

ARDEX GUIDE SPECIFICATION

ARDEX ARDICOAT™ PLUS

Two Component Cement-Based Acrylic Waterproofing Compound

SECTION 07 16 00 CEMENTITIOUS WATERPROOFING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings, general provisions of the Contract, and other related construction documents such as Division 01 specifications apply to this Section

1.2 SUMMARY

- A. This section includes Portland cement-based, acrylic-modified, fiber-reinforced waterproofing membrane.
- B. Related Sections: Other specification sections which relate directly to the work of this section include the following:
 - 1. Section 03300, Cast-In-Place Concrete.

1.3 REFERENCES

- A. ASTM D 4541, Pull-Off Strength of Coatings Using Portable Adhesion Testers
- B. ASTM D 412, Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers
- C. ASTM D 522, Standard Test Methods for Mandrel Bend Test of Attached Organic Coatings
- D. ASTM D 4060, Abrasion Resistance Using the Taber Abrader
- E. ASTM D 570, Standard Test Method for Water Absorption of Plastics
- F. ASTM D E96, Standard Test Methods for Water Vapor Transmission of Materials

1.4 SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used. Include manufacturer's Material Safety Data Sheets.
- B. Qualification Data: For Installer

1.5 QUALITY ASSURANCE

- A. **Manufacturer's Qualifications:** The manufacturer shall be a company with at least five years experience and regularly engaged in the manufacture and marketing of products specified herein.
- B. **Installer Qualifications:** Installation of the ARDEX product must be completed by a factory-trained applicator using mixing equipment and tools approved by the manufacturer. Please contact ARDEX Engineered Cements (724) 203-5000 for a list of recommended installers.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Deliver products in original packaging, labeled with product identification, manufacturer, batch number and shelf life.
- B. Store products in a dry area with temperature maintained between 50° and 85° F (10° and 29°) and Protect from direct sunlight.
- C. Handle products in accordance with manufacturer's printed recommendations.

1.5 PROJECT CONDITIONS

- A. Do not install material below 50° F (10° C) surface and air temperatures. These temperatures must also be maintained during and for 48 hours after the installation of products included in this section. Install quickly if substrate is warm and follow warm weather instructions available from the ARDEX Technical Service Department.

PART 2 – PRODUCTS

2.1 CEMENTITIOUS WATERPROOFING

- A. Two-component flexible membrane, consisting of a liquid acrylic emulsion and a blended cement powder, providing a waterproof coating suitable for all types of concrete and masonry on horizontal or vertical surfaces above, on and below grade.
 - 1. **Acceptable Products:**
 - a. ARDEX ARDICOAT™ PLUS; Manufactured by ARDEX Engineered Cements: 400 Ardex Park Drive, Aliquippa, Pa 15001 USA 724-203-5000
 - 2. **Performance and Physical Properties:** Meet or exceed the following values for material cured at 70° F (20° C) and 50 percent relative humidity:
 - a. Working Time: 30 - 90 minutes.
 - b. Adhesion to Concrete: 150 psi (1.05 MPa) at 7 days, ASTM D4541.
 - c. Tensile Strength: 470 psi (3.24 MPa) without mesh, 3800 psi (26.2 MPa) with mesh, ASTM D412

- d. Flexibility Mandrel Bend: passes 1/8" @ 77° F (25° C) at 28 days, ASTM D522
 - e. Abrasion Resistance: .2 g weight loss at 3,000 cycles, .34 g at 6,000 cycles, ASTM D4060, Taber CS-10 Wheel.
 - f. Water Absorption: 4.5% at 24-hr immersion, ASTM D570
 - g. Waterproofing (hydrostatic pressure resistance) Greater than 101.5 psi (0.7 MPa) over concrete substrate, DIN 1048.
 - h. Vapor Permeability: 3.85 US Perms (2.2×10^{-7} g/Pa·m·s), ASTM E96 Procedure B
 - i. Rapid Chloride Permeability: 550 coulombs
 - j. Color: Concrete gray (CR 241), white (CR 242)
 - k. Combustibility: Non-combustible, both before and after use.
- B. Reinforcing Mesh: Polymer coated glass fiber interlaced reinforcing mesh, compatible with cementitious waterproofing material.
- 1. Acceptable Products:
 - a. ARDEX ARDICOAT™ PLUS MESH; Furnished by ARDEX Engineered Cements: 400 Ardex Park Drive, Aliquippa, Pa 15001 USA 724-203-5000

PART 3 – EXECUTION

3.1 PREPARATION

- A. All substrates must be solid, thoroughly clean and free of oil, wax, grease, asphalt, existing patching materials, curing and sealing compounds, and any contaminant that might act as a bond breaker. Over watered, frozen or otherwise weak concrete surfaces must also be cleaned down to sound solid concrete.
- B. Prepare surface, as necessary, by mechanical methods such as scarifying, scabbling or similar. Sand blasting and high pressure water blasting (min. 3000 psi) are also acceptable, though the surface must then be allowed to dry prior to proceeding with the installation. Acid etching, solvents, sweeping compounds and sanding are not acceptable means of preparing the substrate.

3.2 INSTALLATION OF CEMENTITIOUS WATERPROOFING

- A. Examine substrates and conditions under which materials will be installed. Do not proceed with installation until unsatisfactory conditions are corrected.
- B. Coordinate installation with adjacent work to ensure proper sequence of construction. Protect adjacent areas and landscaping from contact due to mixing and handling of materials.
- C. Mixing: Comply with manufacturer's printed instructions and the following.
 - 1. Precondition components to temperature of 70° plus or minus 5° F (21° plus or minus 2.5° C) prior to mixing.
 - 2. Mix using a 1/2" to 3/4" (12mm to 19mm) low speed heavy duty mixing drill until components are evenly blended to uniform lump-free consistency. Do not add water.

- D. Application: Comply with manufacturer's printed instructions and the following.
1. Where required, reinforce dormant cracks and transitions where there are changes of plane or change in materials using ARDEX ARDICOAT™ PLUS MESH.
 2. Apply ARDEX ARDICOAT™ PLUS at a thickness of 1/16" (1.5mm) to the substrate and immediately lay the ARDEX ARDICOAT™ PLUS MESH into the ARDEX ARDICOAT™ PLUS.
 3. Work the ARDEX ARDICOAT™ PLUS through the ARDEX ARDICOAT™ PLUS MESH with a steel trowel to ensure the fabric is completely encapsulated.
 4. When doing large areas, overlap the ARDEX ARDICOAT™ PLUS MESH a minimum of 2 1/2" (64 mm). At corners and transitions, use two layers of mesh.
 5. Allow the first coat to dry for one to two hours, and then apply finish coat.
- E. Curing: ARDEX ARDICOAT™ PLUS needs to cure a minimum of 24 hours before sealing or overcoating. This time will vary with air temperature, humidity and surface temperature. Do not install if rain, freezing or continuous high humidity is expected in the first 24 hours.
- F. Cleaning: Remove excess material before material cures. If material has cured, remove using mechanical methods that will not damage substrate.

END OF SECTION