

# MasterColor<sup>®</sup>

## Inorganic powder pigments for concrete coloring

### Features

MasterColor is an inorganic powder pigments widely used in the concrete coloring, paintings, and printing inks.

MasterColor is used in the production of durable color-conditioned concrete as part of an engineered system of products for colored architectural concrete.

### Application

Recommended for use in:

- Integrally colored architectural concrete
- Imprinted concrete
- Ready mixed concrete
- Precast concrete
- Pervious Concrete
- Self-Consolidating Concrete

### Benefits:

- Beautiful, long-lasting integrally colored concrete
- Enhanced finishing characteristics
- Excellent color accuracy
- Batch-to-batch color consistency and verifiable color batching results
- Increased plant productivity and reduced labor
- Clean and simple
- Faster dispersion into concrete
- Complete system of products for high quality installations

### Typical Properties:

- Density: 3.85 – 4.15 at 22 °C
- Melting point: 350-400°C
- Solubility: Insoluble in water and alcohols, soluble in acids.
- Stability: Set off crystallized water above 150°C,

- Oil absorption: 25-35 ml/100g
- Volatiles at 105°C: 1.0% max.
- Residue of 325 mesh: 0.3% max.
- Water soluble: 0.3% max.

### Guidelines for use:

#### General:

Due to the graying effect of most cements, there are some custom colors that can only be produced using very light or white cements. Variations in water content, cement type, color variations in cementitious materials or aggregates, finish texture, timing of operations, curing or forming methods, release agents or surface treatments may produce distinct, though in many cases slight, variations in final color. All standard color matches are completed using a medium shade of Portland cement.

#### Dosage:

Optimum dosage of MasterColor should be determined in trial mixes.

#### Mixing:

The coloring pigments are dispensed prior to or while loading concrete.

For best results add the coloring pigments prior to concrete. For post addition, mix a minimum of 4-5 minutes at mixing speed to assure uniformity.

For best results, truck or mixer should be clean and pre-wet with no standing water. A

minimum batch size equal to 1/3 of the mixer capacity should be used as a guideline for efficient mixing.

Keeping the addition order, mixing time, materials and water cement ratio constant between multiple batches is critical for color consistency.

***Adding Value to Concrete***

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### Concrete placement and finishing:

Final color and textures should be pre-approved with a cured jobsite mock up. As with all concrete, slabs on ground shall be placed over properly compacted and prepared sub grade. Spade formed edges and consolidate and strike off surface as normal. Care should be taken to avoid over vibration, over-working and over-finishing, etc. that might cause excessive bleeding.

Trowelling or broom-finishing Color-Conditioned Concrete should be performed in the same direction to maintain uniform appearance. Do not add additional water to the concrete either by retempering or by adding water to the surface during the finishing process. MasterColor® pigments are part of an engineered systems approach, which includes curing and sealing compounds and other accessory products available through Master Builders Solutions Construction Chemical Company

### Curing:

Proper curing of Color-Conditioned Concrete is required to enhance the depth of color, provide a more uniformly colored concrete, and provide surface protection.

Compatible curing and sealing materials manufactured by Master Builders Solutions are recommended. MASTERKURE 111 CF, MASTERCURE 194 and MASTERTOP 455 Sealer are color-matched. MASTERKURE 194 & MASTERKURE 102 complies with ASTM C 309 Liquid Membrane-Forming Compounds for Curing Concrete. MASTERKURE 111CF is an evaporation reducer that helps produce high quality concrete flatwork and reduces surface moisture evaporation. Because MASTRKURE 111 CF MASTERKURE 111CF is an evaporation reducer that helps produce high quality concrete flatwork and reduces surface moisture evaporation. Because MASTRKURE 111 CF retards evaporation, it is especially effective in combating rapid drying conditions

### **Adding Value to Concrete**

including, high concrete and/or ambient temperatures, low humidity, high winds, direct sunlight or work in heated interiors during cold weather, etc.

MASTERKURE 194 is used for horizontal surfaces, the MASTERKURE 194 should be applied as soon as the initial surface sheen has disappeared from the concrete face. In the case of formed concrete, the product should be applied immediately on removal of the formwork. Remaining MASTERKURE 194 films have to be removed prior to application of any subsequent treatment. Protect treated areas from rain for at least 2 hours after application.

### Product Notes:

#### **Corrosivity – Non-Chloride, Non-Corrosive:**

MasterColor coloring pigments will neither initiate nor promote corrosion of reinforcing steel embedded in concrete. No calcium chloride or chloride-based ingredients are used in the manufacture of these products. Complete safety information can be found on the Material Safety Data Sheets.

#### **Compatibility:**

MasterColor coloring pigments are compatible with most admixtures used in the production of quality concrete. Mineral additives may affect color and should be checked for potential adjustments. All other admixtures should be dispensed into the concrete separately. The use of calcium chloride accelerators are not recommended in Color-Conditioned Concrete. Final color and texture should be verified with a cured jobsite mock-up

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## Storage & Handling:

### Storage Temperature:

MasterColor coloring pigments should be stored between 40-100 °F (4-38 °C). Store under cover, away from flames, out of direct sunlight and protect from extremes of temperature. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice, consult Master Builders Solutions 's Technical Services Department.

### Shelf Life:

MasterColor coloring pigments have a minimum shelf life of 12 months if properly stored (see handling and storage requirements above).

### Packaging:

MasterColor coloring pigments are available in 25kgs PP woven bag or Kraft bags, un-palletized or 25kgs bags, 24bags per pallet, shrink-wrapped or in 600kgs PP woven jumbo bag, palletized.

## Safety Precautions

As with all chemical products, care should be taken, during use and storage, to avoid contact with eyes, mouth, skin and foodstuffs. Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Re-seal containers after use. Use in well-ventilated areas and avoid inhalation. For further information, refer to the material safety data sheet.

## Note:

Field service, where provided, does not constitute supervisory responsibility. For additional information, contact your local Master Builders Solutions representative. Master Builders Solutions reserves the right to have the true cause of any difficulty determined by accepted test methods.

## Quality Statement

All products manufactured by Master Builders Solutions Egypt, or imported from Master Builders Solutions affiliate companies world-wide, are manufactured to procedures certified to conform to the quality, environment, health

safety management systems described in the ISO 9001:2015, ISO 14001:2015 & OHSAS 18001:2007 standards.

\* Properties listed are based on laboratory controlled tests.

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