GLAZE PLUS

TECHNICAL DATA SHEET

STONE SEAL S-2H

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DESCRIPTION

Stone Seal S-2H is the advanced economical, hardener and densifier for concrete & marble surfaces and a much more effective alternative to conventional sodium or potassium silicate hardeners. This patented lithium silicate treatment deeply penetrates and reacts with the concrete to produce insoluble calcium silicate hydrate within the concrete pores. Conventional hardeners deposit high concentrations of sodium or potassium salts, which contribute to surface ASR, resulting in deterioration of concrete. Surfaces treated with Stone Seal S-2H will resist damage from water, surface abrasion, eliminate dusting and simplifies maintenance. Stone Seal S-2H should be used where the specification calls for just a hardened floor with or without burnishing and no grinding or polishing is required. Typically this product would be used on new slabs either at the time of placement or after a wet cure, chemical cure or after 28 days of curing or construction. Stone Seal S-2H can also be use on a previously densified floor where sodium or potassium was used at one time and the surface is starting to dust or deteriorate.

DURABILITY

Stone Seal S-2H will outlast any other sodium or potassium densifiers. Stone Seal S-2H contains chemicals heavy in silica, which reacts with calcium hydroxide in concrete, densifies and hardens the micro pores in the top layer of the concrete (“wear zone”), creating a permanent impregnation of the concrete floor. Stone Seal S-2H is breathable and UV stable. Will not yellow, discolor, peel or flake.

ELIMINATES DUSTING

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GREATER ABRASION RESISTANCE

Concrete floors treated with Stone Seal S-2H will significantly improve abrasion, in comparison to conventional sodium or potassium hardeners.

REDUCES AND ELIMINATES ASR

(Alkali Silicate Reaction) due to high lithium content. High concentrations of sodium or potassium salts, which will contribute to surface crazing and surface ASR, are not present in Stone Seal S-2H. Lithium will not absorb water or contribute to floor sweating.

REDUCE TIRE MARKS

The rough, uneven texture of natural concrete causes tires to abrade, adding to their wear. A concrete floor treated with Stone Seal S-2H will make the entire surface smooth, preventing this abrasion and leaving minimum tire marks on the floor.

IMPROVES CONDITIONS OF OLD FLOORS

As concrete ages, surface stress, delaminating, curled cold joints, and other problems can arise. Stone Seal S-2H liquid hardeners/densifiers combined with our customized grinding and polishing technique can remove the top surface layer of the old concrete and strengthen the floor, increasing its impact and abrasion resistance.

LITTLE OR NO PRODUCTION "DOWN TIME"

Cures quickly. Floor can be put into service immediately after the application process is complete. Due to the cleanliness of the process and the lack of toxic or hazardous chemicals, floors can often be serviced while the plant is in full production.

COST EFFECTIVE

Stone Seal S-2H improves performance, appearance and light reflectance of new and old floors. It will reduce an energy bill. A treated floor will lower maintenance costs significantly through reduction in upkeep (no waxing), and reduced tire wear.

PLANET SAFE

Stone Seal S-2H is water-based, contains no solvents, non-toxic, no smell, non-mutagenic & carcinogenic (safe in food preparation areas), non-flammable, low odour, fast drying, easy to apply.

ADVANTAGES

- Compatible with all C^2 lithium hardeners, densifiers, sealers and cleaners. Do not use the spatula on the main adhesive that is used with the hardener.

- Helps Concrete Curing. For best results, use Stone Seal S-2H first for hardening and densification followed with a water-based, dissipating curing membrane. Stone Seal S-2H should not be substituted as a curing agent.
- Easy to Use. Reduces application time and costs of burnishing and diamond polishing operations. One step application. No white salty spots on concrete, No scrubbing and flushing required after application. No caustic wastewater.
- Ordinary cleaning can easily remove blemishes and tire marks.
- Lithium does not absorb water or contribute to floor sweating.
- An extremely hard marble-like shield and permanent impregnated surface can be achieved for the life of the concrete with one single application.
- May be applied to broom finished, steel troweled, power troweled or burnished concrete finishes before final cure.
- Much safer and easier to apply than conventional sodium or potassium silicate hardeners.
- Stone Seal S-2H products are patented formulations.
- Produces a fast surface gloss, which improves with traffic and maintenance.
- Slip resistance is not diminished with high gloss and hardness.

9- TECHNICAL PROPERTIES

Technical Data	
FORM	Clear water-liked liquid
SPECIFIC GRAVITY	1.05
ACTIVE CONTENT	6.0%
TOTAL SOLIDS	6.0%
pH	11.0
WT/GAL	8.6lbs
FLASH POINT	Non Flammable
FREEZE POINT	0
VOC CONTENT	<20g/L
SHELF LIFE	2 years in unopened, factory sealed container

LIMITATIONS

All information provided is accurate to the best of our knowledge and is to be used strictly as a guide. Handling conditions, installation and use are not in our control therefore we cannot guarantee the results.

- Will not repair damaged surfaces and cracks.
- Not recommended for use on plastic concrete, mortar, resin-based terrazzo mixes and painted or asphaltic and non-cementitious surfaces.

SURFACE PREPARATION

Please read: SAFETY INFORMATION on the label and SURFACE PREPARATION before use and application.

SURFACE

Application of Stone Seal S-2H may begin as soon as prepared surfaces are dry and free of ponded water. Do not apply to surfaces, which are frozen, dirty or have standing water. Acid-stained concrete must be thoroughly neutralized and rinsed prior to application of Stone Seal S-2H.

Protect people, vehicles, property, plants and all nearby surfaces not to be treated from contact with the product including contact resulting from wind drift or overspray. Use polyethylene or other proven protective material to mask off all surrounding areas. Surfaces must be clean, dry and absorbent. Confirm surface absorbency with a light water spray. Surfaces designated for treatment should wet uniformly. If the surface does not wet uniformly, use the appropriate surface preparation cleaner or mechanical process to remove remaining surface contaminants. Always prepare a test sample to ensure that the desired results are achieved on the specific substrate

EQUIPMENT

Use a low-pressure sprayer and soft-bristled push broom, squeegee or microfiber pad.

AIR AND SURFACE TEMPERATURE

Test Area

- Test a minimum 1.5m x 1.5m (5ft. x 5ft.) area on each type of masonry.
- Let the test panel dry 3 to 7 days before inspection.
- Keep test panels available for comparison throughout the project.

STORAGE AND HANDLING

Maintain temperature of 4-38°C (40-100°F), protect from extreme temperatures and keep from freezing. Do not double-stack pallets. Published shelf life assumes upright storage of factory-sealed container in a cool dry place. Do not alter or mix with other chemicals. Thaw and Mix well before using and always seal container after dispensing. Dispose of unused product and container in accordance with local regulations. Do not reuse container or remove labels. Keep this and other chemicals out of the reach of children.

PACKAGING

1L | 5L | 20L Containers

APPLICATION INSTRUCTION

DILUTION

Do not dilute, apply as packaged when applying to cured concrete or cured and ground/honed concrete. Apply mist-like coat when using on highly polished concrete (3,000 grit resin diamonds).

COVERAGE RATES

Freshly placed, Uncured, Steel Troweled concrete

- 12.5-20 m2/L
- 500-800 ft2/US gal

Cured, Steel Troweled Concrete

- 10-17.0 m2/L
- 400-700 ft2/US gal Cured, Ground/Honed Concrete
- 10-15 m2/L
- 400-600 ft2/US gal

PLEASE NOTE: Coverage rates are offered for estimating purposes only. Variations in concrete quality, porosity, job site conditions, temperature and relative humidity will affect coverage rates and drying times.

Typical Coverage Rates

Calculate Target Coverage Rate by testing a small section of the prepared surface using instructions found below.

Calculating Specific Target Coverage Rate

- Prepare the test section in accordance with “Surface Preparation”. Surfaces must be clean, dry and absorbent. Confirm surface absorbency with a light water spray – surfaces designated for treatment should wet uniformly
- Add 3.5L of Stone Seal S-2H to a clean, pump-up sprayer fitted with an adjustable spray tip. Lightly apply according to “Application Instructions” steps #1-7 for the appropriate floor type. Repeat as necessary to determine correct rate of application.
- Measure the test area to establish the Target Coverage Rate per liter.

Drying Time

30 min. to 1 hour depending on weather conditions and concrete porosity

Freshly Placed, Uncured Steel-Troweled Concrete

1. Saw cut control joints after final surface preparation.
2. Clean concrete of saw debris or any dirt or residue.
3. Using a low-pressure sprayer fitted with an adjustable spray tip, apply a single coat of Stone Seal S-2H at a rate that covers the surface but does not produce puddles. Treated surfaces should stay wet for 5-10 minutes following initial application. Uniformly spread the product in a thin layer using a microfiber pad. The microfiber pad should be pre-moistened with Stone

Seal S-2H prior to use. Treat porous areas that dry in less than 5-10 minutes with additional Stone Seal S-2H.

4. Using a squeegee, water rinse or automatic floor scrubber, collect and remove after 15 minutes all residues, which do not penetrate.
5. Failure to remove excess material may result in extended dry times and a dry powder residue resulting from liberal application of Stone Seal S-2H.
6. Let treated surfaces dry thoroughly, typically 30 min. to 1 hour. Remove any dried powder residue from the surface using a stiff broom, power sweeper or floor-scrubbing machine.
7. Immediately apply the specified curing compound or initiate the specified curing procedure.
8. Once dry, burnish to a high gloss finish using high-speed burnishing equipment fitted with Stone Seal S-2H burnishing pads. Additional coats may be applied and burnished depending upon concrete porosity and desired finish.

Cured, Steel Troweled Concrete

1. Remove all dirt, debris, or curing compounds. Allow clean surface to dry.
2. Confirm surface absorbency with a light water spray. Make sure that prepared surface is uniformly wet and in hot, dry weather, lightly pre-wet the concrete with fresh water. Allow any standing water to evaporate.
3. Follow steps 2 – 7 as described in “Freshly Placed, Uncured Steel-Troweled Concrete” for completion.

Cured and Ground/Honed Concrete

1. Grind or sand and level the concrete surface with an orbital floor machine, floor sander or diamond grinding machine equipped with a 50 to 200 grit sanding screen, diamond discs or diamond abrasive pad depending upon desired exposure and size of the aggregate. Vacuum dry grinding equipment is preferred. Wash off or vacuum all sanding dust and debris and allow floor to dry.
2. Follow steps 2 – 7 as described in “Freshly Placed & Uncured Concrete.

Cured and Polished Concrete

1. Follow steps listed above for Cured and Ground/Honed Concrete.
2. To achieve desired finish, use progressively finer diamond discs and continue grinding from 800 to 3000 grit.
3. Remove all dust and debris.
4. For immediate and enhanced shine, burnish or buff the dry concrete surface in both directions using a burnisher fitted with Stone Seal S-2H burnishing pads or an orbital floor machine equipped with a black, red or white pad. This is a dry buffing operation.

PLEASE NOTE: Stone Seal S-2H is compatible with wet or dry grinding and polishing operations. The above procedures for polished and highly polished concrete may be customized by an experienced contractor to complement his grinding or polishing operation.

CLEANUP

Clean tools and equipment with fresh water. Immediately wash with water over sprayed glass, aluminium, or other surfaces.

FINAL RESULTS

The concrete & marble surface is ready to use when dry. Smooth and hardened concrete & marble surfaces should demonstrate reduced water absorption, a satin sheen, and slight color enhancement upon drying. Maximum water resistance and hardness will develop over 7 days. Surface sheen will increase with time and maintenance.

MAINTENANCE

Use Stone Seal S-2H, our high quality, lithium-based solution for cleaning and maintaining the lithium treated surfaces. This proprietary product was developed to further enhance long-term performance of the finished concrete floor. Do not use acidic cleaners to maintain treated floors. Though Stone Seal S-2H will improve the stain resistance of concrete some acid concentrates and acidic foods may etch and leave a residual stain if left on the surface. Clean up all spills quickly to minimize any possible damage. All sealers, both penetrating and coatings will only slow down the staining process. Spills must be cleaned up in a timely manner. Daily removal of surface dust and debris with a microfiber pad or dry dust mop will help maintain the desired appearance. Regular maintenance cleaning will improve surface shine. To refresh gloss surface, dry buff periodically with high-speed burnisher and Stone Seal S-2H burnishing pads. For improved resistance to water or oily stains, apply Stone Seal S-2H according to label instructions. Apply Stone Seal S-2H directly to the hardened concrete & marble surface.

FIRST AID

Ingestion: Drink large quantities of water or milk. DO NOT induce vomiting. Seek medical attention immediately.
Eye Contact: Remove contact lenses. Immediately flush eyes for 15 minutes in clear running water while holding eyelids open. Seek medical attention immediately.
Skin Contact: Wash contacted area with soap and water. DO NOT attempt to neutralize with chemical agents. If irritation persists, seek medical attention.
Inhalation: Remove affected person to fresh air. Wash mouth and nasal passages with water repeatedly. If breathing difficulties persist, seek medical attention.

WARRANTY

The information and recommendations made are based on our own research and the research of others, and are believed to be accurate. However, no guarantee of their accuracy is made because we cannot cover every possible application of our products, and anticipate every variation encountered in masonry surfaces, job conditions and methods used. The purchasers shall make their own tests to determine the suitability of such products for a particular purpose.

TECHNICAL SUPPORT

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