Protectosil® WS 808 – the perfect combination of water repellency and stone consolidation

Dr. Christopher Studte
Rheinfelden, February 2012

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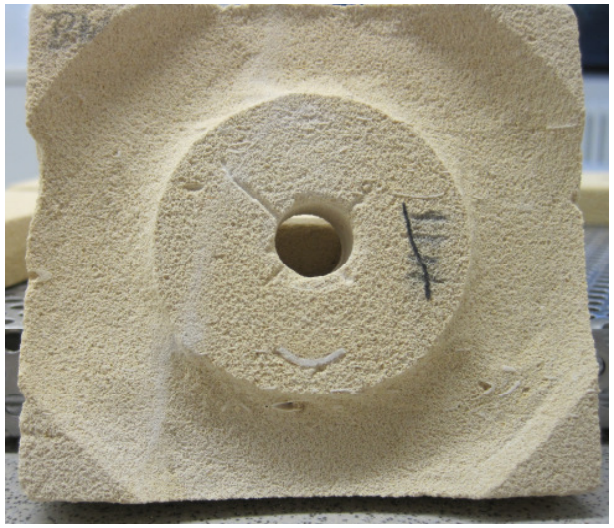
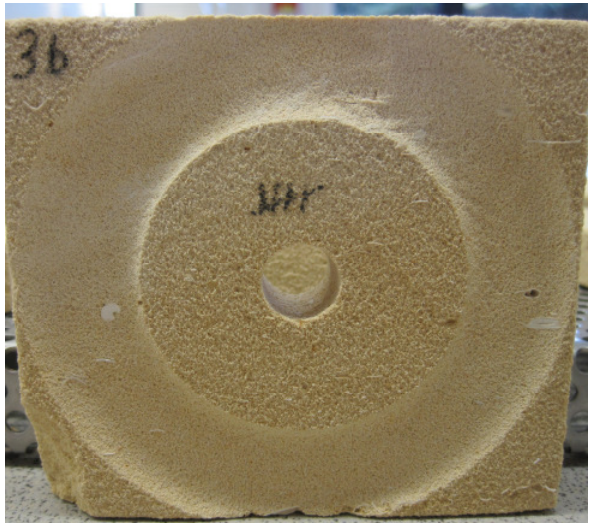
See it yourself –
perfect beading effect…

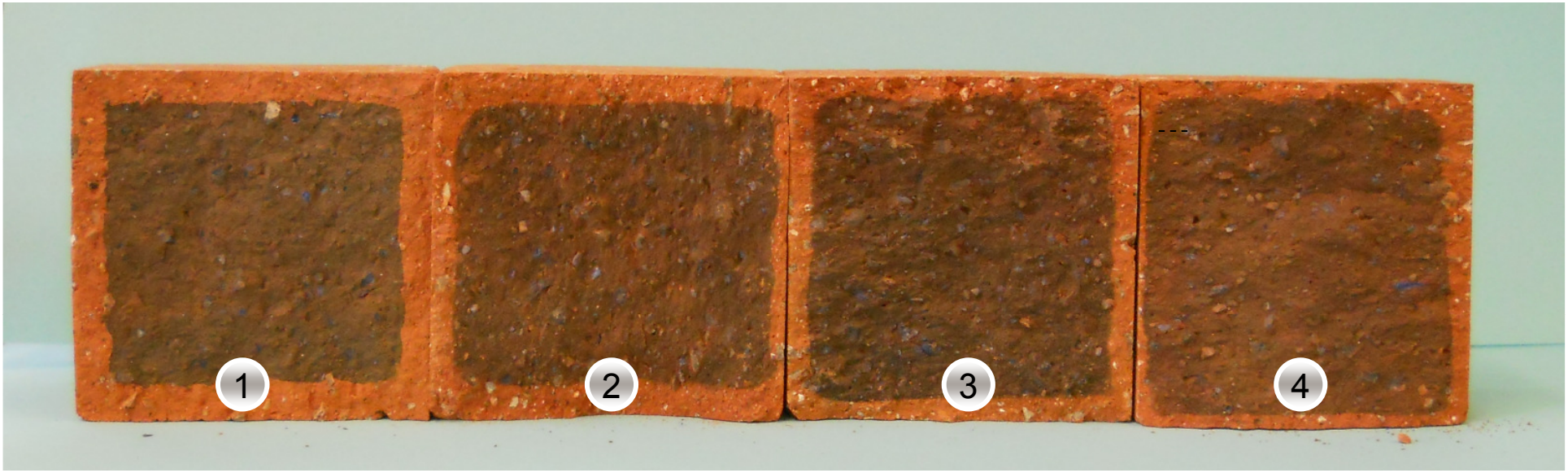
and a significant consolidation of mineral construction materials

Untreated	Protectosil® WS 808 1:10	Protectosil® WS 808 pure
		

Abrasion test of 500 rotations

High penetration depth at any dilution

Penetration depth



Dilution ratio	1:10	1:15	1:20	1:25

Protectosil® WS 808 at a glance

Oligomeric propyl siliconate/silicate concentrate as water-repellent and consolidant for mineral substrates

Product description	• Water based, 55 wt% active ingredient • Clear colorless liquid • Supplied as concentrate: to be diluted with tap water up to1:100 • pH >13
Properties	• Excellent long-lasting beading effect even at very high dilutions • High penetration depth and fast curing • Excellent consolidation of mineral construction materials • Generates water-vapor permeable, colorless treatment • Excellent reduction of water uptake • Resistant against alkaline environment • Prevents rising damp in brickwork and sand stone • Significantly reduces the formation of white deposits on treated surfaces
Storage	• Storage stability 12 months

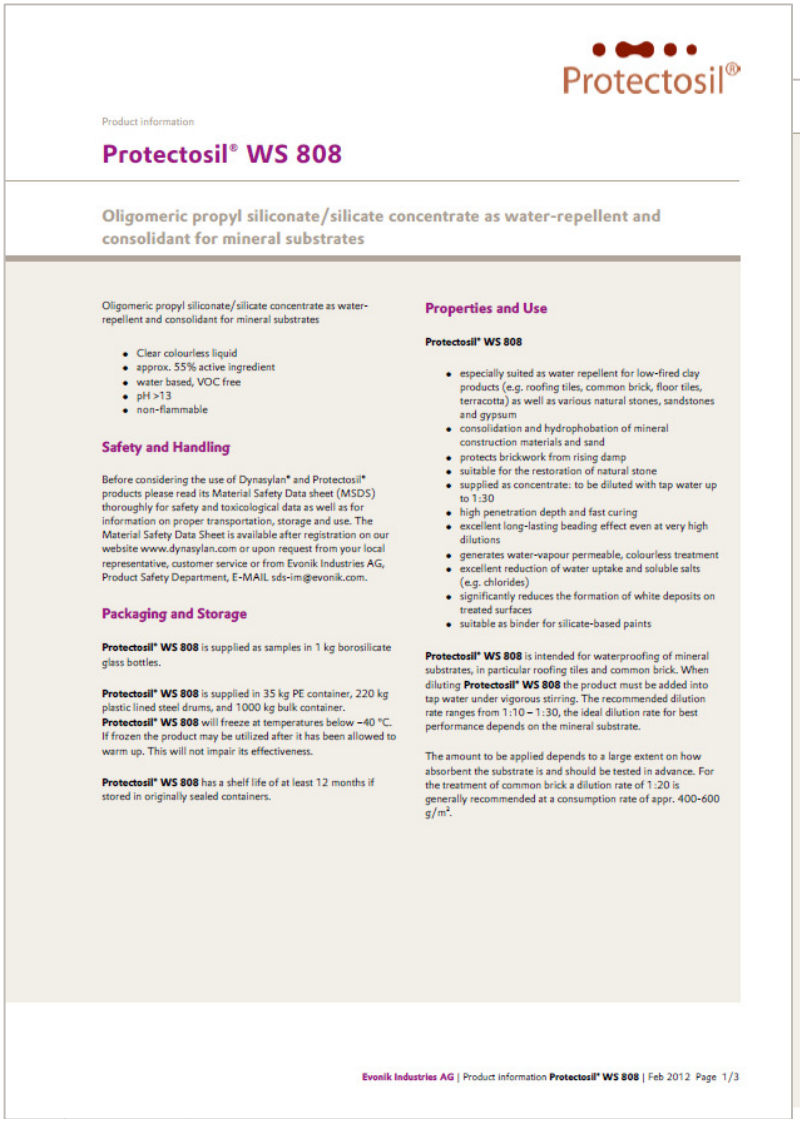
Water repellent with long lasting beading effect

Excellent stone consolidant

Protectosil® WS 808 is suited for many applications…

- As water-repellent for low-fired clay products (e.g. roofing tiles, common brick, floor tiles, terracotta) as well as various natural stones, sandstones and gypsum
- For Consolidation and hydrophobation of mineral construction materials and sand
- Against rising damp in brickwork
- For the restoration of natural stone
- As binder for silicate-based paints

All documents are available



Protectosil®

Product information

Protectosil® WS 808

Oligomeric propyl siliconate/silicate concentrate as water-repellent and consolidant for mineral substrates

Oligomeric propyl siliconate/silicate concentrate as water-repellent and consolidant for mineral substrates

- Clear colourless liquid
- approx. 55% active ingredient
- water based, VOC free
- pH >13
- non-flammable

Safety and Handling

Before considering the use of Dynasylan® 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.dynasylan.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

Protectosil® WS 808 is supplied as samples in 1 kg borosilicate glass bottles.

Protectosil® WS 808 is supplied in 35 kg PE container, 220 kg plastic lined steel drums, and 1000 kg bulk container.
Protectosil® WS 808 will freeze at temperatures below –40 °C. If frozen the product may be utilized after it has been allowed to warm up. This will not impair its effectiveness.

Protectosil® WS 808 has a shelf life of at least 12 months if stored in originally sealed containers.

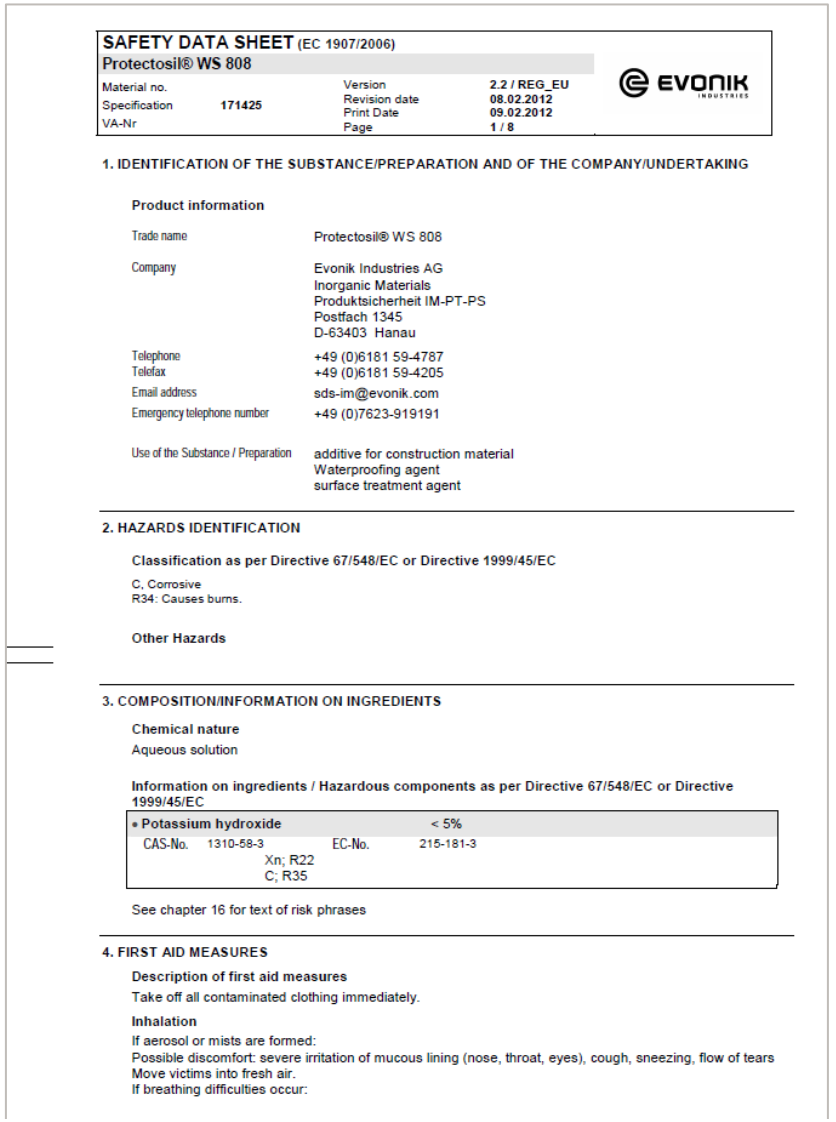
Properties and Use

Protectosil® WS 808

- especially suited as water repellent for low-fired clay products (e.g. roofing tiles, common brick, floor tiles, terracotta) as well as various natural stones, sandstones and gypsum
- consolidation and hydrophobation of mineral construction materials and sand
- protects brickwork from rising damp
- suitable for the restoration of natural stone
- supplied as concentrate: to be diluted with tap water up to 1:30
- high penetration depth and fast curing
- excellent long-lasting beading effect even at very high dilutions
- generates water-vapour permeable, colourless treatment
- excellent reduction of water uptake and soluble salts (e.g. chlorides)
- significantly reduces the formation of white deposits on treated surfaces
- suitable as binder for silicate-based paints

Protectosil® WS 808 is intended for waterproofing of mineral substrates, in particular roofing tiles and common brick. When diluting **Protectosil® WS 808** the product must be added into tap water under vigorous stirring. The recommended dilution rate ranges from 1:10 – 1:30, the ideal dilution rate for best performance depends on the mineral substrate.

The amount to be applied depends to a large extent on how absorbent the substrate is and should be tested in advance. For the treatment of common brick a dilution rate of 1:20 is generally recommended at a consumption rate of appr. 400-600 g/m².



SAFETY DATA SHEET (EC 1907/2006)
Protectosil® WS 808

Material no.		Version	2.2 / REG_EU
Specification	171425	Revision date	08.02.2012
VA-Nr		Print Date	09.02.2012
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1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product information

Trade name	Protectosil® WS 808
Company	Evonik Industries AG Inorganic Materials Produktsicherheit IM-PT-PS Postfach 1345 D-63403 Hanau
Telephone	+49 (0)6181 59-4787
Telefax	+49 (0)6181 59-4205
Email address	sds-im@evonik.com
Emergency telephone number	+49 (0)7623-919191
Use of the Substance / Preparation	additive for construction material Waterproofing agent surface treatment agent

2. HAZARDS IDENTIFICATION

Classification as per Directive 67/548/EC or Directive 1999/45/EC

C, Corrosive
R34: Causes burns.

Other Hazards

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature

Aqueous solution

Information on ingredients / Hazardous components as per Directive 67/548/EC or Directive 1999/45/EC

• **Potassium hydroxide**			< 5%
CAS-No.	1310-58-3	EC-No.	215-181-3
	Xn; R22 C; R35		

See chapter 16 for text of risk phrases

4. FIRST AID MEASURES

Description of first aid measures

Take off all contaminated clothing immediately.

Inhalation

If aerosol or mists are formed:
Possible discomfort: severe irritation of mucous lining (nose, throat, eyes), cough, sneezing, flow of tears
Move victims into fresh air.
If breathing difficulties occur:

Potential customers are

- Clay roof tiles manufacturers
- Terracotta tiles manufacturers
- Gypsum/ gypsum boards manufacturers
- Stone protection companies
- Silicate paint producers
- Paver producers
- Stone/brick manufacturers
- …

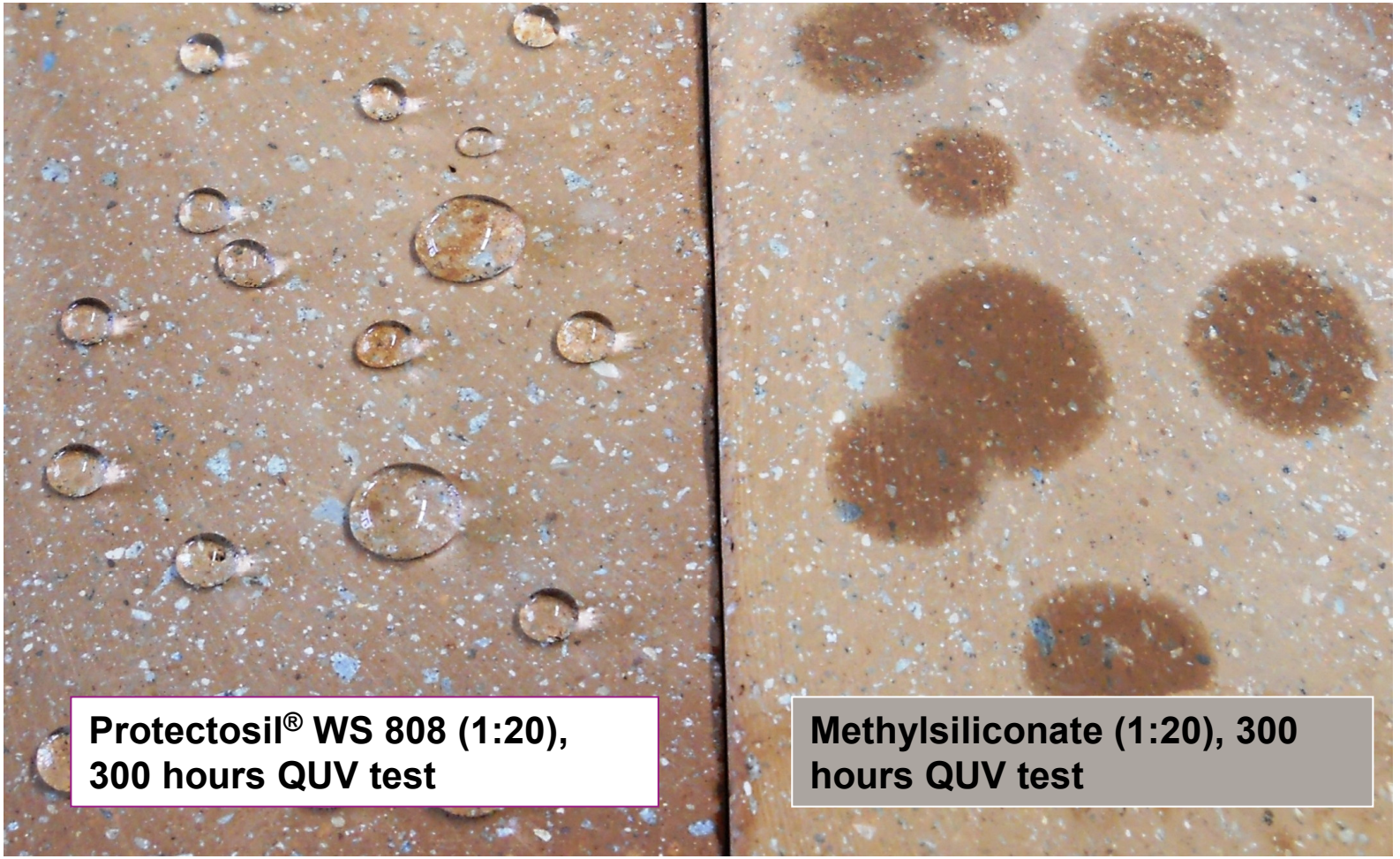
Please add potential groups

Key Benefits of Protectosil® WS 808 vs. Methylsiliconates

Properties	Methylsiliconates	Protectosil® WS 808
Beading effect	+	++
Hydrophobation	+	+
UV-Stability	-	++ (after 300 h QUV test)
Consolidation	-	++
Reduces formation of white deposits	-	+
Fast curing	-	+ Beading effect after ½ h at 5°C - RT
Alkali stability	-	+
Penetration depth	+	++
Reduction of water uptake at >1:100 dilutions	++	+

Protectosil® WS 808 - better beading effect and penetration depth compared to methylsiliconates

Protectosil® WS 808 has an excellent long-lasting beading effect not influenced by UV rays



Protectosil® WS 808 shows no formation of white deposits as common with methylsiliconates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