

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 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 Operations GmbH, Product Safety Department, E-MAIL sds-hu@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

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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