

**SECTION 03 35 00
CONCRETE FLOOR FINISHING**

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Finishing separate floor toppings, slabs-on-grade, and monolithic floor slab.
- B. Surface treatment with concrete hardener, sealer, and slip resistant coatings.

1.2 REFERENCES

- A. ACI 301 - Structural Concrete for Buildings
- B. ACI 302 - Guide for Concrete Floor and Slab Construction
- C. ASTM E1155 - Standard Test Method for Determining F_F Flatness and F_L Floor Levelness Numbers

1.3 SUBMITTALS

- A. Submit under provisions of Section 01 33 00 Submittals Procedures.
- B. Product Data: Provide data on concrete hardener, sealer, and slip resistant treatment, compatibilities, and limitations.

1.4 MAINTENANCE DATA

- A. Submit under provisions of Section 01 77 00 Contract Closeout.
- B. Maintenance Data: Provide data on maintenance renewal of applied coatings.

1.5 QUALITY ASSURANCE

- A. Perform work in accordance with ACI 301 and ACI 302.
- B. Maintain copies of each document on site.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, protect, and handle products under provisions of Section 01 31 00 Project Management and Coordination.
- B. Deliver materials in manufacturer's packaging including application instructions.

1.7 ENVIRONMENTAL REQUIREMENTS

- A. Temporary Lighting: Provide minimum 200 W light source, 8' above the floor surface, for each 425 sq. ft. of floor being finished.
- B. Temporary Heat: Ambient temperature of 50° F (10° C) minimum
- C. Ventilation: Sufficient to prevent injurious gases from temporary heat or other sources affecting concrete.

1.8 COORDINATION

- A. Coordinate work under provisions of Section 01 31 00 Project Management and Coordination.
- B. Coordinate the work with concrete floor placement and concrete floor curing.

PART 2 PRODUCTS

2.1 COMPOUNDS - HARDENERS AND SEALERS

- A. Non-Metallic Hardener: Premixed, dry powder, colored, emery aggregate and abrasion resistant hardener.

2.2 SLIP RESISTANT TREATMENT

- A. Slip Resistant Finish: Aluminum oxide type, color as selected from manufacturer's standard range

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify site conditions under provisions of Section 01 31 00 Project Management and Coordination.
- B. Verify that floor surfaces are acceptable to receive the work of this section.

3.2 FLOOR FINISHING

- A. Finish concrete floor surfaces in accordance with ACI 301 and ACI 302.
- B. Wood-float surfaces that will receive quarry tile, ceramic tile, cementitious terrazzo with full bed setting system.
- C. Steel trowel surfaces receiving carpeting, resilient flooring, seamless flooring, thin set terrazzo, thin set quarry tile, and thin set ceramic tile.
- D. Steel trowel surfaces scheduled to be exposed.
- E. In areas with floor drains, maintain design floor elevation at walls; slope surfaces uniformly to drains as indicated on drawings.

3.3 FLOOR SURFACE TREATMENT

- A. Apply dry shake liquid hardener in accordance with manufacturer's instructions as scheduled.
- B. Apply slip resistant finish in accordance with manufacturer's instructions as scheduled.
- C. Apply sealer in accordance with manufacturer's instructions as scheduled.

3.4 TOLERANCES

- A. Measure for F_F and F_L tolerances for floors in accordance with ASTM E1155, within 72 hours after slab installation
- B. Finish concrete to achieve the following tolerances:
 - 1. Under Ceramic or Quarry Tile on Setting Bed: F_F 25 and F_L 25
 - 2. Under Resilient flooring (VCT, sheet vinyl, etc): F_F 30 and F_L 25
 - 3. Exposed to View and Foot Traffic (polished concrete): F_F 40 and F_L 35
 - 4. Exposed stained concrete (mechanical, electrical, custodial): F_F 20 and F_L 15
 - 5. Exception: The F_L levelness tolerances do not apply to any un-shored elevated construction.
 - 6. Correct the slab surface if the actual F_F or F_L number for the floor installation measures less than required.
- C. Identify areas requiring corrective work.
 - 1. Correct all defects in the defined traffic floor by grinding or removal and replacement of the defective work.
 - 2. Re-measure corrected areas by the same process.

END OF SECTION