### BUTTERFIELD<sup>®</sup> COLOR

A SIKA BRAND

## **Perma-Shake**<sup>®</sup>

### **Color Hardener**

# Many things can affect the appearance of color. For best color matching results, a representative job site sample should be cast using materials and finishing techniques that will be used on the project.

Colors shown on this chart represent formulations using medium gray cement and sealed with solvent-based Clear Guard<sup>®</sup> Cure and Seal. Variations can be expected due to differences in cement, aggregates and method of application.



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### Perma-Shake<sup>®</sup> Color Hardener

#### The Butterfield Color® Advantage

Color is an integral part of what we see every day. From the subtle earth tones of sand, wheat, and sage, to the bright colors of a sunset or mountain range, combinations of colors can be used to set the mood and theme. Color decisions are made with two factors in mind – specific design needs and how well the color will endure year after year. Color and durability are the very essence of Butterfield Color<sup>®</sup>. With over 40 years of field experience in architectural colored concrete, we offer a line of concrete color additives that are technically superior and meet the needs of the architectural specifier as well as the concrete finisher.

MasterFormat<sup>™</sup> Guide Specifications, and Butterfield Color<sup>®</sup> Architectural Details and Specifications are available for the specifier/designer. All information is available for download online at www.butterfieldcolor.com or at 800-282-3388.

### **Coloring System Guide**

Description: Perma-Shake<sup>®</sup> Color Hardener is a dry shake, color hardener that is applied to the surface of freshly placed concrete. It is a cementitious-based coloring material that may be used to create abrasion resistant interior floors and freeze-thaw stable exterior hardscapes. The time-tested formulation of Perma-Shake<sup>®</sup> Color Hardener creates an extremely dense surface that is resistant to foot and vehicular traffic, and extreme weather. It is available in a wide range of streak free, uniform colors ranging from subtle pastels to deep, rich hues. It is used to uniformly color gray concrete, or provide random accents of color on concrete integrally colored with Uni-Mix<sup>®</sup> Integral Concrete Colorant, Uni-Mix<sup>®</sup> Liquid Integral Concrete Colorant or Select Grade<sup>®</sup> Integral Concrete Colorant. Perma-Shake<sup>®</sup> Color Hardener is also used when imprinting, texturing, or stenciling new concrete with Perma-Cast<sup>®</sup> Stamping Tools, Texture Rollers and Stencils. It is compatible with Perma-Cast<sup>®</sup> Clear Liquid Release, Perma-Cast<sup>®</sup> Antiquing Release and Select Grade<sup>®</sup> Antiquing Release. Color hardened surfaces may also receive additional coloration by applying one or more colors of Perma-Cast<sup>®</sup> Sierra Stain<sup>™</sup>.

Perma-Shake<sup>®</sup> Color Hardener is a precise blend of cement, silica quartz aggregates, synthetic metal oxides, and plasticizer. Perma-Shake<sup>®</sup> Color Hardener conforms to ASTM Standard C979 for color stability. The water-reducing wetting agent in Perma-Shake<sup>®</sup> Color Hardener allows it to be readily incorporated into the concrete surface, forming a rich paste that makes finishing easier. In addition to strength and durability, the color hardened surface is resistant to fading.

Perma-Shake<sup>®</sup> Color Hardener is a prepackaged material available in 24 standard colors. Custom colors, color matching, and colors selected from the Uni-Mix<sup>®</sup> Integral Concrete Colorant and Uni-Mix<sup>®</sup> Liquid Integral Concrete Colorant color charts can be formulated with ample lead-time. Note: When a Perma-Shake<sup>®</sup> Color Hardener is formulated from the Uni-Mix<sup>®</sup> Integral Concrete Colorant color charts, the cured color will not be an exact match to the concrete colored with those integral coloring systems. Read all related or companion product Technical Data Sheets before installation. All information is available for download online at www.butterfieldcolor.com or at 800-282-3388.

Perma-Shake<sup>®</sup> Color Hardener adds a wide array of color options to your architectural designs and hardscape projects while providing an extremely durable surface for pedestrian and vehicular traffic. Perma-Shake<sup>®</sup> Color Hardener, used in conjunction with varying finishing techniques such as jointing schemes, saw cutting and/or pattern stamping, can create a striking effect. Combinations of colors can be used to create a desired mood and theme. Perma-Shake<sup>®</sup> Color Hardener is an excellent choice for high traffic industrial flooring, since it greatly increases the strength and durability of the concrete surface. Using lighter colors will optimize lighting in an industrial environment.

Limitations: Perma-Shake<sup>®</sup> Color Hardener must be applied at the recommended broadcast rate. Review Coverage section of the Perma-Shake<sup>®</sup> Color Hardener Technical Data Sheet. All information is available for download online at www.butterfieldcolor.com or at 800-282-3388. Applying insufficient material will reduce the abrasion resistance and may alter the color of the cured surface. Perma-Shake<sup>®</sup> Color Hardener should not be mixed into ready mixed concrete nor applied onto cementitious overlays.

Perma-Shake<sup>®</sup> Color Hardener is intended for application during new concrete flatwork installations. It may, however, be mixed with water and then plastered onto fresh vertical concrete such as step risers or curbs. Review Vertical Surfaces section of the Perma-Shake<sup>®</sup> Color Hardener Technical Data Sheet before Installation. All information is available for download online at www. butterfieldcolor.com or at 800-282-3388. Utilize concrete mix designs, tools, and techniques that ensure the thorough hydration of the material for proper finishing and curing.

Packaging: Perma-Shake® Color Hardener is packaged in 50 lb. (22.68 kg) plastic pails. Shelf life is 2 years from the date of invoice in original, unopened containers, in dry storage.

Quality Control: Cast a job site sample at least 21 days prior to the installation for approval of color and finish. Utilize all materials, tools, and techniques from the actual job in the mock-up. Consistent batching, pouring, finishing, curing, sealing, and preparation techniques, will ensure the uniformity of architectural concrete. Verify adequate wet and dry slip resistance. Verify maintenance requirements. Site visits by Butterfield Color, Inc. Personnel are for making technical recommendations only and not for supervising or providing quality control.

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