MAPEI

Mape-Antique CC



Premixed cement-free brick-coloured dehumidifying mortar for the restoration of damp stone, brick and tuff masonry

WHERE TO USE

- Restoration of stone, brick or tuff buildings damaged by rising capillary damp (suitable for historical buildings).
- Restoration of structures damaged by sulphate salts.

Applied after **Mape-Antique Rinzaffo**, **Mape-Antique CC** is suitable for the restoration of buildings affected by strong presence of chlorides.

Some application examples

- As a dehumidifying render on masonry subject to rising damp.
- As a dehumidifying render on structures built by lagoons or by the sea.
- As a dehumidifying render over stone (especially porous, such as those of lime nature) or brick, including burnt bricks, walls, columns, vaulting, etc. and wherever saline efflorescence exists.
- Restoring stone, brick or tuff renders bond with mortars which were originally mechanically weak.
- Grouting between stones, bricks and tuff of quarry-faced masonry.

TECHNICAL CHARACTERISTICS

Mape-Antique CC is a premixed brick-coloured cement-free powder mortar based on special hydraulic binders with pozzolanic action, natural sand, special additives and synthetic fibres according to a formula developed in the Mapei research laboratories.
After mixing **Mape-Antique CC** with water in a mixer, it forms a sulphate resistant plastic-thixotropic consistency mortar that is easily workable on both vertical surfaces and ceilings. According to the 1965 Italian law and the 1972 Italian Ministerial Decree, **Mape-Antique CC** can be defined as a mortar based on a hydraulic lime based binder.
In order for **Mape-Antique CC** to best carry out its dehumidifying action, even in the presence of high concentrations of salt, it must be applied over **Mape-Antique Rinzaffo**, a barrier against salt that can prevent the formation of dangerous and anti-aesthetic efflorescence that is consequent to water evaporation.
In fact, thanks to its characteristics, **Mape-Antique Rinzaffo** can substantially increase **Mape-Antique CC**'s already high chemical-physical performances.
Furthermore, **Mape-Antique Rinzaffo** improves the bonding of the macro-porous render on difficult substrates (ex. stone masonry) and uniforms absorption of stone-brick masonry.
Mortars prepared with **Mape-Antique CC** are very similar to the old mortars based on lime, pozzolan-lime or hydraulic lime originally used in the construction of period buildings in terms of colour, mechanical strength, modulus of elasticity and porosity.
Compared to the original mortars, however, **Mape-Antique CC**-based repair mortars possess a durability that makes them virtually indestructible in the face of natural aggressions: rain, rising damp, freeze-thaw cycles, cracks caused by plastic shrinkage, alkali-aggregate reaction and attack by the sulphate salts that are often in the masonry.
Despite their intrinsic porosity and "mechanical delicacy", **Mape-Antique CC**-based mortars are physically and chemically insensitive to aggressive attacks.
The Technical Data Table (Final Performances) lists

Mape-Antique CC

some examples of typical data relating to the principal properties of mortar prepared with **Mape-Antique CC** in the plastic and cured state.

RECOMMENDATIONS

- **Mape-Antique CC** mortar must be applied not less than 2 cm thick.
- Do not use **Mape-Antique CC** for consolidating slurries to be injected (use **Mape-Antique I**).
- Do not add additives, cement or other binders (lime or gypsum) to **Mape-Antique CC**.
- Do not finish the **Mape-Antique CC** surface with paints that could interfere with the moisture evaporation (use **Silexcolor Paint**, **Silexcolor Tonachino**, lime-based paints or **Antipluviol S**).
- Do not apply **Mape-Antique CC** at temperatures below +5°C.
- Apply **Mape-Antique CC** on a clean substrate.

APPLICATION PROCEDURE

Preparing the substrate

Before preparing the mortar it is essential that the structure to be repaired is carefully prepared. All damaged materials (mortar, stone, brick or tuff) should be removed and new samples procured should replace the original materials as much as possible both in appearance and substance.
In the presence of rising damp, completely remove the render at least 50 cm above the damp area and anyway for a minimum height of twice the thickness of the wall.
After removing all loose material (dust, grease, etc.) wash the structure with water to remove efflorescence and soluble salts that are in the masonry. If necessary repeat several times in order to dissolve any salt present between the masonry.
Always apply a 5 mm coat of **Mape-Antique Rinzaffo** after having wet the structure that needs repair as well as the stones or bricks that will be inserted into the structure.
Mape-Antique Rinzaffo may also be used on substrates that have not been damaged by chlorides (see the **Mape-Antique Rinzaffo** technical data sheet).
Excess water must be left to evaporate so the section to be repaired is saturated with water inside yet dry on the surface. Compressed air can be used to speed up evaporation.

Preparing the product

Mape-Antique CC is prepared in a normal cement mixer. After pouring the minimum amount of water (approximately 3.5 litres for each bag of product), pour in the contents of the previously opened bags of **Mape-Antique CC** in a steady flow. Mix for 3 minutes and check that the mix is well blended, taking care to scrape any unblended powder from the sides of the mixer. More water can be added to the mix if needed but the total amount should not exceed 4 litres per bag, including the amount poured in initially. Mix again for 2 to 3 minutes, depending on the efficiency of the mixer, to obtain the optimum plasticity for application with a trowel.

Applying the mortar

Mape-Antique CC prepared with water and according to the recommended method has a plastic consistency and is easy to apply.
24 hours after **Mape-Antique Rinzaffo** has hardened, apply the render with **Mape-Antique CC**. The total thickness must not be less than 2 cm.
Both products must be applied with a trowel.

Although **Mape-Antique CC** contains substances that prevent cracking caused by plastic shrinkage, the mortar should not be applied to a wall exposed to direct sunlight or wind; if so, spray water abundantly on the rendering once applied.

Finishing

Finishing can be carried out, as required, by simply levelling (immediately after application) with a float.
In order to ensure that the render is highly vapour permeable, it is recommended not to firmly press the surface of the fresh render.
If a fine grained finishing is desired, **Mape-Antique FC** or **Mape-Antique FC/R** smoothing mortars can be used, but they tend to slightly reduce the vapour permeability of the render because they contain fine graded aggregates.
Their use is not recommended when the masonry is subject to strong rising damp and in the presence of strong concentrations of soluble salts. In these cases it is recommended to finish with **Silexcolor Tonachino** or **Silexcolor Marmorino**, silicate based coverings available in 34 colours.
As an alternative paint the renders with **Silexcolor Paint**, also available in 34 colours.
For surfaces especially exposed to rain and that do not require tinting, masonry can be protected with a transparent vapour-permeable treatment using **Antipluviol S**, a water repellent siloxane resin based primer.

CONSUMPTION

15 kg/m² per cm of thickness.

Cleaning

Before hardening, the mortar can be removed from tools with water. Afterwards cleaning is very difficult and can only be carried out mechanically.

PACKAGING

25 kg bags.

SAFETY INSTRUCTIONS FOR THE PREPARATION AND APPLICATION

It contains special hydraulic binders that, when in contact with sweat or any other bodily fluids, produce an alkaline reaction. It is irritant to the eyes and skin.
Wear protective gloves and goggles.
For further information refer to the safety data sheet.

STORAGE

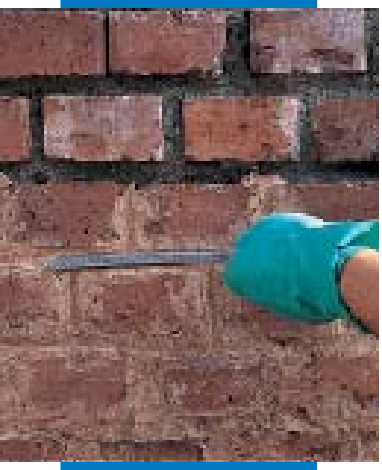
12 months in a dry and sheltered place in original sealed packaging.



Trowelling on Mape-Antique CC mortar



Pointing of brickwork with Mape-Antique CC



Finishing joints in a brick wall with Mape-Antique CC

TECHNICAL DATA (typical values)

PRODUCT IDENTITY	
Consistency:	powder
Colour:	brick-colour
Density (kg/dm³):	1.5
Maximum diameter (mm):	2.4
Dry solid content (%):	100
Storage:	12 months in a dry place in original sealed packaging
Hazard certification according to EC 99/45:	irritant. Before using refer to the "Safety instructions for the preparation and application" paragraph and the information on the packaging and safety data sheet
Customs class:	3824 50 90
FINAL PERFORMANCES IN MORTAR	
Mix ratio:	one 25 kg bag with 3.5-4 litres of water
Composition (kg/m³): **– Mape-Antique CC:** **– water:**	 1500 225
Consistency of the mix:	thixotropic
Density (kg/dm³):	1.6-1.8 (depending on the mixing)
Colour:	brick-colour
Flow table (%) (UNI 7044):	80-100
Porosity (%):	20-24
Resistance to vapour trasmission (μ):	10-15
Application temperature range:	from +5°C to +35°C
Pot life of mix (at +23°C and 50% R.H.):	approximately 1 hour
Waiting time after application of Mape-Antique Rinzaffo (at +23°C and 50% R.H.):	≤ 24 hours
Max thickness per layer (mm):	30
Compressive strength (MPa): **– 7 days:** **– 28 days:**	 2-4 4-6
Dynamic modulus of elasticity (MPa): **– 7 days:** **– 28 days:**	 3000-4000 4000-6000
Resistance to sulphates in terms of increase in expansion (%) after 30 days of specimens (40x40x160 mm, cured for 28 days with R.H. = 95% and T = +20°C) immersed in sulphate solution 10% of Na_2SO_4 with those immersed in pure water:	< 0.02
Efflorescences (semi-immersion in water):	absent



Detail of façade, Bagnacavallo, Italy



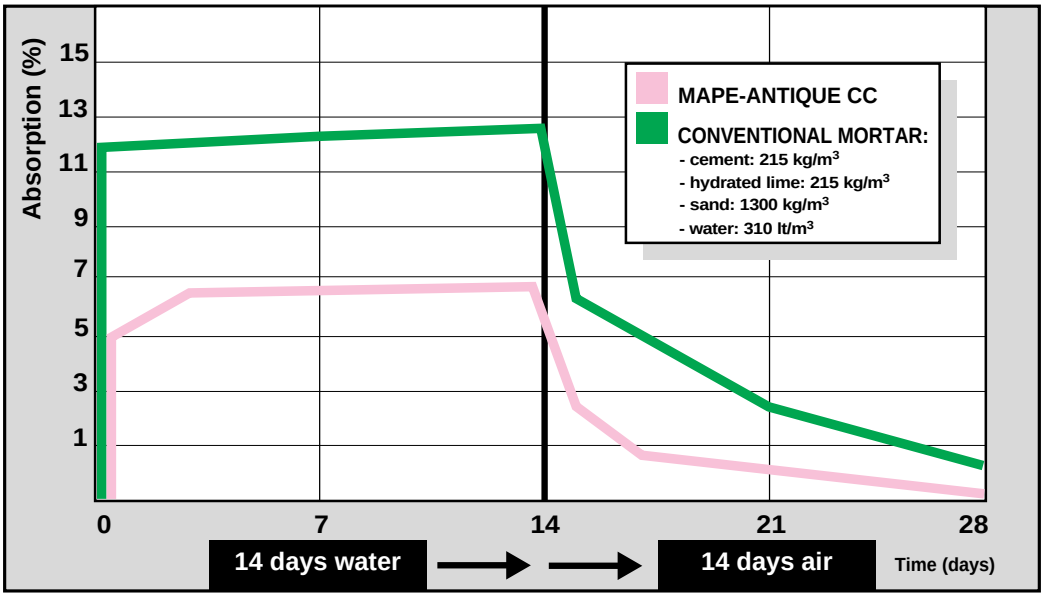
Restoring a façade with Mape-Antique CC



Building restored with Mape-Antique CC

Mape-Antique CC

WATER ABSORPTION-DESORPTION



FOR PROFESSIONALS.

WARNING

N.B. - Although the technical details and recommendations contained in this product report 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 of the product are available upon request



Building to be restored with Mape-Antique CC in Bagnacavallo, Italy

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602-6-2003