

SECTION 03 05 00

INTEGRAL WATERPROOFING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Section includes materials and procedures for integral waterproofing of concrete.

1.2 RELATED SECTIONS

- A. Section 01 10 00 - Summary
- B. Section 01 33 00 - Submittal Procedures
- C. Section 01 45 00 - Quality Control
- D. Section 01 60 00 - Product Requirements
- E. Section 03 10 00 - Concrete Forming and Accessories
- F. Section 03 30 00 - Cast-in-Place Concrete
- G. Section 03 31 26 - Self-Consolidating Concrete
- H. Section 03 35 00 - Concrete Finishing
- I. Section 03 39 00 - Concrete Curing

1.3 REFERENCES

A. ASTM International (ASTM):

- 1. ASTM C 39/C 39M - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
- 2. ASTM C 94/C 94M - Standard Specification for Ready-Mixed Concrete
- 3. ASTM C 494/ C 494M - Standard Specification for Chemical Admixtures for Concrete

B. American Concrete Institute (ACI):

- 1. ACI 301 - Specifications for Structural Concrete
- 2. ACI 301M - Specifications for Structural Concrete (Metric)
- 3. ACI 305.1 - Specification for Hot Weather Concreting
- 4. ACI 306.1 - Standard Specification for Cold Weather Concreting
- 5. ACI 308.1 - Standard Specification for Curing Concrete

C. NSF International (NSF):

1. NSF/ANSI Standard 61 - Drinking Water System Components

D. Corps of Engineers:

1. CRD C-48 - Standard Test Method for Water Permeability of Concrete

1.4 SUBMITTALS

- A. Submit under provisions of Section 01 33 00 Submittal Procedures.
- B. Product Data: Supplier's data sheet of waterproofing admixture to be used.
- C. Supplier's Certificate: Certificate showing the conformance of admixtures to specified performance requirements.
- D. Mix designs as per ACI guidelines for waterproofing admixtures should have a .45 water/cement ratio or lower.

1.5 QUALITY ASSURANCE

- A. Provide products from one supplier.
- B. A meeting shall be held two weeks prior to placement of concrete to discuss the Project and materials. Waterproofing admixture **dricrete™** Representative shall be present at the meeting.
- C. Conform to ACI 305.1 for hot weather concrete placement and protection.
- D. Conform to ACI 306.1 for cold weather concrete placement and protection.

PART 2 - PRODUCTS

2.1 SUPPLIER

- A. **dricrete™** 4469 Admiralty Way Marina del Rey, CA 90292
Telephone: (818) 606-7972
Email: tim@dricrete.us
Web address: <http://www.dricrete.us/>

2.2 WATERPROOFING ADMIXTURE (PERMEABILITY-REDUCING ADMIXTURE)

- A. Shall be a portland cement-based crystalline capillary waterproofing admixture that reacts in concrete to form non-soluble crystalline hydration products in the capillary pores of the concrete.
- B. Shall conform to ASTM C 494/C 494 M, Type S.
- C. Shall show a reduction in permeability of concrete compared to an identical concrete mixture without the admixture, when tested in accordance with CRD-C 48 at a pressure of 200 psi (1.4 MPa) [equivalent to 460 ft (140 m) of head].
- D. Shall reduce or have no penetration of water compared to an identical concrete mixture without the admixture, when tested in accordance with DIN 1048 for a duration of 96 hours.
- E. Shall be certified to NSF/ANSI 61.
- F. Product: **dricrete**TM as supplied by **dricrete**TM.
- G. Substitutions: Not permitted.

PART 3 - EXECUTION

3.1 BATCHING, MIXING AND TRANSPORTING

- A. Waterproofing admixture shall be batched at the concrete production plant in a manner similar to that for cement and other cementitious materials.
- B. Batching and mixing of materials shall be in accordance with ASTM C 94/C 94M.
- C. Mix for at least for 5 minutes after the addition of waterproofing admixture.

3.2 PLACING, CONSOLIDATION AND FINISHING

- A. Placing, consolidation and finishing of concrete shall be in accordance with the recommendations of ACI 301 [ACI 301M].

3.2 COLD WEATHER CONCRETING

- A. Concrete shall be placed and protected in accordance with ACI 306.1.

3.3 HOT WEATHER CONCRETING

- A. Concrete shall be placed and protected in accordance with ACI 305.1.

3.4 CURING AND PROTECTION

- A. Curing and protection of concrete shall be in accordance with Section 03 39 00 [ACI 308.1].

END OF SECTION