

Weather

- Do not pour colored concrete when rain, frost or high winds are forecast.
- Ideal pouring conditions are when the temperature is between 55-85° F.
- Schedule placement of colored concrete to minimize exposure during hottest part of the day.
- Provide extra curing protection to dark or black colored concrete as these colors absorb more heat.
- Be aware of the air temperature. In cool weather it takes less water to achieve a workable mix.
- In weather conditions that result in rapid evaporation of bleed water within the concrete, we recommend using an evaporation retarding finishing aid.

Mixing

- Open protective paper bag and remove the dissolvable PVA interior bag containing the pigment. This PVA bag is completely dissolvable when it comes in contact with water and will not leave bag remnants or stitching.
- Adding color to batch:
 1. Mixing at Dry Batch Ready-Mix Plant - 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.
 2. Mixing at Central Batch Ready-Mix Plant - 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.
 3. Mixing at Jobsite - 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.
- Ensure that the same ration of water, cement and raw materials is used for each load of concrete of the same color.
- The concrete slump should be consistent at 5 inches or less, and should not exceed 6 inches for any load. Should special conditions require a wetter slump, water reducers and plasticizers should be used instead of additional water. Richer more intense color is achieved with a low water/cement ratio.
- If possible, use the largest size of coarse aggregate to keep the water content level low.
- **DO NOT** add calcium chloride accelerators for any reason. Non-chloride accelerators may be used when required.
- **Chromogen™ Integral Color** can be used with set accelerators and retarders (non-chloride type), surface retarders, water reducers, super-plasticizers, internal waterproofing, fly ash and air entrainer. Take extreme caution when using third generation plasticizers such as polycarboxylates as they impact on the final color and finish.
- Allow no more than 1 to 1.5 hours between batching and placing concrete.
- Avoid using reactive aggregates.
- Minimize vibration of concrete. Place concrete near its final location and use hand tools to move.
- Maximum dosing rate of pigment should not exceed 10% of the total cementitious material weight. Dosage rates from 1-6% are common.
- Always add pigment by weight, not by volume
- Avoid direct exposure of colored concrete to moisture and condensation while curing to minimize the adverse effects of discoloration and efflorescence.

Guidelines for Integrally Colored Concrete

Sub-grade / Reinforcement

- Use a compact, dampened, though well drained consolidated sub-grade.
- Use correct joints and saw cuts to minimize cracking. Refer to ACI 302.1 R-04 Guide for Concrete Floor and Slab Construction.
- Protect surrounding slabs and structures to prevent damage.

Finishing

- Bull float after striking of slab.
- Wait for bleed water to evaporate before trowelling. Early final trowelling before bleed water had evaporated can cause entrapped moisture, discoloration and dusting of surface.
- Avoid over-trowelling. This causes burning and discoloration. Darkening and discoloration is more likely to occur as trowelling time increases.
- Hand finishing of colored concrete is ideal. Take extreme caution when power troweling as uneven or over-trowelling may result in undesirable discoloration. When power troweling, always use new blades.
- Avoid adding excess water to the surface or using wet finishing tools. NO additional water should be introduced after any portion of the load has been discharged.
- Do not add cement or pigment to the surface of wet concrete.
- All final hand finishing should be done in the same direction. Use consistent finishing practices at all times.

Curing

- To prevent surface blemishing, do not cure with plastic sheeting, intermediate wetting and drying, membranes, paper, sodium or fluoro-silicate hardeners and other compounds which can cause discoloration.
- Apply a curing compound as soon as surface will allow. Ensure any curing compound is structurally and aesthetically suitable for decorative concrete.
- Use a cure and seal in conjunction with a topcoat of premium acrylic sealer is ideal for all colored concrete projects.
- Application of sealer will also protect from effects of oil, grease, dirt and weather.
- Ensure the sufficient joints are provided to control cracking.
- If saw-cutting is used for control joints, rinse off all residue to prevent staining and discoloration.
- Be prepared for the whole slab to lighten in color during curing. The final "true" color will start to become apparent four days after placement however final color will be achieved after full cure of the concrete (approximately 28 days after placement)

The information herein is general information to assist Chaotic Pigments customers in determining whether or not our products are suitable for their specific applications. Our products are intended for sale to experienced contractors only. We require that end users should inspect and test our products before use to satisfy themselves as to the content and suitability for the applications they intend to use our products for.

Nothing herein shall constitute any warranty expressed or implied, including any warranty of merchantability or fitness for a particular purpose, nor is any protection from any law or patent to be inferred. The exclusive remedy for all proven claims is replacement of our materials and in no event shall we be liable for incidental or consequential damages.



Phone: 479-270-4787

Email: info@chaoticpigments.com

www.chaoticpigments.com