PLANITOP 200

Water-repellent cementitious skimming mortar with a fine, natural finish for concrete and plastic, glass and porcelain coatings

WHERE TO USE

Fine-grained, natural-finish skimming layer for internal and external concrete, cementitious and lime-mortar render, old quartz paint, scratch-effect plastic coatings and glass or porcelain mosaics.

Some application examples

- Levelling and finishing concrete walls, cementitious renders or cement lime mortar before painting.
- Smoothing walls, even over existing paint such as washable acrylic paints, quartz paints, textured paints, etc. as long as they are sound, clean and well anchored.
- Smoothing over glass or porcelain mosaics on walls.
- Smoothing gypsum wall-board panels (treated beforehand the gypsum joints between the panels with **Primer G**).
- Smoothing mineral wood panels (such as Eraclit®).

TECHNICAL CHARACTERISTICS

Planitop 200 is a one-component, fine-grained, water-repellent cementitious skimming mortar available in grey or white, based on special high resistance binders, selected aggregate, special admixtures and synthetic powder polymers prepared according to a formula developed in the MAPEI research laboratories.
The special composition of **Planitop 200**, mixed only with water, grants high bonding strength, easy application with a flat trowel and easy finishing with a metal or sponge float.
Planitop 200 can be applied at a maximum thickness of 3 mm per coat.
For greater thickness but not more than 6 mm, two coats must be applied and a 4x4.5 mm MAPEI **Mapenet 150** (alkali-resistant glass fibre mesh in compliance with ETAG 004) inserted between the first and second coat.
Mapenet 150 must also be used when the surface to be skimmed is made up of different types of material.
In good weather, coloured finishing products from the **Silexcolor**, **Silancolor**, **Quarzolite**, **Elastocolor**, **Colorite** or **Dursilite** ranges may be applied one week after applying **Planitop 200**. The latter product may be used for decorating internal or external surfaces as long as they are partially covered and protected from direct exposure to the sun and rain.
Planitop 200 meets the main requirement 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 minimum 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/extarnal render*"), category CS IV according to EN 998-1.

RECOMMENDATIONS

- Do not use **Planitop 200** for greater thicknesses (>6 mm: use **Mapegrout LM2K**, **Mapegrout 430** or **Planitop Smooth & Repair**).
- Do not apply **Planitop 200** if the temperature is lower than +5°C.
- Do not add cement or other aggregates to **Planitop 200**.
- For the protection of hydraulic structures and surfaces subject to abrasion use **Mapefinish** or **Mapefinish HD**.
- Before applying **Planitop 200** make sure the substrate is sound and free from dust.
- Do not use on very windy days and do not apply **Planitop 200** when the surfaces are exposed to direct sunlight, because rapid drying may occur.
- If applied in two successive coats, insert **Mapenet 150** between the coats.
- Apply a first protective primer coat (e.g. **Primer G**) over gypsum based plasters.
- Do not apply products containing solvents on **Planitop 200**.
- Do not apply on de-humidifying render (use a skimming mortar from the **Mape-Antique** range or a coloured finishing product from the **Silexcolor** or **Silancolor** ranges).

APPLICATION PROCEDURE

TECHNICAL INFORMATION FOR THE APPLICATION	
Composition of mix:	100 kg **Planitop 200** 20-23 kg water
Minimum application thickness:	3 mm
Application temperature range:	Environment and substrate temperature from +5°C to +35°C
Pot life of mix:	approx. 1 h 30 mins (at +20°C)
Minimum waiting time for painting with coloured finishes from **Silexcolor**, **Silancolor**, **Elastocolor**, **Quarzolite**, **Colorite** or **Dursilite** range:	7 days

Preparation of the substrate

Surfaces that need to be treated must be perfectly clean and sound. If the substrate is covered with old paint, make sure the paint is consistent and well bonded to the substrate. However, it is recommended to prepare the substrate by mechanical means removing any loose parts and existing crumbling finishings, then wash all surfaces that need to be treated with high-pressure water in order to remove any dust residues that could interfere with bonding. Before applying **Planitop 200** wait until all surface water has disappeared or remove the water with compressed air or dampened cloths.
Absorbent substrates such as renders or concrete must be dampened with water beforehand. Substrates with old paintwork, plastic coatings or glass or porcelain mosaics must be perfectly dry when applying **Planitop 200**.
If after washing the substrate still remains dusty, apply a protective primer coat from the MAPEI range (refer to the Technical Services Department).

Preparing the mortar

Pour 5-5.75 litres of water into a suitable clean bucket and slowly add, while mechanically stirring, a 25 kg bag of **Planitop 200**. Carefully mix for several minutes making sure to blend in any powder from the sides and bottom of the bucket to ensure a thorough mix.
Mix until perfectly homogeneous and completely lump-free. A low speed mechanical stirrer is particularly recommended in order to avoid air entrainment.
Avoid preparing the mix manually.
Instructions for the preparation of mortar for Lab testing samples can be found in the TECHNICAL DATA section.

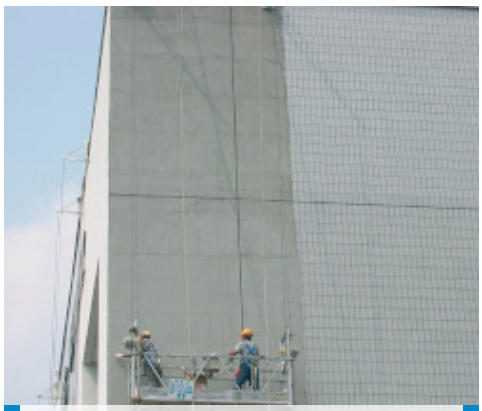
Applying the mortar

Apply a maximum 3 mm thick layer of mortar with a metal trowel.
The surface finishing of **Planitop 200** can be carried out just a few minutes after its application with the same metal trowel or with a traditional dampened sponge float.

During hot or windy weather, or in particularly hot areas, spray water on the surface of the smoothing compound when it starts to set (that is, when it may be pressed lightly without leaving fingerprints) and over the next few days when the mortar has completely hardened, to avoid quick drying and hygrometric shrinkage which may cause cracks to form.

Applying Planitop 200 on glass mosaic

Applying Planitop 200 on concrete



Applying Planitop 200 on ceramic substrate

Application of the second layer of Planitop 200 on a substrate made from different materials with Mapenet 150 embedded between the layers

Floating with Planitop 200

PRECAUTIONS TO BE TAKEN DURING AND AFTER APPLICATION

No particular precautions need to be taken if the temperature is around +20°C. If the temperature is particularly high or low, or if there are strong breezes, follow the normal precautions for cementitious materials. To get the best finish and protection for the substrate, we recommend using a coloured finishing product from the **Silexcolor**, **Silancolor**, **Elastocolor**, **Quarzolite**, **Colorite** or **Dursilite** ranges. The latter product may only be used for decorating internal or external surfaces if they are partially covered and protected.

CLEANING

Due to the high bonding strength of **Planitop 200**, it is recommended to wash working tools before the mortar sets.
Once the mortar has set, the product can be cleaned only by mechanical means.

COLOURS

Grey or white.

CONSUMPTION

Approximately 1.3 kg/m² per mm of thickness.

PACKAGING

25 kg bags.

STORAGE

Planitop 200 can be stored for 12 months in its original unopened packaging in a dry place.

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.
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
Definition according to EN 998-1:	GP
Consistency:	powder
Colour:	Grey or white
Maximum size of aggregate:	0.4 mm

TECHNICAL INFORMATION FOR THE PREPARATION OF PRODUCT	
Composition of mix:	100 parts by weight of **Planitop 200** with 21.5 % water
Preparation of mix:	product mixing 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% R.H.)	
Colour of mix:	grey or white
Consistency of mix:	thixotropic-trowellable
Density of mix:	1800 kg/m^3
Setting time:	
- initial	> 2 h
- final	< 8 h

FINAL PERFORMANCES
According to curing defined in test methods

Performance characteristic	Test method	Requirements EN 1504-2 (C) MC and IR	Requirements EN 998-1 GP – CS IV	Product performance
Compressive strength: - **1 day** - **7 days** - **28 days**	EN 12190	Not required	Not required	**> 5 MPa** **> 12 MPa** **> 20 MPa**
Flexural strength: - **1 day** - **7 days** - **28 days**	EN 196-1	Not required	Not required	**> 2.5 MPa** **> 4.0 MPa** **> 5.0 MPa**
Bond strength by pull-off:	EN 1542	For rigid systems without traffic ≥ 1,0 MPa	Not required	**> 2,0 MPa**
Adhesion to substrate: **– plastic coating**	-	Not required	Not required	**≥ 1.5 MPa** (*)

- glass mosaic **- thin porcelain tiles**				**≥ 1.0 MPa** **≥ 0.8 MPa**
Thermal compatibility – freeze-thaw cycles with de-icing salts (50 cycles) after thunder shower cycles (10 cycles):	EN 13687-1 EN 13687-2	For rigid systems without traffic ≥ 1.0 MPa	Not required	**≥ 1.0 MPa**
Watertightness expressed as coefficient of permeability to water *W*:	EN 1062-3	W < 0.1 kg/m²·h$^{0.5}$	Not required	***W* < 0.1 kg/m²·h$^{0.5}$** Class W_3 *(low permeability to water) according to EN 1062-1*
Permeability to water vapour (wet-cup – method B) expressed as equivalent air thickness S:	EN ISO 7783	Class I S < 5 m Class II 5 m ≤ S ≤ 50 m Class III S > 50 m	Not required	**S < 0.5 m** **Class I** *(permeable to water vapour)*
Compressive strength:	EN 1015-11	Not required	CS I (from 0.4 to 2.5 MPa) CS II (from 1.5 to 5.0 MPa) CS III (from 3.5 to 7.5 MPa) CS IV (≥ 6 MPa)	**Category CS IV**
Adhesion to substrate:	EN 1015-12	Not required	Declared value and failure pattern (FP)	**≥ 1.5 MPa** **Failure pattern (FP) = B**
Capillary water absorption:	EN 1015-18	Not required	W_C 0 not specified W_C 1 ≤ 0.40 kg/(m²·min$^{0.5}$) W_C 2 ≤ 0.20 kg/(m²·min$^{0.5}$)	**Category W_C 2**
Coefficient of permeability to water vapour (μ):	EN 1015-19	Not required	Declared value	**μ < 90**
Thermal conductivity ($\lambda_{10,dry}$):	EN 1745	Not required	Chart value	**0.66 W/m·K (P = 50%)**
Reaction to fire:	EN 13501-1	Euroclass	Euroclass	**B-s1, d0**

NOTES:
Preparation of test samples according to EN 1504-2: compaction according to EN 196-1.
(*) Adhesion may vary according to the type of plastic coating.

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.
The values declared in the TECHNICAL DATA table (typical values) were obtained in compliance with test methods and curing cycles defined in the technical standards referenced therein. Therefore, please note that the use of test procedures or methods other than those indicated in the table could lead to different values and that, in such cases, any liability of our company is excluded.
Please refer to the current version of the Technical Data Sheet, available from our website www.mapei.com

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