

# ARMOLIME TS

## HIGH RESISTANCE CEMENTITIOUS MORTAR FOR MASONRY BEDDING

*Ideal for bedding, consolidation and section enlargement even with reinforcement of masonry*



**ARMOLIME TS** is a highly-resistant, breathable mortar with excellent adhesive properties designed for masonry consolidation in general. It is compatible with the materials used in old walls and historical buildings and is classified as masonry mortar (type M 10), as described in UNI EN 998-2 standard. It can be used for section enlargement, for bedding, and for pointing historical brick, natural stone and tuff walls.

### ADVANTAGES

**ARMOLIME TS is a masonry mortar – type M 10 – 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 TS features very low release of sulphates, chlorides, nitrates, potassium and sodium.**
- ✓ **ARMOLIME TS 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 TS is extremely versatile and easy to apply.** For consolidation **up to 5 cm**, it is usually **spray or trowel** applied.
- ✓ **ARMOLIME TS is non-combustible and does not produce smoke (Euroclass A1).**



### USES

**ARMOLIME TS** is particularly suited to the following applications:

- ✓ Masonry bedding requiring breathable but high resistance materials.
- ✓ Consolidation of brickwork, stone or tuff structures, including old-monumental buildings.
- ✓ Section enlargement of vaults and masonry structures even with reinforcement and meshes.
- ✓ Reinforced plaster for old walls.

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## PREPARAZIONE DEL SUPPORTO

### 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**.

## HOW TO USE

### MORTAR PREPARATION

**ARMOLIME TS** shall be mixed with approx. 18-20% water (4.5-5 litres per 25kg bag). Water must be free of salts and any organic compounds. Mix in a concrete mixer or in the mixer of the plastering machine. The mix must be homogeneous and lump-free. Do not mix manually, as this would not guarantee an even distribution of the mortar components and above all, of the fibres.

### MORTAR APPLICATION

**ARMOLIME TS** can be applied manually by trowel or using a plastering machine. If you apply the product with a plastering machine, use a piston plastering machine and not a continuous one. If you apply the mortar by trowel, it is recommended to make a roughcast using the same material with fluid consistency to improve mortar adhesion, by adjusting the substrate absorption. The roughcast must be about 2 mm thick. If you apply the mortar manually, make layers 1 to 2 cm thick. Apply any subsequent layer when the mortar of the previous layer starts setting but has not hardened completely. The aforementioned thickness depends on a number of factors such as substrate absorption, temperature, windy weather etc. Adjust it accordingly.

In case of heterogeneous substrates such as bricks, stone, tuff etc. having different thermal properties, it is recommended to insert the alkali-resistant fibreglass mesh **MAGINET** in the mortar, in order to prevent cracking. Fit the mesh also at the corners of doors and windows where major stresses may cause cracking.

### FINISH OF THE MORTAR

Smooth the surface with a sponge float after application. Check if the mortar is ready by pressing it with your thumb. If your thumb leaves only a slight impression and does not go deeper, you can tool it. This time varies depending on temperature and relative humidity, sun radiation and wind conditions. Finishing with sponge 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. After applying **ARMOLIME TS** you should apply a very fine skim coat like ARMOLIME TA, which is suitable for subsequent finishing with paint or decorative lime-based plaster or however a breathable product in order not to alter the characteristics of **ARMOLIME TS**. If reinforcement sheets or reinforced vaults are required, place the mesh 1 cm away from the bottom by fitting spacers and make a concrete cover of at least 2 cm. Total thickness of the mortar must be over 4 cm.

## PACKAGING AND STORAGE

**ARMOLIME TS** 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.



## 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	White - beige
MAXIMUM AGGREGATE SIZE - EN 1015-1	2.5 mm
CHLORIDE CONTENT - EN 1015-17	< 0.1%

## APPLICATION SPECIFICATIONS

BULK DENSITY OF FRESH MORTAR – EN 1015-6	1700 kg/m <sup>3</sup>
MIXING WATER	18-20%
CONSISTENCE OF FRESH MORTAR - UNI EN 1015-3	about 180 mm
APPLICATION TEMPERATURE	+5 °C to +35 °C
WORKABLE LIFE OF FRESH MORTAR - EN 1015-9	approx. 60 minutes
APPLICATION THICKNESS	min 10 mm per coat max 25 mm per coat
CONSUMPTION	14-15 kg/m <sup>2</sup> 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%.

## 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 M10 (> 10 MPa)
INITIAL SHEAR STRENGTH	EN 998-2	tabulated value	0.15 N/mm <sup>2</sup>
WATER VAPOUR PERMEABILITY COEFFICIENT	EN 1745	tabulated value	15-35 μ
CAPILLARY WATER ABSORPTION	EN 1015-18	declared value	≤ 0.3 kg/m <sup>2</sup> h <sup>-0.5</sup>
THERMAL CONDUCTIVITY	EN 1745	tabulated value	(λ <sub>10,dry</sub> ) P = 50% 0.67 W/mK
REACTION TO FIRE	EN 13501-1	Euroclass	A1

### Legal notes - SLCMP version of 01.03.2017

Draco Italiana s.p.a. has adopted the parameters indicated in this data sheet and the related standards for the calculation of the values and technical data contained herein.

Customers shall verify that this data sheet and the values indicated herein apply to their product batch and have not been superseded by later editions. If in doubt, verify that the sheet corresponds to the one available on the website [www.draco-edilizia.it](http://www.draco-edilizia.it) at the time the sales contract was executed and/or by previously contacting the Technical Department.

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