

# PRODUCT DATA SHEET

# CHROMIX® G Admixtures for Color-Conditioned® Concrete

FREE FLOWING PIGMENT GRANULES DESIGNED TO PERMANENTLY COLOR CONCRETE AND OTHER CEMENTITIOUS MATERIALS.

#### PRODUCT DESCRIPTION

CHROMIX® G Admixtures for Color-Conditioned® Concrete are free-flowing concentrated pigment granules designed to permanently color concrete and other cementitious materials. They can be poured directly into concrete mixes, conveyed by gravity feed or pneumatic equipment, or pre-dispensed into pulpable bags that can later be added directly to the concrete mix as a single unit.

#### **USES**

CHROMIX® G 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® G 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, plastic, or rubber concrete reinforcements. CHROMIX® G 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

| Chemical Base | Synthetic iron oxide pigments.  |
|---------------|---|
| Packaging     | Bulk bags of designed for use with a CHROMIX-It® automated dispensing unit are available in the four standard base colors:  CHROMIX G10 Base – Black  CHROMIX G20 Base – Light Red  CHROMIX G25 Base – Medium Red  CHROMIX G30 Base – Yellow  Hundreds of premeasured ready to use colors are available from distributors in pulpable toss-in bags and plastic pails. These are typically packaged so one unit colors one yard of concrete. |

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| Appearance / Color | Over 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 colors common to the industry. Visit www.scofield.com for your nearest point of distribution. |
|--------------------|---|
| Shelf Life         | CHROMIX® G Admixtures for Color-Conditioned® Concrete have a 24 month shelf life from date of manufacture.  |
| Storage Conditions | Keep dry, moisture free, and below 175 °F (80 °C).  |
|                    |   |

#### TECHNICAL INFORMATION

#### **Concreting Guidance**

CHROMIX® G Admixtures for Color-Conditioned® Concrete is designed to have minimal effect on concrete plastic and hardened properties, and to minimally interact with other concrete admixtures. Additional water, about 10 % of the CHROMIX® G Admixtures for Color-Conditioned® Concrete used, may be needed to compensate for water absorbed by the 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 sections as described later in this bulletin.

#### APPLICATION INFORMATION

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|--------------------------|--|--|
| Recommended Dosage       | Color selection will determine the ratio of base colors needed, and color saturation, and intensity will determine the amount of granules required. Typical dosages range between 0.2 to 10.0 pounds of granules 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. |  |
| Mixing                   | Preferred Use Procedures  CHROMIX® G Admixtures for Color-Conditioned® Concrete 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. Typically, this will take at least 5 minutes and 130 drum revolutions at   |  |

ing 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 granules early in the batching process to minimize dusting. Care must be taken to not allow disintegrating bags or granules to become hung up on mixing vanes or collect in spaces where the mix has limited motion.

Restrictions

Do not use with chloride based accelerators.

### **APPLICATION INSTRUCTIONS**

#### **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 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/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

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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 below.

#### 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 competitor 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.

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

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.

#### **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 = 0g/I

#### LEGAL DISCLAIMER

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