

CHROMOGEN™ INTEGRAL COLOR

Technical Data Sheet - 09/2010

The **Chromogen™ Integral Color System** is a premium line of concrete admixtures created and designed by Chaotic Pigments. Designed with the decorative concrete contractor in mind, **Chromogen™ Integral Color** offers the strongest and most vibrant color line available. Chaotic Pigments had listened to contractors, redi-mix producers and distributors from around the world and designed a true system that offers one of the largest range of color selection in the decorative concrete industry. Innovations such as our 100% dust free PVA packaging means no mess and clean handling. Additionally, our unique dosing system allows standard products to be used for any concrete mix design while providing redi-mix producers, distributors and installers a distinct advantage when stocking or using color. This allows for clean, waste free inventory for redi-mix producers, distributors and contractors.

Description

Get perfect color every time by using the **Chromogen™ Integral Color System** when coloring ready mixed or precast concrete. Made with the purest synthetic oxide pigments, **Chromogen™ Integral Color** is the best choice for professional users. Economical, consistent color, no matter the application or mix design.

Benefits

- Available in 48 standard colors using 12 unique pigment formulations for one of the widest range of standard color selection in the industry. Custom colors and color matching are also available.
- Packaged in completely dust free water soluble PVA plastic bags for easy addition to the mixer. User will never touch the pigments and there is no chance of paper not dissolving in the drum which can lead to finishing problems.
- Packaged in 25lb, 5lb and 11lb bags which allows any size batch of any mix design to be loaded without any special packaging.

Planning and Ordering

1. **Chromogen™ Integral Color** is designed for coloring ready mixed concrete, architectural precast, countertops, mortar and any other cement based application. Pigments should never be dusted or sprinkled onto the concrete surface. When surface coloring is required use **Chromogen™ Colored Hardener**.
2. Consistency in cement, aggregates, water/cement ratio, admixtures, finishing techniques and curing methods are critical to maintaining consistent uniform color.
3. User should always pour a jobsite mock-up, using specified mix design and materials that will remain consistent throughout pour to confirm color shade. It is recommended that a minimum of three cubic yards of concrete be batched and fully cured before final color determination. All concrete should be batched, placed, cured and finished per ACI standards.

Dosing and Mixing

1. Total color per batch should be determined by referring to the **Chromogen™ Integral Color Chart** which refers to dosage weight per 94lb sack of cement. Use the following formula when planning. (Sacks of cement per yard) * (Dosage Rate per yard) * (Total yards in batch). Following example is based on 8 cubic yards of 6 sack mix concrete with a color using 2lbs per 94lb sack of cement:
 - ◇ $6 X 2 (12lbs \text{ per } CY) * 8 (\text{yards}) = 96lbs \text{ per batch}$ - this would be achieved by dosing with (3) 25lb bags, (3) 5lb bags and (1) 11lb bag.
2. Concrete should be ordered at a workable 4-6" slump. Slump should be consistent from pour to pour. When higher slump is desired, water reducing or plasticizing admixtures may be used in place of water. Adding water can dramatically affect color.

3. Ready Mixed Plant Addition

- Dry Batch - Add approximately two-thirds of the mix water and one-half of the aggregates for the batch to a clean drum. Remove the interior PVA disintegrating bags from the outer protective paper bags and add the total batch weight of **Chromogen™ Integral Color** to the drum and allow to mix at full speed for approximately 3 minutes to disperse color. PVA bags will disintegrate upon contact with water. Add the balance of ingredients and mix at full speed for 8-10 minutes to assure complete pigment dispersion.
- Central Batch - Add one half of total batch materials to a clean drum. Remove the interior PVA disintegrating bags from the outer protective paper bags and add the total batch weight of **Chromogen™ Integral Color** to the drum and allow to mix at full speed for approximately 3 minutes to disperse color. Add the remainder of batch materials and mix at full speed for 8-10 minutes to assure complete pigment dispersion.
- 4. **Jobsite Addition** - Due to the design of the PVA bag dosing system, no special handling procedures are required. Remove the interior PVA disintegrating bags from the outer protective paper bags and add the total batch weight of **Chromogen™ Integral Color** to the mix and allow to mix at full speed for 8-10 minutes to assure complete pigment dispersion.

Application and Finishing

Concrete should be placed using accepted industry procedures. A jitterbug or rollerbug may be used to bring cream to the surface for easier workability and better dispersion of the **Chromogen™ Integral Color**. The concrete should be bull floated with a wood or magnesium bull float. After screeding, the floating procedure should not begin until all bleed water has dispersed to avoid serious scaling, dusting, crazing, efflorescence and irregular coloring. Various finishing techniques may be used at this time such as broom, rotary, textured patterns (stamped concrete) or exposed aggregate finishes. If the final finish is to be a steel trowel finish, care should be taken that the final strokes be made in the same direction. Do not over-trowel and do not sprinkle or fog water on concrete. This will cause variation in color intensity. After colored concrete has achieved initial set (as soon as the next day in warm climates, and as long as 10 days in cold climates), **Chromogen™** integrally colored concrete may be sandblasted to produce another finish variation.

Maintenance and Care

Chromogen™ integrally colored concrete is virtually maintenance-free. Should the concrete surface become contaminated with dirt, oil or debris, it may be scrubbed with a mild detergent solution and then rinsed with clear water. Colored concrete should be sealed to protect from stains and to help prevent efflorescence, the naturally occurring whitening effect created when concrete cures that can "mask" the intensity of color. After 2-5 years of use, the luster of the sealer may diminish; however, this does not mean the sealer has dissipated. At that time, and at the owners discretion, another coat or two of sealer may be applied to renew the appearance of the surface. Chaotic Pigments offers sealers of the highest quality, specifically designed for colored concrete.