BUILDING TRUST
CONSTRUIRE LA CONFIANCE

PRODUCT DATA SHEET

CHROMIX® G Admixtures for Color-Conditioned® Concrete

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

PRODUCT DESCRIPTION

CHROMIX® G Admixtures for Color-Conditioned® Concrete are free-flowing concentrated pigment granules designed to permanently colour 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.

WHERE TO USE

CHROMIX® G Admixtures for Color-Conditioned® Concrete can be used to colour 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 colour 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 colour 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 Coloured Concrete.*

PRODUCT INFORMATION

Composition / Manufacturing	Synthetic iron oxide pigments.
Packaging	Bulk bags designed for use with a CHROMIX-It® automated dispensing unit are available in the four standard base colours: CHROMIX G10 Base – Black CHROMIX G20 Base – Light Red CHROMIX G25 Base – Medium Red CHROMIX G30 Base – Yellow Hundreds of ready to use colours are available using the Chromix Dispensers designed for dosing directly into Ready-Mix Trucks(404-MER) or Precast Mixers (404-MEP). Pre-measured bags designed to treat 1 m^3 of concrete can also be produced (404-ME).

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 80 °C (175 °F).
Appearance / Colour	Over 700 tested colour formulas are available for immediate packaging with the CHROMIX-It® Colour Center delivery system. These include colours depicted on Sika's Colour Chart A-312, as well as hundreds of colours common to the industry.

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 product data sheet.

APPLICATION INFORMATION

Recommended Dosage	Colour selection will determine the ratio of base colours needed, and colour saturation, and intensity will determine the amount of granules required.Typical dosages range between 0.09 to 4.54 kg of granules per 42.64 kgs 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 colour 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.

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.

VOC = 0 g/L

APPLICATION INSTRUCTIONS

Factors Influencing Final Colour & Appearance
Colours represented on the CHROMIX Colour Chart A-312 depict samples of broom finished concrete made with medium grey cement and cured with LITHOCHROME® Colorwax™.The final colour 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 colour include cement type and colour, 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 colour, 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 colour. Mix designs that develop excessive bleed water can float non-uniform cement/pigment ratios, and cause uneven or weak colouring. 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 coloured concrete cures, or use wet brooms and tools while finishing. Any of these will likely result in inconsistent concrete colour.

Placement and Finishing Tips

As freshly placed concrete cures, its colour 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 colour variations that will often fade with time. Avoid high salt aggregates that can cause efflorescence that can make colour irregular. These visual differences can be long lasting, and raise questions about the quality of the concrete placement. Always evaluate composition and finishing techniques as described below.

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 and colourant, before batching concrete into the mixer.

Jobsite Test Sections

Prior to large scale production, the concrete or cementitious mix design for each colour 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 colour 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 colour, 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.

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

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