



PRODUCT DATA SHEET

SCOFIELD® Formula One SG

A CONCENTRATED SODIUM SILICATE DENSIFIER FOR IMPROVING CONCRETE SURFACE HARDNESS, RESISTANCE TO DIRT PICK-UP, AND EASE OF POLISHING.

PRODUCT DESCRIPTION

SCOFIELD® Formula One SG is a concentrated VOC free concrete densifier formulated to economically harden, densify, and increase the abrasion resistance of cementitious surfaces. Based on concentrated sodium silicate, it is diluted with water so it can deeply penetrate into concrete pores. It then reacts with cement, pozzolans, and most aggregates to fill microvoids and allow concrete to polish faster while allowing these surfaces to release moisture vapor. It is not a coating, and will not crack, peel, or delaminate from surfaces.

USES

SCOFIELD® Formula One SG may only be used by experienced professionals.

Use as an effective concrete polishing aid, or to harden, densify, or dustproof the cementitious surfaces of:

- Interior or exterior floors
- Stairs and walkways
- Ground and polished floors
- Below grade basements

CHARACTERISTICS / ADVANTAGES

- Low odor, non-yellowing water based formulation.
- Breathable non-film forming surface treatment.
- Bonds directly to cement and aggregate silicates.
- Hardens and improves stain and scratch resistance.
- Deeply penetrates, and quickly reacts.
- Shortens concrete polishing times.
- UV light stable and weather resistant.
- Cures to a non-toxic, non-flammable surface.
- Apply by brush, roller, spray or mop.
- Accepts most water repellent surface treatments.

APPROVALS / STANDARDS

SCOFIELD® Formula One SG can be used as part of a low VOC concrete polishing system to earn LEED® credits for Indoor Environmental Quality, EQ Credit 4.2: Low-Emitting Materials: Paints & Coatings.

SCOFIELD® Formula One SG can be used with Scofield® Formula One™ Guard-W to make floors that exceed Underwriters Laboratories UL 6L90 requirements for slip resistance.

PRODUCT INFORMATION

Chemical Base	Sodium Silicate, 24% solids
Packaging	5-gallon (18.9 L) pails and 55-gallon (208 L) drums.
Appearance / Color	Clear to slightly cloudy liquid.
Shelf Life	1 year from the date of manufacture. 1 month after opening.
Storage Conditions	Store in original containers at 40°F to 120°F (4°C - 49°C). DO NOT FREEZE!

APPLICATION INSTRUCTIONS

If using spray equipment, always wear protective respirator. Mask adjacent areas to protect property from splashes and overspray. Dried material will be difficult to remove. Remove overspray immediately with soap and water.

SCOFIELD® Formula One SG should always be diluted a minimum of 1:1 by volume with water, and dilutions of 1 part concentrate into 3 parts of water is adequate for most jobs. Dilution rate, surface age, hardness, porosity, substrate moisture content, and purpose will determine the optimum combination of dilution and coverage rate. First time applicators are encouraged to use the product diluted 1:3 with water.

Although successful application can be performed with topical applications, the use of brooms, sponges, or mops to work material into substrate pores have proven to produce superior results. Applicators are encouraged to have consistent application rates and change dilution rates to achieve desired results.

For all uses and applications, apply until surfaces are saturated. Spread or scrub puddles of excess material into surfaces before it is allowed to dry. **Remove and rinse away any obvious excess surface material while it is still wet. Material allowed to dry on surfaces will likely form unsightly salts that are difficult to remove.**

SCOFIELD® Formula One SG can be applied to freshly placed concrete as soon as broom or other surface patterns will not be disturbed by the application. Achieving uniform penetration on this young a surface is difficult, and concrete is suggested to be at least 7 days old so that initial concrete cure is complete and product absorption is consistent across surfaces. A 28 day cure so that the slab is fully dry and has consistent absorbance is preferred.

Coverage

Coverage will depend upon dilution rate, method of application, surface porosity, age, moisture, absorption characteristics and the texture of the concrete. Coverage on flat finished concrete with a dilution rate of 1 gallon of concentrate mixed into 3 gallons of water is typically 200–400 ft²/gal (4.9–9.8 m²/L). Old or soft concrete will require more material or less dilution. Slabs ground to expose hard non absorptive aggregates will take less material.

Dilution Rates

Suggested dilution rates are given by volume.

Partially eroded, aged, or coarsely ground concrete to be polished: 1 part concentrate into 1 part water.

Soft, aged, or lightly ground concrete to be polished: 1 part concentrate into 2 parts water.

Hard, steel troweled, new concrete: 1 part concentrate into 3 parts water.

EQUIPMENT

Apply SCOFIELD® Formula One SG by brush, roller, sponge, mop, or pump-spray application. Use rotary floor scrubbers equipped with brushes or pads to assist with large jobs. Always wear protective clothing and equipment proper for the method of application. Use of a wet vacuum equipped with a squeegee-type attachment to remove excess material and rinse water is recommended. All equipment should be washed with soap and water after use.

Spray applicator Guidelines:

Pump Garden Sprayer: Use conical tip and apply with circular motion.

SUBSTRATE PREPARATION

Surfaces must be clean of all prior sealers, curing compounds, oils, or other foreign materials that might prevent penetration. If used as a first stage densifier when polishing concrete, grind to the desired aggregate exposure ending with 80 to 200 grit tools. Use brooms or vacuums to remove all grinding dusts, loose concrete laitance, and powders, or the densifier may permanently adhere them to the surface.

Mixing: Dilution should be performed in non-metallic plastic containers. Mix until uniform prior to beginning the application.

Jobsite Test Sections

Verify and approve suitability and appearance by making jobsite test sections prior to general application. Each individual concrete color, finishing technique, densifier, and sealer combination should be verified. Test sections must be of adequate size to be representative and be produced by the same workers who will apply product to the larger job. Test completed systems for wet and dry slip resistance to ensure they are safe. Do not proceed with products, techniques, or finishing systems that do not meet required safety specifications or site owner approval.

Application

Mask all areas not to be coated to safeguard against splashes, overspray, and runoff from application. Wear all required safety equipment. Take care not to allow tape adhesive to interfere with surfaces to be treated. Surfaces wet with material will be slippery until dry.

Distribute product with a pump garden sprayer to fully saturate the surface. Surfaces should remain wet 5 to 10 minutes. Work material into the surface with a broom, mop, or sponge to ensure product penetrates into substrate pores and microcracks. Take care not to create lap marks as they cannot be removed once the product has dried. If too much material has been applied, and it is puddled or visible after 30 minutes, rinse with water and remove this with a wet vacuum before frosts can form.

When the first application is dry to touch, a second coat can be applied to maximize densification properties. If used as a polishing aid, wet polishing can begin when dry to touch.

Dry times will depend upon the selected coverage rate, penetration into the substrate, and weather conditions. At 70°F (21°C) and 50 % relative humidity with an application rate of 400 sq. ft. per gallon (9.8 m²/L), surfaces should be dry and walkable and ready for the next stage of polishing or rinsing in 1 hour.

If surfaces will not be polished, or they will be sealed with a coating, wash surfaces at this stage with fresh water to remove excess densifier. When completely dry, surfaces can be returned to service or receive stain repellent surface treatments like SCOFIELD® Repello® FPS or SCOFIELD® Formula One™ Finish Coat. If sealing, wait 24 hours to allow the densifier to cure.

Cleaning of Equipment

Clean equipment with warm water and detergent immediately after application.

AVAILABILITY/WARRANTY

Availability

SCOFIELD® Formula One SG is marketed nationwide and internationally, directly to the user through strategically located warehouses, dealers, and representatives. Contact Scofield for its nearest representative.

Scofield offers a complete line of engineered systems for coloring, texturing, and improving performance in architectural concrete. Scofield Systems address specialized requirements for interior, exterior and vertical uses with compatible systems of complementary products including coloring admixtures, color hardeners, colored cementitious toppings, stains, curing compounds, sealers, coatings, repair products and texturing tools. Visit the Scofield website at www.scofield.com for further information.

LIMITATIONS

SCOFIELD® Formula One SG is not a membrane forming curing compound and does not conform to ASTM C 309 requirements. It is not designed to provide water or oil resistance to the concrete surface without further treatment.

Do not use in combination with LITHOCHROME® Chemstain® Classic or white surfaces will likely result.

Concrete that has carbonated at the surface may not react properly with this product. If surface carbonation is present it should be removed mechanically. Acid etching is not advised.

BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

LOCAL RESTRICTIONS

See Legal Disclaimer.

ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

VOC = 0 g/l

LEGAL DISCLAIMER

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