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## Stone Bench

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### I SUMMARY

Our Stone Bench is crafted from sandstone and is shipped with two attached reclaimed douglas fir (wood) bases. For the longest possible service life, the Stone Bench should be installed on a foundation that will ensure that 1) the wood bases do not make direct contact with the soil and 2) rain and other water is drained away to prevent pooling of water around the bases or continuous exposure to moisture.

### II HANDLING

Your Stone Bench will be shipped in its own crate. After conducting your arrival inspection, we suggest you store and transport the Stone Bench to the installation site using that crate.

### III SITE

The Stone Bench should be installed above grade on a permanent footing or foundation (cement slab, drained stone, wood platform, etc.) that is appropriately engineered for its weight (approximately 2,400 pounds/1,100 kilograms). This diagram is representative of a typical installation, but you should work with your contractor and/or engineering company to develop a plan and construction documents specific to your site and conditions.



### II STONE SURFACE TREATMENT

For exterior installations, all exposed surfaces of the Stone Bench should be treated with a penetrating siloxane-based water repellent. We suggest you consider a product such as *SealGreen Clay Brick And Natural Stone Sealer* (SealGreen, Overland Park KS USA). Information on this product is attached to assist you and your contractor in determining the appropriate surface treatment and application for your specific site and conditions.

**NOTE** This information is provided as general information, and is not specific to your site or conditions. We recommend that you engage certified professionals to design and fabricate an appropriate footing/foundation and to select, apply, and maintain an appropriate surface treatment. Pieter VanTuyl provides this information in good faith, and we assume no responsibility or liability beyond our product warranty.

# SealGreen®

## Concrete Cleaning & Sealing Products

16072 Foster St. Overland Park, KS. 66085

913-681-3451

[www.sealgreen.com](http://www.sealgreen.com)

## Technical Data Sheet

### SealGreen – Clay Brick and Natural Stone Concentrate Sealer

#### Product Data and Test Information

##### DISTRIBUTION

ReUse Concrete Sealing Specialists, LLC.  
16072 Foster St. Overland Park, KS. 66085  
Office 913-681-3451, 800-997-3873  
Fax 913-239-9276  
[www.sealgreen.com](http://www.sealgreen.com)

##### PRODUCT DESCRIPTION

SealGreen – Clay Brick and Stone Sealer is a one component, VOC compliant, penetrating water repellent, which contains a proprietary modified siloxane. This water-based siloxane penetrates most masonry and concrete pores and capillaries up to ¼ inch or more depending on surface porosity and moisture content at the time of application.

SealGreen – Clay Brick and Stone Sealer reacts with the silica in concrete and masonry in the presence of ultraviolet light and atmospheric moisture. This reaction forms strong permanent bonds beneath the surface and creates a hydrophobic zone that prevents water molecules from penetrating, while allowing free migration of water vapors. The chemical bonds formed in this process allow SealGreen – Clay Brick and Stone Sealer to become an integral part of the substrate and provide long-term water repellent protection.

##### APPLICATIONS

Recommended surfaces include: architectural precast or cast in place, split face concrete blocks, brick, mortars, natural stones, limestone, granite, sandstone, terra cotta, ceramic tile and grout, adobe, exposed aggregate products, Portland cement stuccos, plaster and concrete masonry units.

Protects horizontal surfaces such as pavements, sidewalks and plazas. It should also be used on vertical surfaces with leaks and or where extra protection is desired.

Also protects bridges, parking decks, airport taxiways and aprons, piers and marine structures, and other surfaces requiring outstanding corrosion resistance and protection from chloride penetration.

For use on brick masonry to protect against the entrance of wind-driven rain.

To reduce the effects of mildew, efflorescence, and stains from concrete and masonry.

##### ADVANTAGES

Effective on most vertical or horizontal exterior, above-grade masonry surfaces. Natural substrate color and surface textures are unaffected, with little to no gloss created.

##### Benefits of this product are:

- \* Excellent resistance to water intrusion

- \* Deep penetration into the substrate
- \* Exhibits good beading effects
- \* 100% water vapor permeable
- \* Mildew and fungus resistant
- \* Efflorescence protection
- \* High resistance to alkali attack
- \* Freeze thaw protection
- \* Can be reapplied to treated surfaces

SealGreen Cleaners and Sealers are state-of-the-art protective treatments and have developed a reputation by architects and building professionals as the premier solution for water repellents and sealers. SealGreen is dedicated to solving the destructive influence water intrusion and other elements have on building materials.

##### APPEARANCE

SealGreen – Clay Brick and Stone Sealer is clear, non-yellowing and does not change the color or appearance of typical surfaces to which they are applied. Buildings and structures stay cleaner because conditions which contribute to staining are reduced and dirt rinses away more readily.

##### PRETREATMENT FOR PAINT

Water can penetrate through most paints and coatings. This leads to damp substrates and blistering and peeling of paint. Pre-treating concrete, masonry, or stucco with SealGreen – Clay Brick and Stone Sealer prior to painting keeps walls drier and extends the life of the paint. SealGreen – Clay Brick and Stone Sealer is compatible with most latex and other paints. But to assure compatibility between paint and pretreatment, a small test application is recommended. Note: Do not use a pretreatment or allow overspray on metal or other nonporous surfaces to be painted.

##### TECHNICAL DATA

Color	milky white
Active substance	silane/siloxane
Active content	10%
Ph	5
Density	8.34#/gal.
VOC	<50 g/l

##### TEST DATA

**ASTM C 67** % Reduction in Water Absorption on Brick During Immersion in Water for 24 hrs. Results – 96.9%

**ASTM C 140** % Reduction in Water Absorption on 3000 psi Concrete During Immersion in Water for 24 hrs. Results – 91.29%

**ASTM C 97** % Reduction in Water Absorption on Indiana Limestone During Immersion in Water for 48 hrs. Results – 81.7%

**ASTM C672** “Deicer Scaling” 100 cycles (deicer freezing and thawing using air-entrained concrete specimens) Results - Little to No Change

**ASTM E 514** “Water Permeance of Masonry” Reduction in Leakage 99.9%

**ASTM D 1653** Water Vapor Transmission 100% Breathable

## LIMITATIONS

**Not intended for below-grade waterproofing.** SealGreen – Clay Brick and Stone Sealer will leave a residue on non-porous substrates such as glass windows, metal frames and painted surfaces. Caution should be taken with specialty coated glass or plastic windows.

Check compatibility before application. Protect materials which can be damaged by solvents. Do not apply when following conditions are present:

- Ambient or surface temperature less than 40° F
- Or predicted to fall below 40° F within 24 hours following application.
- Rain within 72 hours prior to application or predicted within four hours after application. Wet or frozen substrates.
- High winds which could cause excessive overspray.

Application should be completed by qualified applicator with experience applying water repellents. Application equipment should be clean and free of foreign materials which could be dissolved and deposited on surfaces to be treated. Contact SealGreen for additional precautions and information on compatibility with specific materials.

## INSTALLATION

Best results are obtained by applying SealGreen – Clay Brick and Stone Sealer on clean and dry substrates. All surfaces must be cleaned to remove all traces of dirt, dust, efflorescence, mold, salt, grease, oil, asphalt, laitance, curing compounds, paint, coatings and other contaminants. Acceptable surface cleaning methods include shotblasting, sandblasting, waterblasting and chemical cleaners. If chemical cleaning agents are used, neutralize and wash off residues completely. Allow surface to dry at least 72 hours after water cleaning. Check with SealGreen representative to verify suitable cleaning methods, products and that the surface preparation is adequate.

As a standard procedure, fresh concrete should be allowed to dry for 28 days before application. All repointing must be completed and allowed to cure at least 3 days. Concrete repair and replacement must be completed prior to application. Patching materials, caulking, sealing materials, traffic paint must be fully cured before applying SealGreen – Clay Brick and Stone Sealer. In addition, the actual amount of material that is used for each application is dependent on the absorptive capacity of the substrate.

Before applying, it is recommended that preliminary tests be carried out to determine usage and to test the effectiveness of the treatment.

**Application:** Apply water repellents as early as practical to protect substrates during construction, but not before wall cap, flashings, and roof are in place and water trapped in structure has been drained.

Spray apply SealGreen – Clay Brick and Stone Sealer by low-pressure (150 psi maximum) pumping equipment with a wet fan type spray nozzle. Alternate methods include nap roller (1") or by brush. **Required application rate varies from 70 to 175 sq. ft. per gallon depending on surface texture and absorbcency.**

**Vertical Surfaces:** Mix well before using. Test small area before starting general application to assure desired results and coverage rates. Apply when surface and air tempera-

tures are between 40°F to 110°F. Provide adequate ventilation.

Apply in a flooding application, from the bottom up so the material runs down 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. For best results two applications are recommended with the second application applied using a wet on wet technique, retreat within three to five minutes after initial application. A wet treated surface may be agitated with a soft bristle scrub brush to ensure more even distribution and greater penetration. During application, precautions should be taken to protect the surrounding area from overspray. Remove overspray from non-targeted surfaces immediately with soap and water. Apply to southern exposed areas during coolest part of the day.

**Horizontal Surfaces:** Mix well before using. Pretest to measure material coverage rates. Apply enough material so that solution stands for 60 seconds before completely penetrating the surface. If additional material is required to reach desired coverage rate, a wet on wet application can be used. Avoid puddling or ponding, brush or broom to spread material to more porous area. If applicable, block all drains and use absorptive coverings to contain run-off of excess material. To avoid unnecessary clean-up, use soap and water to remove overspray as soon as possible.

**Caution: Over application of material may cause darkening of surface.**

**Dry Time:** To touch, or 2 to 6 hours depending on temperature and humidity.

**Clean Up:** Thoroughly rinse spray equipment with clean water. Wash rollers with soap and water. Rinse thoroughly.

**Precautions:** Fire hazards are eliminated since SealGreen – Clay Brick and Stone Sealer is water-based and does not contain combustible or flammable solvents. Respiratory protection is not required during normal use and handling. Please refer to the Material Safety Data Sheet for more detailed information.

## WARRANTY

**Five years when properly applied.** Contact SealGreen for information and warranty requirements.

## AVAILABILITY

SealGreen – Clay Brick and Stone Sealer is available in concentrated form in 5 and 55 gallon containers to approved applicators throughout the United States. Contact ReUse Concrete Sealing Specialists, LLC at 800-997-3873 for a sales representative in your area.

## TECHNICAL SERVICE

Technical service engineers and chemists are available to answer questions on product performance, application methods and chemical composition.

This information is furnished without warranty, representation, inducement or license of any kind, except that it is accurate to the best of ReUse Concrete Sealing Specialists, LLC's knowledge or obtained from sources believed by ReUse Concrete Sealing Specialists, LLC. does not assume any legal responsibility for use or reliance upon same. Tests should be carried out only by chemists or chemically qualified lab technicians. Before using any chemical, read its label and Material Safety Data Sheet.

## MATERIAL SAFETY DATA SHEET

Copyright: 1997

Effective Date: 1/1/08 Supersedes: 5/23/07

Emergency #: 913-219-0013

### SECTION I. IDENTIFICATION

PRODUCT NAME: **SealGreen –Brick and Stone Sealer**  
 CHEMICAL NAME & SYNONYMS: Water Repellent  
 DISTRIBUTOR NAME: ReUse Concrete Sealing Specialists, LLC. 16072 Foster St. Overland Park, KS.  
 66085 913-681-3451  
 CAS #: Not Issued  
 CHEMICAL FAMILY: Water Based Silane/Siloxane Blend

### SECTION II. COMPONENTS

INGREDIENTS	CAS NUMBER	% BY WT*
- Dimethyl, Methylhydrogen siloxane	68037-59-2	5.0-10.0
- N-Octyltriethoxysilane	2943-75-1	5.0-10.0
- Trace Chemicals		<1.0
- Water	007732-18-5	Balance

• The concentrations shown in the substance list are maximum or ceiling levels (weight %) to be used for calculations for regulations.

Per Environmental Protection Agency (EPA) Method 24 (7/1/91), Determination of Volatile Matter Content, this product has volatile solvents content (VOC) of < 25 g/l. VOC Compliant.

### SECTION III. HEALTH HAZARDS

NFPA 704 CODES: 0=Minimal, 1=Slight, 2=Moderate, 3=Serious and 4=Severe

HEALTH (BLUE)	FLAMMABILITY (RED)	REACTIVITY (YELLOW)	CLOTHING
NFPA: 1	NFPA: 0	NFPA: 0	NFPA:
HMIS: 1	HMIS: 0	HMIS: 0	HMIS: PP = B

#### ACUTE EFFECTS OF OVEREXPOSURE:

- EYE: Mildly irritating to the eyes.  
 - SKIN: No skin irritation expected. May aggravate existing dermatitis.  
 - INHALATION: Breathing mist may cause mild irritation to upper respiratory tract.  
 - INGESTION: None known. Do not take internally.

CHRONIC EFFECTS OF OVEREXPOSURE: Repeated prolonged contact may produce irritation.

OTHER HEALTH EFFECTS (MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE): People with sensitive skin can experience aggravated skin irritation. No other known applicable information.

### SECTION IV. FIRST AID MEASURES

#### EMERGENCY FIRST AID PROCEDURES:

- EYE: Immediately flush eyes with running water for at least 15 minutes. If irritation or adverse symptoms develop, seek medical attention.

- SKIN: Minimal effect on contact, if irritation occurs wash skin with soap and water. If irritation or adverse symptoms continue, seek medical attention.
- INHALATION: Remove to fresh air.
- INGESTION: Do not take internally. Drink large quantities of milk or water. Do not induce vomiting. Seek medical attention if stomach upset occurs.

## SECTION V. FIRE AND EXPLOSION HAZARD DATA

**SealGreen –Brick and Stone Sealer** does not support combustion and is not considered a fire or explosive hazard. When involved in a fire, it may emit vapors containing the siloxane containing materials, carbon oxides and silicon dioxide. These materials should be considered irritants. In addition, the silicon dioxide dust has a PEL of 6 mg/m<sup>3</sup> and an ACGIH Total Dust of 10 mg/m<sup>3</sup>. It is possible that **SealGreen –Brick and Stone Sealer** can create SiO<sub>2</sub> dust levels greater than these PEL and ACGIH limits when decomposed in a fire or explosion. For these reasons, fire fighters should wear self-contained breathing apparatus and full protective clothing. Heated closed containers may burst due to steam pressure. Cool containers with water.

## SECTION VI. SPILL, LEAK & DISPOSAL PROCEDURES

Contain spills immediately with inert material to prevent waterway entry. Transfer liquids and solid diking materials to suitable containers for recovery or disposal.

## SECTION VII. HANDLING AND STORAGE

Handle in a well ventilated area. Maintain positive pressure in interior of occupied buildings during exterior application and close fresh air intakes in area of application. Avoid inhaling vapors and mists, and getting in eyes, on skin or on clothing. Wash hands and other contaminated areas thoroughly with soap and water after handling this product and before eating or smoking. Wash contaminated clothing and equipment thoroughly before reuse.

Normal warehouse storage in a closed container is adequate. Storage temperature should be above freezing and below 120°F. Drain equipment and flush with water to clean. Shelf life is 18 months in original sealed container.

## SECTION VIII. PERSONAL PROTECTION

Appropriate personal protective equipment necessary to prevent repeated or prolonged contact should be worn. Mechanical ventilation is recommended. Avoid breathing mist or vapors. Where high concentrations of mist occurs, a respirator with appropriate dust and mist removal capabilities is recommended. Eye protection, resistant clothing and resistant boots should be worn where spills or splashing can occur. Chemical splash goggles are recommended. A single prolonged skin exposure is not likely to result in skin irritation or absorption through the skin in harmful amounts. Wash contaminated clothing before reuse. Do not take internally. An eye wash station should be available.

## SECTION IX. - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Milk white
ODOR:	Slight odor
pH:	(Typical) 5
BOILING POINT, 760 mm Hg:	212°F, 100°C
VAPOR PRESSURE, at 20 deg. C:	17.5 mm Hg
LIQUID DENSITY:	1 g/cc
SOLUBILITY IN WATER, by wt.:	100 %
SPECIFIC GRAVITY (H <sub>2</sub> O = 1):	1
PERCENT VOLATILE BY VOLUME:	7.5%
PERCENT VOLATILE BY WEIGHT:	7.5%
VISCOSITY:	Similar to water
EVAPORATION RATE (Butyl Acetate = 1)	Similar to Water
PHYSICAL STATE:	Liquid

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## SECTION X. STABILITY AND REACTIVITY

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**SealGreen –Brick and Stone Sealer** reacts with silica in concrete and masonry in the presence of ultraviolet light and moisture forming bonds with the substrate in normal use. The organic content of the aqueous mixture will react with bases, acids and oxidizers producing heat, polymers and oxidation by-products. Vaporization of small quantities of water controls any heat released. Atomization, vaporization or combustion forms aerosols which can carry siloxane containing materials, carbon oxides and silicon dioxide into the atmosphere. Hazardous polymerization will not occur.

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## SECTION XI. TOXICOLOGICAL INFORMATION

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This product is known to be a mild eye and upper respiratory irritant. OSHA PEL and ACGIH TLV has not been established; however, the low vapor pressure of silane/siloxane containing materials in **SealGreen –Brick and Stone Sealer** should produce air concentrations below expected exposure limits. The LD50 has not been determined, but should be relatively high based upon typical silicone toxicity. Do not take internally, avoid breathing mist and minimize eye and skin contact.

HEALTH HAZARD CATEGORIES: None of the product's ingredients are found on any lists of hazardous, carcinogenic or banned chemical agents or materials generated by them.

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## SECTION XII. ECOLOGICAL INFORMATION

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There is little or no risk to surrounding vegetation during application, and overspray on non-targeted areas can be easily removed with soap and water.

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## SECTION XIII. DISPOSAL CONSIDERATIONS

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The material is non-hazardous. Small quantities may be cleaned with soap and water, then flushed to a sanitary or industrial sewer. Absorbent material containing small amounts of the material may be disposed in appropriate land fills. Disposal of large quantities should comply with applicable disposal permits.

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## SECTION XIV. TRANSPORT INFORMATION

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DOT SHIPPING NAME (49CFR 172.101):	Non Regulated
- DOT ID# (49CFR 172.101):	Non Regulated
- DOT HAZARD CLASS:	Non Flammable Liquid, NOS
- MARKING:	None Required
- LABEL:	None Required
- PLACARD:	None Required
- HAZARD (29 CFR 1910.1200):	Non-Flammable

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## SECTION XV. REGULATORY INFORMATION

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### FEDERAL

This product is non-hazardous under the OSHA Hazard Communication Standard (29 CFR 1910-1200). All components are on the Confidential or Non-Confidential TSCA Inventory List. The ingredients of this product are listed on the Toxic Substances Control Act (TSCA) inventory and do not have special toxic substances warning requirements.

None of the components in this product require notification of the National Response Center under the Comprehensive Environmental Response Compensation, and Liability Act of 1980 (CERCLA) per 40 CFR 302.4.

None of the components in this product require reporting under Superfund Amendment and Reauthorization Act of 1986 (SARA) Title III as emergency planning or release reporting per 40 CFR 355 (used for SARA 302, 304, 311 and 312). The components also do not require annual reporting as a toxic chemical under SARA Title III per 40 CFR 372 (for SARA 313). This product contains no chemicals subject to SARA Title III, Section -13, Part 372 reporting requirements.

### **STATE RIGHT-TO-KNOW**

Under California Proposition 65, this product contains no listed substances at levels which would require a warning as a product known to the to cause cancer, birth defects or other reproductive harm.

Under the Massachusetts Right-To-Know Law, this product contains no listed substances at levels that require reporting per the Substance List.

Under the Pennsylvania Right-To-Know Law, this product contains no listed substances at levels that require reporting per the Hazardous Substance List.

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## **SECTION XVI. OTHER INFORMATION**

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APPROVED BY: Floyd E. Farha, Ph.D.

DATE: 1/1/08

SUPERCEDES: 5/23/07

All terms and abbreviations have been defined in various government publications, or are standard chemical terms used by IUPAC.

The data and recommendations herein are based upon our research and the research of others, and are believed to be accurate. However, no warranty or guarantee of their accuracy is made; and the products are distributed without warranty, expressed or implied, including the limited warranties of merchantability of fitness for particular purpose.

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