

1. Product Description

StenSilan® WW is a single-component, silane-based, water-repellent impregnation agent. **StenSilan® WW** has chemical groups that react with mineral surfaces. These groups are chemically bound to the surface and make the surface hydrophobic (water-repellent).

It has strong surface-covering and material-penetration properties. It is a white, water-based emulsion that forms a layer that is imperceptible to the eye after application. It is resistant to UV radiation and it also increases the resistance of the surface it covers.

2. Uses

StenSilan® WW makes natural stone, marble, ceramic, plaster, and aerated concrete surfaces hydrophobic; therefore, it prevents water absorption. **StenSilan® WW** bonds chemically with these materials and creates water repellency deep within them instead of staying on the surface; it therefore does not create a separate layer over the surface, yet it still keeps water out of the structure. Therefore, it does not prevent the structure from breathing or transmitting gases; it prevents water from accumulating beneath the coating and does not cause coating defects such as the coating separating from the surface over time.

Since the thermal conductivity of materials increases when they absorb water, it contributes indirectly to thermal insulation by keeping the surface dry. The natural appearance of surfaces where **StenSilan® WW** is applied does not change. Surfaces coated with **StenSilan® WW** are not affected by contaminants carried by water.

Because of these properties, **StenSilan® WW** is used to protect all kinds of mineral surfaces exposed to atmospheric conditions and to the wetting action of rainwater or water from other sources. Another positive effect of the water-repellent property of **StenSilan® WW** is preventing salt efflorescence on water-absorbent surfaces during drying. **StenSilan® WW** maintains its hydrophobic properties for 5-10 years depending on the penetration depth and surface abrasion. At the end of these periods, **StenSilan® WW** application must be repeated. **StenSilan® WW** does not impair the paintability of the surfaces; instead, it improves it. Some of the major applications are:

- Surfaces such as concrete, plaster and aerated concrete
- Protection of historical and contemporary stone artworks against atmospheric effects
- Concrete floors and surface coatings, roads, runways, terraces, shear walls

Stenkim® provides technical support for selecting the most suitable StenSilan® product.

Silane-Siloxane Emulsion Water-Repellent Impregnation

Highlights

- Single-component, silane-based
- Low-viscosity, white, water-based emulsion
- Allows the surface to breathe and preserves its natural appearance
- Strong surface-covering and material-penetration properties
- Impregnates the surface; makes it water-repellent in depth without forming a film
- Liquids on the surface can be easily cleaned by wiping and leave no stain
- Resistant to UV radiation and increases the durability of the coated surface
- Prevents salt efflorescence on absorptive surfaces during drying
- Improves the paintability of the treated surface
- Can be applied by spraying or manually with a brush and roller



3. Application

3.1. Application

StenSilan® WW is spray-applied over large areas. It can be applied on small areas with a brush or roller. For continuous protection on wide surfaces, pouring the material onto the surface and then spreading it with a brush provides better results than applying it with a brush wetted with the material.

The surface must be cleaned, dust and loose material removed, and cracks repaired before application. Application can be carried out on moist or dry surfaces. However, it is required to protect the material from water contact and rain until the applied material dries.

Floor temperature must be considered carefully because if the material dries too fast it cannot penetrate into the concrete. It must not be applied at floor temperatures higher than 50 °C. It is sufficient if the surface is wetted with **StenSilan® WW** during the application. However, where deeper protection is required, the amount of **StenSilan® WW** applied per square meter must be increased. Depending on the surface properties and required protection level, 1 L of product covers 2.5-10 m². Products in opened packages must be used as soon as possible.

If the whole package will not be used, a sufficient amount must be transferred to another container and the package must be reclosed tightly. Tools used must be cleaned at the end of the job. Since the material may adhere to all materials including glass, it must not get onto unintended surfaces.

In indoor applications, application must be carried out after the furnishings and plants are covered. Partially cured material must not be used.

3.2. Cleaning

Equipment used can be cleaned with water at the end of the job.

4. Safety

Applicators and supervisors must read the Safety Data Sheet (SDS) carefully and follow the instructions provided. Emptied packages must be disposed of in compliance with relevant regulations and laws. The application must be carried out by skilled workers under the supervision of experts and the applicators must use all personal protective equipment required for the worksite and the task such as goggles, mask and gloves.

5. Storage

Packages must not be exposed to direct sunlight. Storage temperature must be between 5 and 30 °C. Under these conditions, the material will retain its properties in unopened containers for 6 months from the production date.

Protect the product from freezing. Frozen material cannot be reused.

6. Disclaimer

This document is provided for general information and is based on **Stenkim®**'s laboratory data and field experience at the time of publication. **Stenkim®** reserves the right to revise this information without prior notice.

Stenkim® warrants that its products conform to the stated specifications on delivery. The buyer is responsible for determining the product's suitability for the intended purpose and for all conditions of transport, storage, application, and use. **Stenkim®** accepts no liability for results obtained under conditions outside its control. **Stenkim®**'s liability under this warranty is limited to replacement of non-conforming product and excludes any consequential or indirect damages.



7. Technical Data

Property	Method	Result
Viscosity	EN ISO 3219	>5 cP
Consumption		0.1-0.4 l/m ²
Density	EN ISO 2811-2	1 ± 0.05 g/cm ³
Concentration		min. 6%
Shelf Life		6 months
Packaging		10 liter packages

Stenkim® reserves the right to make changes to the values in this table at any time.

