

# PoroMap Intonaco Macchina

**Pre-blended grey-coloured, salt-resistant dehumidifying and insulating mortar for repairing damp stone, brick and tuff walls; applied using a rendering machine**



## WHERE TO USE

- Repairing brick, stone and tuff buildings damaged by capillary rising damp.
- Restoration of structures damaged by sulphate attack, chlorides and nitrates.
- **PoroMap Intonaco Macchina**, applied on top of a coat of **PoroMap Rinzafo Macchina**, is ideal for completely eliminating rising damp and surface efflorescence, both on recently-built walls which do not have a DPM between the foundations, and older perimeter and dividing walls.

## Some application examples

- Dehumidifying and insulating render on walls with rising damp; applied using a rendering machine.
- Dehumidifying render on structures in damp environments or close to the sea.
- Dehumidifying render on stone structures (especially porous stone, such as limestone) and/or brick structures, including those which have not been well fired (e.g. masonry, pillars, vaulted roofs, etc.) and wherever there is saline efflorescence.
- Repairing render on stone, brick and tuff buildings made using mortar with poor mechanical properties.
- Pointing between layers of stone, brick and tuff on natural-finish masonry.

## TECHNICAL CHARACTERISTICS

**PoroMap Intonaco Macchina** is a pre-blended, grey-coloured mortar made from special hydraulic binders resistant to pozzolan-reaction sulphates, natural sand, lightweight aggregates and special additives, according to a formula developed in MAPEI's own research laboratories.

When **PoroMap Intonaco Macchina** is mixed with water, which must be carried out using a continuous mixing machine, it forms a mortar with a plastic-thixotropic consistency which is easy to apply by spraying, both on vertical surfaces and on ceilings. In order for **PoroMap Intonaco Macchina** to fully develop its de-humidifying properties, including in those cases where there is a high concentration of salt, it must be applied on a layer of **PoroMap Rinzafo Macchina**, which forms a salt-resistant barrier to impede the formation of dangerous and unsightly surface efflorescence after the water has evaporated. In fact, thanks to its special characteristics, **PoroMap Rinzafo Macchina** has the capacity of further improving the inherently high chemical-physical performance properties of **PoroMap Intonaco Macchina**. It also helps to improve the bond of macro-porous render on problematic substrates (e.g. stone masonry) and to even out the absorption on mixed masonry (e.g. stone-brick). The properties of mortar made using **PoroMap Intonaco Macchina**, such as mechanical strength, modulus of elasticity and porosity, are very similar to those of old mortar made using lime, pozzolan-lime and hydraulic lime originally used in the construction of historic buildings.

# PoroMap Intonaco Macchina



Preparation of the product



Levelling off the render

Compared with the original mortar, however, **PoroMap Intonaco Macchina** is more resistant to acid rain, freeze-thaw cycles, cracking due to plastic shrinkage and reactions with alkali aggregates and soluble salts which are often present in masonry and in the ground on which they have been built, including sulphate salts.

## RECOMMENDATIONS

- **PoroMap Intonaco Macchina** must only be applied after spreading a 5 mm-thick layer of **PoroMap Rinzaffo Macchina** on the surface of the masonry.
- The layer of **PoroMap Intonaco Macchina** must be at least 2 cm thick.
- Do not use **PoroMap Intonaco Macchina** for repairing deteriorated concrete structures (use products from the **MapegROUT** range).
- Do not add additives, cement or other binders (lime and gypsum) to **PoroMap Intonaco Macchina**.
- Do not finish off the surface of **PoroMap Intonaco Macchina** with a non vapour permeable paint (use paint and render from the **Silexcolor** or **Silancolor** ranges, lime-based paint or, if a natural finish is required, apply a coat of **Antipluviol S**).
- Do not apply **PoroMap Intonaco Macchina** if the temperature is lower than +5°C.
- Use **PoroMap Intonaco** and **PoroMap Rinzaffo** if manual application techniques are necessary.

## APPLICATION PROCEDURE

### Preparation of the substrate

Before applying the mortar, the surface of the structure to be treated must be prepared correctly. Completely remove all the old render to a height of at least 50 cm above the damp area, and in all cases, to a height of at least twice the thickness of the wall. Wash the masonry with water a number of times to remove all traces of efflorescence and to eliminate any soluble salts present on the surface. After washing the masonry, wait until all the excess water has evaporated from the surface to be treated.

### Preparation of the product

The mortar must be prepared using a continuous-cycle rendering machine, such as a Putzmeister MP 25, or a G4 or G5 PFT. Pour the contents of the sacks in the hopper, and set the flow-meter according to the type of machine used and to form mortar with a plastic consistency.

Model	Rotor stator	Mixer	Setting flow-meter (l/h)
Putzmeister MP 25	D6 - Power	standard	320-360
PTF G4 or G5	D6 - 3	standard	320-360

### Application of the mortar

Start applying **PoroMap Intonaco Macchina** on the layer of **PoroMap Rinzaffo Macchina**

once it has become firm, but before it has completely hardened. If **PoroMap Intonaco Macchina** is applied the following day, it is important that the surface sprayed with **PoroMap Rinzaffo Macchina** is not tamped, and is left with a rough finish.

The total thickness of the render must be at least 2 cm to obtain the best results.

The mortar must be sprayed on continuously with a continuous-mixing rendering machine, such as a **Putzmeister** or **PFT**.

Even though **PoroMap Intonaco Macchina** contains products which counteract cracks due to plastic shrinkage, it is good practice to apply the dehumidifying render when the walls to be treated are not directly exposed to the sun or winds. In such cases, the surface of the product must be sprayed with water once it starts to set.

## FINISHING

The finish may be regulated quite simply by levelling off with a float (between the start and end of setting phases). To guarantee that the render is highly permeable to vapour, we recommend that the surface is only lightly tamped.

If a finer, more compact surface finish is required, **PoroMap Finitura** smoothing and levelling mortar may be used. However, the fine grain structure of this product tends to reduce the vapour permeability properties of the render. Therefore, we strongly advise against using this product if the structure is subject to serious rising damp, or if there are high concentrations of soluble salts.

In such cases, it is better to use siloxane-based **Silancolor Tonachino** or silicate-based **Silexcolor Tonachino**, available in a wide range of colours using the **ColorMap®** colouring system, after applying their relative primer (**Silancolor Primer** and **Silexcolor Primer**). As an alternative to **PoroMap Finitura**, **Silancolor Tonachino** and **Silexcolor Tonachino**, paint the render using **Silancolor Paint** or **Silexcolor Paint** (also available in a wide range of colours using the **ColorMap®** colouring system), after applying a coat of their relative primer.

For constructions particularly exposed to rain, if the render does not require painting, the walls may be protected with a transparent, breathable and water-resistant product such as **Antipluviol S** resin-based impregnator.

## Cleaning

Mortar which has not yet hardened may be washed from tools using water. Once hardened, cleaning is much more difficult, and must be carried out mechanically.

## CONSUMPTION

11.5-13 kg/m<sup>2</sup> per cm of thickness.

## PACKAGING

20 kg sacks.

## STORAGE

12 months in a dry, sheltered area in the original, unopened packaging.

This products conforms to the requirements of Directive 2003/53/CE.

TECHNICAL DATA (typical values)	
PRODUCT IDENTITY	
Consistency:	powder
Colour:	grey
Bulk density (kg/m³):	1200
Max diameter of aggregate (mm):	1
Dry solids content (%):	100
Hazard classification according to EC 1999/45:	irritant. Before using refer to the "Safety instructions for preparation and application" paragraph and the information on the packaging and Safety Data Sheet
Customs class:	3824 50 90
APPLICATION DATA (at +20°C - 50% R.H.)	
Application temperature range:	from +5°C to +35°C
Workability time of mix:	approx. 1 hour
Waiting time after the key coat:	2 hours
Max applied thickness (mm):	30
FINAL PERFORMANCE OF RENDER BLENDED ACCORDING TO EN 1015/2	
Mixing water (%):	21
Consistency of mix:	thixotropic
Density of the fresh mix (EN 1015/6) (kg/m³):	1400
Porosity of the mix while still fresh (EN 1015/7) (%):	> 20
Colour of hardened product:	grey
Total porosity of mortar when hardened (%):	> 40
Vapour diffusion resistance factor (EN 1015/19) (μ):	≥ 13
Compressive strength (EN 1015/11) (N/mm²): – after 28 days (CS II category):	1.5-5
Flexural strength (EN 1015/11) (N/mm²): – after 28 days:	1-2
Dynamic modulus of elasticity (N/mm²): – after 28 days:	< 4500
Bond strength to concrete (EN 1015/12) (N/mm²):	≥ 0.4 (B)
Thermal conductivity (EN 1745) (λ):	0.42 W/mk
Water absorption (EN 1015/18) (kg/m²):	2.5
Reaction to fire (EN 13501-1):	class A1

# Poromap Intonaco Macchina

## SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Poromap Intonaco Macchina contains cement which, in contact with perspiration or other body fluids, produces an irritating alkaline reaction and, in those subjects sensitive to such products, an allergic rash. Use protective gloves and goggles. For further information, please refer to the Safety Data Sheet.

PRODUCT FOR PROFESSIONAL USE.

### WARNING

While the indications and guidelines contained in this data sheet correspond to the company's knowledge and wide experience, they must be considered, under

*all circumstances, merely as an indication and subject to confirmation only after long-term, practical applications. Therefore, anybody who undertakes to use this product, must ensure beforehand that it is suitable for the intended application and, in all cases, the user is to be held responsible for any consequences deriving from its use.*

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

