

GUIDE SPECIFICATION

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SECTION 03362

APPLIED CONCRETE FINISHES - DRY SHAKE COLORED HARDENER

This guide specification has been prepared by QC Construction Products, in printed and electronic media, as an aid to specifiers in preparing written construction documents for colored concrete floors using a dry shake-on hardener/colorant and optional imprinting with stamping tools if a pattern is desired other than what is imparted by tooling and/or saw cutting.

Edit entire master to suit project requirements. Modify or add items as necessary. Delete items, which are not applicable. Words and sentences within brackets [_____] reflect a choice to be made regarding inclusion or exclusion of a particular item or statement. Where a bracket follows a value, word, or phrase, the preferred value, word or phrase occurs first, with the other choices following inside the brackets. This section may include performance, proprietary and descriptive type specifications. Edit to avoid conflicting requirements.

This guide specification is written around the Construction Specifications Institute (CSI), Section Format standards references to section names and numbers are based on MasterFormat 95.

For specification assistance on specific product applications, please contact our offices above or any of our local product representatives throughout the country. Additional technical information is available in our CSI formatted Product Information Bulletins.

QC Construction Products reserves the right to modify these guide specifications at any time. Updates to this guide specification will be posted to the manufacturer's web site and/or in printed matter as they occur. QC Construction Products makes no expressed or implied warranties regarding content, errors, or omissions in the information presented.

PART 1 GENERAL

1.1 SUMMARY

- A. Provisions established within the General and Supplementary Conditions of the Contract, Division 1 - General Requirements, and the Drawings are collectively applicable to this Section.

1.2 SECTION INCLUDES

Edit the "Section Includes" paragraph to briefly describe the content of the section. After editing section, refer back to this paragraph to verify no conflicts occur.

- A. Concrete floors colored using a dry shake-on colored hardener.
- B. Curing and sealing.

1.3 RELATED SECTIONS

Sections paragraph below to suit project requirements; Delete sections that will not be used.

- A. Section 07920 - Joint Sealant: Sealant for joints.

1.4 QUALITY ASSURANCE

Include quality assurance requirements below, which are consistent with the size and scope of the project and extent of work of this section. Only request qualification statements you intend to review, and which are necessary to establish qualifications of the product, manufacturer, or installer.

- A. Perform work in accordance with ACI 301, 302 and 304.
- B. Obtain materials from same source throughout the entire process.
- C. Applicator Qualifications: Performed by firm with 3 years minimum experience in application of sealer required for Project.

1.5 SUBMITTALS

Include submittal requirements below, which are consistent with the scope of the project and extent of work of this section. Only request submittals, which are necessary for review of design intent.

Do not request submittals if drawings sufficiently describe the products of this section or if proprietary specifying techniques are used. The review of submittals increases the possibility of unintended variations to drawings.

- A. Submit product data under provisions of Section 01300.
- B. Include data on joint filler, admixtures and curing compounds.
- C. Submit manufacturer's instructions under provisions of Section 01300.
- D. Provide field samples of surface colors [, textures] [, and patterns] specified for architect approval prior to beginning work, 48 x 48 inch in size illustrating floor finishes.

1.6 ENVIRONMENTAL REQUIREMENTS

- A. Do not place pavement when base surface or ambient temperature is less than 40 degrees F, or if base surface is wet or frozen.
- B. Provide mechanical ventilation during and after application to dissipate fumes if natural ventilation is insufficient.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Comply with requirements of Section 01600.
- B. Store products above 50EF, but no greater than 85EF, unless otherwise recommended by manufacturer.

1.8 SEQUENCING AND SCHEDULING

- A. Schedule application of products at proper time intervals after concrete finishing and curing operations.
- B. Maintain proper moisture content of concrete before, during, and after application of specified products.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Concrete Formwork: Refer to Section 03100.
- B. Concrete Reinforcement: Refer to Section 03200.
- C. Concrete Materials and Mixes: Refer to Section 03300.
- D. Dry Shake-On Colorant/Hardener:
 - 1. Blend of portland cement, graded hard aggregates, non-fading synthetic oxide pigments, and plasticizers.
 - 2. Color as selected by Architect from manufacturer's standard range. [Custom color as selected by Architect.]
 - 3. Acceptable products and manufacturers: QC Color Hardener by QC Construction Products.

Select B.1 below for color coordinated curing on concrete that will be regularly maintained and recoated; select B.2 below for concrete which will be allowed to weather naturally; B.3 below is the same as B.2, but is a lower gloss version.

- E. Curing Compound: Meeting ASTM C309, water-based emulsion, and as follows:
 - 1. [QC Color Cure by QC Construction Products.]
 - 2. [QC Clear Cure by QC Construction Products.]

QC Construction Products has a broad line of concrete sealers to enhance the beauty of stained concrete and minimize the damaging effects of petroleum based contaminants and overall effect of weathering. Refer to manufacturer's product usage recommendations. Contact manufacturer for suggested maintenance coatings for periodic renewal of finish. The following is a brief description of each:

QC Ultra Seal or Solvent Seal VOC III: Solvent based, non-yellowing, penetrating sealer, to protect against dusting, staining, and dirt.

QC Solvent Seal 18 or 27: Same as above, but does not comply with some VOC regulations.

QC Cemseal: Water based, 100% acrylic emulsion, with excellent resistance to penetration of oil, gas, and water.

- F. Sealing and Finish Coatings:
 - 1. [QC Ultra Seal by QC Construction Products.]
 - 2. [QC Solvent Seal VOC III by QC Construction Products.]
 - 3. [QC Solvent Seal 18 or 27 by QC Construction Products.]
 - 4. [QC Cemseal by QC Construction Products.]
- G. [Imprinting Tools and Accessories]:
 - 1. Mat type imprinting tools for texturing freshly placed concrete, in [running bond brick] [cobblestone] [flagstone] [weathered wood] [quarried stone] [_____] [custom pattern/texture as selected by Architect.]
 - 2. Release powder, composed of a dry blend of chemical powders and color pigments, designed to provide clean release of texturing tools and mats, provided in [same] [contrasting] color as primary concrete color selected, equal to QC Release Powder by QC Constructions.]]
- H. Form release agent: As acceptable to concrete colorant manufacturer, non-staining, dissipative type.
- I. Vapor Retarding Membrane: [6] [10] mil [reinforced] polyethylene.]

2.2 JOINT FILLERS

Select one or more of the following joint fillers. "A" is used where an architectural statement needs to be made. "B" is used as backing for joint filler specified either below or in Section 07920.

- A. Redwood Boards: Construction hard grade redwood, sound and free of checks, splits or other defects, [3/4] 1-1/2] inch thick.
- B. Non-Asphaltic Joint Fillers: ASTM D1752, Type I.

Select D.1 for applications where puncture resistance of horizontal joints is not a requirement. Select D.2 for areas where a shore A modulus of 40 is desirable for horizontal joints subject to frequent foot traffic.

- C. Sealants: Two part polyurethane sealants, of grade as required to suit application, meeting ASTM C920, in manufacturer's [standard] [custom] colors, and as follows:
 - 1. Urethane, SL grade, as specified in Section 07920.
 - 2. Urethane, SL-TB grade as specified in Section 07920

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine conditions and proceed with Work in accordance with Section 01400.
- B. Verify that surfaces are clean, dry, dust free, and free of efflorescence, oil or other matter detrimental to colorant application.

3.2 PREPARATION

- A. Prepare surfaces in accordance with manufacturer's directions.
- B. Provide protection as necessary to protect adjacent materials and surfaces from dirt, dust, spillage, overspray and other surface or physical damage.

3.3 APPLICATION

- A. Place concrete floors in accordance with ACI 301 and 302 and Section 03330.
- B. Uniformly spread, screed, and float concrete. Do not use grate tampers or mesh rollers. Do not spread concrete by vibration.
- C. Provide finishes to match approved samples at locations indicated.
- D. Apply materials in accordance with manufacturer's printed instructions.
- E. Dry Shake Finish:
 - 1. Apply materials at the recommended following rates unless a greater amount is recommended by manufacturer.
 - a) Apply QC Color Hardener at a rate of 60-120 pounds per 100 sq/ft (depending on color selected).
 - 2. Immediately following initial floating operation, uniformly distribute approximately 2/3 of required material over concrete surface and embed by means of bull floating. Follow floating operation with second shake application, uniformly distributing remainder of material at right angles to previous application, and embed by bull floating.
 - 3. After completion of broadcasting and floating, apply trowel finish. [Avoid embedding non-slip aggregate completely below surface.]
- F. [While concrete is still in its plastic state, apply the tool/texture pattern to the surface of the concrete. Properly tamp tools into the surface to achieve the required texture, with uniformity of pattern and depth of stamping. Utilize bond breaker to keep tools from sticking to fresh concrete.]
- G. After consolidating and screeding, float concrete to gradients indicated. Use a straight edge to level and test surface in longitudinal direction to required grade. Finish edges to provide a smooth

dense surface with 1/8" radius.

- H. Place curing compound on exposed concrete surfaces immediately after finishing. Apply in accordance with manufacturer's instructions.
- I. [Apply chemical stain only after concrete has cured a minimum of 30 days and only after curing compound has dissipated to the extent that water spray on the surface of the concrete uniformly darkens the surface. Apply in number of coats and at application rates as required to match approved sample.]

Specify tolerances consistent with the type of construction and Owner requirements.

3.4 TOLERANCES.

- A. Maintain surface flatness to ACI 302 of Ff[___] and levelness of Fl[___]. Test flatness and levelness in accordance with ASTM E-1155.
- B. In areas of floor drains, maintain floor level at walls and slope surface uniformly to drains at 1/8-1/4 inch per foot.

END OF SECTION