PLANITOP 100

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

CE EN 1504-2 · EN 1504-2 (C) PRINCIPLES MC-IR · Fast Track Ready

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** line.

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).
For thicknesses greater than 3 mm, adding 30% aggregates with a maximum diameter of 2 mm is recommended.
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.
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

Preparing 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.

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Preparing the mix

Finishing coat from 1 to 3 mm thick

· Pour a 25 kg bag of **Planitop 100** into a receptacle containing 6.5-6.75 litres of clean water while mixing continuously with an agitator at low speed until a homogeneous lump free mix is obtained.

Repairs from 3 to 30 mm thick

· After mixing **Planitop 100** with water as described above, add up to 30% sand with a maximum diameter of 2 mm. Continue mixing until a thixotropic homogeneous 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.*

Applying the mix

Finishing coats from 1 to 3 mm thick

· 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.

Repairs from 3 to 30 mm thick

· Apply the mortar with a trowel to a maximum thickness of 30 mm. The mix is thixotropic, so using formwork is not necessary. Finishing can be done with a float sponge 30 to 40 minutes (at +20°C) after application. If necessary for aesthetic reasons, final finishing can be done with a flat trowel or other tools to obtain a surface finish that looks very similar to the existing concrete. This requirement comes up most often when making small repairs on interlocking precast concrete panels.

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/m² for each mm of thickness if used neat.
1 kg/m² for each mm of thickness when used with 30% of 2 mm sand.

PACKAGING

Planitop 100 is available in 25 kg bags.

STORAGE

12 months. Store in a dry, covered place in original sealed packaging.
The product complies with the conditions of Annex XVII to Regulation (EC) N° 1907/2006 (REACH), item 47.

SAFETY INSTRUCTIONS FOR PREPARATION AND INSTALLATION

Planitop 100 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.

Planitop 100: ***one component, quick-setting cementitious mortar for protecting concrete; conforms with the requirements of EN 1504-2 coating (C), MC and IR principles***

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TECHNICAL DATA (typical values)			
PRODUCT IDENTITY			
Consistency:	powder		
Colour:	light grey		
Maximum size of aggregate (mm):	0.2		
Bulk density (kg/m³):	1,250		
Dry solids content (%):	100		
APPLICATION DATA OF PRODUCT (at +20°C - 50% U.R.)			
Colour of mix:	grey		
Mixing ratio:	100 parts of **Planitop 100** with 26-27 parts of water (6.5-6.75 litres of water per 25 kg sack)		
Consistency of mix:	thixotropic - trowellable		
Density of the mix (kg/m³):	1,650		
Recommended minimum and maximum thickness (mm) **– applied neat:** **– mix added with 30% of sand with max. 2 mm grain size:**	 1-3 3-30		
Application temperature range:	from +5°C to +35°C		
Pot life of mix:	20-30 minutes		
Setting time:	1 hour - 1 hour 30 minutes		
FINAL PERFORMANCE (26% mixing water - 2.5 mm thick layer)			
Performance characteristics	**Test method**	**Requirements according to EN 1504-2 coating (C) MC and IR principles**	**Performance of product**
Compressive strength (MPa):	EN 12190	not required	> 5 (after 1 day) >12 (after 7 days) > 15 (after 28 days)
Flexural strength (MPa):	EN 196/1	not required	> 2.0 (after 1 day) > 3.0 (after 7 days) > 5.0 (after 28 days)
Bond strength on concrete (substrate in MC 0.40) according to EN 1766 (MPa):	EN 1542	For rigid systems with no traffic: ≥ 1.0 with traffic: ≥ 2.0	≥ 2 (after 28 days)
Thermal compatibility measured as bonding according to EN 1542 (MPa) **– freeze-thaw cycles with deicing salts:** **– thunder-shower cycle:**	EN 13687/1 EN 13687/2	For rigid systems without traffic: ≥ 1.0 with traffic: ≥ 2.0	 ≥ 2 ≥ 2

Impermeability expressed as coefficient of permeability to free water ($kg/m^2 \cdot h^{0,5}$):	EN 1062/3	W < 0.1	W < 0.1 - Class III (low permeability) according to 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	S_D < 0.5 Class I (permeable to water vapour)
Reaction to fire:	EN 13501-1	Euroclass	A1

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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