



# Planitop 540

**Cement-based smooth finishing compound for concrete surfaces and “cured” interior and exterior renders which can be applied up to 3 mm thick**



## WHERE TO USE

Smoothing rough “cured” renders and concrete units in interiors and exteriors before painting.

### Some application examples

- Smooth finishing of cement-lime based or prepacked cured traditional renders.
- Levelling slightly rough concrete walls before painting.
- Levelling joints between precast sectional slabs.
- Levelling ready mix concrete units such as panels, columns and beams.
- Levelling rough screeds and rendered walls before installing ceramic floor and wall coverings.

## TECHNICAL CHARACTERISTICS

**Planitop 540** is a pre-blended, normal hardening, one component smooth finishing compound, grey or white, based on cementitious binders, selected graded aggregates, additives and synthetic powder polymers prepared according to a special formula developed in the MAPEI Research laboratories.

Due to its special composition, the finishing obtained by mixing **Planitop 540** with water is easy to apply with a flat metal trowel and, finished with a sponge float. Once cured it has a high bonding strength.

**Planitop 540** can be applied at a maximum of 3 mm per coat.

Greater thicknesses (but not more than 6 mm) must be carried out in at least 2 coats. Ceramic coverings can be

applied after 4 days from the application of **Planitop 540** using MAPEI cementitious adhesives.

Thanks to the smooth finishing with **Planitop 540**, it is possible to apply coloured finishes such as **Silexcolor Tonachino**, **Silancolor Tonachino** or **Quarzolite Tonachino**. Other types of paints such as **Elastocolor Paint**, **Silexcolor Paint**, **Silancolor Paint**, **Colorite Performance** or **Quarzolite Paint** can also be applied. Coloured “Tonachini” or paints can be applied, in good weather conditions, 7 days after the application of **Planitop 540**.

**Planitop 540** responds to the principles defined in meets the main requirements of 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 1504-2 coating (C) according to principles MC and IR (“*Concrete surface protection systems*”) and is classified as GP (“*General purpose mortar for internal/external render*”), category CS IV according to EN 998-1.

## RECOMMENDATIONS

- Do not use **Planitop 540** for finishing thicknesses greater than 6 mm (use **Mapegrout Thixotropic**, **Mapegrout T40**, **Mapegrout BM** or **Planitop 400**).
- Do not apply **Planitop 540** at temperatures below +5°C or above +35°C.
- Do not add cement, lime, gypsum or aggregates to **Planitop 540**.

# Planitop 540



Applying Planitop 540 with a metal trowel



Applying Planitop 540 with a metal trowel



Smoothing the Planitop 540 surface with a metal trowel

- Do not use directly on gypsum or anhydrite surfaces. Apply **Primer G** or **Malech** over gypsum-based renders.
- Do not apply **Planitop 540** over dirty or crumbly surfaces.
- Use **Mapecofinish** to protect hydraulic structures or surfaces subject to abrasion.
- Do not apply **Planitop 540** on painted surfaces or surfaces covered with plastic coatings (use **Planitop 200** or **Planitop 207**).
- Do not use **Planitop 540** in windy days or when the surfaces are subject to direct sun light.
- Do not apply on dehumidified renders (use **Mapec-Antique FC** finishing or coloured finishings from the **Silexcolor** and **Silancolor** range).

## APPLICATION PROCEDURE

### Preparing the substrate

Surfaces must be perfectly clean and sound. If the substrate is dirty, it is recommended to wash the surface with water in order to remove any dust that could interfere with the adhesion.

Before applying **Planitop 540** remove all the free water from the surface.

If, after having been washed, the surface still has dust, apply a MAPEI primer (seek technical assistance).

### Preparing the smoothing compound

Pour 6-6.5 litres of water into a clean container and, while mixing slowly, add a 25 kg bag of **Planitop 540**.

Mix for several minutes making sure any unblended is removed from the bottom and the sides of the container as mixing proceeds.

Mix until a homogeneous, completely lump-free mixture is obtained. A low speed mechanical stirrer is used to avoid excess air. In order to completely disperse the contained additives, allow the mixture to stand for approximately 10 minutes after its preparation. Mix briefly before use. Avoid preparing the mix manually.

### Applying the smoothing compound

Apply the compound to a maximum of 3 mm thick per each coat with a flat metal trowel on the surface.

Porous substrates, such as renders or concrete, must be dampened with water beforehand.

The surface finishing of **Planitop 540** can be carried out either with a flat metal trowel or with a sponge float several minutes after its application.

In high temperatures, windy or sunny days, it is recommended to nebulize the surface with water after it begins to set (when the product does not "mark" with finger pressure) and during the following days when the mortar has completely cured. This is to avoid rapid drying and hygrometric shrinkage that could cause cracks.

## Instructions to be followed during and after application

No particular precautions need to be taken at temperatures around +20°C.

At high or low temperatures or with strong ventilation, the normal precautions for the use of cementitious material need to be taken.

For a better finish and protective result, it is suggested to use coloured finishes from the **Silexcolor**, **Silancolor**, **Elastocolor**, **Quarzolite** or **Colorite** ranges.

## Cleaning

Due to **Planitop 540**'s high bonding strength, it is recommended to wash working tools with water before the mortar hardens.

Once **Planitop 540** hardens, it is very difficult to remove and tools can only be cleaned by mechanical means.

## COLOUR

Grey or white.

## CONSUMPTION

Approximately 1.2 kg/m<sup>2</sup> per mm of thickness.

## PACKAGING

25 kg bags.

## STORAGE

**Planitop 540** can be stored for 12 months in original packaging and in a dry sheltered place.

Manufactured in compliance with the regulations of the 2003/53/EC Directive.

## SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

**Planitop 540** contains cement that, in contact with sweat or other body fluids, produces an irritant alkaline reaction and allergies to those predisposed. Wear protective gloves and goggles.

For further and complete information about a safety use of our product please refer to our latest version of the Material Safety Data Sheet.

PRODUCT FOR PROFESSIONAL USE.

## 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 web site [www.mapei.com](http://www.mapei.com)

**All relevant references for the product are available upon request and from [www.mapei.com](http://www.mapei.com)**

**Planitop 540: natural-finish cementitious smoothing compound for concrete surfaces and internal and external render; CE certified according to CPD 89/106 in compliance with EN 1504-2 and EN 998-1 Standards.**

## TECHNICAL DATA (typical values)

### PRODUCT IDENTITY

Consistency:	powder
Colour:	grey or white
Maximum size of aggregate (EN 1015-1) (mm):	0.4
Bulk density (kg/m³):	1,200
Dry solids content (%):	100
Storage:	12 months in a dry area in its original, unopened packaging
Hazard classification according to EC 1999/45:	irritant. Before using refer to the "Safety instructions for preparation and installation" paragraph and the information on the packaging and Safety Data Sheet
Customs class:	3824 50 90

### APPLICATION DATA OF PRODUCT (at +20°C - 50% R.H.)

Colour of mix:	grey or white
Mixing ratio:	100 parts of <b>Planitop 540</b> with 24-26 parts of water (approximately 6.0-6.5 litres of water per 25 kg sack of product)
Consistency of mix:	thixotropic-trowable
Density of the mix (EN 1015-6) (kg/m³):	1,600
Application temperature range:	from +5°C to +35°C
Pot life of mix (EN 1015-9):	approx. 2 hours
Maximum applicable thickness per layer (mm):	3
Waiting time before laying ceramic coating:	4 days
Minimum waiting time before painting with coloured finishing products from the Silexcolor, Silancolor, Elastocolor, Quarzolite and Colorite ranges:	7 days

### FINAL PERFORMANCE (25% mixing water)

Performance characteristic	Test method	Requirements according to EN 1504-2 coating (C) principles MC and IR	Performance of product
Compressive strength (MPa):	EN 12190	not required	15 (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: $\geq 1.0$ with traffic: $\geq 2.0$	$> 1.0$ (after 28 days)
Impermeability expressed as coefficient of permeability to free water (kg/m²·h <sup>0.5</sup> ):	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 $5 \text{ m} \leq S_D \leq 50$ m Class III $S_D > 50$ m	$S_D = 0.1$ Class I (permeability to water vapour)
Performance characteristic	Test method	Requirements according to EN 998-1	Performance of product
Compressive strength after 28 days (N/mm²):	EN 1015-11	CS I (from 0.4 to 2.5)	Category CS IV
		CS II (from 1.5 to 5.0)	
		CS III (from 3.5 to 7.5)	
		CS IV ( $\geq 6$ )	
Bond strength to substrate (brickwork) (MPa):	EN 1015-12	Declared value and failure mode (FP)	$\geq 0.5$ Failure mode (FP) = B
Capillary action water absorption [kg/(m²·min <sup>0.5</sup> )]:	EN 1015-18	W 0 (not specified) W1 ( $\leq 0.40$ ) W2 ( $\leq 0.20$ )	Category W 2
Coefficient of permeability to water vapour ( $\mu$ ):	EN 1015-19	Declared value	$\leq 25$
Thermal conductivity ( $\lambda_{10, dry}$ ) (W/m·K):	EN 1745	Chart value	0.51
Reaction to fire:	EN 13501-1	Euroclass	E



Finishing the Planitop 540 surface with a sponge float



**Planitop  
540**



**1057-11-2010**

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