

SECTION 03355  
COLORCRON®

Mineral aggregate, colored dry shake surface hardener

NOTE TO SPECIFIERS

The purpose of this suggested specification is to assist the specifier while developing a specification for the use of Master Builders COLORCRON®. This specification has been prepared to be part of a complete project specification. It has not been prepared to be a "stand alone" item. This document is not intended to be copied directly into project specifications.

PART 1 - GENERAL

1.01 Related Documents

- A. Drawings and general provision of the Contract, including General and Supplementary Conditions, apply to this Section.
- B. Provisions of Section 03300, Cast-In-Place Concrete, apply to this Section.

1.02 Summary

- A. This Section specifies a pre-mixed, ready-to-use, mineral aggregate surface hardener with high, light reflectivity for impact-resistant floors; proportioned, mixed, and packaged at the factory.
- B. This product is composed of processed mineral aggregates, cementitious binders, plasticizers, water-reducing admixtures, and other proprietary ingredients.

1.03 References

ACI 301-89	Specification for Structural Concrete for Buildings
ACI 302-R-89	Guide for Concrete Floor and Slab Construction
ACI 304 R-89	Guide for Measuring, Mixing, Transporting and Placing Concrete
ACI 305 R-91	Hot Weather Concreting
ACI 306 R-89	Cold Weather Concreting
ASTM C 309-89	Specification for Liquid Membrane-Forming Compounds for Curing Concrete

1.04 Quality Assurance

- A. Job Mock-Up: In a location designated by the Architect/Engineer, place a minimum 100 ft<sup>2</sup> (10 m<sup>2</sup>) floor mock-up using materials and procedures as directed by the Architect/Engineer to obtain acceptable finish surface.
  - 1. Maintain the same controls and procedures used in the acceptable mock-up throughout the project.

1.04 Quality Assurance, continued

- B. Field Support: During job mock-up and initial period of installation, the manufacturer of the surface hardener will provide the service of a trained, full-time employee to aid in securing proper use of the product.

1. Notify surface hardener manufacturer at least three days prior to initial use of the product.

- C. Installer Qualifications: Engage an experienced installer who has specialized in the application of floor finishes similar to that required for this project.

PART 2 - PRODUCTS

2.01 Materials

- A. Concrete: Provide concrete materials complying with requirements of Section 03300.

- B. Surface Hardener: "COLORCRON®", manufactured by Master Builders, Inc.

1. Apply surface hardener at the rate of 1.0 to 2.0 lbs/ft<sup>2</sup> (4.9 to 9.8 kg/m<sup>2</sup>).

- C. Curing Compound: One of the following; "MASTERKURE®", MASTERKURE® 100W, MASTERKURE® 200W or MASTERKURE® CR" as manufactured by Master Builders, Inc.

- D. Joint Filler: MASTERFILL® 300 manufactured by Master Builders, Inc.

PART 3 - EXECUTION

3.01 Concrete Placement

- A. Section 03300, Cast-In-Place Concrete, specifies basic concrete materials and placement requirements.

- B. Where heavy-duty or extra heavy-duty concrete floors are scheduled, provide concrete with the following additional requirements:

1. Maximum slump of 4" (102 mm).
2. Do not apply over concrete containing more than 3% air content when tested by ASTM C173 or ASTM C231 procedures.
3. Do not use calcium chloride or set-accelerating admixtures containing calcium chloride.
4. Do not use admixtures that increase bleeding.

**3.02 Application of Surface Hardener**

- A. Place and integrate 2/3 of the total amount in the first application and the remaining 1/3 on the second application. The use of a mechanical spreader is recommended.
- B. After the concrete has been leveled and as soon as the concrete will support an operator and machine, float the surface of the slab with a mechanical float fitted with float shoes. Once the shake has absorbed sufficient moisture (indicated by the darkening of the shake), float the surface. Immediately apply the remaining 1/3 of the shake and allow to absorb moisture.
- C. Use finishing machines with detachable float shoes. Compact surface by a third mechanical floating if time and setting characteristics of the concrete will allow. Do not add water to the surface.

3.02 Application of Surface Hardener, continued

- D. As surface further stiffens, indicated by loss of sheen, hand or mechanically trowel with blades set relatively flat. Remove all marks and pinholes in the final raised trowel operation.

3.03 Curing and Protection

- A. Cure finished floors using film-forming curing compound recommended by surface hardener manufacturer. Uniformly apply curing compound over the entire surface at a coverage that will provide moisture retention in excess of the requirements of ASTM C 309. Maintain ambient temperature of 50 °F (10°C) or above during the curing period.

3.04 Joint Filling

- A. After a minimum of 90 days, apply a semi-rigid epoxy joint filler in all control and saw cut construction joints. Place joint filler in a method complying with manufacturer's instructions.

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