



PRODUCT DATA SHEET

CHROMIX® L Admixtures for Color-Conditioned® Concrete

LIQUID INTEGRAL COLOURING ADMIXTURE FOR PERMANENTLY COLOURING AND OTHER CEMENTITIOUS MATERIALS.

PRODUCT DESCRIPTION

CHROMIX® 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.

WHERE TO USE

CHROMIX® 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® 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® 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 / CERTIFICATES

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

PRODUCT INFORMATION

Composition / Manufacturing

Synthetic Iron Oxide Pigments.

Packaging

Rigid cage or disposable bladder-in-box 946 L (250 gallon) totes containing 1520 kg (3350 pounds) of colourant designed for use with a CHROMIX-It® automated dispensing unit are available in the five standard base colours:
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 colour, and premeasured colours in ready-to-use pails that colour 0.76 m² (one cubic yard) of concrete are available.

Product Data Sheet

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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 4 to 49 °C (40 to 120 °F)
Appearance / Colour	Over 700 tested colour formulas are available for immediate packaging with the CHROMIX-It® Colour Center delivery system. This includes colors depicted on Scofield's Colour Chart A-350GL, as well as hundreds of colours common to the industry. Visit www.scofield.com for your nearest point of distribution.

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/cement 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:

Ingredient	Recommendation	Comments
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 0.25 to 16.5 kg of liquid per 100 kg of cement (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.

BASIS OF PRODUCT DATA

Product properties are typically averages, obtained under laboratory conditions. Reasonable variations can be expected on-site due to local factors, including environment, preparation, application, curing and test

methods.

ENVIRONMENT, HEALTH & SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling,

storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

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.

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.

DISPENSING

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.

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LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for exact product data and uses.

LEGAL NOTES

The information, and in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any recommendations, or from any other advice offered. The information contained herein does not relieve the user of the products from testing them for the intended application and purpose. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request or may be downloaded from our website at: www.sika.ca

Product Data Sheet

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