

Protectosil® 871

Water-based reactive organofunctional siloxane oligomer

Technical Data

Properties and test methods	Value	Unit	Method
Color	slightly blue < 1	Gardner	ISO 4630
Viscosity (20 °C)	152	mPa's	DIN 53015
pH (20 °C, 1:1 in H ₂ O)	4	-	DIN 19268
Flash point	> 95	°C	DIN 51755
Density (20 °C)	1.094	g/cm ³	DIN 51757

Registration

Protectosil® 871

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

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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® 871 is supplied in 25 kg containers and 200 kg drums. Protectosil® 871 is not frost resistant and should not be stored at temperatures below 3 °C. Only demineralised water should be used for dilutions. Protectosil® 871 should be stored at temperatures between 3 °C and 40 °C. Protectosil® 871 has a shelf life of 6 months if properly stored in originally sealed containers. The containers should not frequently be opened as the stability is reduced due to contact with oxygen.

Properties and Use

Protectosil® 871

- is suited for the damp proof causing of brickwork
- shows very good penetration of surrounding substrate and gives high reduction of water uptake
- should be used in dilutions with water
- may be applied by injection methods
- effectively hydrophobizes bricks and mortar
- may also be used for the hydrophobation of terracotta and other clay materials
- is free of methanol and liberates no flammable and volatile organic components (no VOCs)

Protectosil® 871 should be used as a dilution with water (1 part Protectosil® 871 with 1 to 20 parts of water). For the dilutions only deionized water should be used. When diluting always add Protectosil® 871 to the water while continuously stirring. Foaming upon diluting can be suspended by using commercially available defoamers. For most applications a 5 % solution (1 part Protectosil® 871 with 11 parts of water) is recommended. An aqueous solution containing 5 % of Protectosil® 871 is stable for more than 2 weeks if the pH value of the solution is 7.

Application

During application outside temperatures and surface temperatures should be between 5 °C and 40 °C. Protectosil® 871 can be injected into the substrate by using a proprietary recirculating pump with the appropriate number of injection nozzles to generate a constant injection pressure into the drilled wall until a continuous band of solution-saturated wall is obvious. When using a 5 % solution of Protectosil® 871 and injecting into red brick at 3,5 bar full saturation may be obtained after approx. 10 minutes. Protectosil® 871 can be applied to hydrophobize terracotta and other clay materials. The prefabricated goods should be totally immersed into a dilution of Protectosil® 871 until the substrate is fully saturated. As an alternative Protectosil® 871 can also be applied by wet-on-wet flow coating to the saturation point. The solution should be applied in 2 - 3 coats without drying between the coats. On vertical surfaces the solution should run down in the 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 pumping equipment are suitable. The material should not be atomized or applied with a brush. Protectosil® 871 reacts with the interfaces in pores and capillaries of the substrate and forms invisible, water-repellent interfacial compounds. To determine the exact amount to be applied and to check weather previous or following treatments are compatible as well as any color changes that might occur with the Protectosil® 871 treatment it is recommended to do a small test patch first.

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