

Silsan[®] Micro conc.

Silicone Impregnating Agent and Priming Coat



Product description

Silsan[®] Micro conc. is a solvent-free, water dilutable silicone micro concentrate, based on silanes and silicone resins.

Diluted with clean tap water, the product forms a micro emulsion which is used as an impregnating agent and priming coat for mineral and alkaline construction materials.

Silsan[®] Micro conc. also has reinforcing properties and promotes wall drainage.

Silsan[®] Micro conc. does not form a film and, due to its extremely fine emulsion, penetrates deeply into the construction material.

The physical properties of the treated material, in particular its water vapour permeability (sd value), are not negatively affected.

Silsan[®] Micro conc. is characterised by the following properties:

- Clear, low viscosity, easily diluted with tap water
- Solvent and water free
- Deep material penetration
- Excellent water repellent and reinforcement properties
- Stops rising damp and prevents efflorescence
- Can be applied to damp materials
- Solutions must be used up the same day

Application

Silsan[®] Micro conc. is diluted with clear tap water, following the recommendations given on page 2, and can be used in the following fields of application:

- Hydrophobing / façade impregnation:

Absorbent surfaces of mineral construction materials such as

- Natural stone
- Plaster
- Bricks
- Concrete
- Sand lime stone

can easily be made water repellent by applying dilutions of Silsan[®] Micro conc.

Even though application on damp materials is possible, the substrate should be as dry as possible in order to achieve reliable, long-lasting water repellency.

Please refer to the table printed on page 2 for further details concerning the appropriate dilution ratio and means of application.

- Priming / material reinforcement:

Sandy mineral materials and substrates can be reinforced and made water repellent by applying solutions of Silsan[®] Micro conc. prior to their final coating.

However, the substrate should be as dry as possible in order to achieve reliable and long-lasting water repellency.

Recommended dilution ratios and means of application are shown in the table on page 2.

- Wall draining:

Silsan[®] Micro conc. is primarily used for wall draining by means of drill hole injection according to the WTA Guideline 4-4-04D. Silsan[®] Micro conc. is WTA certified to be used as a damp proof course, injected under pressure, at a dilution ratio of 1:9 and at wall moisture levels of up to 95%.

When applied in this way, the product forms a barrier inside the wall, which protects the entire building from rising damp.

In order to achieve best results, the wall should be fully saturated with the micro emulsion in the area of injection. The ready-to-use solution of Silsan[®] Micro conc. is injected into the wall or brickwork through drilled holes. At dry to slightly moist walls, pressureless injection is adequate. Due to the low viscosity and the fine molecular structure of the diluted emulsion, deep penetration into the capillaries of the wall is guaranteed.

In the case of moist walls and brickwork, the product must be injected under pressure up to 5 bars in order to achieve the same effectiveness.

The injection holes are usually drilled at ground level (outside) or at floor level (inside), the

distance between the boreholes should be approx. 12 cm. The drilling depth of the boreholes should be approx. 5 cm shorter than the thickness of the wall and they should be cleared of dust before injection.

In order to achieve optimum results, solutions made with Silsan[®] Micro conc. must generally be used within the same day, in all fields of application.

Storage stability

The packages must not be exposed to direct sunlight.

Although the product is not frost-sensitive, we recommend a storage temperature within a range of + 5 to + 25 °C.

In originally sealed containers, Silsan[®] Micro conc. may be stored for a maximum of 12 months after the date of delivery.

Even after shelf life has expired, the product isn't necessarily unfit for use. However, in such case, we highly recommend to inspect the product regarding a potential infestation of bacteria and fungus.

Field of application	Dilution ratio* of Silsan [®] Micro conc. : water	Way of application
Hydrophobing / façade impregnation	10 : 90	Rolling, painting or airless spraying
Priming / material reinforcement	6 : 94	Rolling, painting or airless spraying
Wall draining	10 : 90	Borehole injection; pressureless for dry to slightly moist walls, with pressure for moist walls

Field of application incl. recommended dilution ratios and means of application

* to prepare the solution, pour Silsan[®] Micro conc. into cold, clean tap water. After the mixture has been stirred briefly, an opalescent micro emulsion will result.

Product properties of Silsan[®] Micro conc.

Properties	Value
Composition	water dilutable concentrate based on silicone-oligomers and silicone resins
Appearance	clear liquid, light yellow to yellow-orange**
Active content	100 %
Type of solvent	solvent-free
Solubility	water dilutable
Flash point	> 23 °C
Viscosity (at 20°C)	< 100 cSt
Density (at 20°C)	approx. 0.9 g/ccm
pH-value	5 (1:9 in water)
Packaging	plastic canister, 5 kg, 10 kg, 30 kg metal drum 180 kg
Storage stability	approx. 12 months at + 5 to + 25 °C

Note:

These figures are only intended as a guide and should not be used in preparing specifications.

** Typically, the product changes its colour shade from light yellow to yellow-orange during storage. This effect is well-known and typical for this kind of product, and is no indication of an impairment of quality.

Special storage and recommendations for use:

- Store the product in a cool, dark place
- In order to prevent contamination with bacteria and fungus spores from the ambient air, the containers should only be opened to remove the product required and be subsequently closed once more. In particular when using plastic drums, see that no dust or dirt from the atmosphere falls into the open drum.
Close the drum immediately after the product has been taken out.
- When a dipper is used, it must be cleaned thoroughly before immersion.
- Once the containers have been opened, use up the complete contents as quickly as possible.



**Graf Chemicals GmbH
Prof.-Max-Lange-Platz 4
D-83646 Bad Tölz**

19

EN 1504-2:2004

**Surface protection products – hydrophobic impregnation
EN 1504-2: ZA. 1a**

Depth of penetration	Class I: < 10 mm
Water adsorption and resistance to alkali	Absorption ratio < 7,5 % compared with the untreated specimen < 10 % after immersion in alkali solution
Drying rate for hydrophobic impregnation	Class I: > 30 %
Hazardous substances	Complies with EN 1504-2, 5.3

Please note that the CE marking only valid at a dilution of 1:9 (product : tap water).

The data presented in this leaflet are in accordance with the present state of our knowledge, but do not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter product constants within the scope of technical progress or new developments. The recommendations made in this leaflet should be checked by preliminary trials in order to provide for local processing conditions over which we have no control, especially where other companies' raw materials are also being used. The recommendations do not absolve the user from the obligation of investigating the possibility of infringement of third parties' rights and, if necessary, clarifying the position. Recommendations for use do not constitute a warranty, either express or implied, of the fitness or suitability of the products for a particular purpose.