautions need be taken when the temperature is approx. +20°C.
- After its application, **Mapefinish** must be cured very carefully; the mortar surface must be protected from rapid evaporation of water.

CLEANING

Due to the high adhesion of **Mapefinish**, even on metal, it is advisable to clean tools with water before the mortar starts to set.
After setting, cleaning can only be done mechanically.

COVERAGE

1.8 kg/m² for each mm of thickness.

PACKAGING

Units of 30 kg: 24 kg component A (bags); 6 kg component B (tanks).

STORAGE

Mapefinish component A, stored in original packagings in a dry place can be stored up to 12 months.
The product complies with the conditions of Annex XVII to Regulation (EC) N° 1907/2006 (REACH), item 47.
Mapefinish component B can be stored for 24 months.
Store both components at a temperature of at least +5°C.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Mapefinish component A contains cement that when in contact with sweat or other body fluids causes irritant alkaline reaction and allergic reactions to those predisposed. It can cause damage to eyes.
It is recommended to use protective gloves and goggles.
Mapefinish component B is not considered dangerous according to the European regulation regarding the classification of mixtures. It is recommended to wear gloves and goggles and to take the usual precautions taken for the handling of chemicals.
In case of contact with eyes or skin wash immediately with plenty of water and seek medical attention.
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.

Mapefinish: two-component, normal-setting, cementitious mortar for repairing and protecting concrete, conforms to the requirements of EN 1504-3 R2 - class and of EN 1504-2 coating (C) MC and IR principles		
TECHNICAL DATA (typical values)		
PRODUCT IDENTITY		
Type:	PCC	
	component A	component B
Consistency:	powder	liquid
Colour:	grey	white
Maximum size of aggregate (mm):	0.4	–
Bulk density (kg/m ³):	1.2	–
Density (g/cm ³):	–	1.02
Dry solids content (%):	100	24

Chloride ions content: – minimum requirements ≤ 0.05% - according to EN 1015-17 (%):	≤ 0.05		≤ 0.05	
APPLICATION DATA (at +20°C - 50% R.H.)				
Colour of mix:	grey			
Mixing ratio:	4 parts of Mapefinish comp. A with 1 part of comp. B			
Consistency of mix:	fluid - trowellable			
Density of the mix (kg/m³):	1,800			
Application temperature range:	from +5°C to +35°C			
Pot life of mix:	approximately 1 hour			
Waiting time for superficial drying:	approximately 30 min			
Waiting time before painting over with Elastocolor Paint:	24 hours			
FINAL PERFORMANCE (thickness 2.5 mm)				
Performance characteristics	Test method	Requirements according to EN 1504-2 coating (C) MC and IR principles	Requirements according EN 1504-3 for mortar class R2	Performance of product
Compressive strength (MPa):	EN 12190	not required	≥ 15 (after 28 days)	> 20 (after 7 days) > 35 (after 28 days)
Flexural strength (MPa):	EN 196/1	not required	not required	> 5 (after 7 days) > 10 (after 28 days)
Modulus of elasticity in compression (GPa):	EN 13412	not required	not required	14 (after 28 days)
Bond strength on concrete (substrate in MC 0.40) according to EN 1766 (MPa):	EN 1542	for rigid systems without traffic: ≥ 1.0 with traffic: ≥ 2.0	≥ 0.8 (after 28 days)	≥ 2 (after 28 days)
Thermal compatibility measured as bonding according to EN 1542 (MPa): – freeze-thaw cycles with deicing salts: – thunder-shower cycle: – dry thermal cycle:	EN 13687/1 EN 13687/2 EN 13687/4	For rigid systems without traffic: ≥ 1.0 with traffic: ≥ 2.0	≥ 0.8 (after 50 cycles) ≥ 0.8 (after 30 cycles) ≥ 0.8 (after 30 cycles)	≥ 2 ≥ 2 ≥ 2
Capillary absorption (kg/m²·h ^{0.5}):	EN 13057	not required	≤ 0.5	< 0.30
Impermeability expressed as coefficient of permeability to free water (kg/m²·h ^{0.5}):	EN 1062-3	W < 0.1	not required	W < 0.05 - Class III (low permeability) according EN 1062-1
Permeability to water vapour - equivalent air thickness S _D - (m):	EN ISO 7783-1	Class I S _D < 5 m Class II 5 m ≤ S _D ≤ 50 m Class III S _D > 50 m	not required	S _D < 0.5 Class I (permeable to water vapour)

Resistance to accelerated carbonation:	EN 13295	not required	not required	Depth of carbonation $\leq$ of reference concrete (MC 0.45 type with water/concrete ratio = 0.45) according to UNI 1766
Reaction to fire:	EN 13501-1	Euroclass		E

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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