



# PoroMap Rinzafo



**Salt-resistant transpirant scratch-coat mortar, based on hydraulic pozzolanic-reaction binder, to be used by hand as first layer when applying de-humidifying renders**

## WHERE TO USE

Renovating brick, stone and tuff masonry, including recent builds, damaged by capillary rising damp. Renovating masonry damaged by the crumbling effect of sulphates, chlorides and nitrates.

## Some application examples

**PoroMap Rinzafo** must always be used as the first layer in the following systems:

- internal and/or external macro-porous, de-humidifying and insulating render on stone, brick, tuff and mixed masonry, including recent builds, with capillary rising damp and saline efflorescence;
- de-humidifying render on stone (such as limestone) and/or particularly porous, absorbent brick masonry, and in general wherever there is saline efflorescence;
- de-humidifying render on masonry in lagoon areas or close to the sea.

## TECHNICAL CHARACTERISTICS

**PoroMap Rinzafo** is a ready-mixed powdered mortar for macro-porous, de-humidifying and insulating render made from special hydraulic, pozzolanic-reaction binders, natural sand and special additives with very low emission of volatile organic compounds (EMICODE EC1 R Plus) according to a formula developed in the MAPEI research laboratories.

This product is classified as GP according to EN 998-1 Standards: “*General purpose mortar for internal/external render*”, Category CS IV.

When mixed with water in a cement mixer, **PoroMap Rinzafo** forms a salt-resistant, transpirant skimming mortar with a semi-fluid consistency which is easy to apply by trowel both on vertical surfaces and ceilings.

The properties of a mortar made with **PoroMap Rinzafo**, such as mechanical strength, modulus of elasticity and porosity, are very similar to those of a mortar made using lime, lime-pozzolan or hydraulic lime originally used in the construction of old buildings.

Compared with these types of mortar, however, **PoroMap Rinzafo** also has properties which make it resistant to acid rain, freeze-thaw cycles, the leaching action of rainwater, alkali-aggregate reactions and soluble salts often present in the masonry and in the ground on which the masonry is built.

Typical values are shown in the Technical Data table (see Application Data and Final Performance sections) which refer to the main characteristics of **PoroMap Rinzafo** at both the wet and hardened states.

## RECOMMENDATIONS

- Apply a 5 mm thick layer of **PoroMap Rinzafo** before applying the macro-porous de-humidifying and insulating render made from **PoroMap Intonaco**.

# PoroMap Rinzafo

- Do not apply **PoroMap Rinzafo** with a rendering machine (use **PoroMap Rinzafo Macchina**).
- Never add additives, cement or other binders (lime and gypsum) to **PoroMap Rinzafo**.
- Do not apply **PoroMap Rinzafo** if the temperature is lower than +5°C.

## APPLICATION TECHNIQUE

### Preparation of the substrate

Completely remove all the render using hand or power tools to a height of approx. 50 cm above the damaged render, and in all cases to a height of at least twice the thickness of the wall. Remove all traces of loose or crumbling material, dust, mould and any other substance or material that could affect the bond of the **PoroMap Rinzafo** and **PoroMap Intonaco** de-humidifying cycle until the substrate is clean, sound and compact. Clean the masonry with low-pressure water jets to remove any efflorescence or soluble salts present on the surface. Repeat this operation several times if necessary. Repair any gaps and uneven areas in the masonry by patching or tacking them using stone, bricks or tuff with similar characteristics to the original material. Saturate the substrate with water to prevent it drawing off water from the mortar and compromising its final performance characteristics. Excess water must be left to evaporate off so that the masonry is saturated and the surface is dry (s.s.d. condition). Compressed air may be used to speed up this process. If the substrate cannot be saturated with water, we recommend that it is at least wetted to allow the mortar to adhere correctly. Before applying **PoroMap Intonaco**, always apply a layer of **PoroMap Rinzafo** approx. 5 mm thick to completely cover the substrate to be rendered to improve its adhesion, even out the absorption of the substrate and slow down the transfer of salts.

On mixed walls or on walls out of plumb by more than 4-5 cm, which could lead to the layer of render having an irregular thickness, we recommend inserting a Ø 2 mm zinc-plated 5 x 5 cm metallic mesh before applying **PoroMap Rinzafo**. Fasten the mesh to the masonry with nails, plugs or chemical anchors (such as **Mapefix PE Wall** or **Mapefix PE SF**) with a small gap between the mesh and the substrate so that it becomes embedded in the middle of the layer of mortar.

### Preparation of the product

Prepare **PoroMap Rinzafo** in a cement mixer. Small amounts of the product may be prepared using an electric drill at low speed with a mixing attachment. Mixing by hand is not recommended. After pouring the minimum amount of clean water required into the mixer (4 litres for

every 25 kg bag of **PoroMap Rinzafo**), slowly add the powdered mortar in a continuous flow. Mix for approximately 3 minutes and check that the blend is well mixed, even and lump-free, and that any lumps of powder that have stuck to the sides or bottom of the mixer are removed. Add more water if required up to a maximum of 4.5 litres per bag including the water added at the start of mixing. Then mix **PoroMap Rinzafo** again for a further 2-3 minutes, depending on the efficiency of the mixer, to obtain an even, semi-fluid mix.

### Application of the product

Apply a layer of **PoroMap Rinzafo** approximately 5 mm thick to completely cover the substrate to be rendered, starting from the lower part of the wall. This thin base layer improves the adhesion of **PoroMap Intonaco**, evens out the absorbency of the substrate and slows down the transfer of soluble salts. After applying the keying mortar do not float or compact the surface. Even though **PoroMap Rinzafo** contains products which contrast the formation of micro-cracks caused by plastic shrinkage, it is good practice to apply the mortar when the wall is not exposed to direct sunlight and/or wind. In such cases, such as during hot and/or particularly windy weather, take special care when curing the mortar. Spray water on the surface or employ other systems to prevent the mixing water evaporating too quickly.

### Cleaning

Remove mortar from tools with water before it hardens. Once hardened, cleaning is much more difficult and must be carried out mechanically.

### PACKAGING

25 kg bags.

### COLOUR

Light grey.

### CONSUMPTION

7.5-8 kg/m<sup>2</sup> (for a 5 mm-thick layer).

### STORAGE

12 months in a dry, covered area in its original, unopened packaging. The product complies with the conditions of Annex XVII to Regulation (EC) N° 1907/2006 (REACH) - All. XVII, item 47.

### SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

**PoroMap Rinzafo** contains cement that when in contact with sweat or other body fluids causes irritant alkaline reactions and allergic reactions to those predisposed. It can cause damage to eyes. If the product comes in contact with the eyes or skin, wash immediately with plenty of water and seek medical attention. It is recommended to use protective



Masonry after removing the render



Hydrowashing the masonry

## TECHNICAL DATA (typical values)

### PRODUCT IDENTITY

Type of mortar (EN 998-1):	GP - General purpose mortar for internal/external render
Consistency:	powder
Colour:	light grey
Maximum size of aggregate (EN 1015-1) (mm):	2.5
Bulk density (kg/m <sup>3</sup> ):	1,000-1,100
EMICODE:	EC1 R Plus - very low emission

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

Mixing ratio:	100 parts of <b>PoroMap Rinzafo</b> with 15.5-17.5 parts of water (4-4.5 litres of water per 25 kg bag of product)
Consistency of mix:	semi-fluid
Density of wet mortar (EN 1015-6) (kg/m <sup>3</sup> ):	1,800
Porosity of wet mortar (EN 1015-7) (%):	> 20
Application temperature:	from +5°C to +35°C
Workability time of wet mortar (EN 1015-9):	approx. 60 mins.
Thickness to be applied (mm):	5

### FINAL PERFORMANCE: 16.5% mixing water; mixed in compliance with EN 1015-2 standards

Performance characteristic	Test method	Requirements according to EN 998-1	Performance of product
Compressive strength after 28 days (N/mm <sup>2</sup> ):	EN 1015-11	CS I (from 0.4 to 2.5)	≥ 8 (Category CS IV)
		CS II (from 1.5 to 5)	
		CS III (from 3.5 to 7.5)	
		CS IV (≥ 6)	
Adhesion to substrate (N/mm <sup>2</sup> ):	EN 1015-12	declared value and failure mode (FP)	≥ 0.5 Failure mode (FP) = B
Capillary action water absorption [kg/(m <sup>2</sup> ·min <sup>0.5</sup> )]:	EN 1015-18	W 0 (not specified)	Category W 1
		W 1 (C ≤ 0.40)	
		W 2 (C ≤ 0.20)	
Coefficient of permeability to water vapour (μ):	EN 1015-19	declared value	< 20
Thermal conductivity (λ <sub>10, dry</sub> ) (W/m·K):	EN 1745	chart value	0.71 (P = 50%)
Reaction to fire:	EN 13501-1	value declared by manufacturer	Class A1
Resistance to sulphates:	Anstett test	not required	high
Saline efflorescence (after semi-immersion in water):	/	not required	absent



Application of PoroMap Rinzafo

# PoroMap Rinzafto

gloves and goggles and to take the usual precautions for the handling of chemicals. For further and complete information about the safe use of our product please refer to the latest version of our 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 website [www.mapei.com](http://www.mapei.com)**



This symbol is used to identify Mapei products which give off a low level of volatile organic compounds (VOC) as certified by GEV (Gemeinschaft Emissionskontrollierte Verlegewerkstoffe, Klebstoffe und Bauprodukte e.V.), an international organisation for controlling the level of emissions from products used for floors.



**Our Commitment To The Environment**  
MAPEI products assist Project Designers and Contractors create innovative LEED (The Leadership in Energy and Environmental Design) certified projects, in compliance with the U.S. Green Building Council.

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

