

# PLANITOP 100

Fast-setting light grey-coloured fine mortar for repairs and of concrete and renders



## WHERE TO USE

For repairing and finishing of porous or chipped cement-based surfaces.

### Some application examples

- Evening out surface imperfections in prefabricated concrete, such as interlocking panels, beams and pillars.
- Finishing of cement renders or lime and cement mortar before painting with **Elastocolor** range of products.
- Small repairs to precast concrete sections damaged while being moved.
- Rapid finishing of concrete facings repaired with products of the **Mapegrout** range.

## TECHNICAL CHARACTERISTICS

**Planitop 100** is a one-component mortar based on special cement binders, selected fine grain aggregates, additives and polymers manufactured according to a formula developed in the MAPEI research laboratories.

When mixed with water, **Planitop 100** produces a runny mortar that is easily applied even vertically up to 3 mm thick per coat.

Because of its high synthetic resin content, **Planitop 100** has excellent adhesion to all cement-based surfaces and forms a compact and mechanically strong layer after hardening (1 to 1.5 hours at +20°C).

**Planitop 100** meets the requirements defined by 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 the use of products and systems") and the minimum requirements claimed by EN 1504-2 coating (C) ("Surface protection systems for concrete") according to MC and IR principles.

When thickness over 3 mm is required and in any case for localised applications up to 30 mm, 30% of aggregates with a maximum grain size of 2 mm may be added.

**N.B. Planitop 100** has a shelf life of 12 months when stored in a dry place. With time, however, setting may be slower, but **Planitop 100's** final mechanical characteristics will remain unchanged.

## RECOMMENDATIONS

- Do not use **Planitop 100** to repair large surfaces. Use products from the **Mapegrout** range.
- Do not add lime, cement or gypsum to the mix.
- Do not add water to a mix that has already begun to set.
- Do not use at temperatures below +5°C.

## APPLICATION PROCEDURE

### TECHNICAL INFORMATION FOR THE APPLICATION

Composition of mix:

100 kg **Planitop 100**  
26-27 kg water

Application thickness:

1-3 mm

Application temperature range:

Environment and substrate temperature from +5°C to +35°C

Pot life of mix:

approx 20-30 mins (at +20°C)

## Preparation of the substrate

Substrates must be sound and free of dust, loose materials, and form-release agents. Reinforcing bars must have rust removed and then be treated with **Mapefer** or **Mapefer 1K**.

Saturate concrete or other porous materials with water. Wait for the excess water to evaporate before applying **Planitop 100**. To facilitate the elimination of free water, use compressed air or a sponge. In no case can the mortar be applied on substrates that have a film of surface water.

## Preparing the mix

Pour a 25 kg bag of **Planitop 100** into a container filled with 6.5-6.75 litres of clean water while mixing continuously with a low speed electric mixer until a homogeneous, lump-free mix is obtained.

**N.B.** After mixing with water, **Planitop 100** is workable for 20 to 30 minutes at +20°C. Prepare only as much **Planitop 100** as can be used during that time.

Instructions for the preparation of mortar for Lab testing samples can be found in the TECHNICAL DATA section.

## Applying the mix

Apply **Planitop 100** with a flat trowel in a maximum thickness of 3 mm. To facilitate smoothing, several coats can be applied one after the other as soon as the previous one is sufficiently dry. Alternately, a few minutes after application a float sponge may be used for finishing; in this case the surface finish will be very similar to that of a fine grain plaster.

## PRECAUTIONS TO BE TAKEN DURING AND AFTER APPLICATION

- No special precautions need to be taken when the temperature is around +20°C. In hot weather the material should not be exposed to the sun and cold water should be used for preparing the mix.
- During cold weather, use water at a temperature of +20°.
- After application, especially when hot or windy, protect the surface of the mortar to prevent rapid evaporation of water that could cause cracking from plastic shrinkage.

## CLEANING

While still wet, **Planitop 100** can be cleaned from tools with water.

After setting, cleaning can only be done mechanically.

## CONSUMPTION

1.3 kg/m<sup>2</sup> for each mm of thickness.

## PACKAGING

**Planitop 100** is available in 25 kg bags.

## STORAGE

12 months. Store in a dry, covered place in original sealed packaging.

## SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Instructions for the safe use of our products can be found on the latest version of the Safety Data Sheet, available from our website [www.mapei.com](http://www.mapei.com).

PRODUCT FOR PROFESSIONAL USE.

## TECHNICAL DATA (typical values)

### PRODUCT IDENTITY

Class according to EN 1504-2:  
(methods and principles)

Coating (C) – principles MC and IR

Consistency:

powder

Colour:	Light grey
Maximum size of aggregate:	0.2 mm

## TECHNICAL INFORMATION FOR THE PREPARATION OF PRODUCT

Composition of mix:	100 parts by weight of <b>Planitop 100</b> with 26 % water
Preparation of mix:	Mixing of product according to EN 196-1
Conditions of curing:	PCC (according to Annex A – EN 12190) for EN 1504-2

## CHARACTERISTICS OF FRESH MIX (at +20°C - 50% U.R.)

Colour of mix:	grey
Consistency of mix:	thixotropic-trowellable
Density of mix:	1650 kg/m <sup>3</sup>
Final setting time:	1h – 1h 30'

## FINAL PERFORMANCES

According to curing defined in test methods  
2.5 mm application thickness

Performance characteristic	Test method	Requirements EN 1504-2 (C) MC and IR	Product performance
<b>Compressive strength:</b> - 1 day - 7 days - 28 days	EN 12190	Not required	> 5 MPa > 12 MPa > 15 MPa
<b>Flexural strength:</b> - 1 day - 7 days - 28 days	EN 196-1	Not required	> 2.0 MPa > 3.0 MPa > 5.0 MPa
<b>Bond strength by pull-off:</b>	EN 1542	For rigid systems without traffic ≥ 1.0 MPa With traffic ≥ 2,0 MPa	≥ 2.0 MPa
<b>Thermal compatibility – freeze-thaw cycles using de-icing salts (50 cycles) after thunder-shower cycles (10 cycles):</b>	EN 13687-1 EN 13687-2	For rigid systems without traffic ≥ 1.0 MPa with traffic ≥ 2.0 MPa	≥ 2.0 MPa
<b>Watertightness expressed as coefficient of permeability to water W:</b>	EN 1062-3	$W < 0.1 \text{ kg/m}^2 \cdot \text{h}^{0.5}$	$W < 0.1 \text{ kg/m}^2 \cdot \text{h}^{0.5}$ Class W <sub>3</sub> (low permeability to water) according to EN 1062-1
<b>Permeability to water vapour (wet-cup – method B) expressed as equivalent air thickness S:</b>	EN ISO 7783	Class I S < 5 m Class II 5 m ≤ S ≤ 50 m Class III S > 50 m	<b>S &lt; 0.5 m</b> <b>Class I</b> (permeable to water vapour)
<b>Reaction to fire:</b>	EN 13501-1	Euroclass	<b>A1</b>

## 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](http://www.mapei.com)

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