ARMOLIME TA

BREATHABLE MORTAR BASED ON NATURAL LIME NHL 3.5 FOR REPOINTING AND RESTORING OLD MASONRY

Ideal for repairing and sealing the courses of old brick walls

DRACO

RENOVATION AND BIOCONSTRUCTION LINE

BREATHABLE MORTARS FOR MASONRY CONSOLIDATION

CE EN 998-2 | M 5 MASONRY MORTAR | LIME NHL 3.5 | BREATHABLE | EASY TO APPLY | DRACO STIL NOVO

ARMOLIME TA is a premixed mortar based on natural hydraulic lime (NHL 3.5) for repointing and restoring old brick, natural stone and tuff structures. Breathable and based on natural lime enriched with admixtures having pozzolanic activity and natural microfibres, it is ideal for restoring and filling the joints in old and monumental buildings, as well as for bioconstruction work. **ARMOLIME TA** makes it possible to respect the building philosophy and original materials, thus ensuring high durability and resistance to weathering and freeze-thaw cycles.

ADVANTAGES

ARMOLIME TA is a lime-based breathable mortar for restoring and sealing the courses of bricks. **It is classified as masonry mortar (type M 5)** pursuant to **UNI EN 998-2**. **The product has the following characteristics:**

- ✓ **Excellent mechanical properties** that can adapt to the structural and execution needs or historical-architectural features of the masonry structures.
- ✓ **High adhesive** pull-off and shear **strength**, thus making it **ideal bedding and reinforced vaults**.
- ✓ **ARMOLIME TA** features **very low release of sulphates, chlorides, nitrates, potassium and sodium**.
- ✓ **ARMOLIME TA prevents efflorescence and does not contribute to brickwork deterioration** caused by the chemical-physical consequences of salt crystallisation.
- ✓ **It features a low capillary water absorption** which prevents water ingress in brickwork, and at the same time high water-vapour permeability which **ensures normal breathability of masonry**.
- ✓ **ARMOLIME TA is extremely versatile and easy to apply.** For consolidation **up to 5 cm**, it is usually **spray or trowel** applied.
- ✓ **ARMOLIME TA is non-combustible and does not produce smoke (Euroclass A1).**

USES

ARMOLIME TA is particularly suited to the following applications:

- ✓ Sealing grout lines on brick walls, old masonry, natural stone and tuff.
- ✓ Filling and repairing lesions and surface cracks on old masonry.
- ✓ As bedding mortar for repairing old masonry and/or natural stone.
- ✓ Repairing and repointing old wall surfaces, including those built using the *opus incertum* construction techniques.

DRACO Italiana SpA • via Monte Grappa, 11 D-E • 20067 Tribiano (MI) t. +39 02 90632917 • f. +39 02 90631976 • info@draco-edilizia.it

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HOW TO USE

SUBSTRATE CLEANING

- **The surface must be clean, cohesive and not flaking. Remove any loose or poorly adherent parts** from the area to be treated and **clean thoroughly by low pressure water blasting so as to remove efflorescence and soluble salts**. In case of deep cleaning and renovation work, clean the substrate by mechanical or manual chipping.
- **Remove the existing bedding mortar**, if severely damaged or weak.
- In the presence of **mechanically weak substrates** apply the breathable surface reinforcement agent ARMOSTONE (see technical data sheet).

SATURATION

- **Wet the surface with water until saturation is achieved.** This procedure prevents the substrate from absorbing the water of the mix, which may lead to cracking and reduce the bond strength of the mortar. This operation also makes it possible to remove any residues caused by the roughening of the concrete sub-base. Excess water must evaporate completely before starting to work. **The product shall be applied to a damp, but not wet surface**.

MORTAR PREPARATION

Mix **ARMOLIME TA** with 6.5-6.75 litres of water per bag, equal to 26-27% in weight of the powder. Gradually pour the product into the mixer containing approx. 90% of the mixing water and mix at low speed for about 3 minutes. Add the remaining water and mix for 2-3 minutes. The use of a vertical or horizontal shaft mixer is recommended. In case of a small mix, you can use a drill fitted with helix mixer. The mix must be homogeneous and lump-free. Do not mix manually, as this would not guarantee an even distribution of the mortar components.

MORTAR APPLICATION

ARMOLIME TA shall be applied manually by trowel.

MASONRY POINTING: apply ARMOLIME TA into the masonry grout lines, pressing it to promote adhesion. Remove any excess product immediately. Remove any residues from the surface of the bricks. Exposed grouting should be sponged with a damp sponge or a broomcorn brush.

EXPOSED MASONRY: create the laying bed, then place the building block in the desired position. Make sure the bricks (or ashlars) are properly aligned. Remove any excess mortar with a trowel, then smooth it out.

MORTAR FINISHING

Finishing with float is always necessary not only to smooth the surface out, but also to prevent plastic shrinkage cracks. To this purpose, it is recommended to use **PROBETON CURING N** as final curing membrane, especially in case of sun radiation and windy weather.

ARMOLIME TA can be mixed with local aggregates (1÷ 4 mm) to obtain a mortar which is as similar to the original one as possible (max 20% in weight).

PACKAGING AND STORAGE

ARMOLIME TA is packed in 25 kg bags.

If properly stored in a sheltered, dry place in its original container, the product maintains its properties for 12 months.

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PRECAUTIONS

- In some cases, the light colour of the mortar might turn dark green because of the reaction of the active compounds it contains. The colour will go back to the original colour in the presence of high humidity and poor aeration.
- Working temperature +5°C to +35°C.
- Do not apply on frozen substrates or on substrates that are thawing or if there is a risk of frost in the following 24 hours.
- Do not use damaged or open bags.
- Do not apply in case of high sun radiation.
- Do not add lime, cement or other binders and/or admixtures to the product.
- Do not add more water than specified.
- Do not use the product if it has already started to harden.
- Do not add water to make the product workable when it is hardening.

PRODUCT CHARACTERISTICS

APPEARANCE	Powder
COLOUR	Grey - Hazelnut brown
TYPE OF BINDER - EN 459-1	NHL 3.5
MAXIMUM AGGREGATE SIZE - EN 1015-1	2.5 mm
CHLORIDE CONTENT - EN 1015-17	< 0.1%

APPLICATION SPECIFICATIONS

MIXING WATER	26-27%
BULK DENSITY	1750 kg/m^3
CONSISTENCE BY FLOW TABLE - EN 1015-3	190
APPLICATION TEMPERATURE	+5 °C to +35 °C
WORKABLE LIFE OF FRESH MORTAR - EN 1015-9	approx. 60 minutes
CONSUMPTION	17 kg/m^2 per cm of thickness

Times vary depending on substrate temperature and ambient temperature and humidity.

The values given in the table are indicative and calculated at a temperature of +20 °C and relative humidity of 65%.

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PERFORMANCE CHARACTERISTICS MASONRY MORTAR WITH GUARANTEED PERFORMANCE FOR GENERAL PURPOSE (G) FOR EXTERNAL USE IN ELEMENTS SUBJECT TO STRUCTURAL REQUIREMENTS

PERFORMANCE CHARACTERISTICS	TEST METHOD	REQUIREMENTS ACCORDING TO EN 998-2	PRODUCT PERFORMANCE
COMPRESSIVE STRENGTH at 28 days	EN 1015-11	Classes from M1 to Md	Class M5 (5 MPa)
INITIAL SHEAR STRENGTH	EN 998-2	tabulated value	0.15 N/mm^2
WATER VAPOUR PERMEABILITY COEFFICIENT	EN 1015-19	tabulated value	15-35 μ
CAPILLARY WATER ABSORPTION	EN 1015-18	declared value	< 0.5 kg/m^2 h$^{-0,5}$
THERMAL CONDUCTIVITY	EN 1745	tabulated value	($\lambda_{10,dry}$) P = 50% 0.80 W/mK P = 90% 0.80 W/mK
REACTION TO FIRE	EN 13501-1	Euroclass	A1

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