



# PoroMap Rinzafo Plus



**Salt-resistant, breathable scratch-coat mortar, based on hydraulic pozzolanic reaction binder, to be used as first layer to improve the bond of the render and even out the absorption of the substrate**

## WHERE TO USE

Restoring masonry where a first layer that improves the bond of the render and evens out the absorption of the substrate is needed. It can be used both on loose surfaces and waterproof coating for creating anti-condensation cycles

Renovating brick, stone and tuff masonry, including new build, damaged by capillary rising damp or by the crumbling effect of sulphates, chlorides and nitrates, when the substrate is extremely crumbling.

## Some application examples

**PoroMap Rinzafo Plus** can be applied as the first layer for:

- anti-condensation cycle on retaining walls in partially underground or underground environments.
- structural, breathable renders on particularly problematic masonry such as stone or mixed masonry, highly porous masonry or extremely weak surfaces.
- Internal and/or external macro-porous, de-humidifying and insulating render on stone, brick, tuff and mixed masonry, including those recently built, when the substrate is extremely crumbling.

## TECHNICAL CHARACTERISTICS

**PoroMap Rinzafo Plus** is a ready-mixed powdered mortar made from special hydraulic, pozzolanic-reaction binders, natural sand, special additives with very low emission of volatile organic compounds (EMICODE ECI Plus) according to a formula developed in the MAPEI Research and Development laboratories.

This product is classified as GP according to EN 998-1

standard: "General purpose mortar for internal/external render Category CS IV.

When mixed with water in a cement mixer or in a continuous feed spraying machine, **PoroMap Rinzafo Plus** forms a breathable scratch-coat with a semi-fluid consistency which is easy to apply by rendering machine or by trowel both on vertical surfaces and ceilings.

The properties of a mortar made with **PoroMap Rinzafo Plus**, 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 Plus** 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 Plus** at both the wet and hardened states.

## RECOMMENDATIONS

- In case of particularly problematic masonry such as stone or mixed masonry, highly porous masonry or extremely weak surfaces it is recommended to apply **PoroMap Rinzafo Plus** as first layer to improve the bonding of the next coat of render and to even out the absorption of the masonry.
- Do not use **PoroMap Rinzafo Plus** as consolidating injection slurry (use **MapeWall Inject & Consolidate**).
- Do not add any additive, cement or other binders (lime or gypsum) to **PoroMap Rinzafo Plus**.

# PoroMap Rinzafo Plus

- Do not apply **PoroMap Rinzafo Plus** if the temperature is lower than +5°C.
- Do not use **PoroMap Rinzafo Plus** on masonry with high concentration of salts without creating in the same masonry a horizontal chemical barrier using **Mapestop** or **Mapestop Cream**.

## APPLICATION PROCEDURE

### Preparation of the substrate

If the product is used for an anti-condensation cycle, apply **PoroMap Rinzafo Plus** directly on **Mapelastic Foundation**. Make sure that the surface is free from dust or any other substance that could affect bonding. In case of extremely weak masonry or if the substrate is extremely crumbling, remove all traces of loose or crumbling material, dust, mould and any other substance or material that could affect the bond of **PoroMap Rinzafo Plus** 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 **MapeWall Muratura Fine** or **MapeWall Muratura Grosso** or **MapeWall Render & Strengthen**, according to the performances required to the mortar together with 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 or treated with a suitable consolidating product to allow the mortar to adhere correctly.

Apply a layer of **PoroMap Rinzafo Plus** approx. 5 mm thick to completely cover the substrate to be treated with **PoroMap Deumidificante**.

### Preparation of the product

Prepare **PoroMap Rinzafo Plus** in a drum concrete mixer, if the product is applied with a trowel, or in the hopper of a continuous feed rendering machine if the product is applied by spraying. Although the product can be applied also manually, it is recommended to apply it using a rendering machine in case of large surfaces, as the yield of the product is improved. 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.

### Application of the product

*Application with rendering machine*  
Pour the contents of the bags of **PoroMap Rinzafo Plus** into the hopper of a continuous feed rendering machine (such as a PFT G4 or G5, Putzmeister MP 25, Turbosol or a similar machine) and set the

flow-rate at 440-460 l/h, depending on the type of equipment used, until a "plastic", consistency is obtained. Tests to validate the product were carried out using a Putzmeister MP 25 with the following set-up:

### Stator - Rotor - Mixer Hose - Spray lance

Model	Rotor stator	Mixer	Flowmeter setting (l/h)
Putzmeister MP 25	D6 - Power	standard	440-460
PTF G4 or G5	D6 - 3	standard	440-460

Apply a single layer of **PoroMap Rinzafo Plus** around 5 mm thick to completely cover the surface to be treated, starting from the bottom working upwards. It is recommended to apply the product at a distance of approx. 20 cm, so that the product is applied uniformly. After applying the product, do not float or compact the mortar. Wait until **PoroMap Rinzafo Plus** has hardened before applying dehumidifying.

### Application with a trowel

After pouring the minimum amount of clean water required into the mixer (4.75 litres for every 25 kg bag of **PoroMap Rinzafo Plus**), 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 5.25 litres per bag including the water added at the start of mixing. Then mix **PoroMap Rinzafo Plus** again for a further 2-3 minutes, depending on the efficiency of the mixer, to obtain an even, plastic and thixotropic mix. Apply a single layer of **PoroMap Rinzafo Plus** around 5 mm thick to completely cover the surface to be treated, starting from the bottom working upwards. It is recommended to apply the product at a distance of approx. 20 cm, so that the product is applied uniformly. After applying the product, do not float or compact the mortar.

Wait until **PoroMap Rinzafo Plus** has hardened before applying **PoroMap Deumidificante**.

Even though **PoroMap Rinzafo Plus** contains products which contrast the formation of micro-cracks, 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 the mortar from the tools with water before it hardens. Once hardened, cleaning is much more difficult and must be carried out mechanically.

### PACKAGING

25 kg bags.



Application of PoroMap Rinzafo Plus on Mapelastic Foundation for creating anti-condensation cycle



Removal of damaged render



Powerwashing of 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/m³):	1,000-1,100
EMICODE:	EC1 Plus - very low emission

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

Mixing ratio:	100 parts of <b>PoroMap Rinzafo Plus</b> with 19-21 parts of water (4.75-5.25 l of water for each 25 kg bag)
Consistency of the mix:	semi-fluid
Bulk density of wet mortar (EN 1015-6) (kg/m³):	1,800
Recommended application temperature range:	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: 20% 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/mm²):	EN 1015-11	CS I (from 0.4 to 2.5)	≥ 8 (Category CS IV)
		CS II (from 1.5 to 5.0)	
		CS III (from 3.5 to 7.5)	
		CS IV (≥ 6)	
Adhesion to substrate (brick) (N/mm²):	EN 1015-12	declared value and failure mode (FP)	≥ 0.5 Failure mode (FP) = B
Capillary action water absorption [kg/(m²·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	0.57 (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 Plus with a rendering machine



Application of PoroMap Rinzafo Plus with a trowel

# PoroMap Rinzafo Plus



## CONSUMPTION

7.5-8 kg/m<sup>2</sup> (per 5 mm of thickness).

## STORAGE

PoroMap Rinzafo Plus can be stored for 12 months in a dry, covered area in its original, unopened packaging.

This product complies with the prescriptions of Reg. (EC) N. 1907/2006 (REACH) - Annex XVII, item 47.

## SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

PoroMap Rinzafo Plus 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. During use wear protective gloves and goggles and take the usual precautions for handling chemicals. In case of contact with the eyes or the skin wash immediately with plenty of water and seek medical attention.

For further and complete information about the safe use of our product please refer to the latest version of our 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)**

## LEGAL NOTICE

**The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement or replace requirements per the TDS in force at the time of the MAPEI product installation.**

**The most up-to-date TDS can be downloaded from our website [www.mapei.com](http://www.mapei.com).**

**ANY ALTERATION TO THE WORDING OR REQUIREMENTS CONTAINED OR DERIVED FROM THIS TDS EXCLUDES THE RESPONSIBILITY OF MAPEI.**



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.

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



BUILDING THE FUTURE