

MasterColor[®] 1

Inorganic powder pigments for concrete coloring

DESCRIPTION

MasterColor 1 are powdered coloring pigments for cementitious systems.

MasterColor 1 complies to BS 1014.

FEATURES

MasterColor 1 is used in the production of durable color-conditioned concrete as part of an engineered system of products for colored architectural concrete.

TYPICAL APPLICATIONS

Recommended for use in:

- Integrally colored architectural concrete
- Imprinted concrete
- Ready mixed concrete
- Precast concrete
- Pervious concrete
- Self-consolidating concrete

ADVANTAGES

- 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

PACKAGING

MasterColor 1 coloring pigments are available in 25kg bags.

TYPICAL PROPERTIES*

Density	3.85-4.15 @ 22°C
Melting point	350-400°C
Solubility	Insoluble in water and alcohols, soluble in acids
Stability	Set off crystallised water 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.

APPLICATION GUIDELINES

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.

Optimum dosage of **MasterColor 1** 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.

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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 1 pigments are part of an engineered systems approach, which includes curing and sealing compounds and other accessory products available through Master Builders Solutions.

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, **MasterKure 106**, **MasterKure 107** and **MasterKure 181** comply 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 **MasterKure 111CF** retards evaporation it is especially effective in combating rapid drying conditions including, high concrete and/or ambient temperatures, low humidity, high winds, direct sunlight or work in heated interiors during cold weather, etc.

MasterKure products used for horizontal surfaces should be applied as soon as the initial surface sheen has disappeared from the concrete face.

The exception to this is **MasterKure 111CF** evaporation retarder which can be applied as soon as the concrete has been finished. In the case of formed concrete, the product should be applied immediately on removal of the formwork.

Remaining **MasterKure** films (except **MasterKure 181**) have to be removed prior to application of any subsequent treatment.

PRODUCT NOTES

Corrosivity – Non-Chloride, Non-Corrosive:

MasterColor 1 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 1 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.

STORAGE AND SHELF LIFE

MasterColor 1 coloring pigments should be stored at temperatures between 4°C to 55°C.

Store under cover out of direct sunlight and away from sources of flame.

MasterColor 1 coloring pigments have a minimum shelf life of 12 months if stored as above.

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 Technical Services Department.

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HEALTH AND SAFETY

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.

QUALITY AND CARE

All products originating from Master Builders Solutions Dubai, UAE facility are manufactured under a management system independently certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001 and ISO 14001.

* Properties listed are based on laboratory controlled tests.

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STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this Master Builders Solutions publication are based on the present state of our best scientific and practical knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by law. The user is responsible for checking the suitability of products for their intended use.

NOTE

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