

RetroPlate Special Concrete Floor Finishes With Colored Dye Specification

PART 1- GENERAL

1.1 SUMMARY

- A. This section includes the following.
 - 1. Acid base concrete stain floor color.
 - 2. Applying Sealer and Hardener, and polishing concrete to specified finish level.
- B. Related Work:
 - 1. Section 03300 Cast-In-Place Concrete
 - 2. Section 09639 Concrete Hardening/Sealing

1.2 REFERENCES

- A. American Society for Testing and Materials:
 - 1. ASTM-C779, Standard Test Method for Abrasion Resistance of Horizontal Concrete Surfaces
 - 2. ASTM C805, Impact Strength
 - 3. ASTM G23-81, Ultraviolet Light & Water Spray
 - 4. ASTM 1028, Co-Efficient of Friction
- B. American Concrete Institute
 - 1. ACI 302. 1R-89, Guide for Concrete Floor and Slab Construction
- C. Other Test:
 - 1. Reflectivity

1.3 SUBMITTALS

- A. Comply with pertinent provisions of Section 01600- Product Requirements.
 - 1. Provide submittal information within 35 calendar days after the contractor has received the owner's notice to proceed.
- B. Product data:
 - 1. Submit special concrete finishes manufacturer's specifications, test data and other data required for each type of manufactured material and product indicated.
 - 2. Submit special concrete finishes describing products to be provided, giving manufacturer's name, product name, and product line number for the specified material proposed to be provided under this section.
 - 3. Submit special concrete finishes manufacturer's recommended

installation procedures; which when approved by the Architect, will become the basis for accepting or rejecting actual installation procedures used on the work.

4. Submit special concrete finishes technical data sheet giving descriptive data, curing time, and application requirements. Provide material analysis and generic type.
5. Submit special concrete finishes manufacturer's Material Safety Data Sheet (MSDS) and other safety requirements.
6. Follow all special concrete finishes published manufacturer's installation instructions.

- C. Provide certified test reports, prepared by an independent testing laboratory, confirming compliance with specified performance criteria.

1.4 QUALITY ASSURANCE

A. Installer Qualifications:

1. Use an experienced installer and adequate number of skilled workmen who are thoroughly trained and experienced in the necessary craft.
2. The special concrete finish manufacturer for each specified material and process shall certify applicator.
3. Applicator shall be familiar with the specified requirements and the methods needed for proper performance of work of this section.

B. Manufacturer's Certification:

1. Provide letter of certification from concrete finish manufacturer or specialized applicator stating that installer is certified applicator of special concrete finishes, and is familiar with proper procedures and installation requirements required by the manufacturer.

C. Mock-ups:

1. Apply mock-ups of each type finish, to demonstrate typical joints, surface finish, color variation (if any), and standard of workmanship.
 - a. Build mock-ups approximately 50 square feet in the location indicated or if not indicated, as directed by the Architect or Owner Representative.
 - b. Notify Architect or Owner Representative seven days in advance of dates and times when mock-ups will be constructed.
 - c. Obtain from the Architect or Owner Representative approval of mock-ups before starting construction.
 - d. If the Architect or Owner Representative determines that mock-ups do not meet requirements, demolish and remove them from the site and cast others until mock-ups are approved.
 - e. Maintain mock-ups during construction in an undisturbed condition as a standard for judging the completed work.
 - f. Approved mock-ups may become part of the completed work if undisturbed at time of substantial completion.

D. Protection

1. No satisfactory chemical or cleaning procedure is available to remove petroleum stains from the concrete surface. Prevention is therefore essential.
 - a. All hydraulic powered equipment must be diapered to avoid staining of the concrete.
 - b. No trade will park vehicles on the inside slab. If necessary to complete their scope of work, drop cloths will be placed under vehicles at all times.
 - c. No pipe cutting machine will be used on the inside floor slab.
 - d. Steel will not be placed on interior slab to avoid rust staining.

E. Pre-Installation Conference:

1. Conduct conference at project site to comply with requirements in Division 1 Section “ Project Management and Coordination”

1.5 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in original packages and containers, with seal's unbroken, bearing manufacturer labels indicating brand name and directions for storage, mixing with other components, and application.
- B. Store materials to comply with manufacturer's written instructions to prevent deterioration from moisture or other detrimental effects.
- C. Dispense special concrete finish material from factory numbered and sealed containers. Maintain record of container numbers.

1.6 PROJECT CONDITIONS

A. Environmental limitations:

1. Comply with manufacturers written instructions for substrate temperature and moisture content, ambient temperature and humidity, ventilation, and other conditions affecting topping performance.
 - a. Concrete must be cured a minimum of 45 days or as directed by the manufacturer before application of Retro-Plate can begin.
 - b. Application of Retro-Plate shall take place 10 days prior to installation of equipment and substantial completion, thus providing a complete, uninhibited concrete slab for application.

- B. Close areas to traffic during floor application and after application, for time period recommended in writing by manufacturer.

PART 2 – PRODUCTS

2.1 MATERIALS AND MANUFACTURERS

A. Color Dye

1. Retro-Plate AmeriPolish Dyes. No substitutions as distributed by the Righter Group, Inc., Wilmington, MA (800) 848-4841.

B. Concrete Stabilizer

1. Retro-Plate 99, manufactured by Advanced Floor Products, Inc., P.O. Box 50533, Provo, Utah 84605, 801-812-3420. Approved equals by Tnemec or Curecrete Distribution.
2. No substitutes will be considered, unless they meet performance of ASTM's listed herein.

a. Performance Criteria:

- i. Abrasion Resistance: ASTM C779 – Up to 400% increase in abrasion resistance.
- ii. Impact Strength: ASTM C805 – 21% increase impact strength.
- iii. Ultra Violet Light and Water Spray: ASTM G23-81 – No adverse effect to ultra violet and water spray.
- iv. Co-efficient of Friction: ASTM 1028 – all levels of finish (up to 800 grit) exceed OSHA and ADA recommendations.
- v. Reflectivity: 30% increase in reflectivity.

3. Certified Applicators

4. Manufacturer's Regional Representative

5. RetroGuard by AFP-Anti-Stain Sealant shall be applied as the final sealer for immediate stain resistance. Apply at 500 square feet per gallon.

2.2 RELATED MATERIALS

A. Neutralizing Agent:

1. Tri-sodium Phosphate

B. Water:

1. Potable

PART 3- EXECUTION

3.1 SURFACE CONDITIONS:

- A. Examine substrate, with installer present, for conditions affecting performance of finish. Correct conditions detrimental to timely and proper work. Do not proceed until unsatisfactory conditions are corrected.

- B. Verify that base slab meet finish and surface profile requirements in Division 3 Section "Cast-In-Place Concrete," and Project Conditions above.
- C. Prior to application, verify that floor surfaces are free of construction latents.

3.2 APPLICATION

- A. Start any of the floor finish applications in presence of manufacturer's technical representative.
- B. Apply concrete floor finish in accordance with manufacturer's instructions.
- C. Stained Concrete Finish.
 - 1. Bring concrete substrate up to 400 grit.
 - 2. Apply acid stain, where indicated, in accordance with stain manufacturer's instructions.
 - 3. Cure stained surface in accordance with manufacturer's instructions.
 - 4. Neutralize stained concrete floor with neutralizing agent, and flush with water.
- D. Sealing, Hardening and Polishing of Concrete Surface.
 - 1. Concrete must be in place a minimum of 45 days or as directed by the manufacturer before application can begin.
 - 2. Application is to take place at least 10 days prior to racking and other in-store accessory installation, thus providing a complete, uninhibited concrete slab for application
 - 3. Only a certified applicator shall apply Retro-Plate 99. Applicable procedures must be followed as recommended by the product manufacturer and as required to match approved test sample.
 - 4. Achieve waterproofing, hardening, dust-proofing, and abrasion resistance of the surface while imparting a sheen.
 - 5. Apply special concrete sealer finish in accordance with sealer manufacturer's instructions.
 - 6. Polish to required sheen levels.
 - 7. V₂ & V₃ Sealer applied after finish polish.

3.3 WORKMANSHIP AND CLEANING:

- A. The premises shall be kept clean and free of debris at all times.
- B. Remove spatter from adjoining surfaces, as necessary.
- C. Repair damages to surface caused by cleaning operations.
- D. Remove debris from jobsite
 - 1. Dispose of materials in separate, closed containers in accordance with local regulations.

3.4 PROTECTION:

- A. Protect finished work until fully cured in accordance with manufacturer's recommendations.

Specifier Note: This product guide specification is written according to the Construction Specifications Institute (CSI) Format, including *Master Format*, *Section Format*, and *Page Format*, contained in the *CSI Manual of Practice*.

The section must be carefully reviewed and edited by the Architect to meet the requirements of the project and local building code. Coordinate this section with other specification sections and the drawings.

Delete all "Specifier Notes" when editing this section.

Specifier Notes: This section covers Retro Plate high-performance coating systems for commercial facilities.

This specification is only a guide listing various coating system options for various environments and should not be used as a final specification. Additional coating systems not listed in this specification are available, and may be more appropriate for your coating application. To finalize this specification, please contact www.rightergroup.com

Many coatings specified contain organic solvents. Consult Righter Group for compliance to local VOC regulations.

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January 2009