

# PoroMap Intonaco

**Grey coloured prepacked dehumidifying and thermal insulating salt-resistant mortar, for the restoration of damp stone, brick and tuff masonries**

## WHERE TO USE

- Repairing brick, stone and tuff buildings damaged by rising damp.
- Renovation of structures deteriorated by sulphate, chloride and potassium nitrate salts.
- Applied over **PoroMap Rinzafo**, **PoroMap Intonaco** is ideal for preventing rising damp and efflorescence permanently from old perimeter or separating walls as well as from recently constructed walls that have not been properly insulated at the foundations.

## Some application examples

- As a dehumidifying and insulating render on structures subject to rising damp.
- As a dehumidifying render on constructions built on waterfronts or by the sea.
- As a dehumidifying render on stone (particularly porous such as lime) and/or bricks, including burnt bricks (e.g. walls, columns, vaults, etc.) structures and wherever saline efflorescence exists.
- Restoring renders of stone, brick or tuff buildings bonded with original mortars that are mechanically weak.
- Grouting between stones, bricks and tuff of quarry-faced masonries.

## TECHNICAL CHARACTERISTICS

**PoroMap Intonaco** is a grey prepacked powder mortar composed of special hydraulic binders with pozzolanic reaction and highly resistant to sulphates, natural

sands, light-weight aggregates and special additives, and is prepared according to a formula developed in the MAPEI research laboratories.

Thanks to its special composition, the product meets all WTA requirements.

After mixing **PoroMap Intonaco** with water in a mixer, it becomes a plastic-thixotropic mortar easily workable both on vertical surfaces and ceilings.

In order for **PoroMap Intonaco** to perform best its dehumidifying function where high salt concentrations are present, it must be applied over **PoroMap Rinzafo**, anti-chloride barrier that can prevent the dangerous formation of efflorescence due to water evaporation. Thanks to **PoroMap Rinzafo**'s features, it strongly increases the already high chemical-physical performances of **PoroMap Intonaco** and improves the adhesion of the macro-porous render on difficult substrates (e.g. stone masonries) and uniformes the absorption of mixed masonries (stone-brick).

Mortars prepared with **PoroMap Intonaco** are very similar in terms of mechanical strength, modulus of elasticity and porosity to the old mortars based on lime, pozzolan-lime, or hydraulic lime originally used in the construction of historic buildings.

Compared to the original mortars, however, **PoroMap Intonaco** is more resistant to rain water (acid rain), freeze-thaw cycles, cracks caused by plastic shrinkage, alkali-aggregate reaction and soluble salts that are often in the masonry and in the soils on which they have been built, including the sulphatic ones.



## RECOMMENDATIONS

- Always use **PoroMap Intonaco** after having applied a 5 mm thick layer of **PoroMap Rinzafo** on the masonry.
- **PoroMap Intonaco** must be applied no less than 2 cm thick.
- Do not use **PoroMap Intonaco** to repair damaged concrete structures (use products from the **Mapegrout** range).
- Do not add additives, cement or other binders (lime and gypsum) to **PoroMap Intonaco**.
- Do not finish the **PoroMap Intonaco** surface with paints that could interfere with moisture evaporation (use **Silexcolor** or **Silancolor**, lime-based paints or, if the product needs to remain on the façade, apply **Antipluviol S**).
- Do not apply **PoroMap Intonaco** at temperatures below +5°C.

## APPLICATION PROCEDURE

### Preparing the substrate

The structure to be restored must be properly prepared before applying the mortar. Remove the render completely up to 50 cm above the damp area, or at least as high up as twice the depth of the wall. Wash the wall repeatedly with water to remove efflorescences and any soluble salts that are on the surface. Once washed, wait until all the free water has evaporated from the wall to be dehumidified.

### Preparing the product

Prepare **PoroMap Intonaco** in a conventional bucket-type site mixer. Pour in the minimum amount of water (approx. 3.8 litres for each bag of product), then, in a continuous flow, add the contents of the bags that have been opened beforehand. Mix for 2 minutes, then check that the contents are mixed thoroughly, removing unmixed powder from the sides of the mixer.

Add more water if needed, up to a total of 4-4.4 litres per bag, including the amount poured initially.

Mix for a further 2-3 minutes, depending on the efficiency of the mixer, in order to obtain the ideal plasticity.

### Applying the mortar

Spread **PoroMap Intonaco** within 2 hours from the application of **PoroMap Rinzafo**. For best results, the total thickness of the render must not be less than 2 cm.

The dehumidifying render may be applied by trowel.

Although **PoroMap Intonaco** contains ingredients that prevent cracking due to plastic shrinkage, it is a good rule to apply the product when the wall to be covered is not exposed to direct sunlight or wind. In these cases water should be sprayed on the product after it has finished setting.

### Finishing

The mortar can be finished by simply smoothing with a float (to be carried out from the beginning to the end of the setting). In order to keep the render as permeable as possible to water vapour it is recommended not to exert too much pressure with the float over the fresh surface.

For finer-textured finishes you can use **PoroMap Finitura**, fine-grained finishing mortar that tends to decrease permeability to water vapour. Therefore it should not be used if the structure is subject to strong rising damp or in the presence of a strong concentration of soluble salts.

In these cases finish with **Silancolor Tonachino** or **Silexcolor Tonachino**, siloxane and silicate based coatings available in 34 colours, after the application of the relative primer (**Silancolor Primer** or **Silexcolor Primer**).

As an alternative to **PoroMap Finitura**, **Silancolor Tonachino** and **Silexcolor Tonachino**, paint the renders with **Silancolor Paint** or **Silexcolor Paint** (also available in 34 colours), after the application of the same primer.

For buildings exposed to rain that do not need to be painted with any particular colour, protect with **Antipluviol S**, a transparent, water-repellent siloxane resin compound that is permeable to water vapour.

### Cleaning

Mortar that has not hardened yet can be removed from tools with water. Once the mortar has hardened, it is very difficult to remove and tools can only be cleaned mechanically.

### CONSUMPTION

10-11.5 kg/m<sup>2</sup> per cm of the thickness.

### PACKAGING

20 kg bags.

### STORAGE

12 months in original unopened 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

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

For further information refer to the Safety Data Sheet.

PRODUCT FOR PROFESSIONAL USE.

### WARNING

*Although the technical details and recommendations contained in this 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 applications: 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.*

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

## TECHNICAL DATA (typical values)

### PRODUCT IDENTITY

<b>Appearance:</b>	powder
<b>Colour:</b>	grey
<b>Bulk density (kg/m<sup>3</sup>):</b>	1,200
<b>Maximum diameter of aggregate (mm):</b>	1
<b>Dry solid content (%):</b>	100
<b>Storage:</b>	12 months in a dry place in original unopened packaging
<b>Hazard classification according to EC 1999/45:</b>	irritant. Before using refer to the "Safety instructions for preparation and application" paragraph and the information on the packaging and Safety Data Sheet
<b>Customs class:</b>	3824 50 90

### APPLICATION DATA (at +23°C - 50% R.H.)

<b>Application temperature range:</b>	from +5°C to +35°C
<b>Pot life of mix:</b>	approx. 1 h
<b>Waiting time after Poromap Rinzafo application:</b>	2 h
<b>Max thickness per layer (mm):</b>	30

### FINAL PERFORMANCE DATA (in compliance with WTA recommendations)

<b>Mix ratio:</b>	one 20 kg bag with 4-4.4 litres of water
<b>Composition (kg/m<sup>3</sup>):</b> – Poromap Intonaco: – water:	approx. 1,100 approx. 220
<b>Consistency of mix:</b>	thixotropic
<b>Porosity of the mortar in the fresh stage (EN 1015/7) (%):</b>	> 25
<b>Density of mix (according to EN 1015/6) (kg/m<sup>3</sup>):</b>	1,320
<b>Colour of hardened product:</b>	light grey
<b>Total porosity (%):</b>	> 40
<b>Resistance to water vapour (according to EN 1015/19) (μ):</b>	≤ 10
<b>Compressive strength (according to EN 1015/11) (N/mm<sup>2</sup>):</b> – after 28 days (CS II):	1.5-5
<b>Flexural strength (according to EN 1015/11) (N/mm<sup>2</sup>):</b> – after 28 days:	1-2
<b>Dynamic modulus of elasticity (N/mm<sup>2</sup>):</b> – after 28 days:	< 4,500
<b>Bonding strength EN 1015/12 (N/mm<sup>2</sup>):</b>	≤ 0.4 (B)
<b>Thermal conductivity (EN 1745) (λ):</b>	0.38 W/mk
<b>Water absorption (EN 1015/18) (kg/m<sup>2</sup>):</b>	2.5
<b>Fireproof class (EN 13501-1):</b>	class A1

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