MONOFINISH

One-component, normal-setting cementitious mortar for smoothing concrete and cementitious render

WHERE TO USE

Protection and smoothing of concrete surfaces.

Some application examples

- Smoothing surface imperfections in concrete before painting.
- Smoothing and levelling off concrete repaired with mortars from the **Mapegrout** range.
- Smoothing irregular surfaces of cement-based renders that have good mechanical strength.

TECHNICAL CHARACTERISTICS

Monofinish is a one-component mortar made of high-strength cement, fine-grained selected aggregates, special additives and synthetic polymers according to a formula developed in MAPEI Research & Development Laboratories.
When **Monofinish** is mixed with water, a free-flowing mix is obtained, which is easy to apply also on vertical surfaces in a single coat up to 2-3 mm thick. Thanks to its high synthetic resin content, **Monofinish** adheres firmly to all concrete surfaces and, once hardened, it forms a tough and compact layer.
Monofinish complies with the principles defined in EN 1504-9 ("*Products and systems for the protection and repair of concrete structures: definitions, requirements, quality control and evaluation of conformity. General principles for use of products and systems*"), and the minimum requirements of EN 1504-3 ("*Structural and non-structural repair*") for R2-class non-structural mortars and with the requirements of EN 1504-2 standard coating (C), according to the MC and IR principles ("*Surface protection systems for concrete*").

RECOMMENDATIONS

- Do not use **Monofinish** for thick applications (use **Mapegrout Thixotropic Zero**, **MapegroutT40**, **MapegroutBM** or **Mapegrout Hi-Flow Zero**).
- Do not apply **Monofinish** if the temperature Is lower than +5°C.
- Do not add cement or aggregates to **Monofinish**.
- For the protection of hydraulic structures and surfaces subject to abrasion, use **Mapefinish**.

APPLICATION PROCEDURE

TECHNICAL INFORMATION FOR THE APPLICATION	
Mix composition:	100 kg of **Monofinish** 18-19 l of water
Maximum applicable thickness per coat:	2-3 mm
Recommended application temperature:	surrounding and substrate temperature from +5°C to +35°C
Pot life of mix:	approx. 1 hour (at +20°C)
Surface drying time:	approx. 30 minutes (at +20°C)
Waiting time before application of the paint (Elastocolor Primer and Elastocolor Pittura Zero):	3 days on surfaces smoothed with **Monofinish** only; 7 days on surfaces repaired first with mortars from the **Mapegrout** range then finished with **Monofinish**

Preparation of 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 high-pressure water.
If necessary, rebuild and repair any degraded areas using mortars from the **Mapegrout** range (see relevant technical data sheets).
After carrying out small repairs with **Mapegrout** mortars, saturate the substrate with water and wait for the excess water to evaporate. If necessary, use compressed air or a sponge to help remove excess water.
It is recommended not to apply **Monofinish** on substrates with a surface film of water.

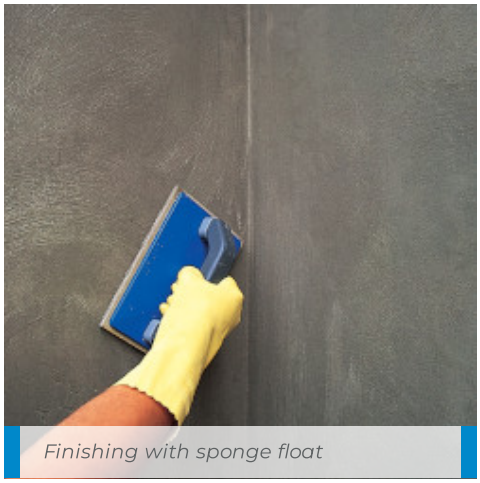
Preparation of the mortar

Pour 4.0-4.2 l of water into a suitable clean container and slowly add a 22 kg bag of **Monofinish** while mixing.
Accurately stir **Monofinish** for a few minutes, carefully removing all traces of dust from the sides and the bottom of the container.
Continue mixing until a homogeneous, lump-free mix is obtained. Use a low-speed electric mixer to avoid entraining too much air into the mix.
Avoid mixing the product manually.
The instructions for the preparation of the mortar to be used for the creation of concrete samples for laboratory tests are reported in the TECHNICAL DATA table.

Application of the mortar

Apply the mortar on the surface with a trowel at a maximum thickness of 2 to 3 mm per coat.
Thicker coatings should be applied in several coats.
Smooth over the surface of **Monofinish** with the same flat trowel or a damp sponge float approximately 30 minutes after application at +20°C.
If the surface tends to dry out while smoothing it over, spray water on the surface to help the float slide more easily.
During hot or windy weather or on particularly sunny days, it is recommended to spray water on the surface for the first few hours after application to prevent the mixing water evaporating off too quickly and triggering the formation of cracks.

Application by trowel



Finishing with sponge float

CLEANING

Because of the high adhesion of **Monofinish** it is recommended to clean tools with water before the mortar starts to set.
Once the product has hardened, cleaning can be carried out only mechanically.

CONSUMPTION

1.4 kg/m² per mm of thickness.

PACKAGING

22 kg bags.

STORAGE

Monofinish can be stored for 12 months in its original packaging in a dry area.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Instruction for the safe use of our products can be found on the latest version of the SDS available from our websitewww.mapei.com
PRODUCT FOR PROFESSIONAL USE.

TECHNICAL DATA (typical values)

PRODUCT IDENTITY	
Class according to EN 1504-3:	R2
Type according to EN 1504-1:	PCC
Identity according to EN 1504-2: (methods and principles)	Coating (C) – principles MC and IR
Consistency:	powder
Colour:	grey
Maximum size of aggregate:	0.4 mm
Chloride ion content according to EN 1015-17: (minimum requirements according to EN 1015 ≤ 0.05%)	≤ 0.05 %

TECHNICAL INFORMATION FOR PRODUCT PREPARATION	
Mix composition:	100 parts by weight of **Monofinish** with 18.5% of water
Preparation of mix:	mix the product in compliance with the standard EN 196-1

CHARACTERISTICS OF FRESH MIX (at +20°C - 50% R.H.)	
Colour of the mix:	grey
Consistency of mix:	fluid- trowellable
Density of the mix:	1700 kg/m³

FINAL PERFORMANCE
According to the curing defined in the test methods (2.5 mm thickness)

Performance characteristic	Test method	Requirements according to EN 1504-2 (C) MC and IR	Requirements EN 1504-3 R2	Product performance
Compressive strength: **- 3 hours** **- 1 day** **- 28 days**	EN 12190	not required	- - ≥ 15 MPa	**> 4 MPa** **> 15 MPa** **> 25 MPa**
Flexural strength: **- 3 hours**	EN 196-1	not required	not required	**> 1.5 MPa**

- 1 day - 28 days				> 4.0 MPa > 6.5 MPa
Compressive modulus of elasticity:	EN 13412	not required	not required	**12 GPa**
Bond strength to concrete by pull-off:	EN 1542	for rigid systems without traffic ≥ 1.0 MPa with traffic ≥ 2.0 MPa	≥ 0.8 MPa	**≥ 2.0 MPa**
Resistance to accelerated carbonation:	EN 13295	not required	not required	**depth of carbonation ≤ reference concrete**
Thermal compatibility: **- freeze-thaw cycling with de-icing salt (50 cycles):**	EN 13687-1	not required	≥ 0.8 MPa	**≥ 2.0 MPa**
- thunder-shower cycling (30 cycles):	EN 13687-2		≥ 0.8 MPa	**≥ 2.0 MPa**
- dry-thermal cycling (30 cycles):	EN 13687-4		≥ 0.8 MPa	**≥ 2.0 MPa**
Capillary absorption:	EN 13057	not required	≤ 0.5 kg/m²·h$^{0.5}$	**< 0.3 kg/m²·h$^{0.5}$**
Impermeability expressed as coefficient of permeability to free water *W*:	EN 1062-3	W < 0.1 kg/m²·h$^{0.5}$	not required	**W < 0.05 kg/m²·h$^{0.5}$** **Class W_3** *(low permeability to water) according to EN 1602-1*
Permeability to water vapour (wet-cup - method B) expressed as equivalent air thickness S_d:	EN ISO 7783	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 m** **Class I** *(permeable to water vapour)*
Reaction to fire:	EN 13501-1	Euroclass	Euroclass	**E**

NOTES:
Specimens preparation: compaction in compliance with EN 196-1.

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

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