

ARDEX GUIDE SPECIFICATION

ARDEX PC-M™ POLISHED CONCRETE MICRO-TOPPING

Part of the ARDEX Polished Concrete System (APCS)

SECTION 03 35 44 POLISHED CONCRETE MICRO-TOPPING

PART I – GENERAL

1.1 SUMMARY

- A. This is the recommended specification for the ARDEX PC-M™ Polished Concrete Micro-Topping a component of the ARDEX Polished Concrete System (APCS).
- B. Complete installation details are provided in the ARDEX Technical Brochures available at www.ardexamericas.com.

1.2 SECTION INCLUDES

- A. Products and procedures for the installation of the ARDEX PC-M™ Polished Concrete Micro-Topping component of the ARDEX Polished Concrete System (APCS) using a multi-step dry micro-polish process and accessories indicated, specified or required to complete system and achieve specified finish:
 - 1. ARDEX PC-M™ Polished Concrete Micro-Topping (Gray or White).
 - 2. ARDEX Primer as suitable for substrate conditions.
 - 3. Micro Polisher and Micro Polishing Pads.
 - 4. ARDEX Polish Concrete Treatment Chemicals.

1.3 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. Maintenance Data: Provide instructions for maintenance of installed work, including methods and frequency recommended for maintaining optimum condition under intended use. These instructions should contain precautions against cleaning products and methods that may be detrimental to finishes and performance.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications:

1. The ARDEX Polished Concrete System (APCS) consists of a process and products engineered and manufactured by ARDEX Engineered Cements. Any substitutions are not permitted and void warranty.

B. Mock-Up: Before performing the work in this section, an on-site mock-up of the ARDEX PC-M™ representative of specified process, surface, finish, color and joint design/treatments must be installed for review and approval. These mock-ups should be installed using the same Installer personnel who will perform work. Approved mock-ups may become part of completed work, if undisturbed at time of substantial completion.

C. Pre-Installation Conference: Prior to the installation of the ARDEX Polished Concrete System, an on-site conference shall be conducted to review specification requirements.

1. Required attendees include the Owner, Architect, General Contractor, Subcontractor and ARDEX Representative.
2. The minimum agenda shall include a review of the site conditions, construction documents, schedule, installation procedures, protection procedures and submittals.

1.5 DELIVERY, STORAGE AND HANDLING

A. Deliver all materials in original containers, bearing manufacturer's labels indicating brand name and directions for storage, factory numbered and sealed until ready for installation.

B. Store all materials in a dry, climate-controlled environment at a minimum of 50°F (10°C) and maximum of 85°F (29°C).

C. Handle products in accordance with manufacturer's printed recommendations.

1.6 SITE CONDITIONS

A. ARDEX PC-M is a cementitious material. Observe the basic rules of concrete work. Do not install below 50°F (10°C) or above 85°F (29°C) surface temperature. Install quickly if floor is warm (above 70°F/21°C and up to 85°F/29°C) and follow warm weather precautions available from the ARDEX Technical Service Department (888) 512-7339. Never mix with cement or additives other than ARDEX approved products.

B. Inspect the existing substrate and document unsatisfactory conditions in writing. Verify that surfaces and site conditions are ready to receive work. Correct unacceptable conditions prior to installation of System. Commencement of work constitutes acceptance of substrate conditions.

C. Close areas to traffic during and after the ARDEX PC-M application for a time period recommended by the manufacturer.

PART 2 – PRODUCTS

2.1 SYSTEM INTEGRITY

- A. The ARDEX Polished Concrete System is an engineered and integrated complete installation system requiring strict adherence to all specified installation processes, equipment, tooling, concrete preparation, joint treatment and chemicals to achieve the intended result. Any substitutions from the specified products and/or processes will void the system warranty.

2.2 MATERIALS

A. ARDEX CONCRETE REPAIR AND TOPPING MATERIALS

1. Concrete Topping: ARDEX PC-M™ Polished Concrete Micro-Topping.
2. Primer: As suitable for substrate conditions.
 - a. ARDEX P 51™ Standard Absorbent Concrete.
 - b. ARDEX P 82™ Non-Porous Substrates.
 - c. ARDEX EP 2000™ Substrate Preparation Epoxy.
3. Water shall be clean, potable and sufficiently cool (not warmer than 70°F/21°C).
4. For complete installation instructions and required tools, please refer to the individual ARDEX Technical Brochures available for each product.

B. EQUIPMENT

1. Micro Polisher – Burnisher: Specific weight and RPM are required to reach temperature of 100°F for application of ARDEX PC FINISH™.
2. Other Equipment as Required.
3. ARDEX POLISHED CONCRETE TREATMENT CHEMICALS.
 - i. ARDEX PC FINISH™ Stain and Wear Protection Treatment (high or low gloss).
 - ii. Stain and Wear Protection Routine Maintenance Treatment.

C. ARDEX CRACK AND JOINT TREATMENT MATERIALS

1. All non-moving joints shall be filled with ARDEX ARDIFIX™

D. ARDEX MOISTURE CONTROL SYSTEM

1. Where moisture vapor emissions from new or existing concrete exceed the recommendations required by the manufacturer, ARDEX MC™ ULTRA Moisture Control System shall be installed in accordance with the manufacturer's written recommendations prior to the installation of the ARDEX PC-M. For complete installation instructions, please refer to the ARDEX MC ULTRA Technical Brochure.

E. PROTECTION MATERIALS

1. To prevent minor damage from light trade traffic during build out of site, protection with materials such as a Protective Floor Covering shall be installed.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Inspect all concrete substrates and conditions under which the ARDEX PC-M is to be installed.
- B. Verify that all surfaces and site conditions are ready to receive work; document and correct conditions detrimental to timely and proper installation of work. Beginning work constitutes acceptance of substrate condition.
- C. Verify that existing concrete has cured a minimum of 28 days before installing ARDEX PC-M and meets the requirement of 3000 psi and 100 pcf. Use the ARDEX MC ULTRA Moisture Control System for a faster track installation option.
- D. Verify that concrete meets the moisture vapor emission requirements of 85% RH per ASTM F2170. If high emissions are present install ARDEX MC ULTRA Moisture Control System.
- E. Conduct pre-installation conference, per Section 1.04 F.

3.2 PREPARATION

- A. All concrete surfaces must be sound, solid, cleaned and primed:
 1. All concrete subfloors must be of adequate strength, clean and free of all oil, grease, dirt, curing compounds and any substance that might act as a bond breaker before priming. Mechanically clean if necessary using shot blasting or other.

3.3 MIX DESIGNS

- A. Mixing Ratio: For one 10lb. Bag of the ARDEX PC-M add 2 quarts of clean water. Pour the water in a mixing container first and then add the ARDEX PC-M. Mix with an ARDEX T-2 Ring Mixing Paddle and a 1/2" Heavy Duty Drill.

3.4 PRIMING

1. If the ARDEX MC ULTRA Moisture Control System is used, no additional priming is needed. The sand-broadcast surface of the ARDEX MC ULTRA is the primer.
2. Follow manufacturer installation instructions for primer suitable for substrate conditions.

3.5 ARDEX PC-M INSTALLATION

- A. After mixing, apply a scratch coat of ARDEX PC-M to the substrate with the flat side of a steel trowel to obtain a solid mechanical bond. Apply sufficient pressure to fill all defects and to feather the product onto the subfloor surface.
- B. It is necessary to install a minimum of 3 coats of the ARDEX PC-M to a total thickness not to exceed 1/16" (1.5 mm).
- C. Since ARDEX PC-M is a micro-topping, it is common to have trowel marks and variations in surface finish. Variations in surface texture will be highlighted when the PC-M surface is polished.
- D. Allow the ARDEX PC-M to cure a minimum of 16 hours before proceeding with the micro-polishing process.

3.6 MICRO-POLISH PROCESS

- A. Application
 1. MICROPOLISH/BURNISH
 2. Dry mop the floor clean to remove all debris.
 3. Apply ARDEX PC FINISH™ Stain and Wear Protection Treatment, per application instructions at a rate of 2,000 square feet per gallon.
 4. Allow to dry a minimum of 15 minutes.
 5. MICROPOLISH/BURNISH
 6. Dry mop the floor clean to remove all debris.
 7. Apply ARDEX PC FINISH per application instructions at a rate of 2,500 square feet per gallon.
 8. Allow to dry a minimum of 15 minutes.
 9. MICROPOLISH/BURNISH

3.7 EDGES

- A. Where desired, polished edge work of ARDEX PC-M shall be done with a hand held or walk behind polishing tool. The edge polishing process will match the corresponding steps outlined above for the desired gloss level, and each edge polishing step shall be done immediately after the matching main polishing step.

3.8 POST INSTALLATION

- A. All moving joints and saw cuts shall be filled with ARDEX ARDISEAL™ RAPID PLUS

3.9 PROTECTION

- A. Protect the new ARDEX PC-M from spills and contamination by petroleum, oil, hydraulic fluid, acid and acidic detergents, paint and other liquid dripping from trades and equipment working over these substrates. If construction equipment must be used on these substrates, diaper all components that may drip fluids. Protect surface by installing a protective Floor Covering.
- B. **Avoid moisture for 72 hours after installation.** Don't permit standing water for this period or place any protective plastic sheeting, rubber matting, rugs or furniture that can prevent proper drying, thereby trapping moisture, which can result in a cloudy effect on the floor.
- C. Light pedestrian use only in the 24 hours after installation. Normal traffic recommended 7 days after completion of the ARDEX Concrete Topping System.

3.9 MAINTENANCE

- A. **IMPORTANT NOTICE:** Maintaining the ARDEX Polished Concrete System and adherence to a recommended cleaning schedule will help the floor hold its mechanically polished gloss longer and greatly reduce the absorption of spilled liquids. The treated concrete floor is easily maintained by regular cleaning with the Maintenance/Post Cleaning procedure, accompanied by Micro Polishing. Specific maintenance recommendations shall be provided by the certified installer performing the work of this section.
- B. Newly Installed ARDEX Polished Concrete System
 - 1. **Restrict water cleaning for 72 hours after installation of PC-T.** Use only a dry mop to clean. Avoid putting mats or covering treated surface to allow coating to fully cure out.
 - 2. **DO NOT USE** cleaners that are acidic or that have citrus (de-limonene) or Butyl compounds.

END OF SECTION