

Protectosil® SC 100

"Easy-to-clean" protection for porous mineral building materials; not for North America

Technical Data

Properties and test methods	Value	Unit	Method
Appearance	Yellowish, slightly cloudy liquid	-	-
Density	approx. 1.008	g/cm ³	DIN 51757
Viscosity	approx. 1	mPa.s	DIN 53015
pH (20 °C, 1:1 in H ₂ O)	4	-	-
Flash Point	> 90	°C	EN 22719

Registration

Protectosil® SC 100

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 Dynasytan® and Protectosil® products please read its Material Safety Data sheet (MSDS) thoroughly for safety and toxicological data as well as for information on proper transportation, storage and use. The Material Safety Data Sheet is available after registration on our website www.dynasytan.com or upon request from your local representative, customer service or from Evonik Industries AG, Product Safety Department, E-MAIL sds-im@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/m². The product consumption of **Protectosil® SC 100** is about 20 g/m² higher than the one of **Protectosil® SC 30**.

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.

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Europe / Middle-East / Africa / Row

Evonik Industries AG

Inorganic Materials
Rodenbacher Chaussee 4
63457 Hanau-Wolfgang
Germany
PHONE +49 6181 59 13636
FAX +49 6181 59 13737
protectosil@evonik.com
www.protectosil.com

Asia / Pacific

Evonik Degussa (SEA) Pte. Ltd.

Inorganic Materials
3 Internatioanl Business Park
#07-18, Nordic European Centre
Singapore 609927
PHONE +65 6890 6830
FAX +65 6899 6630
protectosil@evonik.com
www.protectosil.com

Asia / Pacific

Evonik Taiwan Ltd.

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

North America

Evonik Degussa Corporation

Inorganic Materials
P.O. Box 677
299 Jefferson Road
Parsippany, NJ 07054-0677
USA
PHONE (TOLL FREE) +1 800 828 0919
PHONE +1 973 929 8513
FAX +1 973 929 8503
protectosil@evonik.com
www.protectosil.com

Asia / Pacific

Evonik Degussa (Shanghai) Co. Ltd.

Inorganic Materials
55, Chungdong Road
Shanghai 201108
P.R. China
PHONE +86 21 6119 1053
FAX +86 21 6119 1075
protectosil@evonik.com
www.protectosil.com

Asia / Pacific

Evonik Japan Co. Ltd

Inorganic Materials
12th Floor Monolith Building
2-3-1, Nishi-Shinjuku-ku
Tokyo 163-0912
Japan
PHONE +81 353 23 7300
FAX +81 353 23 7399
protectosil@evonik.com
www.protectosil.com

Latin America

Evonik Brasil Ltda.

Inorganic Materials
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.

Inorganic Materials
94, Galsan 1-dong
Bupyeong-gu
Incheon, 403-081, Korea
PHONE +82 32 510 2433
FAX +82 32 505 2510
protectosil@evonik.com
www.protectosil.com

Asia / Pacific

Evonik India Pvt. Ltd.

Inorganic Materials
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