

# Protectosil® WS 670

## Aqueous emulsion based on organofunctional silanes

### Technical Data

Properties and test methods	Value	Unit	Method
Active content	40	%	
Appearance	white liquid	-	-
Density (20 °C)	approx. 0,96	g/cm <sup>3</sup>	DIN 51757
Flash point	95	° C	DIN EN ISO 2719

### Registration

#### Protectosil® WS 670

AICS (Australien):	No
DSL/NDSL (Canada):	*
ECL (Südkorea):	No
ENCS (Japan):	Yes
IECSC (P.R. China):	*
PICCS (Philippinen):	Yes
REACH (EU):	Yes
TSCA (USA):	Yes
* = Information upon request	

Aqueous emulsion based on organofunctional silanes for the water repellent impregnation of porous, mineral substrates

### 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 on our website [www.protectosil.com](http://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](mailto:sds-hu@evonik.com).

### Packaging and Storage

Protectosil® WS 670 is delivered in 25 l PE canisters, 200 l steel drums with inliner and 1000 l IBCs.

Protectosil® WS 670 is not frost resistant and should be stored at temperatures between +3 °C and +40 °C.

Protectosil® WS 670 has a shelf life of 12 months if properly stored in originally sealed containers.

## Properties and Use

### Protectosil® WS 670

- is suited for the water repellent impregnation of porous, mineral substrates
- shows very high reactivity and resistance against alkali
- penetrates deeply into porous, mineral substrates
- low content of volatile organic compounds (VOC)
- shows no formation of sticky silicone films
- gives invisible and water vapour permeable protection
- reduces significantly the uptake of water
- reduces the uptake of water soluble pollutants
- may be further diluted with water

### Suitable substrates (excerpt):

- concrete
- roof tiles
- clinker masonry
- mineral plaster
- mineral insulating materials
- sand limestone

## Application

The substrates to be treated should be dry and clean. Acceptable surface cleaning methods include sandblasting and water blasting.

For most applications a dilution of 1:3 - 1:1 of the product in demineralized water is recommended. Protectosil® WS 670 is best diluted just before application. The amount of Protectosil® WS 670 to be applied and the concentration to be used are highly dependent on the absorbitivity of the substrate and the desired penetration depth. Very absorbent substrates may require up to >500 - 1000 g/m<sup>2</sup> Protectosil® WS 670 (1:3 dilution in water). To determine the exact amount to be applied and to check weather previous or following treatments are compatible with the Protectosil® WS 670 treatment it is recommended to do a small test patch first.

Gently stir the product before use.

Protectosil® WS 670 should be applied via wet-on-wet flow coating to the saturation point. The solution should be applied in 2 - 3 coats without drying in between coats as the water repellent effect of Protectosil® WS 670 can develop within minutes. On vertical surfaces the solution should form of a clearly visible descending wet curtain. This is achieved by allowing the solution to flow against the surface of the building material without pressure. Most liquid delivery devices, e.g. airless spraying equipment, are suitable. The material should not be atomized or applied with a brush.

Important to note: The water repellent effect of Protectosil® WS 670 can develop within minutes or require up to several days depending on the substrate and weather conditions. Therefore, the impregnation should be applied continuously and without a break to avoid overlapping.

A substrate that has previously been made water repellent cannot be treated with Protectosil® WS 670 as it no longer allows penetration of a water based product. In such cases a pure silane system such as Protectosil® BHN or Protectosil® 008 can be used.

Protectosil® WS 670 is frost sensitive due to its water content. It should not be used at temperatures below 0 °C. During application outside and surfaces temperatures should range between +5 °C and +40 °C. Do not apply if rain is expected or high winds or other ambient conditions prevent proper application.

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® WS 670 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.

## Application Details

Substrate:	Consumption rate (dilution rate in water)
aerated concrete*	min. 350 g/m <sup>2</sup> (1:3)
clinker masonry*	min. 300 g/m <sup>2</sup> (1:3)
concrete*	min. 200 g/m <sup>2</sup> (1:1)
mineral insulating materials*	min. 200 g/m <sup>2</sup> (1:1)
mineral plaster*	min. 200 g/m <sup>2</sup> (1:1)
roof tiles*°	min. 300 g/m <sup>2</sup> (1:3)
sand limestone*	min. 280 g/m <sup>2</sup> (1:3)
* airless spraying	° immersion

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