

MONOFINISH

One-component, normal setting cementitious mortar for smoothing concrete and cement-based renders



WHERE TO USE

Protection and smoothing of concrete surfaces.

Some application examples

- Smoothing surface imperfections in concrete before painting.
- Smoothing of concrete repairs performed with mortars from the **Mapegrout** product line.
- Smoothing irregular surfaces of cement-based renders that have good mechanical strength.

TECHNICAL CHARACTERISTICS

Monofinish is a powdered, high-strength, one-component cement-based mortar with selected fine aggregates, special additives and synthetic polymers manufactured according to a formula developed in the MAPEI Research Laboratories. When mixed with water, **Monofinish** forms a soft paste that is easy to apply even on vertical surfaces in thicknesses up to 2 to 3 mm in a single coat. Because of its high synthetic resin content, **Monofinish** bonds extremely well to all concrete surfaces, and forms a compact, strong adhesive layer when hardened.

Monofinish responds to the principles defined in EN 1504-9 (*"Products and systems for the protection and repair of concrete structures: definitions, requirements, quality control and conformity assessment. General principles for the use of products and systems"*), the minimum requirements for EN 1504-3 (*"Structural and non-structural repairs"*) for R2-class non-structural mortar and the requirements for EN 1504-2 coating (C) (*"Surface protection systems for concrete"*) according to MC and IR principles.

RECOMMENDATIONS

- Do not use **Monofinish** for thick applications (use **Mapegrout Thixotropic**, **Mapegrout T40**, **Mapegrout BM** or **Mapegrout Hi-Flow**).
- Do not use **Monofinish** at temperatures lower than +5°C.
- Do not add cement or aggregate to **Monofinish**.
- For the protection of hydraulic projects and surfaces subject to abrasion, use **Mapefinish**.

HOW TO USE

Preparing the substrate

The surface to be treated must be thoroughly clean and sound: remove any efflorescence, traces of form-release agents and loose particles by sandblasting or spraying with water at high-pressure.

Where necessary, reconstruct or repair any degraded areas using mortar from the **Mapegrout** range of products (see individual technical data sheets).

After carrying out small repairs with **Mapegrout** mortar, saturate the substrate with water and wait for the excess water to evaporate away. To facilitate removal of any free water, use compressed air or a sponge if required.

Do not apply **Monofinish** on substrates with a surface film of water.

Preparing the mortar

Pour 4.0-4.2 litres of water into a clean bucket, then slowly pour in a 22 kg bag of **Monofinish**, mixing with an agitator. Mix thoroughly for several minutes, taking care to scrape any unblended powder from the bottom and sides of the mixer. Mix until a completely homogeneous, totally lump-free paste is obtained. Using an agitator is recommended to prevent entraining excess air. Avoid preparing the mix manually.

Application procedure

Apply the mortar to the surface with a trowel at a maximum thickness of 2 to 3 mm per coat. Thicker finishes should be applied in several coats.

Smoothing **Monofinish** can be done with a flat trowel or wet sponge float approx. 30 minutes after application at +20°C.

If the surface tends to dry during smoothing, water can be sprayed on it to make floating easier.

In warm, windy, or very sunny weather, water should be sprayed on the surface during the first few hours of hardening to prevent rapid drying which could cause cracking.



Application by trowel



Finishing with sponge float

CLEANING

Because of **Monofinish**'s high adhesive properties, tools should be cleaned with water before the mortar sets. After setting, cleaning can only be carried out mechanically.

CONSUMPTION

1.4 kg/m² per mm of thickness.

PACKAGING

22 kg bags.

STORAGE

Monofinish may be stored for up to 12 months in its original packaging in a dry place.

The product complies with the conditions of Annex XVII to Regulation (EC) N° 1907/2006 (REACH), item 47.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Monofinish is irritant, it 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. In case of contact with eyes or skin wash immediately with plenty of water and seek medical attention. It is recommended to use protective gloves and goggles.

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.

Monofinish: one component, normal-setting cementitious mortar for repairing and protecting concrete, in conformity with the requirements for EN 1504-3 standards class R2 and the EN 1504-2 coating (C) MC and IR principles

TECHNICAL DATA (typical values)				
PRODUCT IDENTITY				
Type:	PCC			
Consistency:	powder			
Colour:	grey			
Maximum size of aggregate (mm):	0.4			
Bulk density (kg/m ³):	1,200			
Dry solids content (%):	100			
Chloride ions content - EN 1015-17 (%) - minimum requirement ≤ 0.05%:	≤ 0.05			
APPLICATION DATA (at +20°C - 50% U.R.)				
Colour of mix:	grey			
Mixing ratio:	100 parts of Monofinish with 18-19 parts of water (approx. 4.0-4.2 litres of water per 22 kg bag)			
Consistency of mix:	fluid - trowelable			
Density of mix (kg/m ³):	1,700			
Application temperature range:	from +5°C to +35°C			
Pot life of mix:	approx. 1 hour			
Surface drying time:	approx. 30 minutes			
Waiting time before applying painted coat (Elastocolor Primer and Elastocolor Paint):	3 days on surfaces smoothed over using Monofinish ; 7 days on surfaces repaired with mortar from the Mapegrout range followed by a finishing layer with Monofinish			
FINAL PERFORMANCES (18.5% mixing water - 2.5 mm thick layer)				
Performance characteristic	Test method	Requirements according to EN 1504-2 coating (C) MC and IR principles	Requirements according to EN 1504-3 for R2 class mortar	Performance of product
Compressive strength (MPa):	EN 12190	not required	≥ 15 (after 28 days)	> 4 (after 1 day) > 15 (after 7 days) > 25 (after 28 days)
Flexural strength (MPa):	EN 196/1	not required	not required	> 1.5 (after 1 day) > 4.0 (after 7 days) > 6.5 (after 28 days)
Compressive modulus of elasticity (GPa):	EN 13412	not required	not required	12 (after 28 days)
Bond to concrete (MC 0.40-type concrete) 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 ($\text{kg/m}^2 \cdot \text{h}^{0.5}$):	EN 13057	not required	< 0.5	< 0.30
Impermeability (coefficient of permeability to free water) ($\text{kg/m}^2 \cdot \text{h}^{0.5}$):	EN 1062-3	$W < 0.1$	not required	$W < 0.05$ Class III (permeable low water) according to EN 1062-1
Water vapour permeability - equivalent thickness of air S_D - (m):	EN ISO 7783-1	Class I $S_D < 5$ m Class II $5 \text{ m} \leq S_D \leq 50$ 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 than reference concrete (MC 0.45-type, water/concrete ratio = 0.45) according to UNI 1766 standards
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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