

## 1. Product Description

**StenSilan® M** is a single-component, silane-based, water-repellent impregnation agent for natural stone and marble surfaces.

**StenSilan® M** bonds chemically to all mineral surfaces such as natural stone, concrete and plaster, and makes these surfaces hydrophobic (water-repellent). Surfaces treated with **StenSilan® M** repel water and many similar liquids and do not become soiled by them.

It is a low viscosity transparent liquid; it has strong surface-covering and material-penetration properties. It provides hydrophobic properties to the surface to which it is applied without forming a separate layer. Consequently, hydrophobic properties remain until the upper surface of the stone is completely worn away, and there is no danger of the coating peeling, separating, becoming brittle or slippery over time, as encountered in other impregnation-type materials.

## 2. Uses

**StenSilan® M** prevents marble, granite, Limra limestone, slate and similar surfaces from absorbing water. It chemically bonds to these materials and diffuses inward from the surface, forming a hydrophobic structure on hairline crack surfaces as well, which prevents liquids such as coffee, tea, wine, carbonated drinks and lemon juice from entering the structure. Liquids left on the surface can be easily cleaned by wiping and leave no stain.

It is ideal for frequently cleaned natural stone floors that carry traffic, particularly in tourist facilities, restaurants, shopping malls, and similar venues. Since **StenSilan® M** does not clog capillary channels, it does not impede the stone's ability to breathe or transmit gases. It considerably prolongs the coating life by preventing capillary cracks from widening and damaging the surface when the water that has penetrated into them freezes.

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 the surface generally does not change when **StenSilan® M** is applied, but it may give a slight wet look on some types of stone. It does not form a hydrophobic coating that may separate from the surface.

Because of these properties, **StenSilan® M** is also used to protect all types of surfaces made of natural stone, mineral-based materials, or fired clay products that are exposed to atmospheric conditions and the wetting effect of rainwater or water from other sources. **StenSilan® M** maintains its hydrophobic properties for 2-5 years depending on the penetration depth and surface abrasion. At the end of these periods, **StenSilan® M** application must be repeated.

## Solvent-Borne Silane Water-Repellent Impregnation for Mineral Surfaces

### Highlights

- Single-component, silane-based
- Low viscosity transparent fluid
- Allows the surface to breathe and preserves its natural appearance
- Suitable for many different types of natural stone
- An effective solution for difficult surfaces
- 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
- Prevents salt efflorescence on absorptive surfaces during drying



## 3. Application

### 3.1. Application

Surface cleaning is required before the application. Contaminants such as fuel, oil and chemicals must be removed. It is advised to perform a small test application before full application and record the consumption.

To test, 24 hours after application, drip contaminants such as water, coffee and olive oil onto the surface, leave them for 2 hours, then wipe clean. When applied in the correct amount on compatible substrates, no mark will remain on the surface. Unlike other water-repellents, this product does not have a beading effect, so it is important not to judge effectiveness by whether contaminating liquids bead on the surface.

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. It is applied with a brush and roller.

It is sufficient if the surface is wetted with **StenSilan® M** during the application. The consumption is 4 to 20 m<sup>2</sup>/l depending on the surface properties and desired protection level. If a wet look is not desired, material in excess of what the stone can absorb must never be applied.

On highly absorbent substrates a second application might be necessary. In this case, the second coat must be applied wet-on-wet, while the first is still wet. The depth of the water-repellent layer can be increased by using more material, but it must be borne in mind that this may affect the appearance of the surface.

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. Turbid or partially cured material must not be used.

### 3.2. Cleaning

Equipment used can be cleaned at the end of the job with **StenSolver CL**.

## 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. It must be stored away from open flames and ignition sources. 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. The material is flammable. After prolonged storage, the product must be stirred thoroughly before use.

## 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.



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## 7. Technical Data

| Property    | Method        | Result                        |
|-------------|---------------|-------------------------------|
| Consumption |               | 0.05-0.25 l/m <sup>2</sup>    |
| Density     | EN ISO 2811-2 | 0.82 ± 0.05 g/cm <sup>3</sup> |
| Shelf Life  |               | 6 months                      |
| Packaging   |               | 10 liter packages             |

**Stenkim**<sup>®</sup> reserves the right to make changes to the values in this table at any time.

