

## Integral Color - SG Granular

Get value added results with INNOTECH INTEGRAL COLOR - SG (Standard Grade) GRANULAR color for ready mixed and precast concrete projects. This product is manufactured with high quality granular pigments to ensure easy dosing and consistent color.

### Product Features and Benefits

This product is offered in granular powder form for precise cubic yard dosing, fast batching and clean handling. (Other packaging options are also available—for detailed information, see the “Available Packaging” section in this document.)

### Prior to Application

- INNOTECH INTEGRAL COLOR - SG GRANULAR color is designed for ready mixed, precast, curbing machines and mortar coloring use. INNOTECH INTEGRAL COLOR - SG GRANULAR color should not be dusted or sprinkled onto the concrete surface.
- Consistency of cement color, aggregates, slump, finishing techniques and curing methods are critical in obtaining color uniformity.
- For consistent color, the use of pozzolans or fly ash is strongly discouraged.
- Dosage Guideline:
  1. Product is dosed at one bag per one yard.
- It is important to complete a jobsite sample for customer approval using the specified mix design and color. For an accurate color check on a jobsite sample or on any job, the recommended size of the job should be a minimum order of three yards. In order to get an accurate color check, view sample when it has fully cured.
- Concrete should be batched, placed, cured and finished in accordance with ACI (American Concrete Institute) recommended standards.

### Product Application

#### 1. Slump:

- Slump should not be greater than five inches. Slump should be consistent from pour to pour. Mix designs requiring higher slumps should be achieved by using water-reducing or plasticizing admixtures, not by adding water. Adding water will adversely affect the color.

#### 2. For Ready Mixed Application:

- The drum must be cleaned, and approximately two-thirds of the mix water and one-half of the aggregates needed should be added to the drum. The proper combination of disintegrating bags - INNOTECH INTEGRAL COLOR - SG GRANULAR color should be added to the drum and allowed to mix at a full charging speed for three- to five-minutes or until bags break apart and pigment is distributed evenly.
- Add the remaining ingredients (water, aggregates, cement and admixtures) and mix at a full charging speed for 8-10 minutes (80-100 revolutions). It is the ready mixed supplier's responsibility to make sure bags have fully disintegrated. Failure to follow instructions can result in bags not fully disintegrating.

#### 3. For Central or Premixed Batch Plants:

- After one-half of the total batch has been added to the ready mixed drum, the proper combination of disintegrating bags - INNOTECH INTEGRAL COLOR - SG GRANULAR color should be added. Drum should be allowed to mix at a full charging speed for three to five minutes.
- Add the remainder of the batch to the drum and agitate at full charging speed until the INNOTECH INTEGRAL COLOR - SG GRANULAR color is completely dispersed throughout the mix—about 8-10 minutes (80-100 revolutions). It is the ready mixed supplier's responsibility to make sure bags have fully disintegrated. Failure to follow instructions can result in bags not fully disintegrating.

#### 4. For Jobsite Loading of Integral Colors:

- When applying INNOTECH INTEGRAL COLOR - SG GRANULAR color at the jobsite, it is highly recommended to open the bag or container, and pour pigment directly into the drum, then discard the bag/container. Failure to do so may result in improper dispersion which leads to inconsistent color.
- Once pigment has been added, no additional water may be added.

#### 5. Bag Disintegration:

- The type of aggregate, mix design and water content may affect disintegration of bags. Mixing times and procedures are based on best practices.
- Mixing times and procedures may vary by region depending on factors mentioned previously (aggregate type, etc.). Before discharging the mix, ready mixed supplier should monitor mix inside the drum to determine that the bags have broken down completely.

#### 6. For Vertical Applications:

- All forms should be cleaned thoroughly prior to use or reuse, and applied release agents should be nonstaining. For best results, forms should be free of cement laitance from any prior concrete pour of a different color. For color uniformity, methods and material used in preparing the forms should be consistent through the completion of the job. To achieve more uniform color, forms should be stripped when the concrete is the same age. Lightly sandblasting vertical surfaces is recommended to remove minor form marks and any cement laitance resulting from water, cement and coloring agents bleeding toward the forms during concrete placement.

#### 7. For fiber-reinforced concrete:

- Fibers should be added after INNOTECH INTEGRAL COLOR - SG GRANULAR color has been dispersed.

#### 8. For sand-blasted horizontal surfaces, exposed aggregate (3/8-inch-size pea gravel) finishes, or typical 3/8-inch-size pea gravel mixes:

- Open INNOTECH INTEGRAL COLOR - SG GRANULAR color and empty entire bag or container of color into drum to ensure proper dispersion (then discard the bag/container).

#### 9. Other product application notes:

- Concrete should be cured in accordance with ACI standards. INNOTECH offers a variety of curing agents that adhere to ASTM C 309 standards for curing architectural concrete. The use of INNOTECH CURE & SEAL SB<sup>+</sup> (ASTM C 309 and ASTM C 1315) is recommended for curing new colored architectural concrete flatwork.
- Proper curing, along with maintaining a low slump and protecting the surface against water penetration, reduces the possibility of efflorescence. If efflorescence does occur, wait until concrete has fully cured and remove efflorescence using INNOTECH CON-CLEAN<sup>+</sup>. This is a concentrate and must be diluted before use. Dilute as follows:
  - a) Use one-part INNOTECH CON-CLEAN<sup>+</sup> with 20-parts water.
  - b) OR use six ounces of INNOTECH CON-CLEAN<sup>+</sup> per gallon of water.

### Additional Considerations For Installers Using INNOTECH INTEGRAL COLOR - SG GRANULAR

- Good basic concrete placement procedures are vital to the success of any job where integrally colored concrete is being used.
- Place concrete on damp yet well-drained substrate that has been thoroughly compacted.
- Being careful not to overwork the material, tamp and/or vibrate the concrete, screed, then wood-float to finished grade.
- Provide adequate and uniform texture for appearance and slip resistance.

- Finish edges first, and finish all surfaces within the same approximate time frame. Care should be taken not to trowel-burn edges.
- In the event a curing compound cannot be used, the use of a non-wrinkled, non-staining kraft curing paper may be considered. Use according to manufacturer instructions.
- Do not place concrete over mud, ice, frost or freestanding water.
- Do not add water to partially discharged loads, and do not allow slump to vary from batch to batch. Ensure slump remains consistent and does not exceed five inches.

## To Cure and Seal Colored Concrete

**Practice proper curing procedures.** Lack of proper curing is the number one reason for inconsistent concrete color.

- For curing concrete colored with INNOTECH INTEGRAL COLOR - SG GRANULAR color, choose an INNOTECH cure appropriate to the project requirements: INNOTECH CURE & SEAL SB+ (gloss or matte). INNOTECH CURE & SEAL SB+ conforms to ASTM C 309 and ASTM C 1315.
- If further protection is needed or a curing compound cannot be used, the use of a non-wrinkled, non-staining kraft curing paper may be considered. Use according to manufacturer instructions.
- For sealing concrete, choose from a variety of INNOTECH water-based and solvent-based sealers appropriate to project requirements: Please reference the "INNOTECH SEALER AND MAINTENANCE PRODUCT GUIDE" to determine the correct sealer for a specific application.

## Maintenance

- Maintenance will vary depending on a number of factors, including volume and intensity of traffic, geographic location, ultraviolet light exposure and weather conditions.
- A routine maintenance schedule for all colored concrete is strongly recommended so that surfaces maintain a desired appearance. Colored concrete installations should be inspected, cleaned and resealed every 18-36 months, or as required by traffic volume and intensity.
- INNOTECH offers a complete range of sealers to enhance and finish INNOTECH INTEGRAL COLOR - SG Granular color, please refer to the "INNOTECH SEALER AND MAINTENANCE PRODUCT GUIDE" to determine the correct sealer for the specific application.

## Product Limitations

INNOTECH has found that certain iron oxide pigment colors can cause self-leveling overlays to cure improperly, or set prematurely. It is not perfectly clear why these issues occur, so INNOTECH cannot guarantee the results or performance of self-leveling overlays using this product. Contact the manufacturer of the self-leveling material for coloring and dosage rate information. **Always create mock up samples and perform strength tests prior to project application.**

- Inconsistencies in jobsite conditions, concrete mix design, slump, curing methods, finishing practices, and sealers may produce variations in the color of the finished product.
- Integrally colored concrete tends to be limited to earth tone colors rather than lighter, more pastel colors and is not as brilliant as color-hardened surfaces.

## Applicable Standards

- INNOTECH INTEGRAL COLOR - SG GRANULAR color pigments meet or exceed ASTM C 979.
- INNOTECH INTEGRAL COLOR - SG GRANULAR color meets requirements of the Uniform Building Code.
- INNOTECH should be contacted about approvals in specific jurisdictions. Professional concreting standards and practices, including those published by the American Concrete Institute (ACI), the Portland Cement Association (PCA) and the National Ready Mixed Concrete Association (NRMCA), should be followed.

## Available Packaging

INNOTECH INTEGRAL COLOR - SG GRANULAR color is packaged for clean handling and fast batching and easy installation.

- **Disintegrating Bags:**
  - 1 bag, 1 yard
  - Custom packaging available upon request.

## Product Shelf Life/Storage

INNOTECH INTEGRAL COLOR - SG GRANULAR color should be stored indoors and away from moisture (liquid) and any significant shifts in temperature. Shelf life: 2 years.

## Product Handling

Prior to using INNOTECH INTEGRAL COLOR - SG GRANULAR color, please reference the corresponding Safety Data Sheet (SDS) to ensure safe handling.

## Product Specifications


For specification assistance for INNOTECH INTEGRAL COLOR - SG GRANULAR color and other INNOTECH products, please contact INNOTECH.

## Product Warranty

INNOTECH INTEGRAL COLOR - SG GRANULAR color is a proprietary product, warranted to be of uniform quality within our stringent manufacturing tolerances. As no control is exercised over the product use, no warranty is made as to the effects of such use (neither expressed nor implied). Obligation of the seller and manufacturer under this warranty shall be limited to a refund of the purchase price of that portion of the material proven to be defective. The user assumes all other risk and liability resulting from uses of this product.

**†PLEASE REFER TO THE CORRESPONDING TECHNICAL BULLETIN FOR PRODUCT AND APPLICATION DATA.**

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