

SurfEtch™ Top Surface Retarder

Technical Data Sheet S05TSR-01

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MasterFormat™ Guide Specifications, and Butterfield Color® Architectural Details and Specifications are available for the specifier/designer. All information is available for download online at www.butterfieldcolor.com or at 800-282-3388.

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1. Product Description: SurfEtch™ Top Surface Retarder is a water-based, bio-degradable, low odor top surface retarder. Applied to the surface of fresh concrete, SurfEtch™ Top Surface Retarder chemically delays the set of the surface mortar while allowing the underlying concrete to harden normally. This allows time for washing the surface, producing exposed aggregate flatwork, with subtle and varying reveals of texture and color.

2. Uses: Apply SurfEtch™ Top Surface Retarder on gray concrete or concrete colored with Uni-Mix® Integral Concrete Colorant. Use on poured-in-place flatwork: curbs, sidewalks, driveways, patios, pool decks, tilt-up and precast panels, and most horizontal concrete installations.

3. Characteristics / Advantages:

- Fully cured surface is attractive and slip resistant
- VOC compliant (<10 g/L)
- Solvent free
- SurfEtch™ Top Surface Retarder is safer and cleaner to use compared to acid etching or mechanical blasting
- SurfEtch™ Top Surface Retarder is available in multiple textures and colors

4. Packaging: SurfEtch™ Top Surface Retarder is available in 5 gal. (19 L) pails.

5. Appearance / Color:

- SurfEtch™ 03 Top Surface Retarder - Medium Sand Texture, white
- SurfEtch™ 05 Top Surface Retarder - Coarse Sand Texture, light blue
- SurfEtch™ 15 Top Surface Retarder - 1/8" to 1/4" Aggregate Exposure, green

6. Shelf Life: Shelf life in original, unopened containers is 2 years from the date of purchase.

7. Storage Conditions: Pails should be stored in a cool, dry place when not in use. Do not allow material to freeze. Do not reuse the empty container.

8. Installation: Proceed with application after approval of the test area. Utilize the

same concrete mix design throughout the installation. Finish the concrete uniformly level. High or low areas may retain or reject the material, possibly creating inconsistencies in the exposed finish. Concrete with a float or broom finish allows SurfEtch™ Top Surface Retarder to better penetrate the surface compared to hard-troweled concrete. Float open surfaces treated with an evaporation retarder or finishing aid before applying SurfEtch™ Top Surface Retarder. Do not apply the material until bleed water has dissipated. Do not apply curing and sealing compounds before applying SurfEtch™ Top Surface Retarder.

8.1. Existing Concrete: The cement residue produced when removing SurfEtch™ Top Surface Retarder will bond to hardened concrete. Protect existing concrete by covering it with plastic sheeting or by spraying it with SurfEtch™ Top Surface Retarder. Allow SurfEtch™ Top Surface Retarder to dry completely before proceeding with the new concrete installation. The dried film of SurfEtch™ Top Surface Retarder will prevent the etched residue from penetrating or bonding to the concrete. Protect all adjacent surfaces from discoloration or damage from the chemical etching process.

9. Coverage: SurfEtch™ Top Surface Retarder will cover approximately 175-300 sq. ft./gal. (4.3-7.4 m²/L). Apply at full strength. Do not dilute. Coverage will vary with surface texture and application method.

10. Equipment: Apply SurfEtch™ Top Surface Retarder with a pump-up sprayer, brush, or roller. Spraying is the most effective and consistent method of application. Use clean equipment free from water or solvent residues. Clean application tools with clean water immediately after use.

11. Application: Facilitate mixing by storing the material at moderate temperatures before use. Mix the material with a powered drill, do not hand mix. Mix at low speeds until the material is a uniform color. Mixing time for a 5 gal. pail is 3-5 minutes. Apply an even coating of SurfEtch™ Top Surface Retarder to the concrete's surface. When spraying, utilize the lowest pressure possible to create a fan pattern.

Apply the material evenly, to achieve a masking, consistent color over the concrete. If an insufficient amount of top surface retarder is applied, premature drying may occur, which could affect the exposure results. Heat, wind, and low humidity may also contribute to excessive drying. Cover the concrete surface completely with SurfEtch™ Top Surface Retarder. For consistent exposure results, spray all concrete surfaces at the same time after completing concrete finishing.

12. Dwell Time: Do not work the surface with a float or trowel after applying SurfEtch™ Top Surface Retarder. The material will dry in 1-2 hours, after which time it is resistant to light rain. Prior to drying, protect SurfEtch™ Top Surface Retarder from rain by temporarily covering it with plastic and then removing as soon as the weather allows. Divert downspouts or other sources of substantial water exposure from flowing directly on the concrete after applying SurfEtch™ Top Surface Retarder. Do not apply curing compounds over the surface retarder.

13. Removal and Exposure: Expose the aggregate by washing it within 6-24 hours after application, depending upon the temperature and humidity, and as determined by the approved mock-up panel. Use a garden hose and a new, clean broom or pressure washer to work the surface. Work a small area. If the depth of reveal is too deep, stop washing and allow the concrete to cure and harden further. Some concrete mix designs installed during elevated temperatures may require exposure to start sooner than 12 hours. Cold temperatures delay exposure. Achieve uniform exposure by washing the surface at the same time after the initial application of SurfEtch™ Top Surface Retarder to the concrete.

14. Curing and Sealing: Allow the concrete to dry (no visible moisture or dampness) for 12-24 hours before applying a liquid curing compound. Use Clear Guard® Cure and Seal for exterior applications or interiors when a strong odor is not a concern. Clear Guard® H₂O Cure and Seal is a water-based system useful for interior and exterior applications. Multiple light coats are necessary over the roughened

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etched surface. Do not allow the material to puddle on the surface or in the joints. To protect the exposed aggregate finish, reseal the concrete with the same product originally used to cure.

15. Quality Control: Create a job site sample at least 21 days before installation for approval. Utilize all materials, tools, and techniques from the actual job in the job site sample. When curing and sealing the surface, verify adequate wet and dry slip resistance of the sealed surface. Verify maintenance requirements.

16. Limitations: Apply SurfEtch™ Top Surface Retarder between 55°F to 90°F (13°C to 32°C). Most concrete mix designs stop curing below 50°F. Do not allow the material to freeze during storage or after applied to the concrete. At higher temperatures, low humidity, or windy conditions, the material may prematurely dry and lose its effectiveness unless it is reapplied. Do not apply to concrete that contains cold weather accelerators or hot weather retarders without prior testing. Do not apply to frozen surfaces, nor allow the material to freeze, before washing to expose the aggregate. Do not use as a finishing aid. The depth of etch will vary with different mix designs, method and timing of finishing, application consistency, temperature and removal method. Hard-troweled surfaces will reduce the effectiveness of SurfEtch™ Top Surface Retarder. Do not apply to vertical concrete or to form work.

Do not apply to shake-on color hardeners, particularly if the surface has a hard-troweled finish, without prior testing and approval. The very dense surfaces typically produced by shake-on color hardener may inhibit the depth of etch compared to a plain concrete surface finished in the same manner.

17. 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.

KEEP CONTAINER TIGHTLY CLOSED. KEEP OUT OF REACH OF CHILDREN. NOT FOR INTERNAL CONSUMPTION. FOR PROFESSIONAL USE ONLY.

For further information and advice regarding transportation, handling, storage and disposal of chemical products, users should refer to the actual Safety Data Sheets containing physical, ecological, toxicological and other safety related data. Read the current actual Safety Data Sheet before using the product. In case of emergency, in U.S. call CHEMTREC at 1-800-424-9300, International 703-741-5970, in Canada call CANUTEC (collect) 613-996-6666.

Prior to use of any Butterfield Color, Inc. product, the user must always read and follow the warnings and instructions on the product's most current Technical Data Sheet, product label and Safety Data

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