

**ARDEX GUIDE SPECIFICATION****ARDEX CP™ Concrete Patch**Polymer-Modified, Portland Cement-Based, Repair Topping

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**SECTION 03 01 30  
Maintenance of Cast-In-Place Concrete****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 trowel-grade cementitious topping for interior and exterior fill and repair of concrete surfaces above, on, or below grade.

- 1. ARDEX CP™ Concrete Patch

- B. Related Sections include the following:

- 1. Section 03 30 00, Cast-In-Place Concrete

## 1.3 REFERENCES

- A. ASTM C109/mod, Compressive Strength of Hydraulic Cement Mortars
- B. ICRI Technical Guideline No. 03732 Specifying Concrete Surface Preparation for Sealers, Coatings, and Polymer Overlays

## 1.4 SUBMITTALS

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

SECTION 03 01 30  
MAINTENANCE OF CAST-IN-PLACE CONCRETEMODIFIED 3/1/2017  
ARDEX AMERICAS

## 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. Installation of the ARDEX product must be completed by a factory-trained, certified applicator, such as an ARDEX LevelMaster® Elite or Choice Contractor, 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°c and Protect from direct sunlight.
- C. Handle products in accordance with manufacturer's printed recommendations.

## 1.7 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 MAINTENANCE OF CAST-IN-PLACE CONCRETE

- A. Portland cement-based, polymer-modified interior and exterior concrete repair material.
  - 1. Acceptable Products:
    - a. ARDEX CP™ Concrete Patch
  - 2. Performance Requirements:
    - a. Application: Trowel
    - b. Compressive Strength: 3600 psi (253 kg/cm<sup>2</sup>) at 28 Days
    - c. Working Time: 30 minutes
    - d. Pot Life: 30 minutes
    - e. Walkable: Light foot traffic in 2 hours.
    - f. Color: Concrete Gray

2.3 WATER: Water shall be clean, potable, and sufficiently cool (not warmer than 70°F).

### PART 3 – EXECUTION

#### 3.1 PREPARATION

A. General: Prepare substrate in accordance with manufacturer's instructions. Prior to proceeding with any repair, please refer to the International Concrete Repair Institute's ICRI 03730 Guide for Surface Preparation for the Repair of Deteriorated Concrete Resulting from Reinforcing Steel Corrosion; ICRI 03732 Guideline for Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, and Polymer Overlays; and the American Concrete Institute's ACI 546R-04 Concrete Repair Guide for general guidelines for concrete repair.

1. All concrete and masonry substrates must be sound, solid, dry, and completely free of all oil, grease, dirt, curing compounds and any substance that might act as a bond breaker. Overwatered, frozen or otherwise weak concrete surfaces must also be cleaned down to sound, solid concrete by mechanical methods such as scarifying, scabbling or similar in accordance with ICRI 03732 before priming. Acid etching and the use of sweeping compounds and solvents are not acceptable.
2. The repair area must be saw cut in a basic rectangular shape at least 1/4" (6 mm) in depth. The cuts should be made at 90° angle, and should be slightly keyed. Chip out the concrete inside the cuts to a minimum depth of 1/4" (6 mm) until the area is squared or box shape.
3. Mechanically prepare surface to obtain an exposed aggregate surface with a minimum surface profile of approximately 1/16" (1.5 mm).
4. All cracks and spalls must be repaired prior to installing the patch.

B. Joint Preparation

1. Moving Joints – honor all expansion and isolation joints up through the underlayment. A flexible sealing compound such as ARDEX ARDIFIX™ may be installed.
2. Dormant Cracks and Dormant Control Joints – fill all dormant control joints and dormant cracks with ARDEX ARDIFIX™ Joint Filler.

#### 3.2 APPLICATION

A. Mixing:

1. Add 5 quarts (4.75 L) of clean potable water per 40-pound (18 kg) bag.
2. Mix using a 1/2" (12 mm, 650 rpm) low speed heavy-duty mixing drill with an ARDEX T-2 ring mixing paddle. Mix to a uniform, lump-free consistency. Do not overwater.

**B. Application**

1. Place a scratch coat of the compound onto an area of concrete using a steel trowel, applying enough pressure to ensure good compound-to-concrete contact. Then, use a wood or magnesium float, apply the ARDEX CP™ over the area to be repaired. If necessary, use a straightedge to screed the surface to match existing elevation. After the compound takes an initial set (Approx. 30-40 minutes at 70° F (21° C), use a steel trowel to finish the ARDEX CP™.
2. ARDEX CP™ can be installed from ¼" to ½" (6 to 12 mm) neat and up to 2" (5 cm) with the addition of proper aggregate. For areas thicker than ½" (12mm) mix ARDEX CP™ with washed and well-graded 1/8" to ¼" (3 to 6mm) pea gravel. Mix the ARDEX CP™ with water first, then add 1 part by volume of aggregate, mixing until the aggregate is completely coated. Do not use sand. If aggregate is wet, reduce the amount of water to avoid over-watering. Please note that thicker areas will take longer to set and will reduce overall coverage.

**C. Curing**

1. Although no special curing procedures are required for ARDEX CP™, avoid applying this product if rain is expected within 6 to 8 hours, or if freezing temperatures could occur within 24 hours of application. As with any cementitious material, these conditions can alter the appearance and performance of the patching compound.

**D. Sealing**

1. As is the case with all concrete surfaces in general, ARDEX CP™ should be sealed with a waterborne, breathable concrete sealer, such as ARDEX CG™ Concrete Guard™ to resist damage from standing water, salt, oil as well as staining and marking. Sealing of the ARDEX CP™ can proceed once it has cured for a minimum of 24 hours.

**E. Cleaning**

1. Remove excess material before material cures. If material has cured, remove using mechanical methods which will not damage substrate.

**END OF SECTION**