

EMERCHROME® SC Color Hardener

A heavy duty, ready to use colored dry shake for freshly placed hardscapes.



BUILDING TRUST



TECH-DATA BULLETIN TD-1130.01 Rev. 3.16.2017

L. M. Scofield Company - A SIKA COMPANY

1. Product Description:

EMERCHROME® SC Color Hardener is an extremely abrasion resistant dry shake color hardener comprised of specialty aggregates that produce dense, hard surfaces ideal for areas of frequent pedestrian or vehicular traffic such as building entrances, walkways, ramps, stairs, docks, depots, parking structures, food courts, and business drive through lanes.

It is available in a wide range of high opacity colors, and is designed for installation at the time concrete is placed.

Decorative effects can be created by lightly sandblasting fully cured applications, or by using a fine etch surface retarder on plastic concrete to reveal natural emery or silicon carbide fine aggregate that sparkle as pedestrians walk across the surface.

2. Colors:

EMERCHROME SC Color Hardener is available in a variety of colors depicted on Scofield's LITHOCHROME® Color Hardener A-132 Color Selection Chart. All coloring materials used are stable in ultraviolet light, fade resistant, and conform to light fast standards set forth in ASTM C 979 Pigments for Integrally Colored Concrete.

3. Artistic Effects:

May be used to cover entire slabs or selectively applied to uncolored or integrally colored concrete to provide decorative accents, or to develop areas of high visual contrast desired for safety areas, curb edges, cross walks, and parking spaces.

Light chemical etching, surface retarding, or light sand blasting can effectively expose aggregates to maximize slip resistance, or to create sparkling surfaces.

At the time of installation, surfaces can be stamped or embossed using LITHOCHROME® Antiquing Release and LITHOTEX® Pavecrafters tools to simulate brick, wood, stone, or other patterns.

4. Coverage:

Use EMERCHROME SC Color Hardener at a minimum coverage rate of 90 pounds (1 ½ bags) per 100 square feet (6.75 kg/m²) for residential patios and walkways.

When using light colors or installing on commercial areas of heavy foot traffic, where sport cleats are expected, or where hard wheel carts frequent, applications of 90 to 120 pounds per 100 square feet (6.75 to 9 kg/m²) is needed. Use at 120 Pounds per 100 square feet (9 kg/m²) if vehicular traffic is expected.

5. Limitations:

Color variations can occur from low dose applications or inconsistent application and curing techniques. EMERCHROME SC Color Hardener is not a patching or repair mortar. It is not designed as a trench patch, hole, crack, or core filler. It must be used as directed during fresh concrete placement.

Timing of when it should be applied to freshly placed concrete will vary with concrete mix design, water content, air content, concrete plastic properties, and weather conditions. Accurate timing and application technique must be correctly followed to avoid premature delamination or poor freeze thaw performance. In hot weather, concrete curing compounds must be used after installation to avoid premature drying and

the formation of surface "mud-cracks" that reduce service life. Do not use with chloride containing concrete accelerators. Use with concrete mix designs that are "dry" or made with large amounts of super plasticizer or fly ash is not advised.

Textures and Slip Resistance: Although EMERCHROME SC Color Hardener can be installed to develop coefficient of friction values as high as 0.90; always evaluate fully installed flooring systems for adequate wet and dry slip resistance and SCOF (Static Coefficient of Friction) as described in Section 6. *Jobsite Test Sections.*

6. Jobsite Test Sections:

Producing color hardened concrete flatwork requires skill and practice. Timing of concrete placement, float and finish technique, hardener application, trowel and texturing technique, along with experience in the use of all tools on the job can influence project outcome. To ensure safe and desired results, Representative Jobsite Test Section(s) must be tested and approved prior to large installations.

Test Sections should be close in size and proximity to the areas teams will install on larger projects. A specific section should be made for each combination of concrete mix design, slab thickness, placement technique, hardener dosage, surface profile or texture, color, and curing compound/sealer that will be created. Sections should be made from the same materials, workers, and tools that will be used on future installations.

When completed, present sections to project owners to verify system suitability, and contractor capability. Always ensure that placement and finishing techniques develop color, visual appearance, and all safety and performance criteria. Do not proceed with systems that do not meet owner approval.

7. Packaging:

EMERCHROME SC Color Hardener is available in 60-pound (27 kg) bags.

8. Storage and Shelf Life:

Kept dry and moisture free this product has a shelf life of 1 year from the date of manufacture.

9. Application:

Application is best over a concrete mix with a minimum cement content of 517 pounds per cubic yard or 300 kg/m³. The mix itself must have adequate water to bleed to the surface during placement, yet be completely reabsorbed when the concrete reaches an initial set and curing point where a thumbprint can still indent the surface, but application of the hardener will not alter flatness.

Application technique will vary with climate and site specifics. However the following 6 steps have proven successful in a wide range of conditions.

Step 1. Initial Placement: Spread, shovel, rod, vibrate as needed the initial concrete placement to eliminate voids within forms and properly consolidate the concrete. Complete surface smoothing with a wood float to ensure the surface does not close, trap bleed water below the surface, and begin surface delamination.

Step 2. Pause for Initial Set: Allow concrete to initially set. When all visible bleed water has reabsorbed into the concrete and the slab flatness will not be affected by hardener application, begin hardener broadcast and application.



Step 3. Broadcast of Hardener: Using a technique that keeps product below the knee to minimize dusting, waste, and loss of fine materials, hand or machine broadcast ½ of the desired dose of hardener across the surface of the concrete. Use an underhand or side arm motion taking care to ensure even distribution. Always keep a small amount of material in reserve for touch-up application of missed spots, or unintentionally disrupted areas. Float the hardener into the concrete surface as described in *Step 4*, then broadcast the remaining material from a different direction than the first to eliminate bare spots. Heavy doses may require three broadcast and float cycles.

Step 4. Float and Bond to the Concrete Surface: Hand or power tool float the hardener into the concrete surface between broadcast actions. All water necessary to wet the hardener must come from the underlying concrete. Do not add additional water to wet material. Floating must be thorough and complete so that all hardener is wet-out, and completely worked into and bonded with the partially set concrete.

Step 5. Final Finishing: Complete final finishing with hand or machine trowels. Apply decorative textures with brooms, embossing skins, or stamp tools that yield the desired finish imprint or texture. Blemishes and tool marks left behind will become permanent. Do not wet tools or color alteration will likely result. Avoid overuse of hard steel tools that may burnish the surface and alter color.

Step 6. Evaporation Retarder or Curing Compound Application: Always apply a coat of evaporation retarder or curing compound such as SikaFilm®, Scofield® Colorwax™, or Scofield® Cureseal-W™, to avoid unsightly spider or mud-cracking from premature surface dry and shrinkage. Optimal product selection will depend upon weather conditions, final service environment, and planned maintenance procedures. Contact your Scofield representative for optimal product selection.

■ 10. Maintenance:

Optimal product selection will depend upon weather conditions, final service environment, and planned maintenance procedures. Contact your Scofield representative for optimal product selection.

■ 11. Cautions:

First Aid: Eyes—DO NOT RUB EYES. Immediately flush thoroughly with large amounts of water. **Skin**—Wash thoroughly with soap and water. Remove soiled clothing and wash before reuse. **Inhalation**—If inhaled, or if difficulty in breathing is experienced, move to fresh air. If symptoms persist or develop, or if ingested, get medical attention.

Wash thoroughly immediately after handling. Store in a cool, dry, well-ventilated area in unopened original packaging

or in tightly closed, labeled containers. Avoid generating dust during recovery or disposal. Disposal of all residual or recovered product must be in accordance with applicable federal, state, and local regulations. Before using or handling, read the *Safety Data Sheet and Warranty*.

WARNING!

HARMFUL IF INHALED. IRRITATING TO EYES AND SKIN. MAY CAUSE DELAYED LUNG INJURY (SILICOSIS). DO NOT TAKE INTERNALLY. KEEP OUT OF THE REACH OF CHILDREN. CONTAINS CEMENT AND SILICA (QUARTZ). Cancer hazard. Contains Silica (Quartz) which can cause cancer. (Risk of cancer depends on duration and level of exposure.) Use only with adequate ventilation. Do not breathe dust. Wet cement may cause alkali burns. Avoid contact with eyes, skin, and clothing. Wear dust (particulate) respirator (NIOSH TC-84A approved), safety goggles, and gloves. Follow respirator manufacturer's directions for respirator use.

■ 12. Availability

EMERCHROME SC Color Hardener is marketed internationally through strategically located dealers, and representatives. Scofield offers a complete line of engineered systems for coloring, texturing, and improving performance of architectural concrete. These include 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

■ 13. Warranty Summary:

L. M. Scofield Company (Scofield) represents and warrants only that its products are of consistent quality and within manufacturing tolerances. NO OTHER ORAL OR WRITTEN REPRESENTATION OR STATEMENT OF ANY KIND, EXPRESSED OR IMPLIED, NOW OR HEREAFTER MADE IS AUTHORIZED OR WARRANTED BY SCOFIELD, INCLUDING THOSE OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Liability for breach of contract, negligence, or on any other legal basis is limited to the lesser of refund or replacement of defective materials. SCOFIELD WILL NOT BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING FOR DELAYS OR LOST PROFITS. Communication of this warranty and its limitations to end users is not the responsibility of Scofield, but should be communicated by those in direct contract with the end user. Any claim regarding product defect must be received in writing within one year from the date of manufacture. No claim will be considered without such written notice or after the specified time interval. The end user shall determine the suitability of the products for the intended use, and assumes all risks and liability in connection therewith.

Suggested Short Form Specification for Hardened Concrete:

All concrete flatwork and adjacent vertical surfaces designated in the plans or specifications as having a hardened surface shall be hardened with EMERCHROME® SC Color Hardener in accordance with Scofield's Tech-Data Bulletin TD-1130, using color and a minimum coverage rate of 90 pounds per 100 square feet. All hardened concrete shall be exposed by light sandblast or surface retarder. All products shall be manufactured by L. M. Scofield Company, (800) 800 9900, Los Angeles, CA, (323) 720 3000 and Atlanta, GA, (770) 920 6000.



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SCOFIELD PRODUCTS ARE INTENDED FOR PROFESSIONAL USE ONLY

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