Technological, structural injection mortar with high chemical resistance (Class AARS), suitable for the static reinforcement of weakened masonry structures and consolidant filling of cavity walls. Hyperfluid with compensated shrinkage. Superior resistance to sulphates.

KERABUILD® INIEZIONE

HIGH FLUIDITY – The KERABUILD® INIEZIONE technology ensures filling of micrometric sections with a diffuse and constant injection pressure for the entire duration of consolidation operations. Contact with porous and absorbent materials does not alter the high fluidity and slide of KERABUILD® INIEZIONE, also at considerable distances from the injection point. The prolonged rheoplastic behaviour of the paste is ensured by means of hyperfluidifying agents with progressive effect.

GUARANTEED LONG LIFE – The durability of structural consolidation obtained with KERABUILD® INIEZIONE is guaranteed by the product's high levels of resistance to sulphate attack (Class AARS) and by its proven dimensional stability. The use of silicate micro-particles with pozzolanic action, hyperfluidifying agents for the reduction of the water/cement ratio and interstitial crystallisation agents with expansive effect completes the mix design of KERABUILD® INIEZIONE, ensuring superior compactness and monolithic quality of patching work.

MECHANICAL RESISTANCE - CLASS M1 – The KERABUILD® INIEZIONE technology develops a degree of compressive strength which ensures static reinforcement and structural re-balancing of masonry. Adhesion-promoting polymers with rigid, chemical reticulation and a mix of high-performance binders provide KERABUILD® INIEZIONE with the superior R_{ck}, class M1 resistance.

Developed by the Research and Development Division and guaranteed by the Training Center.
Compliant with the CARE Project for the Protection of Health and the Environment: Building Division (Method M1 – Action E507).

KERAKOLL
SUPERIOR BUILDING TECHNOLOGY

KERABUILD® INIEZIONE

AREAS OF USE

Structural patching of:

- damaged load-bearing masonry
- foundations of historical buildings
- stone or brickwork pillars and vaults
- wattle-type vaults

Grouting of:

- cavity walls
- internal cavities, horizontal or vertical detached segments in old plasters

Use

For indoor and outdoor use on brick, stone, mixed and cavity wall structures as well as within solid masonry to be compacted.

Do not use

As a surface patch layer to increase the structural sections (use a technological, structural mortar such as KERABUILD® COLABILE).

PREPARATION OF SUBSTRATES

The entire surface of areas to be consolidated with KERABUILD® INIEZIONE should be grouted or plastered using SANABUILD® natural breathable plaster to ensure the adhesion of the hyperfluid mortar with no change to the transpiration of the masonry, while inserting thin tubes or injector nozzles at equal distances (recommended mesh of 50x50 cm) for subsequent filling with injection mortar.
For injections in vertical gaps and cracks, damaged parts should be first of all superficially grouted with a technical mortar with low elastic modulus such as KERABUILD® RAPIDO, inserting injection tubes in the position axially corresponding with the cracks.
Always carry out the injection operation working in the bottom-up direction to facilitate the expulsion of air and to ensure continuity of the structural bond.
Before injecting the consolidation mortar inside the cracks, weakened parts, cavities or detached segments, it is necessary to saturate the whole internal structure with water, using the same access routes created for the mortar itself.
Inject KERABUILD® INIEZIONE from the bottom upwards only after you are sure the structure has absorbed all the water injected.

ABSTRACT

The consolidation of uneven masonry is achieved by a structural injection using a technological, non-shrink hyperfluid structural mortar resistant to prolonged contact with sulphate salts, even where moisture is present, such as KERABUILD® INIEZIONE manufactured by Kerakoll. The injection should be done by either pouring the product or by means of a screw pump with control of injector nozzle pressure or using compressed air tanks.

INSTRUCTIONS FOR USE

Preparation

Prepare KERABUILD® INIEZIONE by mixing 25 kg of powder with approximately 7.3 litres of clean water. The mixture is obtained by pouring the water into a clean container and then gradually adding the powder. The mixing process can be performed in a cement mixer, in a bucket (working manually or with a mechanical, low-rev agitator) or using a continuous mixer until a homogeneous, lump-free mortar is obtained. It is also possible to use a plaster sprayer to mix and simultaneously pump the product, using a stator-rotor suitable for the granulometric grading of the mixture.
Store the product in places protected against the heat in summer months and against the cold during the winter.
Use running water not subject to the influence of outside temperatures.

Application

In the case of consolidation, apply KERABUILD® INIEZIONE by injection, using mechanical pumps or pressure tanks, or by top-pouring. The product should be injected from the bottom upwards in order to ensure all remaining air in the section to be filled is expelled, thereby preventing the formation of air pockets. When the mortar comes out of the upper injector, injection is stopped, the injector in use is closed and operation is continued with the higher injector. The operation is continued in this manner until the uppermost point of the damaged area is reached.
On horizontal surfaces, on the other hand, either pour the product or prepare an entry jet into the detached area and a number of exit holes directly opposite the injection point. In this case too, the gap has been filled when the mortar begins to overflow from the exit holes.
KERABUILD® INIEZIONE ensures workability and pumping times with working intervals longer than 1 hour, and does not become segregated inside the pumps also in the presence of working pressure. The product may also be pumped from considerable distances and to high points of discharge, thus allowing for setup of the point of operation at the ground level of the building site and avoiding manual movement of bags and equipment.

Cleaning

Residual traces of KERABUILD® INIEZIONE can be removed from tools with water before the product has hardened.

SPECIAL NOTES

In the case of pressure injection, maximum pumping pressure must be monitored and automatically checked to impede the formation of over-pressure or hammering inside the structure being worked on. The most common control systems are:
- application of a pressure gauge connected with a solenoid valve inside electric pumps
- adjustment of outlet air pressure on the pressure tank compressor (system recommended on account of its simplicity of use and its sensibility of adjustment at low pumping pressures).

TECHNICAL CHARACTERISTICS

Appearance	Ready-mixed	
Apparent volumetric mass	≈ 1.24 kg/dm³	UEAtc
Mineralogical nature of inert material	Silicate-crystalline carbonate	
Granulometric interval	≈ 0 – 400 µm	UNI 10111
CARE	Method M1 – Action E507	
Storage	≈ 12 months in the original packaging in dry environment	
Packaging	Bags 25 kg	

TECHNICAL DATA compliant with Kerakoll Quality Standard

Mixing water	≈ 7.3 l / 1 bag 25 kg	
Fluidity of mixture (Marsh cone):		
- 0 min.	25 s	ASTM C-939
- 30 min.	24 s	ASTM C-939
- 60 min.	24 s	ASTM C-939
Specific weight of the mixture	≈ 2.05 kg/dm³	UNI 7121
pH of mixture	≥ 12	
Segregation	none	
Exuded water	none	UNI 8998
Pot life	≥ 1 h	
Temperature range for application	from +5 °C to +35 °C	
Coverage	≈ 1.6 kg/dm³	

At a temperature of +23 °C, 50% R.H. and no ventilation.

FINAL CHARACTERISTICS

Compressive strength after 28 days	R_{ck} 13 MPa	UNI-EN 196/1
Resistance to sulphates (expansion)	≤ 0.09%	

Values taken at +23 °C, 50% R.H. and no ventilation. Data may vary depending on specific conditions at the building site.

WARNING

- **Product for professional use**
- use at temperatures between +5 °C and +35 °C
- make sure the substrate is not frozen
- do not add different binders or additives to the mixture
- do not add water to the product during the hardening phase
- do not apply to dry or powdery substrates
- if necessary, ask for the safety data sheet
- for further information please consult the **Kerakoll Worldwide Global Service +39-0536.811.516**

BORGO MEDIOEVALE

Assisi, Perugia - ITALY

KERABUILD® EPOADESIVO

Technological, two-component epoxy system in paste form for high-resistance bonding of elements in concrete and steel such as beton plaqué

KERABUILD® INIEZIONE

Technological, hyperfluid, structural mortar with high chemical resistance (Class AARS) for the static reinforcement of weakened masonry structures

SANABUILD®

Natural, breathable silicate plaster with Microtech Technology for the dehumidification and restoration of old walls

THE KERAKOLL GLOBAL SERVICE

Wherever you are, and whatever your project needs are, you can always rely on the Kerakoll Service: highly-efficient, global customer support matching the high quality of our products.
Technical Service +39-0536.811.516 - Technical assistance in real time
Training Service - Professional training to support our quality
Guarantee Service - A long-lasting warranty
Kerakoll.com - The channel of choice for your projects

KERAKOLL QUALITY STANDARD

In all units of the Kerakoll Group, before being considered suitable for production, products undergo stringent testing in accordance with the very high requirements set by the Kerakoll Quality Standard: a process supported by the Centre for Applied Technology which assists the work of researchers with its sophisticated resources and laboratories. At the Kerakoll laboratories the various elements of formulations are carefully analysed to identify and eliminate any factors of weakness by means of simulation of real working conditions in building sites After the testing cycles, the new products are submitted to the extreme fatigue of the Safety-Test process.

SAFETY, HEALTH AND THE ENVIRONMENT

For an industrial system such as Kerakoll it is vitally important to ensure that human health and the environment are protected. The Kerakoll company policy is to ensure that every possible safeguard be taken to make sure that these factors are always considered, and regulations and specific methods have been developed over the years for this purpose at all levels of the organisation. The CARE Project is the result of the Group's concern for human health and the environment, and ensures that the Group's products are perfectly safe for use and that the building materials supplied to builders ensure a very high level of safety before, during and after their use.

The information given here is based on our technical and practical knowledge. As it is not possible for us to directly check the conditions in your building yards and the execution of the work, this information represents general indications that do not bind our Company in any way. Therefore, it is advisable to perform a preliminary test to verify the suitability of the product for your purposes.

Code E525/2004-I

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