

REABILITA CAL Grout

NHL based injection grout for ancient masonry

TC.E.089.1 EN

1. DESCRIPTION

The **REABILITA fluid injection grout** is a pre-dosed mortar, formulated exclusively with Natural Hydraulic Lime, for the structural reinforcement of ancient masonry, in which injection techniques are applied.

It features high fluidity and excellent workability properties that allow the filling of the voids in the interior of the structure that needs consolidation.

Its exclusive, natural hydraulic lime based formula ensures a total chemical and mechanical compatibility with ancient substrates, with optimized characteristics such as, elasticity, water vapor permeability, resistance to salts and the moderate development of the mechanical resistance over time, that ensure an excellent conservation of historic heritage buildings.

The absence of soluble salts in the **REABILITA fluid injection grout** eliminates the appearance of degradation phenomena associated to the formation of efflorescence.

2. FIELD OF APPLICATION

The **REABILITA fluid injection grout** is used in the injection of ancient brick, stone or mixed masonry substrates with reinforcement needs, such as resistant walls, foundations, pillars, arches and vaults.

Its exceptional fluidity allows the consolidation of the interior of structures, as well as the treatment of cracks.

3. PRODUCT CHARACTERISTICS

PRODUCT IN POWDER	Value	Standard
Granulometrics # 200 µm (%)	≤ 2,0	-

PRODUCT IN PASTE	Value	Standard
Mixing Water (%)	30,0 ± 0,5	EN 1015-2
Theoretical consumption (kg/lt)	1,4	-
Slump flow (mm)	>170	NP EN 445
Density (kg/m ³)	1900	EN 1015-2

HARDENED PRODUCT	Value	Standard
Flexural Strength (MPa)	> 4,5	EN 1015-11
Compressive strength (MPa)	> 16	EN 1015-11

4. APPLICATION

Preparing the masonry

The substrate must be submitted to a mincing intervention, in order to remove old renders, for the verification of the masonry's condition.

The surface must be previously washed with water in order to eliminate any soluble or insoluble substances, harmful to the reinforcement technique. Washing can be carried out with the use of a water jet, taking the necessary caution measures in order to avoid damaging the wall, namely on joints or cracks. As an alternative, cleansing may be done mechanically, with metallic brushes.

Cracks must be sealed and the masonry mortar must be re-pointed in order to avoid grout leakage during injection. In this case, we recommend the use of **REABILITA Cal Consolidation** mortar, **REABILITA RA 01** or **REABILITA RJ 35**, depending on the type of façade requested.

The holes where the tubes will be introduced are executed, in general, with a drill. Avoid drilling the masonry units, conducting the drilling, whenever possible, over the joints. The holes normally have a variable diameter of 20 to 40 mm, executed with a slight downward inclination, and with a depth of around 2/3 of the wall thickness.

In structures with a thickness below 60 cm, the holes are normally conducted on only one side of the wall, for higher thicknesses, we recommend intervention on both sides of the wall

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The distribution and quantity of holes must be defined after a previous test at the site, in order to fill in completely and homogeneously the voids in the wall, given the characteristics of the masonry. The geometrical distribution of the holes must follow the corners of the triangles of a triangular mesh, in order to ensure a greater coverage of the wall.

In each hole executed, an injection tube with a diameter between 15 and 20 mm is introduced, at a depth of 10 cm. The holes are sealed with the same mortar used on the joints and cracks.

Before proceeding with the grout injection, water must be injected at low pressure (up to 1atm) into the masonry through the installed injection tubes at the upper side of the wall. This cleansing allows the removal of dust and debris, facilitates the penetration of the grout, verifies if there is any obstruction and reduces absorption of the water contained in the grout, by the injection tubes.

Preparing the grout

The **REABILITA fluid injection grout** must be mixed for 5 minutes in a high rotation mixer, with around 5.5 to 6.0 liters of water per 20 kg bag, until the required consistency is obtained.

We recommend that the product be first sifted through a 1,5 mm sieve, in order to eliminate any eventual grout present in the mixture.

Injection

Proceed with the grout injection of **REABILITA fluid injection grout** at low pressure (up to 1atm at the nozzle), starting at the injection tubes of the previous line. When the product appears at the upper injection tube, close the lower tube and restart the injection through the remaining tubes on the previous line

successively until the top level of tubes is reached.

The **REABILITA fluid injection grout** should be used up to 60 minutes after it has been mixed.

Because these are specific situations, depending on each renovation work, our technical services should be consulted at the moment of product selection.

Restrictions

Fluid injection grout must not be applied at ambient and substrate temperatures below 5°C and above 40°C.

Additional advice

- ▶ The mixing water must be preferably clean tap water, free from impurities (clay, organic material);
- ▶ No mortar should be applied after the setting process has started; Do not soften the mortar;
- ▶ Do not add any other products to the mortar. The **fluid injection grout** must be applied exactly as presented in the original package.

5. PACKAGING AND VALIDITY

Packaging

20 kg bags on plasticized pallets

Validity

As long as the packaging conditions are maintained in storage away from extreme temperatures and humidity, the product has a time period of validity of 6 months



6. ASSOCIATED PRODUCTS

- ▶ **REABILITA Product Range**
(Renovation and Rehabilitation Mortar range)

7. HYGIENE AND SAFETY

(DOES NOT DISMISS CONSULTATION OF THE PRODUCT TECHNICAL FILE))

- ▶ May cause skin irritation;
- ▶ May cause damage to eyes;
- ▶ May cause respiratory irritation;
- ▶ Keep away from children;
- ▶ Use protective gloves / garments / eye protection / face protection;
- ▶ Do not inhale dust/vapours.

Once the application conditions of our products are beyond our reach, we will not be held responsible for its incorrect usage. It is the client's duty to verify the suitability of the product for the predicted use. In any case, our responsibility is limited to the value of goods supplied. The information shown on this file may be changed without previous notice. In case of doubt, and if you should need any additional information, please contact our technical services.

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Secil Argamassas

Customer Support: Apartado 2 | 2406 – 909 – Maceira – LRA – Portugal
Tel: +351 244 770 220 | Fax: +351 244 777 997 | E-mail: comercial@secilargamassas.pt

www.secilargamassas.pt