Product information

Protectosil® 166

Siloxane based water-repellent for mineral-based construction materials

Technical Data

Properties and test methods	Value	Unit	Method
Appearance	clear, colorless liquid	-	-
Active ingredient	oligomeric alkyl siloxane	-	-
Solvent	solvent-free	-	-
Flash point	> 23	°C	DIN 51755
Density (20 °C)	1.0	g/cm³	DIN 51757
Viscosity	4	mPa.s	DIN 53015
Refractive index	1.414	-	DIN 51423

Registration

Protectosil® 166

EINECS/ELINCS (EU):	Yes
AICS (Australia):	No
DSL/NDSL (Canada):	No
PICCS (Philippines):	No
TSCA (USA):	No
IECS (P.R. China):	No
ENCS (Japan):	Yes
ECL (South Korea):	No

Protectosil® 166 is a colorless, solvent-free liquid based on an reactive, oligomeric alkyl siloxane. The diluted solution of Protectosil® 166 is intended for the water-repellent impregnation of absorbent mineral facade construction materials.

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® 166 is supplied in 25 l and 180 l container. Protectosil® 166 has a shelf life of at least 12 months if stored in originally sealed containers. Containers must be kept tightly sealed and protected from moisture.

Properties and Use

Areas of application:

For waterproofing absorbent mineral facade construction materials such as:

- plaster facades
- sand-lime brickwork
- brickwork
- autoclaved aerated concrete
- cement fiber board

Application rate:

We recommend using a 10% solution of the active ingredient in an aliphatic hydrocarbon solvent (such as e.g. Shellsol D 40). The amount to be applied depends to a large extent on how absorbent the substrate is. Empirical values are, for example,

- approx. 0.5 - 1.0 l/m^2 for mineral plaster facades,
- approx. 0.4 - 0.7 l/m^2 for sand-lime brickwork,
- approx. 0.4 - 2.0 l/m^2 for brickwork,
- approx. 0.5 - 2.0 l/m^2 for autoclaved aerated concrete
- and approx. 0.1 - 0.3 l/m^2 for cement fiber board.

The exact amount to be applied must be determined by a trial application.

Product Characteristics:

- water-vapor-permeable, colorless impregnation
- not film-forming effective
- on hairline cracks up to 0.3 mm
- good reduction of the water absorption
- good penetration
- high alkali resistance
- suitable as a primer for facade topcoats
- frost resistant

Processing

Directions for use

The substrates to be treated should be air-dry and clean in order to ensure deep penetration of the active ingredient. During application the outside temperature and the temperature of the substrate should be within the range from 0 °C to 40 °C. The material should not be applied if there is strong wind or if it is raining.

The material must not come into contact with water either before or during use. The prepared solution of Protectosil® 166 must be applied by flowcoating to the saturation point. This is achieved by allowing it to flow without pressure against the surface to be treated. All liquid delivery devices are suitable (airless sprayguns, for example). The material must not be atomized or applied with a brush.

The prepared solution of Protectosil® 166 must remain in contact with the substrate for several seconds as a liquid film. Horizontal surfaces should have a shiny, wet appearance for 3-5 seconds. Vertical surfaces should exhibit a 30-50 cm shiny curtain of liquid. All equipment and containers must be clean and dry. After use they can be cleaned with any organic solvent (methylated spirit, petrol or thinners). Non-absorbent substrates such as glass, wood, plastic, and metal cannot be treated with the prepared solution of Protectosil® 166. In the worst case, the product not absorbed by the substrate may react with atmospheric moisture to form a greasy, glossy silicone resin film. Substrates such as mentioned above should be covered before application. If they become contaminated, the resulting film can be easily removed if cleaned immediately using conventional cleaning agents, or alcohol (spirit of soap) in difficult cases.

Glass, wood, and metal are not attacked by the prepared solution of Protectosil® 166. Neither are most plastics used in construction. If in doubt, carry out a preliminary test. Plants in the vicinity of the substrate to be treated should be protected against contact with the solution.

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

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

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 (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 (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 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 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

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

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

EVONIK
POWER TO CREATE