

Protectosil® SH 100

Solvent-free one-component consolidant based on silicic acid esters.

Technical Data

Properties and test methods	Value	Unit	Method
Appearance	colorless, clear low viscous liquid		-
Density (25 °C)	approx. 1.06	g/cm ³	DIN 51757
Viscosity (20 °C)	approx. 5,0	mPa·s	DIN 53015
SiO ₂ content	40.0 - 42.0	wt%	AN-SAA 0851
Flash point	42	°C	DIN 51755
Active content	>98	%	-

Registration

Protectosil® SH 100

EINECS/ELINCS (EU):	Yes
AICS (Australia):	Yes
DSL/NDSL (Canada):	Yes
PICCS (Philippines):	Yes
TSCA (USA):	Yes
IECSC (P.R. China):	Yes
ENCS (Japan):	Yes
ECL (South Korea):	Yes

Solvent-free one-component consolidant based on silicic acid esters.

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® SH 100 is supplied in 25 kg and 215 kg steel drums as well as in 1000 kg bulk containers.

Protectosil® SH 100 has to be stored at temperatures lower than +35 °C. Moisture has to be excluded.

Protectosil® SH 100 has a shelf life of 12 months if stored in originally sealed containers.

Properties and Use

Protectosil® SH 100

- is qualified for the consolidation of mineral construction materials
- acts as a binder due to the hydrolysis and subsequent dehydration to polymeric silicious structures
- may be used for the restoration of natural stone
- is qualified for the consolidation of brick work and terracotta
- improves the thermal and chemical stability and mechanical properties of treated substrates
- is not miscible with water
- solvent free
- one component system, ready to use

Protectosil® SH 100 is applied on dry substrates when temperatures are between 5 - 30 °C. Application is typically carried out by flooding until the substrate is saturated, i. e. no additional material is absorbed within 1 minute; application by rolling is also possible provided enough material can be applied homogeneously.

In case a repeated treatment is necessary on strongly decayed substrates this should be carried out as a wet-in-wet application max. 4 hours after the first treatment. Excess material has to be removed right after the application in order to avoid formation of glossy spots especially on less-porous areas of the substrate. This may be achieved by flooding with methyl-ethylketone or white spirit.

It is recommended to treat the whole area in one step in order to secure uniform appearance.

To improve long-term protection of the substrate subsequent treatment with masonry water repellents is recommended.

Application

Protectosil® SH 100 is not miscible with water and should be used undiluted.

Depending on the substrate (e. g. grade of decomposition, porosity) the consumption may vary over a wide range. It is therefore recommended to evaluate the required dosage by means of representative test areas prior to the final impregnation. Possible discolouration should also be carefully observed in this context.

All equipment may be cleaned with common organic solvents (e.g. methylated spirit, petrol or thinners) after use.

Non-absorbent substrates such as, for example, glass, wood, plastic and metal cannot be treated with Protectosil® SH 100. Glass, wood and metal are not attacked by Protectosil® SH 100. Neither are most plastics used in construction. Therefore, covering is normally not necessary. To make sure we recommend to carry out a test. In the worst case, product not absorbed by the substrate may react with atmospheric moisture to form a greasy, glossy silicone resin film, which can easily be removed if cleaned immediately using conventional cleaning agents, or alcohol (check for compatibility of the solvent with the surface).

Plants in the vicinity of the substrate to be treated should be protected against contact with Protectosil® SH 100.

Protectosil® SH 100 is an invisible treatment. A subsequent hydrophobation of treated substrates is possible by using the products Protectosil® BHN, Protectosil® 40 S or Protectosil® 60 SK. A drying period of 2 weeks should be allowed for the Protectosil® SH 100 before any further treatment.

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