

# Kimistone KSF

Strong consolidant based on ethyl silicate for silicate stone materials



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## DESCRIPTION

Strong consolidant based on silicic acid ethyl esters in alcoholic solvent, in which the silicate particles are molecules having nanometric dimensions.

Under standard environmental conditions (+ 20°C, 50% UR) the final degree of consolidation is reached after approx. 2 weeks. The consolidating effect is assured by the hydrolysis of amorphous silica ethylsilicates, guaranteed by the use of suitable catalysts capable of determining the rate of reaction. It does not lead to chromatic, film, permeability reduction.

## ADVANTAGES

- High consolidating capacity
- Ethylsilicate content greater than 75%
- High penetration capacity due to the type of solvent used
- Use of low toxicity solvent
- Presence of catalysts that regulate the reaction kinetics
- No color changes after application
- Does not form films
- Low reduction of vapor permeability

## USES

It is applied on silicate matrix materials (serene stone, simon stone, golden stone, strong stone, stonemason, mulher moss, piasentine stone, stump, tuff, gneiss, trachitis, serpentine, gingiva, slate, beola, quartzites) and on artificial stone such as brick, cotto tile, lean shiny plaster and carbonate substrates.

## WORKS

Consolidation of stone materials (SA7)

## APPLICATION



Roll or brush application

The product penetrates deeply into the porous structure of the material to be consolidated, thanks to the low surface tension of the solvent. Under standard environmental conditions (+ 20 ° C, 50% UR) the final degree of consolidation is reached after approx. 2 weeks.

Kimistone KSF has been tested on many types of stone (natural and artificial) substrates and guarantees the absence of color changes and the absence of significant reductions in the water vapor permeability of the substrate on which it is applied. The product guarantees the consolidation of the stone materials on which it is applied due to the reaction between the ethylsilicates and the water contained in the materials themselves.

Ethylsilicates in the presence of water and in a neutral environment are slowly hydrolyzed into amorphous silica. The presence of the solvent causes the ethylsilicates to penetrate the stone material before the reaction. Consolidation is obtained after approx. 2-3 weeks thanks to suitable catalysts that determine the rate of reaction so as to avoid a too rapid reaction which would result in the formation of a very low gel and a too slow reaction that would lead to partial loss of etylsilicate by evaporation.

When the substrate has hydroxyl groups (eg sandstones and clay stones), a reaction that also involves a bond between the broken grains is obtained, as the reaction occurs with the same hydroxyl groups.

In the case where the support does not contain hydroxyl groups (eg marble and limestone), the amorphous silica is deposited in the porous structure, however obtaining a consolidating effect but without bonds with the stone.

The product can be used "as-is". In the case of supports with open porosity of less than 12-15%, it is advisable to use the Kimistone KSF with a dilution, using ethylene solvent, up to a 1:2 ratio.

Kimistone KSF can be applied by low pressure spray or by brush using the pockets, tablets or dive technique. The product must be applied until refused on perfectly dry and clean surfaces.

If you intend to repeat a second application of the product, do not do so within 4 hours of the first application. It is advisable to always carry out a preliminary test before the application to assess the amount of product required in relation to the microstructure of the material to be consolidated.

### CONSUMPTION

0,2 - 0,8 lt/m<sup>2</sup> depending on the porosity of the substrate.

### PACKAGING

- Tan. 5 lt
- Tan. da 25 lt

### STORAGE

Protect from frost. Store the product in a dry, sheltered place at temperatures of +5 °C and above. In these conditions and in unopened containers, the product remains stable for 24 months.

CHARACTERISTICS	VALUE
Solvent	Ethyl alcohol
Active ingredient	> 75 %
Viscosity	1 - 20 mpa·s
Density	0,95 g/cm <sup>3</sup>
Pot-life a + 20°C	24 h
Application temperature	+5 / +30 °c

### WARNING

Product for professional use. Always carry out a patch test before beginning. Do not apply when it is about to rain, or to surfaces on which mist or condensation has settled. Do not apply at temperatures under +5 °C or above +30 °C, nor on cold and wet supports. Do not apply to walls exposed to sunlight. Depending on the support, before applying the product, remove and/or restore all areas that are separating or flaking and fill any openings or cracks that are wider/deeper than 1 mm. Any excess product should be removed immediately (before it dries) to prevent surface sheen in less porous areas. Operators should be equipped with gloves, masks, safety glasses and any other items of protection prescribed in safety regulations for the use of solvents. Do not smoke during use and keep the product away from heat sources or electrical devices that could create sparks. In case of eye contact, flush eyes with plenty of water and consult a doctor. Equipment must be cleaned with Solvente EPOX after use.

For further information and advice on safe handling, storage and disposal of chemical products, the user must refer to the most recent Safety Data Sheet, containing physical, ecological, toxicological and other data related to safety.

All technical data shown in this Technical Data Sheet are

based on laboratory tests. Actual measurement data may vary due to circumstances beyond our control.

The information and requirements indicated in this Technical Data Sheet are based on our current knowledge and experience and are to be considered, in any case, purely indicative. They cannot guarantee the final result of the applied product and they have to be confirmed by exhaustive practical applications; therefore the user must test the suitability of the product for the intended application and its purpose. Users must always refer to the latest version of the local technical data sheet related to the product.

### TECHNICAL SPECIFICATIONS

#### SK7 – Consolidation of stone materials

(SK7) Consolidation of stone materials with strong consolidant based on silicic acid ethyl esters in alcoholic solvent Kimistone KSF by Kimia S.p.A. or similar product.

The strong consolidant based on silicic acid ethyl esters in alcoholic solvent, with high breathability, neutral, reversible, resistant against to atmospheric agents and no film-forming, it will be prepared and applied scrupulously following the indications given on the technical sheets provided by the Produce and must have the following characteristics:

- Solvent: Ethyl alcohol
- Viscosity: 1 - 20 mPa·s
- Density : 0,95 g/cm<sup>3</sup>
- Pot-life at + 20°C: 24 hours