

CHROMIX® G

Admixtures for Color-Conditioned® Concrete

Concentrated pigment granules designed to permanently color concrete and other cementitious materials.



BUILDING TRUST



L. M. Scofield Company - A SIKA COMPANY

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1. Product Description:

CHROMIX® G Admixtures for Color-Conditioned® Concrete are concentrated pigment granules designed to permanently color concrete and other cementitious materials. They are made exclusively with fade resistant pigments that conform to the light Resistance (color fastness) requirements of ASTM C 979 Pigments for Integrally Colored Concrete.

CHROMIX G granules may be poured or conveyed directly into concrete mixers, or after first dispensing into convenient disintegrating repulpable bags that can be added as a single unit into the concrete mix. They quickly disperse with minimal effort to develop uniform streak-free color. Neither the CHROMIX G, nor the repulpable bag, will contribute to the corrosion of concrete reinforcements or fasteners, and do not promote efflorescence.

CHROMIX G can be used to color cast-in-place, precast, and dry-cast concrete floor slabs, walls, steps, sidewalks, curbs, columns, arches, and other decorative objects. Used in concrete, CHROMIX G 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.

2. Colors:

CHROMIX G granules are available in four standard base colors that can be combined to derive thousands of color variants. Standard base colors include:

- CHROMIX G10 Base – Black
- CHROMIX G20 Base – Light Red
- CHROMIX G25 Base – Medium Red
- CHROMIX G30 Base – Yellow

More than 700 tested color formulas are available for immediate packaging with the CHROMIX-IT Color Center delivery system. These include colors depicted on Scofield's Color Chart A-312, as well as hundreds of other custom and common industry colors. Packaged colors of CHROMIX G are available at distributors throughout North America. Visit us at www.scofield.com for your nearest point of distribution.

3. Dosage and Impact on Mix Design:

CHROMIX G requirements will differ and depend upon color selected and total cement content of the material to be colored. Typical dosages range between 0.2 to 10.0 pounds of CHROMIX G per 94 pound sack of cement. Light colors require less CHROMIX G than do dark or more saturated colors. Materials with higher cement content will require more CHROMIX G. When determining the proper CHROMIX G dose to use, flyash, slag, activated pumice, or other pozzolanic cement replacements should be considered part of the total cement content.

4. Concrete Mix Design Modifications:

CHROMIX G is designed to have minimal effect on concrete plastic and hardened properties, and to minimally interact with other concrete admixtures. It does not have pozzolanic effects and should not be counted as cementitious material. Additional water, about 15% of the CHROMIX G used, may be needed to compensate for water absorbed by the CHROMIX G granules. This amount of water will be less if water reducing admixtures are part of the mix design.

As all chemical admixture interactions cannot be predicted, always test final mix designs with actual materials to be used, and perform a jobsite test as described later in this bulletin.

5. Preferred Use Procedures:

CHROMIX G granules 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, and the repulpable bag is

given time to disintegrate. Typically, this will take at least 5 minutes and 130 drum revolutions at mixing speed. Automated delivery systems can be set to introduce granules early in the batching process to minimize dusting. If they are introduced after other concrete ingredients, the use of some trim or wash water to rinse any coloring dusts into the batch is advised.

If disintegrating bags are added to partially loaded mixers, care must be taken to ensure bags are not hung up on mixing vanes, and enough mix time is allowed to completely mix bags into the load.

6. Factors Influencing Final Color & Appearance:

Colors represented on the CHROMIX Color Chart A-312 depict samples of broom finished concrete made with medium gray cement and cured with a 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 trowels, hard 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/CHROMIX G 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 or COLORCURE® Concrete Sealer tinted to match the final color of the cured concrete and avoid these problems and deliver jobs that are uniform in color and appearance.

Always evaluate composition and finishing techniques as described in section 8. *Jobsite Test Sections* below.

7. Limitations:

The compatibility of CHROMIX G with other admixtures used in the production of concrete must be verified prior to use. When bright, bold, or extreme colors and jewel tones are desired, consider LITHOCHROME® Color Hardener for flatwork as shown in Color Chart A-132.

8. 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.

9. Packaging:

CHROMIX G is available from distributors in premeasured ready to use repulpable bags, and 5 gallon pails. Bulk Colors are available from your local Scofield Representative.

Loads of colored ready-mix concrete are available from select ready-mix concrete plants throughout North America.

10. Storage and Shelf Life:

Stored below 120°F (49°C), CHROMIX G has a 2 year shelf life from date of manufacture. Do not store at temperatures over 175°F (80°C).

11. Cautions:

WARNING!

**WARNING! MAY IRRITATE EYES, SKIN.
 DO NOT TAKE INTERNALLY. DO NOT BREATHE IN DUST.
 KEEP OUT OF THE REACH OF CHILDREN.**

EMERGENCY TELEPHONE NUMBER: CHEMTREC 1-800-424-9300.

May cause mild eye or skin irritation. Safety goggles and impervious gloves are recommended.

First Aid: Eyes—DO NOT RUB EYES. FLUSH IMMEDIATELY WITH WATER. Hold eyelids apart while flushing material out thoroughly with large amounts of water. Skin—Wash thoroughly with soap and water. Remove soiled clothing and footwear and wash before reuse. Inhalation—Move to fresh air. If symptoms develop or if ingested, get medical attention.

Wash thoroughly immediately after handling. Close container after each use. In case of spillage, avoid breathing dust, or walking through material. Do not allow spills to enter soils, waterways, drains, or sewers. Approach spills from upwind and collect with broom or vacuum. Use dry sweep compound to remove residual materials. Place recovered material in clearly marked waste containers, and dispose of in accordance with applicable waste regulations. Do not reuse empty containers. Before using or handling, read the *Safety Data Sheet and Warranty*.

12. 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 for further information.

13. Limited Warranty:

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, EXPRESS 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.



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L. M. Scofield Company customer service: 1 800 800 9900

Western Headquarters: 6533 Bandini Blvd., Los Angeles, CA 90040 **voice:** 323 720 3000 **fax:** 323 720 3030

Eastern Headquarters: 4155 Scofield Road, Douglasville, GA 30134 **voice:** 770 920 6000 **fax:** 770 920 6060

www.scofield.com