MAPEI

IN COMPLIANCE WITH EUROPEAN STANDARD
EN 998-1
GP-CS II
MAPEI
RENDERING AND PLASTERING MORTAR

Mape-Antique FC Ultrafine

CE
EN 998-1

GEV-EMICODE EC 1 PLUS very low emission

Salt-resistant, ultra fine-grained lime and Eco-Pozzolan transpirant skimming mortar for a smooth finish on render

WHERE TO USE

Ultra fine-grained, macro-porous, de-humidifying skimming mortar for repairing masonry deteriorated by the presence of capillary rising damp and soluble salts, including on existent buildings of historical and artistic interest.
Ultra-fine skimming mortar for transpirant or "structural" base render.
Ultra-fine skimming mortar for lime-based render deteriorated by the action of atmospheric agents and environmental conditions or by ageing.

Some application examples

- Smooth finishing internal/external large-grained, de-humidifying, macro-porous render when repairing masonry deteriorated by the presence of capillary rising damp and soluble salts.
- Smooth finishing large-grained dehumidifying render on masonry in lagoon areas or close to the sea.
- Smooth finishing new de-humidifying render or old lime-based render on stone, brick, tuff and mixed masonry, including on buildings of historical and artistic interest with a conservation order or under the protection of the National Trust.
- Smooth finishing large-grained transpirant or "structural" base render.

TECHNICAL CHARACTERISTICS

Mape-Antique FC Ultrafine is a pre-blended, ultra fine-grained, cement-free skimming mortar in powder form made from lime, Eco-Pozzolan, natural sand and special additives with very low emission of volatile organic compounds (EMICODE EC1 R Plus), according to a formulation developed in MAPEI's research laboratories. This product is classified as GP according to EN 998-1 Standards: "*General purpose mortar for internal/external render*", category CS II.
When mixed with water in a suitable clean container, **Mape-Antique FC Ultrafine** forms a salt-resistant, smooth, transpirant skimming mortar with a plastic consistency which is easy to apply with a flat metal trowel on both vertical surfaces and on ceilings.
The properties of a mortar made from **Mape-Antique FC Ultrafine**, such as mechanical strength, modulus of elasticity and vapour permeability, are very similar to the ones of a skimming mortar made using lime, lime-pozzolan or hydraulic lime originally used in the construction of old buildings.
Compared with these types of mortar, however, **Mape-Antique FC Ultrafine** also has properties which make the product resistant to various chemical-physical aggressive phenomena, such as the presence of soluble salts, freeze-thaw cycles, the leaching action of rainwater, alkali-aggregate reactions and the formation of cracks caused by plastic shrinkage.
Typical values are shown in the Technical Data table (see Application Data and Final Performance sections) which refer to the main characteristics of **Mape-Antique FC Ultrafine** at both the fresh and hardened states.

RECOMMENDATIONS

- **Mape-Antique FC Ultrafine** is not recommended for structures with high flows of capillary rising damp or high concentrations of soluble salts (we recommend using **Mape-Antique FC Grosso** or products from the **Silexcolor** or **Silancolor** ranges).

Mape-Antique FC Ultrafine

Spread on a first layer of Mape-Antique FC Ultrafine

Part of application cycle for Mape-Antique FC Ultrafine

Smoothing over the product with a flat metal trowel

- Wait until the render is completely cured before applying **Mape-Antique FC Ultrafine**.
- **Mape-Antique FC Ultrafine** must be applied in layers max. 1 mm thick for each coat.
- Do not use **Mape-Antique FC Ultrafine** for casting into formwork (use **Mape-Antique LC** mixed with aggregates with a suitable grain size).
- Do not use **Mape-Antique FC Ultrafine** to make consolidating slurry for injection into structures (use **Mape-Antique I** or **Mape-Antique F21**).
- Do not use **Mape-Antique FC Ultrafine** for rendering.
- Never add additives, cement or other binders (lime and gypsum) to **Mape-Antique FC Ultrafine**.
- Do not apply thin coats of paint or coloured coating which could have a significant impact on the transpiration properties of **Mape-Antique FC Ultrafine** and, therefore, obstruct the evaporation of damp in the masonry. Use products from the **Silexcolor** or **Silancolor** ranges, lime-based paint and water-repelling products such as **Antipluviol S** or **Antipluviol W**.
- Do not apply **Mape-Antique FC Ultrafine** if the temperature is lower than +5°C.

APPLICATION PROCEDURE

Preparation of the substrate

The surfaces to be skimmed must be clean, sound and free of dust and crumbling elements. We also recommend that the surface of the new render is planed with a metal-tipped cutter to remove any surface laitance and make it easier for the skimming compound to bond and prevent the formation of air bubbles. Before skimming the render, always wet the substrate.

Preparation of the product

Prepare **Mape-Antique FC Ultrafine** in a suitable clean container using a low-speed electric drill with a mixing attachment. Mixing the product by hand is not recommended. After pouring the minimum amount of clean water required into the mixer (6 litres per 20 kg bag of **Mape-Antique FC Ultrafine**), slowly add the powdered mortar in a continuous flow. Mix for approximately 3 minutes and check that the blend is well mixed, even and free of lumps and that no material has stuck to the sides and base of the container. Add a further amount of water if required up to a total of 6.4 litres per bag, including the water added at the start of mixing.
Then mix **Mape-Antique FC Ultrafine** again for a further 2-3 minutes according to the efficiency of the mixer to obtain an even, “plastic” blend.

Application of the product

Spread on a first, even layer of **Mape-Antique FC Ultrafine** approximately 1 mm thick for each coat with a flat, metal trowel. Press down slightly with the trowel to help the mortar bond and to help expel any air entrapped in the porosity of the render. Apply a further layer of the product as soon as the previous skimming layer starts to set. To get a “mirror” finish, smooth over **Mape-Antique FC Ultrafine** once hardened with a slightly damp, flat metallic trowel. During hot and/or particularly windy weather, take special care when curing the mortar. Even though **Mape-Antique FC Ultrafine** may be applied on any type of lime-based render, including macro-porous de-humidifying render, the ultra-fine grain structure of the product tends to reduce the steam permeability of the render.
In such cases, it is better to use **Mape-Antique FC Grosso** or the silicate-based **Silexcolor Tonachino** or the siloxane-based **Silancolor Tonachino**, coloured coating products applied in thin coats after applying their corresponding primers (**Silexcolor Primer** or **Silancolor Primer**).

FINISHING COAT

Mape-Antique FC Ultrafine must only be applied over the render once it is completely cured.
The surface of **Mape-Antique FC Ultrafine** may only be painted or dressed with other finishing products once the skimming compound has completely cured. Paint the surface with **Silexcolor Paint** or **Silancolor Paint** after applying their corresponding primers.
For constructions particularly exposed to rain, if the render does not require any coating, it may be protected with a transparent water-repellent product such as **Antipluviol S**, siloxane resin impregnator in solvent or **Antipluviol W**, siloxane resin impregnator in water dispersion.

Cleaning

The mortar may be removed from tools with water before it hardens. Once hardened, cleaning is difficult and must be carried out mechanically.

PACKAGING

20 kg bags.

COLOUR

White.

CONSUMPTION

Approx. 1.3 kg/m^2 (per mm of thickness).

STORAGE

12 months in a dry, covered environment in its original, unopened packaging.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Mape-Antique FC Ultrafine contains special hydraulic binders, which in contact with sweat or other body fluids may cause corrosion and damage to the eyes. During use, wear protective gloves and goggles and take the usual precautions for handling chemicals. If the product comes in contact with the eyes or skin, wash immediately

TECHNICAL DATA (typical values)

PRODUCT IDENTITY	
Type of mortar (EN 998-1):	GP: "General purpose mortar for internal/external render"
Appearance:	powder
Colour:	white
Maximum size of aggregate (EN 1015-1) (μm):	< 100
Bulk density (kg/m³):	1,200
EMICODE:	EC1 R Plus - very low emission level
APPLICATION DATA OF PRODUCT (at +20°C – 50% R.H.)	
Mixing ratio:	100 parts of **Mape-Antique FC Ultrafine** with 30-32 parts of water (6-6.4 litres of water per 20 kg bag of product)
Appearance of blend:	plastic
Bulk density of fresh mortar (EN 1015-6) (kg/m³):	1,700
Application temperature range:	from +5°C to +35°C
Workability time of fresh mortar (EN 1015-9):	approx. 60 minutes
Maximum applicable thickness (mm):	approx. 1

FINAL PERFORMANCE (31% mixing water)

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)	2.5 (Category CS II)
		CS II (from 1.5 to 5.0)	
		CS III (from 3.5 to 7.5)	
		CS IV (≥ 6)	
Bond strength to substrate (N/mm²):	EN 1015-12	declared value and Failure mode (FP)	≥ 0.8 Failure mode (FP) = B
Capillary action water absorption [kg/(m²·min$^{0.5}$)]:	EN 1015-18	from Category W 0 to Category W 2	Category W 0
Coefficient of permeability to water vapour (μ):	EN 1015-19	declared value	≤ 20
Thermal conductivity ($\lambda_{10,dry}$) (W/m·K):	EN 1745	tabulated value	0.39
Reaction to fire:	EN 13501-1	value declared by manufacturer	Class E
Resistance to sulphates:	Anstett test	not required	high
Saline efflorescence: (after semi-immersion in water):	/	not required	absent

Spread on a second layer of Mape-Antique FC Ultrafine

Mape-Antique FC Ultrafine

with plenty of clean water and seek medical attention.
For further and complete information about the safe use of our product please refer to our latest version of the 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

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

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