

## PRODUCT DATA SHEET

# CHROMIX<sup>®</sup> L Admixtures for Color-Conditioned Concrete

LIQUID INTEGRAL COLORING ADMIXTURE FOR PERMANENTLY COLORING CONCRETE AND OTHER CEMENTITIOUS MATERIALS.

### PRODUCT DESCRIPTION

CHROMIX<sup>®</sup> L Admixtures for Color-Conditioned Concrete are concentrated pigment dispersions designed to permanently color concrete and other cementitious materials. They may be poured or pumped directly into concrete mixers, and quickly disperse with minimal effort to develop uniform streak-free color.

### USES

CHROMIX<sup>®</sup> L Admixtures for Color-Conditioned Concrete can be used to color cast-in-place, precast, and dry-cast concrete floor slabs, walls, steps, sidewalks, curbs, columns, arches, blocks, pavers, and other decorative objects.

### CHARACTERISTICS / ADVANTAGES

CHROMIX<sup>®</sup> L Admixtures for Color-Conditioned Concrete adds color that is weather resistant, UV Stable, lightfast, and alkali resistant. It contains no materials that initiate, accelerate, or promote the corrosion of steel, coated metal, or plastic concrete reinforcements. CHROMIX<sup>®</sup> L Admixtures for Color-Conditioned Concrete 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.

### APPROVALS / STANDARDS

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

### PRODUCT INFORMATION

<b>Chemical Base</b>	Synthetic Iron Oxides, Titanium Dioxide and Chromium Oxide Pigments.
<b>Packaging</b>	Rigid cage or disposable bladder-in-box 250 gallon totes containing 3350 pounds of colorant designed for use with a CHROMIX-It <sup>®</sup> automated dispensing unit are available in the five standard base colors: CHROMIX L10 Base – Black CHROMIX L20 Base – Light Red CHROMIX L25 Base – Medium Red CHROMIX L30 Base – Yellow CHROMIX L40 Base – White CHROMIX L50 Base – Green Totes of mixed color, and premeasured colors in ready-to-use pails that color one cubic yard of concrete are available.

**Appearance / Color**

Over 700 tested color formulas are available for immediate packaging with the CHROMIX-It® Color Center delivery system. This includes colors depicted on Scofield's Color Chart A-350GL, as well as hundreds of colors common to the industry. Visit [www.scofield.com](http://www.scofield.com) for your nearest point of distribution.

**Shelf Life**

12 months from date of manufacture. Product stratification and mild separation is normal after transit or prolonged standing. Should this occur, mix or recirculate until the mixture is uniform prior to use.

**Storage Conditions**

DO NOT FREEZE! Mix regularly and store at 40 °F to 120 °F (4 °C to 49 °C)

**TECHNICAL INFORMATION****Concreting Guidance**

CHROMIX® L Admixtures for Color-Conditioned Concrete is designed to have minimal effect on concrete plastic and hardened properties, and to minimally interact with other Sika concrete admixtures. As all competitive chemical admixture interactions cannot be predicted, always test final mix designs with actual materials to be used, and perform jobsite test sections as described later in this bulletin. Changes in water/cementitious materials ratio will always impact concrete performance. To maintain performance, water should be held from the mix at a rate of 40% of the colorant used.

When competitor admixtures are in use, the following guidelines may prove helpful in adjusting concrete mix designs.

Mix Design Modification Guidelines:

<b>Ingredient</b>	<b>Recommendation</b>	<b>Comments</b>
Water	Reduce water content by 40% of the total weight amount of color admixture used.	If water is not reduced, Slump, Flow, and w/c ratio may be impacted.
Water Reducer (WR)(Mid-Range or High-Range Water Reducer)	Reduce WR dose by 2% of the total weight of color admixture used. Fluid ounce reduction will be about 0.307 x total color dose in pounds.	If not adjusted higher than desired slump may result.
AEA	Reduce AEA doses by 50% to 75% in designs that use AEA's.	If not adjusted, high air content may result.

**APPLICATION INFORMATION****Recommended Dosage**

Color selection will determine the ratio of base colors needed, and color saturation, and intensity will determine the amount of liquid required. Typical dosages range between 0.2 to 15.5 pounds of liquid per 94 pound sack of cement. If supplementary cementitious materials such as fly ash or blast-furnace slag are used in the mix, their weight must be added to the weight of the cement when determining the correct dosage.

**Restrictions**

Do not use with chloride based accelerators.

# APPLICATION INSTRUCTIONS

## Factors Influencing Final Color & Appearance

Colors represented on the CHROMIX® Admixtures Color Chart A-350GL depict samples of broom finished concrete made with medium gray cement and cured with LITHOCHROME® Colorwax™. The final color and appearance obtained on the jobsite will be influenced by concrete composition, surface finishing technique, and curing compound/sealer selection.

Concrete composition variations that can impact color include cement type and color, aggregate selection, and the use of pozzolans such as slag or fly ash. Differences in sealer or curing compound type, such as water or solvent based, or if no sealer is used, can also influence final appearance.

Finishing techniques will influence final concrete appearance. Different tools such as wood floats, magnesium floats, steel trowels, brooms, and edging tools, will each influence color, surface texture, sealer penetration, and final cured concrete appearance differently. Do not change tool types once work has begun.

Changes in water content and water-to-cement ratio, both in the mix and on the concrete surface during finishing, can influence the final surface color. Mix designs that develop excessive bleed water can float non-uniform cement/pigment ratios, and cause uneven or weak coloring. Once mix designs are established, do not add water to alter concrete plastic properties. Do not add water to loosen partially cured loads. Do not use “watering” sprinklers as colored concrete cures, or use wet brooms and tools while finishing. Any of these will likely result in inconsistent concrete color.

## Placement and Finishing Tips

As freshly placed concrete cures, its color will vary with differences in surface moisture. Concrete curing in shaded areas or in the center of large slabs will surface dry slower than those exposed to sunlight or closer to form edges. This can cause color variations that will often fade with time. Avoid high salt aggregates that can cause efflorescence that can make color irregular. These visual differences can be long lasting, and raise questions about the quality of the concrete placement. Use LITHOCHROME® Colorwax™ tinted to match the final color of the cured concrete and avoid these problems and deliver jobs that are uniform in color and appearance.

## Placements to be Ground and Polished

Use of 1 bottle of SCOFIELD® Ready-Mix Truck Defoamer

per concrete truckload to minimize bug holes and air voids.

## Reinforcing Fiber Interactions.

If high air content is experienced with reinforcing fibers, pre-wet the fibers by tumbling in the mixer three minutes with water, colorant, and 1 bottle of SCOFIELD® Ready-Mix Truck Defoamer per truckload before batching concrete into the mixer.

## 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.

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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.

## MIXING

CHROMIX® L Admixtures for Color-Conditioned Concrete can be introduced at any point in the concrete mixing process, as long as enough mixing and time is given for the color to reach an unchanging uniform appearance. Typically, this will take at least 5 minutes and 130 drum revolutions at mixing speed. Automated delivery systems can be set to introduce material early in the batching process. Care must be taken to not allow material to become hung up on mixing vanes or collect in spaces where the mix has limited motion.

### Preferred Use Procedures

1. Mix or recirculate CHROMIX® L Admixtures for Color-Conditioned® Concrete until it is uniform in consistency.
2. Clean concrete mixer or mixing truck. Remove any previous cleaners, retarders, or traces of previous color.
3. Size the mix design to ensure the mixer is at least 1/3 full, or of a size that ensures mix uniformity within the prescribed number of mixing revolutions or mix time.
4. Introduce CHROMIX® L Admixtures for Color-Conditioned® Concrete.
5. Introduce water, sand, aggregates, and other admixtures in preferred order.
6. Introduce cement.
7. Mix as normally prescribed.

### If loads are split

Order of addition changes may be necessary to accommodate split loads or plant conditions. CHROMIX® L Admixtures for Color-Conditioned® Concrete can be added to the tail end of a load, or after part of a mixed load has been removed. If this is done:

1. Adequate mixing must be performed until the color is uniform.
2. Slump will likely be increased as water will not have been held from the batch.
3. If an AEA was used, air detrainment agent may be needed to avoid high air content.

## AVAILABILITY/WARRANTY

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## Availability

CHROMIX® L Admixtures for Color-Conditioned® Concrete 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.

## Warranty

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 OR 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.** Sale of SIKA products are subject to the Terms and Conditions of Sale which are available at <https://usa.sika.com/en/group/SikaCorp/termsandconditions.html> or by calling 201-933-8300.

## 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.

## 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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