

# 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/cm <sup>3</sup>	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 a 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 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](http://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](mailto:sds-im@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<sup>2</sup> for mineral plaster facades,
- approx. 0.4 - 0.7 l/m<sup>2</sup> for sand-lime brickwork,
- approx. 0.4 - 2.0 l/m<sup>2</sup> for brickwork,
- approx. 0.5 - 2.0 l/m<sup>2</sup> for autoclaved aerated concrete
- and approx. 0.1 - 0.3 l/m<sup>2</sup> 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.

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