

# **Architectural Guide Specifications**

## **Raeco R-50 Stain and Seal**

(Change to meet requirements) SECTION 03550-1  
CEMENTITIOUS FLOOR OVERLAYMENT

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

A. Work includes but not limited to the following:

1. Trowel grade latex modified cementitious overlayment mortar.
2. Ready to use, penetrating, acidic stain to produce permanent, variegated color effects.
3. Ready to use clear sealer to seal and protect the stained overlayment.

**1.02 RELATED SECTIONS**

A. Coordinate related work specified in other areas of the Project Manual, including but not limited to the following:

Section 03300 - Cast-In-Place Concrete

**1.03 REFERENCES**

A. Comply with the requirements of Section 01091 and as listed herein. See Section 01091 for listed association, council, institute, society, and the like organization for its full name and address.

ASTM C-1439 Test Method for Compressive Strength of Hydraulic Cement Mortars. (Using 2 inch or 50 mm Cube Specimens)

ASTM C-190 Test Method for Tensile Strength of Hydraulic Cement Mortars.

ASTM C-256 Test Method for Flexural Strength of Hydraulic Cement Mortars.

**1.04 SYSTEM DESCRIPTION**

A. portland Cement-based, trowel applied, latex modified overlayment to used as a base and leveling coat.

B. portland Cement-based, trowel applied latex modified, fine textured powder to achieve a smooth surface.

C. Acidic, water-based solution of metallic salts that penetrate and react with chemicals in the overlayment to produce insoluble color deposits in the pores.

D. Clear, low gloss to semi-gloss finish sealer to protect stained surface.

**1.05 PERFORMANCE REQUIREMENTS**

A. Resistant to indentation, tightly bonding overlayment.

B. Distinctive colored stain that lightly etches surface and allows deep color penetration.

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**1.06 SUBMITTALS**

A. Submittals in accordance with Sections 01300 and the following:

1. Product Data: Provide completely definitive brochures including specifications, current product literature and other data to prove compliance with specified requirements.
2. Manufacturer's certification that product is cement based having a cement binder content which is a minimum of 80% of total binder as per ASTM C-114.
3. Manufacturer's certification that product specified is suitable for intended use when installed per manufacturer's literature and installation instructions.

**1.07 QUALITY ASSURANCE**

A. Applicator Qualifications: Applicator of concrete floor resurfacing shall be approved by manufacturer. Applicator specializing in performing a stain and seal installation.

B. Regulatory Requirements: See referenced Codes, Ordinances Section 01060

C. Test Areas: At an area on-site, where approved by Engineer, provide a test installation as follows:

1. Size of area shall be 4'x 4'.
2. Test area shall be installed using procedures and under conditions which will reflect actual job site conditions.
3. Test shall be placed and evaluated for a period of 4 days prior to approval by the Engineer.
4. Approval shall deem the test area as the standard by which the remainder of the project shall be compared for the acceptance or rejection.

**1.08 DELIVERY, STORAGE AND HANDLING**

A. In accordance with provisions of Section 01600 and the following: Materials shall be delivered in its original unopened container and protected from contamination, damage or deterioration as per manufacturer's instructions. All damaged products shall be removed from project and discarded as per local requirements.

**1.09 PROJECT SITE CONDITIONS**

A. Environmental Conditions:

1. Maintain enclosed building at minimum of 50 degrees F. before, during and after installation. Provide continuous ventilation and adequate heat to remove moisture, until product has adequately cured.

**1.10 SCHEDULING / SEQUENCING**

A. Coordinate with Engineer's approved Progress Schedule, Section 01310

**PART 2 PRODUCTS**

**2.01 MANUFACTURER**

A. Raeco, Inc. Seattle, Washington Tel. (206) 763-1335 Fax (206) 768-0175 is specified for type, material and quantity required. Contact: Chet Porter

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**2.02 MATERIALS**

- A. Raeco R-50 Cementitious Powder in pre-blended sacks.
- B. Raeco Buttercoat Powder in pre-blended sacks.
- C. R-50 Latex Binder Additive.
- D. Raeco R-2000 Primer, Bonding Agent.
- E. Appropriate Aggregate for thickness' exceeding 1/2". Refer to Product Data Sheet for type and size.
- F. Concrete Stain that is compatible with the Raeco R-50 Overlayment System.
- G. Clear Semi-Gloss, Water-based Sealer.
- H. Technical Data:
  - 1. Trowel grade latex modified overlayment mortar that contains no gypsum chlorides, ferrous metals or corrosive agents.
  - 2. Compressive Strength, 5560 psi @ 28 days, ASTM C-1439  
Tensile Strength, 850 psi @ 28 days, ASTM C-190  
Flexural Strength, 1700 psi @ 28 days, ASTM C-256  
Shear Bond Strength, 650+ psi @ 5 days, (DOW Test Method)  
Flammability, ASTM E84
    - a. Flame Spread 0
    - b. Fuel Contribution 0
    - c. Smoke Development 0
  - 3. Coverage: 50 sq. ft. per sack @ 1/8"

**2.03 MIXING PROPORTIONS**

- A. Mix proportions and methods shall be in accordance with product manufacturer recommendations.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

- A. Verify installation conditions as satisfactory to receive work of this Section. Do not install until unsatisfactory conditions are corrected. Beginning work will constitute your acceptance of conditions as satisfactory.

**3.02 PREPARATION**

- A. Remove all contaminants that would be detrimental to overlayment material bonding to surface.
- B. Cracks in sub-floor shall be repaired prior to installation of the overlayment to prevent telegraphing through the overlayment.
- C. Expansion Joints: Allow joints to continue through the concrete resurfacing material at same width.

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**3.03 APPLICATION**

- A. Primer: Prime sub-floor with specified compound. Priming instruction may vary according to type of substrate, multiple coats may be necessary.
- B. Mix and apply R-50 overlayment base coat in accordance with manufacturer's written directions.
1. Thickness: As required to meet construction conditions. Screed and/or trowel in place to meet tolerances set forth. Minimum 1/4" thick, recommended.
  2. Drying: Provide continuous ventilation and adequate heating to removing moisture from the area until dry. Test for dryness in accordance with manufacturer's directions.
  3. Slope as required to suit conditions of construction.
  4. Sand surface with medium grit sandpaper.
  5. Mix and apply R-50 Latex blended with Raeco Buttercoat Powder in accordance with manufacturer's recommendations.
  6. Sand surface with a fine grit sandpaper and vacuum clean. Apply second coat of R-50 Latex with Buttercoat Powder.
  7. Re-sand surface with fine grit sandpaper and vacuum. Damp mop floor to remove remaining dust.
  8. Apply the concrete stain as per manufacturer's instructions. Two coats may be required to achieve desired color.
  9. Apply two coats of the Semi-Gloss, Water-based Clear Sealer as per manufacturer's instructions.

**3.04 TOLERANCES**

- A. Finished surface tolerances shall be 1/8" using a 10' straight edge, measuring in any direction

**3.05 PROTECTION**

- A. Protect from heavy loads during construction, place temporary cover to area by means to protect from contamination and damage.

END OF SECTION