TECHNICAL DATA SHEET

REABILITA CAL INJECT

NATURAL HYDRAULIC LIME INJECTION GROUT

1. DESCRIPTION

REABILITA CAL INJECT is a dry pre-dosed mortar formulated with Natural Hydraulic Lime, intended for the reinforcement of old masonries by using the injection technique.
It has particular properties of high fluidity, excellent workability that enables to guarantee the filling of voids inside the structure to be consolidated.
Its composition based on natural hydraulic lime ensures a complete chemical and mechanical compatibility with old masonry, with optimized characteristics such as elasticity, water vapour permeability and resistance to salts. Its hydraulic properties guarantee the moderate development of mechanical resistance over time, which ensures an excellent preservation of the historical heritage.
The absence of soluble salts in *REABILITA CAL INJECT* minimizes the occurrence of degradation phenomena associated with efflorescence formation.

2. FIELD OF USE

REABILITA CAL INJECT is used in the injection of old brick, stone or mixed masonry, in structural elements in need of reinforcement, 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

Powdered product	Value	Standard
Granulometry	< 200 µm	-
Paste product	**Value**	**Standard**
Mixing water	28,0 ± 1,0 %	EN 1015-2
Theoretical consumption (Reabilita Cal Inject/litre of paste)	1,35 kg/litre	-
Hardened Product After 28 Days	**Value**	**Standard**
Compressive strength	> 15 N/mm2	EN 1015-11

Density	1500 ± 150 kg/m3	EN 1015-10
Modulus of elasticity	10525 - 11025 N/mm2	BS 18281-5
Reaction to fire	Class A1	EN 988-2
Thermal conductivity	0,61 W.(m/K) (P=50%)	NP EN 1745

4. APPLICATION

a) Substrate preparation

Masonries should be subjected to an inspection intervention removing the old damaged coatings to check the state of the masonry.

The surface should be washed with water in order to eliminate any soluble or insoluble substances harmful to the reinforcement technique. The washing may be done with water jet, taking the necessary precautions so as not to damage the wall particularly in joints or cracks. As an alternative to washing, a mechanical cleaning can be carried out with metal brushes.

Cracks should be sealed and mortar in joints should be replaced to avoid grout leakage during the injection operation. For this purpose, *REABILITA CAL CS* or *REABILITA RA 01* mortars may be used depending on the type of coating chosen.

The holes to insert the injection tubes are usually made with a drill.
It should be avoided to drill masonry elements; drilling should be made in the joints, whenever possible. Holes usually have a variable 20 to 40 mm diameter, having a slight downward inclination and a depth of about 2/3 of the wall thickness, as required.
In structures with a thickness of less than 60 cm, holes are usually made just on one side of the structure; in larger thicknesses it is advisable to have holes on both sides.

Distribution and quantity of holes should be defined after a previous test on site, in such a way as to guarantee the homogeneous and complete filling of the voids of the structure, taking into account its characteristics. The geometric distribution of the holes should ideally follow the vertexes of the triangles of a mesh of equilateral triangles, in order to guarantee greater coverage of the wall.

Each hole shall have a 15 to 20 mm diameter injection tube inserted at a 10 cm depth, being sealed with the same mortar used to seal joints or cracks.
Before the grout is injected, water should be injected at low pressure (up to 1 atm) into the masonry through the injection tubes set, from the upper holes. This process enables the removal of dust and debris, facilitates slurry penetration, enables to check if there are obstructions to the slurry and reduces water absorption from the slurry.

b) Mortar preparation

REABILITA CAL INJECT should be mixed for 5 minutes in a high-speed mixer with about 5,0 to 5,5 litres of water per 18 kg bag, to obtain the correct consistency.

c) Application

REABILITA CAL INJECT should be injected by gravity or at low pressure (up to 1 atm into the nozzle), starting at the injection tubes of the lower row.
When the material appears in the upper injection tube, the lower injector is closed and the injection is restarted in the remaining tubes of the lower row, successively until the top tube level is reached.

REABILITA CAL INJECT should be used up to 60 minutes maximum after mixing.

d) Restrictions

REABILITA CAL INJECT should not be applied at room and substrate temperatures below 5 °C and above 30 °C.

a) Complementary Advices

The mixing water should be free of any impurities (clays, organic matter) and drinking water should be preferably used;
No mortar that has exceeded its open time should be applied. Do not soften mortars by adding water after preparation;

Do not add any other products to the mortar. *REABILITA CAL INJECT* should be applied as it is shown in its original packaging.

5. PACKAGING AND VALIDITY

Packaging

18 kg paper bags in plasticized pallets of 60 bags

Validity

12 months provided the conditions of the original packaging remain unaltered and in good storage conditions, protected from extreme temperature and humidity.

6. HEALTH AND SAFETY

(DOES NOT REPLACE CONSULTATION OF THE PRODUCT SAFETY DATA SHEET)

- Irritating to eyes, respiratory system and skin;
- May cause sensitization in contact with skin;
- Do not breathe dust;
- Avoid contact with skin and eyes;
- If it comes in contact with eyes, rinse immediately and thoroughly with water and seek a specialist advice;
- Use protective clothing and appropriate gloves;
- Keep out of children's reach.

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REABILITA CAL INJECT

EN 998-1
General (G) purpose render mortar.

Declaration of performance DOP.03007

Being the conditions of applying our products out of our reach we do not take responsibility for its misuse. It is the customer's duty to verify the suitability of the product for the intended purpose. In any case, our responsibility is limited to the value of the goods supplied by us. The information contained in the present data sheet may be altered without prior notice. In case of doubt and if you need any further advice please contact our Technical Services.

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