

Mape-Antique I

Cement-free fillerized hydraulic binder for the consolidation, by injection, of stone, brickwork or tuff structures



WHERE TO USE

When restoring cavity walls, columns, foundations, etc. in period buildings, the consolidating material injected must have physical and mechanical properties very similar to those of the mixes originally used before the advent of cement. Once the injected material has hardened, however, it should not interact negatively with sulphate salts present in the masonry, nor must it contain alkaline ingredients (sodium, potassium) that could trigger dangerous expansion phenomena with alkali-reactive stone aggregates.

Mape-Antique I is a product specifically designed to meet these requirements and ensure easy and reliable filling of all cavities present in the building to be restored.

Some application examples

- Consolidating, by injection, of foundations of period buildings.
- Consolidating, by injection, of stone or brick cavity walls in period buildings.
- Consolidating, by injection, of stone and brick columns and vaulting in period buildings.

TECHNICAL CHARACTERISTICS

Mape-Antique I is a cement-free fillerized hydraulic binder formulated in a fine powder. When mixed with

approx. 35% water it produces a fluid, stable slurry able to fill cavities in structures to be consolidated.

Mape-Antique I cures gradually without causing dangerous interactions with brick, stone and existing mortar.

RECOMMENDATIONS

- Do not use **Mape-Antique I** for mortar or rendering in period buildings (use **Mape-Antique LC**, **Mape-Antique MC**, or **Mape-Antique CC**).
- Do not add additives, filler, sand, cement or other binders (lime or gypsum) to **Mape-Antique I**.
- Do not apply **Mape-Antique I** at temperatures below +5°C.

APPLICATION PROCEDURE

Before applying the **Mape-Antique I** slurry, the interior of the section to be consolidated should be completely saturated with water. The day before the work is to be done, thoroughly soak the inside of the section with water, through the same holes where the slurry will later be injected. In the interval, any excess water remaining on the inside will evaporate. The holes should be drilled symmetrically, if possible at the intersecting points of a square grid with sides 50 to 100 cm long. For sections less than 60 cm thick, the slurry is usually injected into one side only. In sections thicker than 60 cm, the slurry is usually



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injected into both sides. The holes (3-4 cm in diameter) can be horizontal or inclined, and should be fitted with plastic nozzles 10-15 mm in diameter through which the slurry is injected under pressure (maximum 3 atm). Any points where the slurry may leak out should be first sealed with a fast setting cement (**Lampocem**), to be removed after the injection.

Prepare the slurry by mixing **Mape-Antique I** and water (approx. 35% of the binder) in a high speed mixer, or mix with a drill fitted with whip attachment until a runny paste is obtained (Marsh cone test on the first litre of slurry: less than 30 seconds). The **Mape-Antique I** slurry must be used for consolidation within 60 minutes after mixing.

Do not add any other material in the form of binders, admixtures, filler, etc. to **Mape-Antique I**.

The mixer used for preparing the **Mape-Antique I** slurry must be washed with water to remove all residues of previous mixes containing portland cement or lime.

Cleaning

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

CONSUMPTION

1.40 kg/l of cavity to be filled.

PACKAGING

Mape-Antique I is available in 20 kg bags.

SAFETY INSTRUCTIONS FOR THE PREPARATION AND APPLICATION

Contains special hydraulic binders that in contact with sweat and other body fluids produce a slightly alkaline reaction. Slightly irritant for the eyes and skin. For further information refer to the safety data sheet.

STORAGE

12 months in a dry place in original sealed packaging.

FOR PROFESSIONALS.

WARNING

Although the technical details and recommendations contained in this 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 products.



Preparation of the Mape-Antique I slurry



Filling of the injection pump with Mape-Antique I



Consolidating injection with Mape-Antique I

All relevant references of the product are available upon request

TECHNICAL DATA (typical values)

PRODUCT IDENTITY

Consistency:	powder
Colour:	light grey
Density (kg/dm³):	1.25
Maximum diameter (µm):	100
Storage:	12 months in a dry place in original sealed packaging
Hazard certification according to EC 99/45:	before use refer to the "Safety instructions for the preparation and application" paragraph and the information on the packaging and data sheet
Hydrosoluble alkali salts:	absent
Customs class:	3824 50 90

FINAL PERFORMANCES IN SLURRY

Composition (kg/m³): – Mape-Antique MC: – water:	1,400 490
Colour:	light grey
Density (kg/dm³):	1.89
Marsh cone emptying time (EN 445):	< 30"
Compressive strength (MPa) (EN 196): – 2 days: – 7 days: – 28 days:	5 14 18
Flexural strength (MPa) (EN 196): – 2 days: – 7 days: – 28 days:	2 3 4
Dynamic modulus of elasticity (MPa): – 28 days:	15,000
Efflorescences (semi-immersion in water):	absent



San Floriano tower consolidated with injection of Mape-Antique I

