

Natural hydraulic lime injection mixture to regeneration old frescoed masonries even frescoed.
CE marked product according to the EN 998-2.

Description

Limepor IZ8 is an injection mix CE mark (according to the EN 998-2) that contains natural hydraulic lime (NHL), high-reactivity metakaolin, and a selected carbonated filler with very fine granulometry. All raw materials used are fired at low temperature following traditional techniques. The high quality of the hydraulic lime and metakaolin allows us to obtain a product which does not cause efflorescences and which contains almost no water-soluble salts. Limepor IZ8 can be injected into cracks and cavities using any common pump with special injectors.



Uses

Limepor IZ8 is used for restoration and pre-consolidation of masonry structures, including those with frescoes, by means of grouting with low pressure injection systems.

Advantages

- No water-soluble salts;
- High fluidity and low water/binder ratio;
- Mechanical properties comparable to those of a masonry structure: it provides uniform and isotropic structural performance of the renovated wall;
- Raw materials fired at low temperatures with a significant benefit to the environment due to the lower levels of carbon dioxide emitted;
- No concrete compounds (Alite C3S and Belite β -C2S) whatsoever;
- High breathability;
- Excellent penetration power enabling very small cracks or cavities to be saturated;
- No mixture segregation during injection;
- Less deterioration of equipment;
- Chemically compatible with materials used in historic buildings;
- Improvement of both the static and dynamic properties of the structure once work is completed;
- Ready-to-use and easy to apply.
- **Formulation tested and optimized in applications, trials and comparative tests conducted since the early 80s.**



To ensure the **perfect saturation** of small **cracks** or **cavities** and **smaller voids**, we have optimized our formulated that they may have: adequate fluidity, guaranteed by the fineness and purity of the constituents and not through the use of a high quantity of water; absence of bleeding (separation of the liquid phase from the solid one); shrinkage compensated.

Kimia performs strict internal controls on the properties outlined above, prior to market its injection products. The company is always available to discuss these features with the competitors.

Characteristics	Value
Appereance	Powder
Colour	white
Application temperature	+2 - +35 °C
pH in water dispersion	11,5 - 12,5
Granulometric distribution UNI EN 1015 1 not-seved at 0,10mm	100 %
Granulometric distribution UNI EN 1015-1 not-seved at 0,01mm	40 %
Fluidity (Consistency mediante canaletta) UNI 8997	80 - 87 cm
Content of soluble Salts Sulfates, nitrates, chlorides (Normal 13/83)	< 0,07%
Resistance to sulfates	Plier opening: < 10 mm; high resistance to sulfates attack
Resistance to sulfates Anstett-Le Chatelier modified essay (internal method)	Any lack of resistance for tests soak for 90 days in Na ₂ SO ₄ solution at 5%
C ₃ S content evaluated through diffractometric (XRD) and spectrophotometric (FTIR) conditions	Any
Fluidity UNI 8997	80 - 87 cm
Fluidity (Marsh cone test)	First < 25 sec.; 30 min < 25 sec; 60 min < 25 sec.
Workability time of wet mortar UNI EN 1015-9	255 ± 30 mins
Bleeding UNI 480-4	Any
Elastic modulus UNI EN 13412	3,5 - 4,5 GPa
Compression strength 7 days UNI EN 1015-11	> 5 MPa
Compression strength 28 days UNI EN 1015-12	> 9 N/mm ²
Flexural strength 7 days UNI EN 1015-11	> 1,4 MPa
Flexural strength 28 days UNI EN 1015-11	> 1,7 MPa
Vapour diffusion coefficient EN 1745	15/35 (value)
Thermal conductivity	0,83 W/mK (value)

Characteristic	Limits EN 998-2	Value
Constituents proportion in weight [%]	Value	Biding: 25-35 Pozzolana materials: 12-22 Inerts: 42-52 Additives: < 1
Chloride content [%] EN 1015-17		≤ 0,1
Resistance to compression at 28 days EN 1015-11 [MPa]		> 9
Resistance to first cut[MPa] with masonry material in compliance with the EN 771		0,15 [Value]
Absorption of water for capillarity EN 1015-18		0,4

Characteristic	Limits EN 998-2	Value
Permeability to water-vapour EN 1745		15/35 [Value]
Reaction to fire		A1
Dangerous substances		Check Safety Data Sheet

Eco-sustainability

This product supports the designers in the realization of the certified works LEED®, 'The Leadership in Energy and Environmental Design', in compliance with the U.S. Green Building Council.



For further informations about the credits kindly contact the Technical Department, email: ufficiotecnico@kimia.it.

LEED® is a green building certification program that recognizes best-in-class building strategies and practices.

Application

Limepor IZ8 must be mixed with approximately 33% drinking water (4.8 - 5.5 litres per 15 kg pack). We recommend you put 3/4 of the water required in the mixer then gradually add the remaining amount until the right consistency forms. No other component other than mixing water must be added to the product for preparation and laying. Limepor IZ8 must be injected into walls by means of normal electric or manual low-pressure pumps, using injectors fixed into the holes and proceeding from the lower holes towards the upper ones. Do not remix by adding water to the product when it has already started to set.

Packaging

15 kg multilayer paper bags.
900 kg pallets.

Coverage

1.4 kg Limepor IZ8 per 1 litre volume to fill.
Absorption per cubic metre of masonry: 80 -190 kg depending on the size of the cavities in the wall.

Storage

Protect from humidity. Store in a dry, sheltered place.
In these conditions the product remains stable for 12 months.

Warning

Product for professional use.
The use of natural raw materials may result in natural color variations from one production lot to another.
Before using, check bags have not been damaged, and do not use the product if there are any lumps.
The Obligations of marking are not related to the intrinsic nature of a given product, but to the use to which a specific material is used: before making the order in Kimia, the buyer shall submit all the documentation available to the D.L. in order to determine the materials suitability (in terms of certifications and performance) in relation to the use for which they are intended.
The technical specifications and application methods recommended herein are based on our current knowledge and experience and do not represent any form of guarantee of the final results obtainable with the product.
It is the customer's responsibility to check that this data sheet is still effective and has not been replaced with a more recent version, and that the product is suitable for the intended use (use the Qrcode to download this technical sheet).

