

PLANITOP INTONACO ARMATO

Two-component, ready-mixed, high-ductility, fibre-reinforced, natural hydraulic lime (NHL) and Eco-Pozzolan based mortar, particularly recommended for levelling off the surface of stone, bricks and tuff, and for the structural strengthening of facing walls, including when extra strengthening mesh is not applied



WHERE TO USE

Skimming the surface of stone, brickwork and tuff.
Structural strengthening of masonry elements, including when strengthening mesh is not applied.

TECHNICAL CHARACTERISTICS

Planitop Intonaco Armato is a two-component, ready-mixed, light-coloured mortar made from natural hydraulic lime (NHL), Eco-Pozzolan, natural sand, special additives and synthetic polymers in water dispersion according to a formula developed in MAPEI Research Laboratories. When the two components are mixed together (component A powder and component B liquid) they form a mix which is easy to spread and which may be applied manually on vertical surfaces in layers up to 10 mm thick each.

Thanks to the synthetic polymers in water dispersion contained in the product, **Planitop Intonaco Armato** adheres very strongly and, once hardened, forms a tough, compact layer that is impermeable to water and aggressive gases in the surrounding atmosphere while remaining permeable to water vapour.

Numerous tests have been conducted and show that the use of **Planitop Intonaco Armato** increases the shear strength and deformation capacity of strengthened panels by a similar amount to those strengthened by applying traditional render reinforced with metal mesh or FRP.

Planitop Intonaco Armato is classified as M15 type masonry mortar according to EN 998-2 European Standards and as type GP category CS IV render according to EN 998-1 standards, in that it reaches a compressive strength of $> 15 \text{ N/mm}^2$ (EN 1015-11) even though it contains lime and Eco-Pozzolan.

RECOMMENDATIONS

- Do not apply **Planitop Intonaco Armato** if the temperature is lower than $+5^\circ\text{C}$.
- Do not add cement, aggregates or other additives to **Planitop Intonaco Armato**.

APPLICATION PROCEDURE

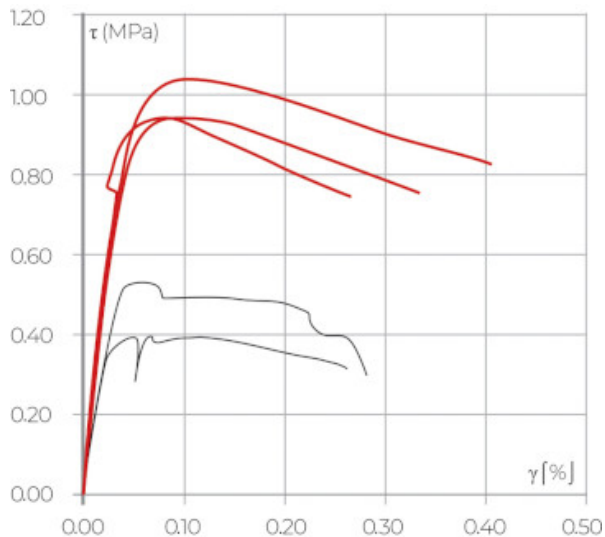
Preparation of the substrate

To ensure good adhesion of the system particular care must be taken when preparing substrates, which must be perfectly clean, sound and free of crumbling areas, dust, oil and old paint. Sandblasting and hydro-blasting are suitable to eliminate efflorescence and soluble salts from the surface of the masonry. Finish off by cleaning the structure with water. Wet the substrate until it is saturated with a dry surface (s.s.d. condition). For particularly absorbent substrates, it is recommended to prime the surface with **Primer 3296** diluted 1:1 with water.

Preparation of the mortar

Depending on which application technique is used, prepare **Planitop Intonaco Armato** with a cement mixer (for manual application) when mixing large quantities or in the mixing unit of a rendering machine (for application by spray). For manual application, pour component B (liquid) into a suitable clean container and slowly add component A (powder) while mixing. Carefully mix **Planitop Intonaco Armato** for some minutes, making sure no powder remains attached to the sides or bottom of the container. Keep mixing until thoroughly blended (completely lump-free).

A mechanical mixer at low speed is recommended for this operation to prevent entraining too much air into the mix. If the mortar is applied by spray, on the other hand, a rendering machine with a separate mixing unit must be used.



Black line: masonry panel without strengthening
Red line: masonry panel strengthened with Planitop Intonaco Armato on both faces

Application of the mortar

Apply **Planitop Intonaco Armato** in several layers around 5 mm thick with a flat metal trowel (or with a rendering machine) to form a single layer with a total thickness of around max. 15 mm.

Finishing the surface of the mortar

After completing the application of **Planitop Intonaco Armato**, if a finer textured finish is required, apply a skim coat of one of the MAPEI range products, such as **Mape-Antique Intonaco NHL** cement-free mortar made from lime and Eco-Pozzolan.

Once the skim coat has hardened it may be coated and protected with **Elastocolor Paint** (protective and decorative elastic paint made from acrylic resin in water dispersion) after applying a coat of **Elastocolor Primer** (solvent-based, high penetration primer) or with products from the **Silexcolor** (silicate-based) or **Silancolor** (silicon resin-based) ranges. All the above coating products are available in a wide range of colours obtained using the **ColorMap®** automatic colouring system.



First layer of Planitop Intonaco Armato



Second layer of Planitop Intonaco Armato

PRECAUTIONS TO BE TAKEN DURING AND AFTER APPLICATION

After applying **Planitop Intonaco Armato** on absorbent substrates, or if the weather is particularly dry, hot or windy, it must be cured very carefully; in such cases, protect the surface to prevent the mixing water from evaporating too quickly.

CLEANING

Planitop Intonaco Armato adheres very strongly, including to metals, for this reason it is recommended to clean tools with water before it sets. Once the product has hardened, cleaning must be carried out mechanically.

CONSUMPTION

1.8 kg/m² per mm of thickness.

PACKAGING

30 kg kit:

- component A: 25 kg bag;
- component B: 5 kg plastic can.

STORAGE

Planitop Intonaco Armato component A may be stored for 12 months in its original packaging in a dry area.

Planitop Intonaco Armato component B may be stored for 24 months.

Store both components at a temperature of at least +5°C.

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.

Planitop Intonaco Armato: two-component, ready-mixed, high-ductility, fibre-reinforced mortar for structural strengthening and levelling off surfaces according to EN 998-1 standards, category CS IV, and EN 998-2 standards, class M15

TECHNICAL DATA (typical values)

PRODUCT IDENTITY

COMPONENT A:

Consistency: powder

Colour: light

Bulk density (kg/m³): 1,400

Maximum diameter of aggregate (mm): 1.5

Chloride content (EN 1015-17) (%)
(minimum requirement: ≤ 0.05%): < 0.05

COMPONENT B:

Consistency: fluid liquid

Colour: white

Bulk density (g/cm³):	1.02			
Dry solids content (%):	10			
Chloride content (EN 1015-17) (%) (minimum requirement: ≤ 0.05%):	< 0.05			
APPLICATION DATA				
Mixing ratio:	25 kg of Planitop Intonaco Armato component A with 5 kg of Planitop Intonaco Armato component B			
Consistency of mix:	fluid-trowellable			
Density of mix (kg/m³):	1,800			
Application thickness (mm):	approx. 5 mm per layer			
Application temperature:	+5°C to +35°C			
Pot life of mix (at +20°C):	approx. 1 hour			
Setting time (start-finish):	10 hours / 20 hours			
FINAL PERFORMANCE (20% component B)				
Performance characteristic	Test method	Requirements according to EN 998-1	Requirements according to EN 998-2	Performance of product
Compressive strength after 28 days (N/mm²):	EN 1015-11	CS I (from 0.4 to 2.5)	from class M1 (> 1 N/mm²) to Class M d (≥ 25 N/mm² or multiples of 5)	> 15 (Category CS IV) (Class M15)
		CS II (from 1.5 to 5.0)		
		CS III (from 3.5 to 7.5)		
		CS IV (≥ 6)		
Adhesion to substrate (N/mm²):	EN 1015-12	declared value and failure pattern (FP)	n/a	≥ 0.8 Failure pattern (FP) = B
Initial shear strength (N/mm²):	EN 1052-3	n/a	chart value	0.15
Compressive modulus of elasticity (GPa):	EN 13412	n/a	n/a	8.000
Capillary action water absorption [kg/(m²·min ^{0.5})]:	EN 1015-18	W _C 0 not specified W _C 1 ≤ 0.40 W _C 2 ≤ 0.20	declared value	Category W _C 2 ≤ 0.2
Coefficient of permeability to water vapour (μ):	EN 1015-19	declared value	–	≤ 60
Thermal conductivity (λ _{10,dry}) (W/m·K):	EN 1745	chart value	chart value	0.66 (P = 50%)
Reaction to fire:	EN 13501-1	Euroclass	Euroclass	A2, s1 - d0

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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