



## PRODUCT DATA SHEET

# EMERCHROME® SC Color Hardener

A COLORED DRY SHAKE CONCRETE SURFACE HARDENER WITH EMERY OR SILICON CARBIDE ADDED TO INCREASE ABRASION RESISTANCE AND ALLOW FOR ADDITIONAL DECORATIVE EFFECTS.

### PRODUCT DESCRIPTION

EMERCHROME® SC Color Hardener is an extremely abrasion resistant dry shake color hardener that contains emery and silicon carbide to provide additional wear resistance and sparkling decorative effects. It is ideal for areas of high volume pedestrian or vehicular traffic. It is available in a wide range of colors, and must be installed at the time concrete is placed.

Decorative effects can be created by lightly sandblasting fully cured applications, or by using LITHOCAST™ Surface Retarder 03 fine etch surface retarder at the time of installation. This will maximize slip resistance and reveal natural emery or silicon carbide aggregates that sparkle as pedestrians walk across the surface.

### USES

EMERCHROME® SC Color Hardener may only be used by experienced professionals.

Use to permanently color, harden, and improve the abrasion resistance of pedestrian ramps, walkways, building entrances, foyers, stairs, loading docks, parking structures, food courts, drive-thru lanes, and crosswalks. Ideal for creating high color contrasted stairs, ramps, crossings, and parking zones, that meet new requirements for the visually impaired.

### PRODUCT INFORMATION

<b>Chemical Base</b>	Gray or white cement, hard natural aggregates, emery, silicon carbide, and synthetic mixed metal oxide pigments.
<b>Packaging</b>	Fully colored ready to apply in 60-pound (27 kg) bags.

### CHARACTERISTICS / ADVANTAGES

EMERCHROME® SC Color Hardener creates a permanent colored surface that is harder and more abrasion resistant than ordinary concrete. The color is weather resistant, UV Stable, lightfast, and alkali resistant. It contains no materials that initiate, accelerate, or promote the corrosion of steel, coated metal, plastic, or rubber concrete reinforcements. EMERCHROME® SC Color Hardener will not migrate from standing water, and can safely color concrete fountains, pools, water features, or concrete that will be polished and encounter damp or wet environments.

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

### APPROVALS / STANDARDS

All pigments used conform to the requirements of *ASTM C 979 Pigments for Integrally Colored Concrete*.

**Appearance / Color**

EMERCHROME® SC Color Hardener is available in the colors shown on Scofield's LITHOCHROME® Color Hardener A-132 Color Selection Chart.

**Shelf Life**

1 year from the date of manufacture.

**Storage Conditions**

Keep dry and moisture free.

**APPLICATION INSTRUCTIONS****Coverage Rates**

Coverage will depend upon service environment and color selection. Thicker applications prevent concrete color beneath the application from influencing color during installation. Heavier application increases final resistance to abrasion, impact, and raveling.

Residential patios, walkways, and pools	90–100 lbs./ft <sup>2</sup> (44.0 – 49.0 kg/10 m <sup>2</sup> )
Commercial applications with hard wheel traffic, athletic cleats, light vehicles	100–120 lbs./ft <sup>2</sup> (49.0 – 58.6 kg/10 m <sup>2</sup> )
Industrial or vehicular traffic areas	120 lbs./ft <sup>2</sup> (58.6 kg/10 m <sup>2</sup> )

**Placement and Installation**

Installation of this product must take place at the same time plastic concrete is poured and placed. Weather conditions, concrete mix composition, plastic properties, slab thickness, and slab bedding can influence the timing and success of the installation. More successful placements are over concrete mixes with a minimum cement content of 517 pounds per cubic yard or 300 kg/m<sup>3</sup>. The mix itself must have enough water to bleed to the surface when placed. This water must be completely absorbed when the concrete reaches its initial set. Apply product when a thumbprint can still indent the surface, and kneeboards and application of the hardener will not alter flatness.

Do not apply while bleed water is still rising or a layer of water may become trapped beneath the surface. Such mistakes can cause surface delamination from the main slab, and result in early failure from impact or freeze/thaw spalling.

**The following 6 steps have proven successful in a wide range of conditions.**

**1. Initial Placement:** Spread, shovel, rod, and vibrate the initial concrete placement to eliminate voids and properly consolidate the concrete. Complete surface smoothing with a wood float to ensure the surface does not close and trap water below the surface.

**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.

**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. 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.

**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.

**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. Do not wet tools or color alteration will result. Avoid overuse of hard steel tools that may burnish the surface and alter color.

**6. Evaporation Retarder or Curing Compound**

**Application:** Apply a coat of evaporation retarder or curing compound such as SikaFilm®, Scofield® Colorwax™, or Scofield® Cureseal-WTM, 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.

**Jobsite Test Sections**

Prior to large scale production, the concrete or cementitious mix design for each color to be produced must be made. Conduct small scale testing to demonstrate concrete from the mix design meets all slump, flow, air content, compressive strength, and any other required concrete specifications.

Prior to general jobsite use, representative Jobsite Test Section(s) or “Mock-Ups” must be produced and approved for each individual concrete color mix design, surface finish/texture, and for each curing compound/sealer combination that will be created.

Use Jobsite Test Sections to verify entire system suitability including frame/mold and foundation preparation methods, surface concrete specification

compliance, finishing techniques, safety procedures, and achieved performance of the fresh and fully cured concrete. When applicable, test completed systems for wet and dry slip resistance. Evaluate polishing or coating application techniques, final color, and visual appearance. Do not proceed with products, techniques, or finishing systems that do not meet required specifications or meet with site owner approval.

Selected Jobsite Test Sections should be in close proximity to the larger job area, and made from the same concrete mix design that will be used on the larger project. Test sections should be sized to be representative of the finished project, and be produced by the same workers who will perform the project installation.

## AVAILABILITY/WARRANTY

### 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](http://www.scofield.com) for further information.

## LIMITATIONS

Do not use with chloride containing concrete accelerators. Do not use with “dry” mixes or those made with large amounts of super plasticizer.

**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 Static Coefficient of Friction as described in Jobsite Test Sections.

## 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.

## OTHER 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=0g/l

## LEGAL DISCLAIMER

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

Prior to each use of any product of Sika Corporation, its subsidiaries or affiliates (“SIKA”), the user must always read and follow the warnings and instructions on the product’s most current product label, Product Data Sheet and Safety Data Sheet which are available at [usa.sika.com](http://usa.sika.com) or by calling SIKA’s Technical Service Department at 1-800-933-7452. Nothing contained in any SIKA literature or materials relieves the user of the obligation to read and follow the warnings and instructions for each SIKA product as set forth in the current product label, Product Data Sheet and Safety Data Sheet prior to use of the SIKA product.

SIKA warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within the product’s shelf life. User determines suitability of product for intended use and assumes all risks. User’s and/or buyer’s sole remedy shall be limited to the purchase price or replacement of this product exclusive of any labor costs. **NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKA SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.**

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