

Protectosil® 40 S

Silane based water repellent for mineral building materials

Technical Data

| Properties and test methods | Value | Unit | Method |
|-----------------------------|--------------------------------|-------------------|-----------|
| Viscosity | 1.12 | mPa.s | DIN 53015 |
| Flash point | 12 | °C | DIN 51755 |
| Boiling point | 81 | °C | (1013hPa) |
| Appearance | free-flowing, colorless liquid | - | - |
| Density (20 °C) | 0.824 | g/cm ³ | DIN 51757 |
| Solvent | ethanol | - | - |
| Odor | of alcohol | - | - |

Registration

Protectosil® 40 S

| | |
|----------------------|-----|
| EINECS/ELINCS (EU): | Yes |
| AICS (Australia): | Yes |
| DSL/NDSL (Canada): | Yes |
| PICCS (Philippines): | Yes |
| TSCA (USA): | Yes |
| IECS (P.R. China): | Yes |
| ENCS (Japan): | Yes |
| ECL (South Korea): | Yes |

Protectosil® 40 S is a silane based free-flowing, colorless liquid. It is specifically intended for the waterrepellent impregnation of absorbent mineral facade construction materials.

Protectosil® 40 S is supplied in ethanolic solution ready for application.

Safety and Handling

Before considering the use of Dynasylan® 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.dynasylan.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® 40 S can be stored in originally sealed containers without any deterioration in quality for at least 12 months. Storage temperature are between -10 °C and 40 °C. **Protectosil® 40 S** is available in 10 l, 25 l PE-container, 200 l drums and 910 l IBC.

Properties and Use

Product Characteristics

- watervaporpermeable, colorless impregnation
- not film-forming
- effective on hairline cracks up to 0.3 mm
- significantly reduces the absorption of water and water-borne contaminants (e.g. chlorides)
- very good penetration
- high alkali resistance
- suitable for waterproofing under topcoats
- frost resistant

Application rate

Depending on how absorbent the substrate is, experience has shown that concrete requires approx. 0.4 - 0.6 l/m² and sand-lime brickwork approx. 0.7 l/m². Porous facade tiles, on the other hand, can require well in excess of 1 l/m² of **Protectosil**[®] 40 S. The amount to be applied has to be determined in a trial application.

Directions for use

The substrates to be treated should be 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 of 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.

Protectosil[®] 40 S must be applied by flow-coating 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.

Protectosil[®] 40 S 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, for example, glass, wood, plastic, and metal cannot be treated with **Protectosil**[®] 40 S. Glass, wood and metal are not attacked by **Protectosil**[®] 40 S. Neither are most plastics used in construction. Therefore covering is normally not necessary. To make it 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.

Protectosil[®] 40 S reacts with the interfaces in pores and capillaries of the mineral surface and forms invisible, waterrepellent interfacial compounds. However, since it is frequently unknown whether the material has been previously treated, a test should always be performed on a small area to make sure that no undesired secondary phenomena occur. Plants in the vicinity of the substrate to be treated should be protected against contact with **Protectosil**[®] 40 S.

Application

Areas of application

For waterproofing of absorbent mineral facade construction materials such as:

- brickwork
- slightly absorbent clinker masonry
- prefabricated concrete elements
- exposed-aggregate concrete
- mineral plaster facades
- sand-lime brickwork
- ceramic tiles
- autoclaved aerated concrete

Waterproofing of facade construction materials with **Protectosil**[®] 40 S can contribute significantly to reducing heating energy, as the reduction in water absorption also reduces the thermal conductivity of the facade.

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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