

Protectosil® 60 SK

High performance silane water-repellent with water beading effect for masonry

Technical Data

Properties and test methods	Value	Unit	Method
Flash point	> 40	°C	EN 22719
Active ingredient content	approx. 100	%	-
Density	approx. 1,038	g/cm ³	DIN 51757
Appearance	Colorless, slightly yellow or hazy	-	-
Viscosity (at 20 °C)	approx. 30	mPa.s	DIN 53015

Registration

Protectosil® 60 SK

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

High performance silane water-repellent with water beading effect for masonry

Protectosil® 60 SK is a free-flowing colorless to slightly yellow, frost resistant liquid based on a silane/siloxane. **Protectosil® 60 SK** is free of tinorganic compounds. **Protectosil® 60 SK** can be applied at full-strength or after dilution with suitable solvents, such as ethanol or white spirit.

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 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

Provided that moisture is excluded, **Protectosil® 60 SK** has a shelf life of two years. **Protectosil® 60 SK** is supplied in 25 l PE canisters and 200 l plastic lined steel drums and 1.000 l container. The material should be stored at temperatures between -10 and 40 °C (best between 0 °C and 30 °C).

Properties and Use

Protectosil® 60 SK is suitable for waterproofing porous mineral building materials, such as concrete, sand limestone, clinker masonry and mineral based natural stone. An excellent beading effect develops a short time after application.

Product Properties

- low volatility
- high reactivity
- very good beading effect
- water vapor-permeable, colorless impregnation
- seals hairline cracks up to 0.3 mm
- considerably reduces absorption of water and damaging water-borne salts (e.g. chlorides)
- high alkali resistance

Directions for use:

Untreated substrates should be air-dry and clean in order to ensure deep penetration of the active ingredient. During application the outside temperature as well as the substrate's temperature should be between 5 and 40 °C. The material should not be applied during strong wind or if is raining. The material must not come into contact with water either before or during use. All surfaces must be cleaned to remove all traces of dirt, dust, efflorescence, mold, salt, grease, oil, asphalt, laitance, curing compounds, paint, coatings and other foreign materials. Acceptable surface cleaning methods include sandblasting, water blasting and chemical cleaners. **Protectosil® 60 SK** cannot be applied to a painted surface. The mineral groups of the substrate must be accessible for the product to create a strong bonding, which is essential for good long-term performance. **Protectosil® 60 SK** should be applied using low pressure pumping equipment with a wet fan type spray nozzle. Do not apply to a wet or damp substrate. On vertical surfaces apply the **Protectosil® 60 SK** in a flooding application, so the material runs down 6 to 8 inches (15-20 cm) below the spray pattern. On horizontal surfaces the liquid material should pond on the surface for at least 5 seconds before being absorbed. A test patch should be applied to the substrate to verify coverage rate and application conditions. Protect glass, metal, plastic and other nonporous substrates from over spray **Protectosil® 60 SK** will not etch glass, but will leave a residue on nonporous surfaces. The material must not be atomized. **Protectosil® 60 SK** can be applied at full-strength or after dilution with suitable solvents. We recommend a minimum application concentration of 10% by weight (which corresponds to 1 part **Protectosil® 60 SK** and 9 parts solvent). It is not recommended to use the product at full-strength on concrete. Here it is of advantage to use dilution rates ranging from 1:3 up to 1:9.

Processing

Suitable solvents are:

- Ethanol water free* (denatured with petroleum hydrocarbons)
- Aliphatic hydrocarbon solvents (pentane, hexane, heptane, etc.)
- Aromatic hydrocarbon solvents (toluene, xylene)
- White spirit

* highly recommended solvent

The amount to be applied depends on how porous the substrate is. When using a dilution rate of 1:9 in ethanol, coverage rates range from 0.2 - 0.7 l/m² for mineral plaster facades, 0.2 - 0.8 l/m² for sand lime stone, 0.25 - 1.0 l/m² for brick and 0.17 - 0.6 l/m² for concrete. A test patch must be applied to determine the correct coverage rate. In order to reach these consumption rates it may be necessary to apply the material using multiple applications steps. It is recommended to let the surface dry between every application step. The performance of **Protectosil® 60 SK**, (e.g. evaluated by the reduction of water up-take) depends on both the dilution rate and the consumption rate. The above mentioned consumption rates are required in order to achieve reduction of water up-take greater than 90%. If a reduction of water up-take lower than that is required then a higher dilution rate (e.g. 1:14 in ethanol) or a smaller consumption rate is possible to use. This should be evaluated in previous tests.

All equipment and containers must be clean and dry. After use, they can be cleaned with any organic solvent (methylated spirit or petrol). Non-absorbent substrates such as window frames, window sills, plastic fittings, window glass, etc., should be covered before application. Surfaces which accidentally come into contact with **Protectosil® 60 SK** can be cleaned with alcohol (spirit) or aqueous soap solution. Cleaning should be carried out as quickly as possible (within a few hours), otherwise formation of a silicone resin film can make cleaning more difficult. Silicone resin films are best removed using ethanol (or spirit). Plant life should be protected from overspray. **Protectosil® 60 SK** reacts with the interfaces in pores and capillaries of the mineral surface and forms invisible, water-repellent interfacial compounds. However, since it is frequently unknown whether the material has been previously treated, and the exact type of treatment, a test should always be performed on a small area to make sure that no undesired secondary phenomena occur.

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