

Protectosil® SC 1000

Fluorine containing formulation based on silane chemistry for an easy-to-clean treatment of porous, mineral surfaces.

Technical Data

Properties and test methods	Value	Unit	Method
Density (20 °C/ 68 °F)	1.33	g/cm ³	DIN 51757
Viscosity (20 °C/ 68 °F)	3.5	mPa.s	DIN 53015
Flash point	85/ 185	°C/ °F	EN 22719
Boiling point (1.013 hPa)	220/ 428	°C/ °F	DIN 51751
Melting point	< -38	°C/ °F	DIN ISO 3841

Registration

Protectosil® SC 1000

EINECS/ELINCS (EU):	Yes
AICS (Australia):	Yes
DSL/NDSL (Canada):	No
PICCS (Philippines):	No
TSCA (USA):	*
ECL (South Korea):	*
IECSC (P.R. China):	Yes
ENCS (Japan):	*
* = information on request	

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Safety and Handling

Before considering the use of Protectosil® products please read its Safety Data sheet (SDS) thoroughly for safety and toxicological data as well as for information on proper transportation, storage and use. The Safety Data Sheet is available after registration on our website www.protectosil.com or upon request from your local representative, customer service or from Evonik Operations GmbH, Product Safety Department, E-MAIL sdshu@evonik.com.

Packaging and Storage

Protectosil® SC 1000 is supplied in 10 kg, 25 kg PE container and 200 kg plastic lined steel drums. Protectosil® SC 1000 should be stored at temperatures between 3 °C and 40 °C. Protectosil® SC 1000 has a shelf life of at least 12 months if stored in originally sealed containers.

Properties and Use

Protectosil® SC 1000

- treated porous, mineral substrates show excellent water and oil repellency
- treated surfaces remain clean for longer times and are more easy to clean (common liquids like coffee, coke, oils and dark liquids are easily removed)
- weakens the adhesion of chewing gum or posters to e.g. facades
- slows down the growth of microorganisms such as mold and algae
- helps avoid unsightly dark water streaks
- is highly reactive and resistant against alkali
- generates watervaporpermeable, colorless impregnation
- no formation of sticky silicone films
- is suited for the treatment of water repellent substrates

Protectosil® SC 1000 is suited for an easy-to-clean treatment of many mineral substrates. Protectosil® SC 1000 may be used undiluted or may be diluted using alcohols (such as ethanol or isopropanol) or xylol. The exact amount to be applied, suitable dilution rate and mode of application is highly depending on the porosity of the substrate and should be determined on a small test patch. The facade to be treated must be clean and the surface dry. Dirt, grime, efflorescence, algae and moss must be removed. High pressure or water vapour cleaning is suitable. Water absorbed during cleaning must be allowed to dry so that the surface is dry before application begins. Imperfections such as cracks, cracked joints or defective seams must be repaired using appropriate methods. Mortar used for repairs must be fully cured and surface dry. The application is recommended if air and substrate temperatures are between 5 °C and 40 °C. Protectosil® SC 1000 should not be applied during rain or strong wind. In the case that a water repellent agent such as Protectosil® BHN or a corrosion inhibitor such as Protectosil® CIT have been applied the substrate has to set for at least 5 days before Protectosil® SC 1000 is applied.

The recommended application method for Protectosil® SC 1000 is with HVLP (High Volume Low Pressure) equipment. Product application using airless sprayers (low pressure, so-called "flooding" method) is also possible if the substrate is sufficiently absorbent. The ready-to-use solution is best applied starting from the bottom and going up the wall. This avoids pre-treating the substrate with run-off from above. Avoid using dirty application equipment, which can contaminate the product. In most cases the hydro- and oleophobic effect develops within just a few minutes (especially in warm, dry weather). Some substrates such as limestone are less reactive. In these cases the effect may take some days to fully develop. The application should be continuous and uninterrupted so that no overlapping occurs. If droplets form on the surface they should be evenly distributed using a soft brush. It should be avoided to distribute a dried film with a brush.

Processing

In some cases (especially on very coarse and very porous substrates) the easy-to-clean effect of Protectosil® SC 1000 may be enhanced by additional treatments. The amount of product required for the second and all subsequent treatments is considerably less. Several layers should only be applied using HVLP technology and resulting droplets must be rubbed in quickly using a brush or swab to distribute the liquid evenly across the surface. In the case of polished stone (e. g. marble) simply apply Protectosil® SC 1000 once with a cloth, microfiber glove or other suitable aid by polishing until a liquid film is no longer visible. Significantly less product is required for polished surfaces (about 30 g/m²) compared to rough ones. Non-absorbent substrates such as, for example, glass, wood, plastic, and metal cannot be treated with Protectosil® SC 1000. Glass, wood, and metal are not attacked by Protectosil® SC 1000.

Neither are most plastics used in construction. Therefore, covering is normally not necessary. To make sure we recommend to carry out a test. In the worst case, product not absorbed by the substrate may react with atmospheric moisture to form a greasy, glossy silicone resin film, which can easily be removed if cleaned immediately using conventional cleaning agents, or alcohol (check for compatibility of the solvent with the surface). Plants in the vicinity of the substrate to be treated should be protected against contact with Protectosil® SC 1000. Protectosil® SC 1000 reacts with the interfaces in pores and capillaries of the mineral surface and forms invisible, interfacial compounds. To determine the exact amount to be applied and to check whether previous or following treatments are compatible with the Protectosil® SC 1000 treatment it is recommended to do a small test patch first.

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