



## PRODUCT DATA SHEET

# LITHOCHROME Chemstain Classic

A CHEMICALLY REACTIVE STAIN THAT ETCHES AND PERMANENTLY COLORS CEMENTITIOUS SURFACES WITH COLOR EFFECTS THAT ARE VARIEGATED AND NATURAL LOOKING.

### PRODUCT DESCRIPTION

LITHOCHROME Chemstain Classic is a chemically reactive stain that etches and permanently colors cementitious surfaces with color effects that are variegated, mottled, and natural looking. Application requires a complex multistep process and should only be attempted by experienced contractors and artisans. LITHOCHROME Chemstain Classic can be left uncoated to simulate natural stone, or sealed with a polymeric topcoat to develop dramatic increases in color depth and intensity.

### USES

Use to create permanent and uneven decorative artistic effects on interior or exterior cementitious hardscapes including floors, walls, stairs, ramps, pools, ponds, precast structural pieces, rock simulations, statues, or other concrete objects.

Different stain and sealer combinations will develop very different visual effects. Low solids water based sealers can be used to create concrete rock features that lose their commonplace appearance and assume a rich, natural beauty. High solids water based or solvent based acrylic, epoxy, or polyurethanes can be used to develop dramatic jewel tones made to look like polished marble, leather, metal, wet sand deposits, or richly stained wood. Examples of variations in final result can be found at [www.scofield.com](http://www.scofield.com).

### CHARACTERISTICS / ADVANTAGES

The longevity of chemically stained concrete is superior in color durability and abrasion resistance to that of concrete surfaces coated with acrylic paints or stains. They do not weather off quickly or delaminate. Their chemical reaction to the concrete allows pigments to become embedded as part of the surface. They will not fade, chip, crack, or peel.

### APPROVALS / STANDARDS

LITHOCHROME Chemstain Classic complies with applicable air quality management regulations.

### PRODUCT INFORMATION

#### Chemical Base

A corrosive, acidic, solution of metallic salts. FOR PROFESSIONAL USE ONLY.

<b>Packaging</b>	1-gallon (3.8 L) and 5-gallon (18.9 L) UN rated containers.								
<b>Appearance / Color</b>	<p>LITHOCHROME Chemstain Classic is available in the eight standard colors below and shown on Scofield's Color Chart A-412 LITHOCHROME® Chemstain® Classic. Because the stain is reactive with the surface, final color produced is unique to each surface and will be influenced by surface composition. Color depth will depend upon the type of sealer selected. Colors shown on the chart are results from application onto pre wet smooth troweled concrete made with gray cement, allowed to dry, neutralized, and sealed with SCOFIELD® Cureseal-W™.</p> <table border="1"> <tr> <td>CS-1 Black</td> <td>CS-2 Padre Brown</td> </tr> <tr> <td>CS-11 Fern Green*</td> <td>CS-12 Weathered Bronze*</td> </tr> <tr> <td>CS-13 Copper Patina*</td> <td>CS-14 Dark Walnut</td> </tr> <tr> <td>CS-15 Antique Amber</td> <td>CS-16 Faded Terracotta</td> </tr> </table> <p>* indicates colors that are only suitable for interior dry conditions.</p>	CS-1 Black	CS-2 Padre Brown	CS-11 Fern Green*	CS-12 Weathered Bronze*	CS-13 Copper Patina*	CS-14 Dark Walnut	CS-15 Antique Amber	CS-16 Faded Terracotta
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CS-13 Copper Patina*	CS-14 Dark Walnut								
CS-15 Antique Amber	CS-16 Faded Terracotta								
<b>Shelf Life</b>	2 years from the date of manufacture.								
<b>Storage Conditions</b>	Store closed, upright, and only in original containers below 120°F (49°C).								

## APPLICATION INSTRUCTIONS

### Coverage Rates

Coverage will vary widely depending on the porosity and texture of the surface, composition and age of the concrete, surface preparation and application technique. Typical coverage rates are 200–300 square feet per gallon (4.9–7.4 m<sup>2</sup>/L). For deep or high intensity effects, a second application should be performed.

### EQUIPMENT

LITHOCHROME Chemstain Classic is corrosive. Read and understand this entire document and the product SDS before using this product. Always wear personal protective equipment when handling or using this product. If using spray equipment, always wear protective respirator, and mask adjacent areas to protect property from overspray. Never use high pressure spray equipment.

Stain can be applied using acid-resistant garden type pump sprayer with a conical tip, then worked into the surface with soft nylon brushes, mops, or lamb wool applicators. Avoid stiff bristles that can flick stain onto unwanted areas. An additional sprayer, mop and pail will be needed to apply and remove neutralizing or rinsing solutions. An industrial vacuum can be used to remove neutralized rinse water.

### SURFACE PREPARATION

Surfaces to be stained must be free of evaporation or surface retarders, concrete curing compounds, form release, coatings, sealers, oils, waxes, or any other material that might prevent stain from penetrating the surface. Concrete must be a minimum of 14 days old, and readily absorb sprayed water. Power wash, or scrub surfaces with rotary equipment or stiff bristle brushes and pH neutral detergents to clean surfaces or remove any laitance that does not allow for the easy absorption of water. Do not clean surfaces to be stained with acids or de-

tergents that can chemically etch the surface. Older or weathered concrete can be difficult to chemically stain. Test small areas to ensure surfaces are reactive. If reactivity is low, neutralization will be needed as indicated in the application section.

### APPLICATION

#### Factors Influencing Final Color & Appearance

The final color and appearance will be influenced by the concrete age, composition, technique used to finish the concrete, and application technique. Application to undisturbed slabs will be more paint like. Application to slabs with the top paste layer removed will be grainier. Variations in concrete finishing will become color swirls and variegations. Stain application to dry or wet surfaces will alter color development, as will the amount of stain applied and the amount of effort used to work stain into the surface. Take care not to over apply or overwork stain into the surface, or color may not remain after rinsing,

#### Jobsite Test Sections

Verify and approve suitability and appearance by making jobsite test sections prior to general application. Apply each chemical stain color onto each type and age of concrete or topping surface, and use each sealer technique that is to be used. 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.

#### Stain Application

Chemical stain is permanent. Mask all areas not to be stained to safeguard against splashes, overspray, and runoff from application, neutralization, or residue removal. Only work in a well ventilated area. Wear all re-

quired safety equipment. Keep a five gallon pail of water with 1 pound of baking soda added to neutralize spills or accidental contact. Take care not to allow tape adhesive to interfere with surfaces to be stained.

**The following 8 steps have proven successful for floors in a wide range of conditions.**

**1. Optional Pre-wetting of surface.**

Many artisans prefer to pre-wet the concrete prior to stain application. This maximizes color penetration and variegations. Spray clean water to saturate the concrete surface. Remove puddles by spreading water or soaking up with a clean mop. The surface should now be cool, damp to the touch, yet not allow a towel to readily absorb water.

**2. Apply the LITHOCHROME Chemstain Classic.** This can be done with an acid resistant low pressure garden sprayer, mop or broom. Apply in a circular motion to just saturate the surface. LITHOCHROME Chemstain Classic should fizz or effervesce when it first comes in contact with the concrete.

**3. Immediately work in stain.** Use a foam, lamb's wool, or soft nylon bristle broom working in circular motions to avoid the creation of lap marks. Do not walk on recently stained areas or footprints will result.

**4. Allow surfaces to dry.** This will take about 4 hours depending on weather conditions and water used in step 1.

**5. Apply a second coat if desired and allow it to dry.**

**6. Neutralize the surface:** Use a solution of 1 pound of baking soda per 5 gallons of water. Apply this with a clean garden sprayer. Move neutralization liquid across the surface with a wet mop or soft broom in a circular motion. Neutralization is complete when surfaces are saturated and no effervescence is seen.

**7. Remove pigment residue.** Use a soft broom or mop and a wet-dry vacuum moving in circular motions to avoid creating lap lines. Rinse surfaces until all easy to remove residue is removed. If a second complimentary color is to be used, apply it at this stage. Failure to remove all residue prior to sealing the surface can cause loss of adhesion, peeling, or reduced sealer durability. When complete, little to no residue should appear after rubbing with a clean cloth.

**8. Allow to dry and apply sealers/topcoats as desired.**

**For Vertical Applications:** Apply by garden sprayer consistently from the bottom up or the top down. Brush out drips immediately. Allow to dry at least 4 hours before neutralization and rinsing. Seal if desired.

## CLEANING OF TOOLS

Clean equipment with water and baking soda solution to neutralize residual stain. Rinse with clear water.

## AVAILABILITY/WARRANTY

### Availability

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.

## 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

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

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