

**SECTION 03 35 00 - CONCRETE FINISHING****PART 1 - GENERAL****1.1 SUMMARY****A. Section Includes:**

1. Finishing concrete floors and other flat surfaces.
2. Floor surface treatment.

**B. Related Requirements:**

1. Section 03 30 00 - Cast-in-Place Concrete: Prepared concrete floors ready to receive finish; control and formed expansion and contraction joints and joint devices.
2. Section 03 39 00 - Concrete Curing: Procedures for curing horizontal and vertical concrete surfaces.
3. Section 07 90 00 - Joint Protection: Sealants, sealers, and gaskets for sealing joints.

**1.2 REFERENCE STANDARDS****A. American Concrete Institute:**

1. ACI 301 - Specifications for Structural Concrete for Buildings.
2. ACI 302.1 - Guide to Concrete Floor and Slab Construction.

**1.3 COORDINATION**

- A. Section 01 31 13 – Project Coordination: Requirements for coordination.
- B. Coordinate Work of this Section with concrete floor placement and concrete floor curing.

**1.4 SUBMITTALS**

- A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
- B. Product Data: Submit manufacturer information on sealer, curing compounds, slip-resistant treatment, compatibilities, and limitations.
- C. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

- D. Field Quality-Control Submittals: Indicate results of Contractor-furnished tests and inspections.
- E. Qualifications Statements:
  - 1. Submit qualifications for manufacturer and applicator and/or installer if requested by Engineer.

1.5 CLOSEOUT SUBMITTALS

- A. Section 01 77 00 - Closeout Requirements: Requirements for submittals.
- B. Operation and Maintenance Data: Submit information on maintenance renewal of applied coatings - sealers.

1.6 QUALITY ASSURANCE

- A. Perform Work according to ACI 301 and 302.1.

1.7 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum three years' documented experience.
- B. Installer-Applicator: Company specializing in performing Work of this Section with minimum three years' documented experience and approved by manufacturer.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Section 01 61 00 - Product Requirements: Requirements for transporting, handling, storing, and protecting products.
- B. Inspection: Accept materials on Site in manufacturer's original packaging and inspect for damage.
- C. Store materials according to manufacturer instructions.
- D. Protection:
  - 1. Protect materials from moisture and dust by storing in clean, dry location remote from construction operations areas.
  - 2. Provide additional protection according to manufacturer instructions.

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## 1.9 AMBIENT CONDITIONS

- A. Section 01 50 00 - Temporary Facilities and Controls: Requirements for ambient condition control facilities for product storage and installation.
- B. Temporary Lighting:
  - 1. Light Source: Minimum 50 foot candles at floor surface.
- C. Temporary Heat: Maintain minimum ambient temperature of 50 deg. F.
- D. Ventilation: Sufficient to prevent injurious gases from temporary heat or other sources from affecting personnel or concrete.

## PART 2 - PRODUCTS

### 2.1 COMPOUNDS - HARDENERS AND SEALERS

- A. Sealer:
  - 1. Penetrating sealer – one-component, solvent-free containing silane modified siloxane emulsion that forms a water and chloride-ion repellent impregnation for cementitious surfaces. Must contain a minimum of 40% silane or siloxane material.
    - a. Water Absorption – The final average percent water absorbed, for concrete coated with the protective sealer, not greater than 20% of the final average percent water absorbed by the uncoated reference concrete.
    - b. Moisture Vapor Transmission – The final average percent moisture loss, for concrete coated with the protective sealer, not less than 75% of its final average percent water absorption.
    - c. Chloride Ion Penetration – The final average absorbed chloride ion content for concrete coated with the protective sealer, not greater than 15% of the final average absorbed chloride ion content of the uncoated reference concrete.
  - 2. Sikagard 701W or approved equal.

### 2.2 SLIP-RESISTANT TREATMENT

- A. Description:
  - 1. Material: Silica sand. – N/A
  - 2. Color: As selected from manufacturer's standard range.

**PART 3 - EXECUTION**

## 3.1 EXAMINATION

- A. Section 01 73 00 - Execution Requirements: Requirements for application examination.
- B. Verify that floor surfaces are acceptable to receive Work of this Section.

## 3.2 APPLICATION

- A. Concrete Floor Finishing:
  - 1. Comply with ACI 301 and ACI 302.1.
  - 2. Steel-trowel poured concrete horizontal surfaces which are scheduled/indicated to be exposed.
  - 3. Vertical formed concrete – sack rubbed w/ Portland cement mixture.
  - 4. Sidewalks: Light broom finish.
  - 5. Other exterior surfaces (shotcrete): float and brush.
- B. Concrete (and Shotcrete) Surface Treatment:
  - 1. Apply sealer to exterior concrete exposed surfaces according to manufacturer's instructions.
  - 2. Allow concrete and shotcrete surfaces to cure for a minimum of 28 days before applying penetrating sealer.

## 3.3 TOLERANCES

- A. Section 01 40 00 - Quality Requirements: Requirements for tolerances.
- B. Maximum Variation of Surface Flatness for Exposed Concrete Floors and other flat surfaces: 1/8 inch in 10 feet.

## 3.4 FIELD QUALITY CONTROL

- A. Section 01 40 00 - Quality Requirements: Requirements for inspecting and testing.
- B. Acceptance:
  - 1. Areas requiring corrective Work will be identified by Engineer.
  - 2. Correct defects in defined traffic floor by grinding or removal and replacement of defective Work.
  - 3. Re-measure corrected areas by procedure as specified in TOLERANCES Article.

**END OF SECTION 03 35 00**