

Protectosil ANTIGRAFFITI®

Permanent graffiti protection for porous mineral building materials

Technical Data

Properties and test methods	Value	Unit	Method
pH	4	-	-
Flash point	> 95	°C	
Density	1.06	g/cm ³	DIN 51757
Viscosity	approx. 1.6	mPa.s	DIN 53015
Appearance	Yellowish to orange, slightly cloudy liquid	-	-

Registration

Protectosil ANTIGRAFFITI®

EINECS/ELINCS (EU):	Yes
AICS (Australia):	*
DSL/NDSL (Canada):	*
PICCS (Philippines):	*
TSCA (USA):	*
IECSC (P.R. China):	Yes
ENCS (Japan):	*
ECL (South Korea):	*
* = available on request	

Protectosil ANTIGRAFFITI® is an aqueous silane system that protects porous mineral building material surfaces from graffiti.

It is practically free from volatile organic components (VOC). Protectosil ANTIGRAFFITI® provides weather-resistant protection, which is still water vapor permeable.

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 Resource Efficiency GmbH, Product Safety Department, E-MAIL sds-hu@evonik.com.

Packaging and Storage

Protectosil ANTIGRAFFITI® has a shelf life of more than 12 months if stored in originally sealed containers.

The product should be stored at temperatures between 3 °C and 40 °C.

Protectosil ANTIGRAFFITI® is supplied in 25 kg, in 200 kg and 1.000 kg containers.

Properties and Use

Protectosil ANTIGRAFFITI[®] may be used as a graffiti repellent on mineral building materials such as:

- Concrete
- Brick/clinker
- Sandstone (not Udelfanger sandstone)
- Sand limestone
- Mineral-based stucco (with limits)
- Marble and granite

It is not recommended to apply Protectosil ANTIGRAFFITI[®] on painted surfaces as well as on plaster.

Product characteristics

Protectosil ANTIGRAFFITI[®]

- protects from graffiti
- repels water, oil and solvent-based paints on porous mineral building materials
- renders the substrate hydro- and oleophobic
- provides permanent protection: even after repeated cleanings re-application is not required

Application

Application steps of Protectosil ANTIGRAFFITI[®]

We recommend in any case to do and to observe test patches to determine the consumption, to check the compatibility with the substrate, and avoid unwanted colour change of the substrate.

Step 1:

The surface of the facade to be impregnated must be clean and dry. Dirt, stains, algae, moss or pre-treatment substances such as release oil have to be thoroughly removed in order to avoid possible and unwanted interactions. Any water absorbed by the surface during the cleaning process itself must dry thoroughly before application. Cracks, gaps, and flawed joints must be properly repaired. Freshly applied repair mortar should be allowed to cure and the surface must be dry.

Adjacent surfaces, such as windows, painted or unpainted surfaces, glass, plants, and soil that are not supposed to come into contact with the product should be covered with appropriate materials (e.g., plastic-sheeting) to protect them from spray and run-off.

In order to minimize possible darkening of certain building materials (see above) we recommend to treat these first with Protectosil[®] SC 100 or Protectosil[®] BHN before applying Protectosil ANTIGRAFFITI[®]. In the case of polished surfaces such as marble or granite it is not necessary to coat several layers of Protectosil ANTIGRAFFITI[®]. The treatment of these substrates should be done by polishing using cloth or microfiber glove.

Step 2:

Protectosil ANTIGRAFFITI[®] is a ready-to-use product.

Best results will be achieved using HVLP (High Volume Low Pressure) equipment. Because of their low atomizing pressure of no more than 0.7 bar/10 psi, these reduced-overspray high-performance guns produce far less spray mist with a high material ejection rate. The low internal nozzle pressure reduces the rebound of paint droplets from the object. HVLP high-performance spray guns produce a fine, soft, and homogeneous spray that permits a broad and uniform material application. Protectosil ANTIGRAFFITI[®] is particularly easy to handle with nozzle sizes of from 1.3 mm to 1.5 mm.

The first application should be carried out from bottom to top to prevent run off and in one stroke to prevent overlapping. Large drops should be rubbed away with a brush. A water treading effect will develop within a few minutes.

Step 3:

Additional applications are required to provide permanent protection against graffiti. The surface must dry completely between each step. HVLP systems are also the best way to apply subsequent coats of the product. A fine coating of liquid droplets will form on the surface. This must be rubbed in with a large brush as quickly as possible before the droplets can dry. Care must be taken to ensure that the impregnation is distributed uniformly (i.e. that the surface is uniformly wetted, the surface should appear bright and wet). The next coat can be applied as soon as the surface of the preceding coat has been dried. The drying times required vary between 10 minutes and one hour depending on the weather.

General directions for use

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 ANTIGRAFFITI[®] is applied. Depending on the climate conditions this time necessary for these products in order to fully crosslink and thereby develop their long-term protection.

Both surface and ambient temperatures should be between 3 °C and 40 °C during application. Protectosil ANTIGRAFFITI[®] should not be sprayed at high wind speeds (>18 km/h) or applied to uncovered or unprotected surfaces during rain. Various sandstones or dense concrete are sensitive to darkening. For these kind of substrates it is recommended to apply a base coat such as Protectosil[®] SC 100 or Protectosil[®] BHN before applying Protectosil ANTIGRAFFITI[®].

Product consumption and number of applications required

The number of applications and the amount of Protectosil ANTIGRAFFITI[®] required depends on the substrate and the desired effect. In general, porous materials require more coats than dense microporous materials. Several coats of Protectosil ANTIGRAFFITI[®] must be applied to provide protection against graffiti. Very porous and absorbent surfaces consume more product than smooth, dense, and microporous materials. The table provides examples of required quantities. It is recommended to arrange test patches to check the processing, possible discolouration, required work and waiting times as well as consumption per m². Polished surfaces (marble, granite) are treated with only one coat. In such cases the product has to be polished onto the substrate. Usually only 20 to 50 g/m² are needed.

Processing

Graffiti cleaning

If Protectosil ANTIGRAFFITI[®] is attacked by graffiti paint a viscous cleaner should be used for cleaning. It is recommended to use Protectosil[®] PROFICLEAN PLUS from Evonik. The cleaner should only be applied to a dry surface. The cleaner should interact with the paint for about 15-30 minutes. Don't let the cleaner dry on the surface. After applying about 400 g/m² of cleaner, it should be thoroughly distributed over the paint and the substrate surface. It might be necessary to apply the cleaner several times. After the paints are dissolved they can be washed away by a high-pressure water jet (with max. 12 bar). If paints based on bitumen have been applied to the surface additional use of a special bitumen cleaner might be necessary.

Application Details

Surfaces - Examples	Approximate total product consumption Comments
Polished mineral - polished marble, granite	20 – 50 g/m ² - polish in the product
Coarse - very low porosity granite	60-100 g/m ² - In most cases a primer is necessary; 2 application steps
Coarse - very low porosity clinker, facade brick	80-120 g/m ² - In most cases a primer is necessary; 2-3 application steps
Smooth, porous - Dense concrete	100-150 g/m ² - In most cases a primer is necessary; 2-3 application steps
Coarse, porous - sandstone, open-cell concrete, limestone	140-160 g/m ² - In most cases a primer is necessary; 2-3 application steps
very coarse, porous to very porous - Silesian sandstone, plaster, structured surfaces (with limits)	140-200 g/m ² - product consumption depends on primer and structure of the surface; 2-3 application steps



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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