



Kimistone K55

ST5-0319

Consolidant and protective product made out of silicic acid ethyl esters and silane-siloxan compounds in an alcohol solvent

DESCRIPTION

Delicate consolidation product with protective function based on ethyl esters of silicic acid and silane / siloxane compounds in alcohol solvent. On standard ambient conditions (+ 20 ° C; 50% RH) the final degree of consolidation is reached after about 2 weeks. Thanks to the presence of silane / siloxane compounds, **Kimistone K55** also exerts a protective function, ensuring the hydrophobization of the support. The strengthening effect is guaranteed by the hydrolysis of ethyl silicate in amorphous silica. Does not create colour changes.

ADVANTAGES

- **Performing:** strong water-repellent effect to protect the substrates, deep penetration thanks to the type of solvent with very low toxicity; no chromatic modifications of the original surface, very low reduction in vapor permeability; no film-forming.

USES

Suitable for consolidation and protection of the surface of both silicate and carbonate matrix stone materials.

WORKS

- Consolidation of stone materials (**SA7**)
- Protection of stone materials (**SA10**)

APPLICATION



Roll or brush

Kimistone K55 penetrates deeply into the porous structure of the material to be consolidated, thanks to the low surface tension of the solvent. Under normal environmental conditions (+20 °C; 50% RH), the final degree of consolidation is reached after approximately 2 weeks. **Kimistone K55** also performs a protective function through

the silane/siloxane compounds which ensure the water-repellency of the surface. **Kimistone K55** has been tested on a wide range of stone supports (natural and imitation) and will not alter the original substrate colour. It will also make no significant difference to the water vapour permeability of the support when applied. The product will consolidate stone surfaces and make them impervious to water. The protective function is given by the silicon compounds which significantly alter the angle of contact in the support, giving the stone surfaces a marked degree of water-repellency as a result. Consolidation is given by the ethyl silicates which, in contact with water in a neutral environment, slowly hydrolyse to form amorphous silica. The solvent ensures the ethyl silicates penetrate the stone before this reaction takes place. Consolidation then takes place gradually over the next 2-3 weeks thanks to selected catalysts that control the speed of the reaction, ensuring it doesn't take place too quickly. This would result in a somewhat unsolid gel whilst if the reaction is too slow, part of the ethylsilicate would be lost through evaporation. When the substrate contains hydroxyl groups (such as sandstone and clay stone), the resulting reaction also creates bonds between weathered grains in the stone as the ethyl silicates react with the hydroxyl groups themselves. When the substrate does not contain hydroxyl groups (such as marble and natural limestone), the amorphous silica is deposited in the porous structure, which will still effectively consolidate the structure.

Kimistone K55 is ready-to-use and can be applied to clean, dry surfaces with a low-pressure spray gun, a brush or by immersion. The support must be compact, and free of any dust, grease or efflorescences. Efflorescences should be removed with the appropriate Kimistone cleaner prior to application. Allow the rendering mortar to dry fully before treating walls of new construction.

Apply to perfectly dry, clean surfaces until fully saturated. Second coats of the product must be applied within no more than 4 hours from the first. Before applying the

product, a patch test should be carried out to check the amount of product required in relation to the microstructure of the material to be consolidated

CONSUMPTION

0,2 - 0,8 lt/m² depending on the porosity of the substrate.

PACKAGING

- Tank 5 lt – box 4 x 5 lt
Pallet 96x5 lt (24 boxes) – 480 lt.
- Tank 25 lt.
Pallet 24x25 lt – 600 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
Physical state	Liquid
Solvent	Ethyl alcohol
Viscosity	1 - 20 mPa·s
Density	0,96 g/cm ³
Pot-life at +20°C	24 hours
Suitable range of temperature for application	+5 / +30 °C

WARNING

Product for professional use. Protect the substrates which are not involved in the work. Make sure there is no obstacle in the working area. Do not apply when it is about to rain, or to surfaces on which mist or condensation has settled. Do not apply to walls exposed to sunlight or at temperatures above 30 °C or below +5 °C.

Before the application, eliminate and/or restore the detached or flaking areas and fill openings and cracks above 1 mm.

If there are excesses of material on the surface in some areas (with still fresh product) remove it immediately, in order to avoid the formation of more shiny areas in the points with lower porosity.

In case of contact with eyes, rinse thoroughly with water and contact a doctor.

Clean equipment with water after use before hardening starts.

Equipment must be cleaned with Solvente EPOX after use.

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.

TECHNICAL SPECIFICATIONS

SK7 – Consolidation of stone materials

SK10 – Protection of stone materials

(**SK7**) Consolidation of stone materials with protective, consolidant product Kimistone K55 by Kimia S.p.A. or similar product.

(**SK10**) Protection of stone materials with protective, consolidant product Kimistone K55 by Kimia S.p.A. or similar product.

The protective, consolidant product based on ethyl esters of silicic acid and silane / siloxane compounds in alcohol 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 : 0,96 g/cm³
- Pot-life at + 20°C: 24 hours