

# Protectosil® SC 60

## "Easy-to-clean" protection for porous mineral building materials

### Technical Data

Properties and test methods	Value	Unit	Method
Appearance	Yellowish, slightly cloudy liquid	-	-
Density	approx. 1.006	g/cm <sup>3</sup>	DIN 51757
Viscosity	approx. 1	mPa.s	DIN 53015
pH (20 °C, 1:1 in H <sub>2</sub> O)	4	-	-
Flash Pont	> 90	°C	EN 22719

### Registration

#### Protectosil® SC 60

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

### "Easy-to-clean" protection for porous mineral building materials

Protectosil® SC 30, Protectosil® SC 60 and Protectosil® SC 100 are aqueous silane-based systems intended to render porous mineral substrates hydro- and oleophobic, making them easy-to-clean. They are practically free from volatile organic components (VOC).

### 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](http://www.protectosil.com) or upon request from your local representative, customer service or from Evonik Resource Efficiency GmbH, Product Safety Department, E-MAIL [sds-hu@evonik.com](mailto:sds-hu@evonik.com).

### Packaging and Storage

Protectosil® SC 30, Protectosil® SC 60 and Protectosil® SC 100:

- have a shelf life of more than twelve months
- Containers must be kept tightly sealed.
- The products should be stored at temperatures between 3 °C and 40 °C.
- The products are supplied in 25 l and 200 l plastic lined steel drums.

## Properties and Use

Protectosil® SC 30, Protectosil® SC 60 and Protectosil® SC 100 can be used to create an easy-to-clean surface on many porous, non-painted mineral-based building materials. Some examples include:

- Sand limestone masonry
- Sandstone masonry
- Brick masonry
- Concrete
- Marble and granite (only rough surfaces and Protectosil® SC 30 suitable)

Protectosil® SC 30, Protectosil® SC 60 and Protectosil® SC 100

- are aqueous silane-based systems intended to render porous mineral substrates hydro- and oleophobic, making them easy to clean
- make stains caused by common liquids (coffee, coke, oils, ...) easily removable
- treated facades remain clean longer and are less susceptible to the growth of microorganisms such as mold and algae
- treated facades show no unsightly dark water streaks
- show high reactivity and are alkaline resistant
- form invisible and fully water vapor permeable impregnations
- show no formation of sticky silicone films
- give very good beading effects with water and oily substances on porous mineral substrates
- are supplied ready-to-use
- can be diluted with demineralized water if wanted

Treated facades remain clean longer, show no unsightly dark water streaks and are less susceptible to the growth of microorganisms such as mold and algae. Stains caused by common liquids coffee, cola and oils, dark liquids that are easily absorbed by untreated surfaces leaving permanent stains, can be easily removed from treated surfaces if cleaning is carried out short time after the staining. The durability of the easy-to-clean effect differs in dependence on the kind of mineral substrate and the amount of applied material. The durability lasts between half a year and 5 years. For the same kind of substrate and equal consumption rates the performance of Protectosil® SC 30 in terms of the water and oil beading effect lasts longer than Protectosil® SC 60 or even Protectosil® SC 100. It is necessary to do a test patch before each application to determine the exact consumption and to check the compatibility with the substrate. As a rule of thumb Protectosil® SC 30 has consumption rates of 50-280 g/m<sup>2</sup>. The product consumption of Protectosil® SC 100 is about 20 g/m<sup>2</sup> higher than the one of Protectosil® SC 30.

## Application

The facade to be treated must be clean and the surface dry. Dirt, grime, efflorescence, algae and moss must be removed. Water jet or steam cleaners are 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. During application the temperatures of the air and the substrate should be between 10°C and 40 °C. Protectosil® SC 30, Protectosil® SC 60 und Protectosil® SC 100 should not be applied during strong wind or rain. A minimum drying time of 24 hours should be allowed after applying Protectosil® SC 30, Protectosil® SC 60 or Protectosil® SC 100. In the case that a water repellent agent such as Protectosil® BHN or a corrosion inhibitor such as Protectosil® CIT have been applied to the substrate, it is recommended to wait at least 5 days before Protectosil® SC 30, Protectosil® SC 60 or Protectosil® SC 100 are applied. If the second system has to be applied sooner a test patch should be done first. The exact consumption rate as well as the concentration to be used are depending on the porosity of the substrate and earlier applied water repellent impregnations (e.g. with Protectosil® BHN or Protectosil® WS 405). Porous, absorbing substrates may need more than 300 ml of the solution per m<sup>2</sup>. The exact consumption rate and the best concentration to be used should be tested on a small test patch. Only Protectosil® SC 30 or Protectosil® SC CONCENTRATE should be applied in the case of polished, weakly absorbing substrates. In such cases it is recommended to polish Protectosil® SC 30 or Protectosil® SC CONCENTRATE on the surface using a cloth or microfiber glove. Consumption rates on polished surfaces are considerably less than on coarse surfaces.

Non-absorbent substrates such as, for example, glass, wood, plastic and metal cannot be treated with Protectosil® SC 30, Protectosil® SC 60 or Protectosil® SC 100. Glass, wood and metal are not attacked by Protectosil® SC 30, Protectosil® SC 60 or Protectosil® SC 100. 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).

### Application Details

Suitable Substrates	Consumption rate
concrete	60-100 g/m <sup>2</sup>
clinker masonry	appr. 80g/m <sup>2</sup>
red brick	90-250 g/m <sup>2</sup>
sandstone masonry	70-200 g/m <sup>2</sup>
sand limestone	70-200 g/m <sup>2</sup>
marble and granite	30-50 g/m <sup>2</sup>

## Processing

Protectosil® SC 30, Protectosil® SC 60 and Protectosil® SC 100 are best applied using HVLP (High Volume Low Pressure) equipment. Product application using airless sprayers (low pressure, so-called "flooding" method) is possible if the substrate is sufficiently absorbent. The ready-to-use solutions are 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. The easy-to-clean effect may be in many cases (especially on very coarse and very porous substrates) enhanced by additional treatments. The amount of product required for the second and all subsequent treatments is considerably less. Droplets should be evenly distributed using a brush or a roller. In most cases the hydro- and oleophobic effect forms within just a few minutes (especially in warm, dry weather). Some substrates, such as limestone, are less reactive. In such cases the effectiveness may take some days to fully develop. The application should be continuous and uninterrupted so that no overlapping occurs. The aqueous solutions of Protectosil® SC 30, Protectosil® SC 60 or Protectosil® SC 100 cannot penetrate a previously treated section. Resulting droplets can cause mottling if not evenly distributed with a brush.

Non-absorbent substrates such as, for example, glass, wood, plastic, and metal cannot be treated with Protectosil® SC 30, Protectosil® SC 60, and Protectosil® SC 100. Glass, wood, and metal are not attacked by Protectosil® SC 30, Protectosil® SC 60, and Protectosil® SC 100. 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 30, Protectosil® SC 60, and Protectosil® SC 100. Protectosil® SC 30, Protectosil® SC 60, and Protectosil® SC 100 react with the interfaces in pores and capillaries of the mineral surface and form invisible, easy-to-clean protection. To determine the exact amount to be applied and to check whether previous or following treatments are compatible with the Protectosil® SC 30, Protectosil® SC 60, and Protectosil® SC 100 treatment it is recommended to do a small test patch first.

This information and any recommendations, technical or otherwise, are presented in good faith and believed to be correct as of the date prepared. Recipients of this information and recommendations must make their own determination as to its suitability for their purposes. In no event shall Evonik assume liability for damages or losses of any kind or nature that result from the use of or reliance upon this information and recommendations. EVONIK EXPRESSLY DISCLAIMS ANY REPRESENTATIONS AND WARRANTIES OF ANY KIND, WHETHER EXPRESS OR IMPLIED, AS TO THE ACCURACY, COMPLETENESS, NON-INFRINGEMENT, MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE (EVEN IF EVONIK IS AWARE OF SUCH PURPOSE) WITH RESPECT TO ANY INFORMATION AND RECOMMENDATIONS PROVIDED. Reference to any trade names used by other companies is neither a recommendation nor an endorsement of the corresponding product, and does not imply that similar products could not be used. Evonik reserves the right to make any changes to the information and/or recommendations at any time, without prior or subsequent notice.

#### **Europe / Middle-East / Africa / Row**

##### **Evonik Resource Efficiency GmbH**

Business Line Silanes  
Rodenbacher Chaussee 4  
63457 Hanau-Wolfgang  
Germany  
PHONE +49 6181 59 13636  
FAX +49 6181 59 713 915  
protectosil@evonik.com  
www.protectosil.com

#### **Asia / Pacific**

##### **Evonik (SEA) Pte. Ltd.**

Business Line Silanes  
3 Internatioanl Business Park  
#07-18, Nordic European Centre  
Singapore 609927  
PHONE +65 6809 6899  
FAX +65 6809 6699  
protectosil@evonik.com  
www.protectosil.com

#### **Asia / Pacific**

##### **Evonik Taiwan Ltd.**

Business Line Silanes  
Artist Construction Bldg  
9F, No. 133  
Min Sheng East Road, Sec 3  
Taipei, 105 Taiwan, R.O.C.  
Taiwan 10596  
PHONE +886 227 17 1242  
FAX +886 227 17 2106  
protectosil@evonik.com  
www.protectosil.com

#### **North America**

##### **Evonik Corporation**

Business Line Silanes  
299 Jefferson Road  
Parsippany, NJ 07054-0677  
USA  
PHONE (TOLL FREE) +1 800 828 0919  
FAX +1 973 929 8503  
protectosil@evonik.com  
www.protectosil.com

#### **Asia / Pacific**

##### **Evonik (Shanghai) Co. Ltd.**

Business Line Silanes  
55, Chungdong Road  
Shanghai 201108  
P.R. China  
PHONE +86 21 6119 1660  
FAX +86 21 6119 1075  
protectosil@evonik.com  
www.protectosil.com

#### **Asia / Pacific**

##### **Evonik Japan Co. Ltd**

Business Line Silanes  
12th Floor Monolith Building  
2-3-1, Nishi-Shinjuku-ku  
Tokyo 163-0912  
Japan  
PHONE +81 353 23 7446  
FAX +81 353 23 7397  
protectosil@evonik.com  
www.protectosil.com

#### **Latin America**

##### **Evonik Brasil Ltda.**

Business Line Silanes  
Alameda Campinas, 579  
01404-000 São Paulo-SP  
Brazil  
PHONE +55 11 3146 4123  
FAX +55 11 3146 4148  
protectosil@evonik.com  
www.protectosil.com

#### **Asia / Pacific**

##### **Evonik Korea Ltd.**

Business Line Silanes  
94, Galsan 1-dong  
Bupyeong-gu  
Incheon, 403-081, Korea  
PHONE +82 2320 4778  
FAX +82 2783 2520  
protectosil@evonik.com  
www.protectosil.com

#### **Asia / Pacific**

##### **Evonik India Pvt. Ltd.**

Business Line Silanes  
Krislon House  
Saki Vihar Road, Anderi (E)  
Mumbai - 400 072  
India  
PHONE +91 226 7238 809  
FAX +91 226 7238 811  
protectosil@evonik.com  
www.protectosil.com