



ONE-COMPONENT, CEMENT-FREE, SALT-RESISTANT, DEHUMIDIFYING ECO-RENDER MADE FROM PURE NATURAL HYDRAULIC LIME, WITH RECYCLED MATERIALS FOR RESTORING OLD MASONRY WITH RISING DAMP, INCLUDING MASONRY OF BUILDINGS OF HISTORICAL INTEREST.



PRODUCT DESCRIPTION

Plaster Mortar NHL 5 is a free-flowing, cement-free mortar in powder form for reconditioning and consolidating masonry made from natural hydraulic lime, fine natural sand, special additives and micro-fibers with very low emission level of volatile organic compounds. This product is classified G according to EN 998-1 Standards: “Guaranteed performance, general purpose masonry mortar for external and internal”, class CS II. When mixed with water Plaster Mortar NHL 5 forms a thixotropic, volumetrically-stable, salt-resistant mortar which is easy trowable with large internal gaps and cavities without sagging. Once hardened, the characteristics of the mortar made from Plaster Mortar NHL 5, such as mechanical strength, modulus of elasticity and porosity, are very similar to those of the mortar made from lime, lime-pozzolan or hydraulic lime originally used in the construction of old buildings. Plaster Mortar NHL 5 also has properties which make the product resistant to various chemical-physical aggressive phenomena, such as the presence of soluble salts and alkali-aggregate reactions. Besides, the mortar does not induce the formation of efflorescence and does not release soluble salts. Plaster Mortar NHL 5 is recommended for layers up to 3 cm thick.

FIELD OF APPLICATION

- Internal and/or external macro-porous, de-humidifying render on masonry, including recent builds, with capillary rising damp and saline efflorescence.
- New de-humidifying render or reintegrating old lime and natural hydraulic lime-based render on stone, brick, tuff, and mixed masonry, including on buildings with a protection order from a local Heritage Organisation or situated within a sustainable building zone.
- Dehumidifying renders for masonry in lagoon areas or close to the sea.
- Restoring damaged render on buildings built using low-performance mortar.
- Pointing “exposed finish” stone, brick, and tuff masonry.

LIMITATIONS

- Do not use to make consolidating slurry to inject into structures
- Do not use to make transpirant render
- Do not use to make “reinforced” render
- Do not use to skim render
- Never add additives, cement or other binders
- Do not apply if the temperature is lower than +5°C.

APPLICATION PROCEDURE

A) Preparation of the substrate

- Remove all deteriorated and loose concrete to form a solid, rough and strong substrate. Any areas previously repaired and which are not perfectly bonded must also be removed.
- Remove all dust, rust, cement laitance, grease, oil and paint from the concrete and reinforcement rods by sandblasting or hydro-sandblasting.
- Treat reinforcement rods with Ferropri-mer 1K or 2K, according to the procedure given in the Technical Data Sheet of product.
- Saturate the substrate with water.
- Before carrying out repairs, wait until excess water has evaporated.
- Install the frame works.

B) Preparing the product

Mix Plaster Mortar NHL 5 in a cement mixer or in the hopper of a screw-type pump with a separate mixer, such as a Putzmeister S5 or a similar machine. Small amounts of the product may be prepared using an electric drill at low speed with a mixing attachment. After adding around 3 litres of clean water for every 25 kg bag of product in a cement mixer or in the mixing unit of a screw-type pump, slowly add the powdered mortar in a constant flow. Mix for 3 to 4 minutes and then make sure the mix is well blended and even and that there are no lumps. Make sure there are no traces of powdered mortar stuck to the sides or bottom of the mixer.

C) Applying the product

Apply a layer of mortar from 20 to 30 mm thick with a trowel or putty knife; no formwork is required. As soon as the mortar starts to set, tamp the surface with a sponge float. The waiting time required before carrying out this operation depends on surrounding weather conditions.

COVERAGE / CONSUMPTION

The consumption is approximately 1.8kg/m² at 1 mm thickness.

PACKAGING

Plaster Mortar NHL 5 is supplied in:
– 25 kg paper bags.

SHELF LIFE-STORAGE

Original sealed bags of this product are guaranteed to be of first quality for 12 months if stored off of the ground in a dry area. High humidity will reduce the shelf life of the bagged product.

SAFETY INSTRUCTION

Plaster Mortar NHL 5 is irritant; it contains cement that when in contact with sweat or other body fluid causes irritant alkaline reaction and allergic reactions to those predisposed. It can cause damage to eyes. In case of contact with eyes or skin wash immediately with plenty of water and seek medical attention. It is recommended to use protective gloves and goggles. 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.**

TECHNICAL DATA

Product identity	
Consistency	powder
Color	white
Type of binder (EN 459-1)	NHL 3.5 and NHL 5 and Eco-Pozzolan
Maximum size of aggregate (EN 1015-1) (mm)	2.5
Bulk density (kg/m ³)	1,500
Chloride content (EN 1015-17) (%)	< 0.05
Application data (at +23°C and 50% R.H.)	
Consistency of mix	fluid - free-flowing
Bulk density of wet mortar (EN 1015-6) (kg/m ³)	1,800
Porosity of wet mortar (EN 1015-7) (%)	25
Application temperature range	from +5°C to +35°C
Workability time of wet mortar (EN 1015-9)	approx. 60 mins
Final performances	
Compressive strength (MPa)	2.5
Bond strength on concrete according to EN 1766 (MPa)	≥ 0.3
Capillary absorption (kg/m ² .h)	Category W1
Thermal conductivity (λ) (W/m.K)	0.3
Coefficient of permeability to water vapour (m)	15
Reaction to fire	A1

WARNING

Danger. Contains Portland Cement: Chromium VI < 2 ppm within the validity period of the product. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H335 May cause respiratory irritation. P261 Avoid breathing dust. P280 Wear protective gloves/protective clothing/eye protection/face protection. P302 + P352 IF IN CONTACT WITH YOUR SKIN: Wash with plenty of water/... P305 + P351 + P338 IF IN CONTACT WITH YOUR EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 Immediately call a POISON CENTER/doctor/...



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