

# 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 <sub>2</sub> O)	4	-	DIN 19268
Flash point	> 95	°C	DIN 51755
Density (20 °C)	1.094	g/cm <sup>3</sup>	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 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® 871** is supplied in 23 l PE-containers and 183 l steel drums with inliner. **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. Please note that the stability of the system decreases dramatically if the pH is raised > 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 appr. 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 whether 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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#### **Europe / Middle-East / Africa / Row**

##### **Evonik Industries AG**

Inorganic Materials  
Rodenbacher Chaussee 4  
63457 Hanau-Wolfgang  
Germany  
PHONE +49 6181 59 13636  
FAX +49 6181 59 13737  
protectosil@evonik.com  
www.protectosil.com

#### **Asia / Pacific**

##### **Evonik Degussa (SEA) Pte. Ltd.**

Inorganic Materials  
3 Internatioanl Business Park  
#07-18, Nordic European Centre  
Singapore 609927  
PHONE +65 6890 6830  
FAX +65 6899 6630  
protectosil@evonik.com  
www.protectosil.com

#### **Asia / Pacific**

##### **Evonik Taiwan Ltd.**

Inorganic Materials  
Artist Construction Bldg  
9F, No. 133  
Min Sheng East Road, Sec 3  
Taipei, 105 Taiwan, R.O.C.  
Taiwan  
PHONE +886 227 17 1242  
FAX +886 227 17 2106  
protectosil@evonik.com  
www.protectosil.com

#### **North America**

##### **Evonik Degussa Corporation**

Inorganic Materials  
P.O. Box 677  
299 Jefferson Road  
Parsippany, NJ 07054-0677  
USA  
PHONE (TOLL FREE) +1 800 828 0919  
PHONE +1 973 929 8513  
FAX +1 973 929 8503  
protectosil@evonik.com  
www.protectosil.com

#### **Asia / Pacific**

##### **Evonik Degussa (Shanghai) Co. Ltd.**

Inorganic Materials  
55, Chungdong Road  
Shanghai 201108  
P.R. China  
PHONE +86 21 6119 1053  
FAX +86 21 6119 1075  
protectosil@evonik.com  
www.protectosil.com

#### **Asia / Pacific**

##### **Evonik Japan Co. Ltd**

Inorganic Materials  
12th Floor Monolith Building  
2-3-1, Nishi-Shinjuku-ku  
Tokyo 163-0912  
Japan  
PHONE +81 353 23 7300  
FAX +81 353 23 7399  
protectosil@evonik.com  
www.protectosil.com

#### **Latin America**

##### **Evonik Brasil Ltda.**

Inorganic Materials  
Alameda Campinas, 579  
01404-000 São Paulo-SP  
Brazil  
PHONE +55 11 3146 4123  
FAX +55 11 3146 4148  
protectosil@evonik.com  
www.protectosil.com

#### **Asia / Pacific**

##### **Evonik Korea Ltd.**

Inorganic Materials  
94, Galsan 1-dong  
Bupyeong-gu  
Incheon, 403-081, Korea  
PHONE +82 32 510 2433  
FAX +82 32 505 2510  
protectosil@evonik.com  
www.protectosil.com

#### **Asia / Pacific**

##### **Evonik India Pvt. Ltd.**

Inorganic Materials  
Krislon House  
Saki Vihar Road, Anderi (E)  
Mumbai - 400 072  
India  
PHONE +91 226 7238 809  
FAX +91 226 7238 811  
protectosil@evonik.com  
www.protectosil.com