

Protectosil® WS 610

Protectosil® WS 610 is a high performance water repellent emulsion for masonry

Technical Data

Properties and test methods	Value	Unit	Method
Density (20 °C)	approx. 1,017	g/cm ³	DIN 51757
Appearance	white liquid	-	-
Flash point	> 95	°C	EN 22719
Viscosity (20 °C)	approx. 12	mPa·s	DIN 53015
pH-value (20 °C)	6,5 - 8,5	-	-
Active ingredient	50	%	-

Registration

Protectosil® WS 610

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

Protectosil® WS 610 is an organofunctional siloxane based waterborne emulsion with almost no volatile organic components (VOC). Protectosil® WS 610 is used for water proofing of mineral building materials.

The main application is facade impregnation creating a water beading effect at the surface. Protectosil® WS 610 reduces the ingress of water and waterborne contaminants into the substrate and thereby prevents premature deterioration. Protectosil® WS 610 chemically bonds with silica to form a permanent attachment of water repellent molecules while also providing an excellent beading effect on the surface. Protectosil® WS 610 is supplied as a 50 % water-borne emulsion. It is mainly used to manufacture formulations with lower concentration of active ingredient in water.

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 Resource Efficiency GmbH, Product Safety Department, E-MAIL sds-hu@evonik.com.

Packaging and Storage

Protectosil® WS 610 has a shelf life of one year if stored in originally sealed containers.

Protectosil® WS 610 should be stored between 3 °C and 40 °C. Protectosil® WS 610 is supplied in 25 l PE canisters and 200 l plastic lined steel drums and 1.000 l bulk container.

Properties and Use

As hydrophobic agent for mineral building materials especially facades with high porosity e.g.

- mineral rendering
- sand-lime brickwork
- hard-baked brickwork
- roofing tiles
- concrete surfaces

Product characteristics after application

- water vapor permeable, colorless
- waterproofing with surface beading
- no formation of a sticky silicone film
- effective on micro cracks up to 0.3 mm
- high reduction of water absorption
- high water repellent effect and good penetration in absorbent mineral building materials

Instructions for use:

Substrates should be dry and clean prior to application to ensure deep penetration of the water repellent. Avoid application during strong wind or rain. It is not possible to apply Protectosil® WS 610 on a painted surface, as 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.

Due to its high water content, the impregnating solution is sensitive to frost and cannot be applied at sub-freezing temperatures. Outside temperature and surfaces temperature should be above 5 °C. Protectosil® WS 610 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® WS 610 in a flooding application, so the material runs down 15-20 cm (6 to 8 inches) below the spray pattern. On horizontal surfaces the liquid material should pond on the surface 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 overspray.

Protectosil® WS 610 will not etch glass, but will leave a residue on nonporous surfaces. Most liquid delivery devices are suitable (e.g. airless spray guns). The material should not be atomized or applied with a brush. This can cause de-emulsification of the product. Temperature and type of substrate are factors, which will determine how fast the water repellent effect develops. The application must be carried out in sections, continuously and without break to avoid overlapping. The recommended concentration is 10% of active ingredient in water. This corresponds to a dilution with water (preferable demineralized water) of 1:4. Protectosil® WS 610 is not recommended to be applied undiluted. Minimum dilution rate should be 1:1. The quantity and concentration to be applied depend on the absorbency of the substrate to be treated and the desired depth of penetration. Porous substrates may require well over 350 ml/m² of the water repellent. The exact quantity and the optimum concentration to be applied should be determined by a trial application. For red brick we recommend a consumption rate of at least 240 ml/m².

Non-absorbent substrates cannot be treated, as drying may cause the formation of a sticky film. This film will harden over time and can be removed using chemical strippers, spirit of soap or solvents. Plants are to be protected against contact with the water repellent agent. Protectosil® WS 610 reacts with the boundary surfaces in pores and capillaries of the mineral surface and forms an invisible, water-repellent boundary surface compound. As possible previous treatments of the substrate might be unknown, it is always advisable to carry out a test to make sure that there are no undesirable accompanying effects.

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