

ARDEX GUIDE SPECIFICATION
ARDEX FEATHER FINISH® XF™
Self-Drying, Cement-Based Finish Underlayment

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 a self-drying, cement-based finish underlayment that provides a smooth surface prior to the installation of floor covering over a variety of substrates, including concrete with relative humidity up to 95%.

- 1. ARDEX FEATHER FINISH® XF™ Self-Drying, Cement-Based Finish Underlayment
- 2. ARDEX P 82™ Ultra Prime
- 3. ARDEX P 51™ Primer

- B. Related Sections include the following:

- 1. Section 03 30 00, Cast-In-Place Concrete
- 2. Section 09 05 61.13 Moisture Vapor Emission Control
- 3. Division 09 Flooring Sections

1.3 REFERENCES

- A. ASTM F2170, Relative Humidity in Concrete Floor Slabs Using in situ Probes
- B. ASTM F710, Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring

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

1.5 QUALITY ASSURANCE

- A. Installation of the ARDEX product must be completed by a factory-trained applicator, such as an ARDEX LevelMaster® Elite, Choice Contractor or INSTALL Substrate Prep Certified Installer, using mixing equipment and tools approved by the manufacturer. Please contact ARDEX Engineered Cements (724) 203-5000 for a list of recommended installers.
- B. Product must be cement-based having an inorganic binder content which includes a minimum 80% Portland cement per ASTM C150: Standard Specification for Portland cement and other specialty hydraulic cements. Gypsum products are not acceptable.
- C. Manufacturer Experience: Provide products of this section by companies which have successfully specialized in production of this type of work for not less than 5 years. Contact Manufacturer Representative prior to installation.

1.6 WARRANTY: ARDEX FEATHER FINISH® installed as part of a floor system, shall be installed in conjunction with the recommended ARDEX Tile & Stone Installation Materials or WW HENRY Flooring Adhesive, as appropriate, to provide the ARDEX SystemOne comprehensive warranty, depending on the system installed.

1.7 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.

1.8 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. Self-Drying, Cement-Based Finish Underlayment

1. Acceptable Products:

- a. ARDEX FEATHER FINISH® XF™; Manufactured by ARDEX Engineered Cements: 400 Ardex Park Drive, Aliquippa, PA, 15001, USA 724-203-5000, www.ardexamericas.com

i. Primer

1. Other non-porous substrates, such as epoxy coating systems, metal substrates and concrete treated with silicate compounds: ARDEX P 82™ Ultra Prime
2. Gypsum: ARDEX P 51™ Primer

2.2 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.

1. Concrete:

- a. Prior to proceeding please refer to ASTM F710 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring. All concrete subfloors must be sound, solid, 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. Acid etching and the use of sweeping compounds and solvents are not acceptable.
- b. Substrates shall be inspected in accordance with ASTM F2170 and corrected for moisture or any other conditions that could affect the performance of the underlayment or the finished floor covering. For areas where moisture vapor emissions exceed the required limits refer to Section 09 05 61.13, Moisture Vapor Emission Control and install the appropriate ARDEX Moisture Control System.

2. Crack and Joint Preparation

- a. Moving Joints and Moving Cracks – honor all moving joints and moving cracks up through the installation. A flexible sealing compound such as ARDEX ARDISEAL™ Rapid Plus Semi-Rigid Joint Sealant may be installed.

- b. Dormant Control Joints and Dormant Cracks – Fill all dormant control joints and dormant cracks with ARDEX ARDIFIX™ Low Viscosity Rigid Polyurethane Crack & Joint Repair or ARDEX FEATHER FINISH® as recommended by the manufacturer.
 3. Gypsum: All gypsum subfloors must be thoroughly clean and free of dirt, debris, sealers and contaminants that might act as a bond breaker. Mechanically clean if necessary using shot blasting or other. Please be advised, however, that the fact remains that the substrate is gypsum, and therefore has inherent weakness. ARDEX FEATHER FINISH will provide a solid surface to which new flooring can bond, but cannot change the fact that a weak substrate lies below.
 4. Wood:
 - a. The wood subfloor must be constructed according to prevailing building codes and must be solid and securely fixed to provide a rigid base free of undue flex. Any boards exhibiting movement must be re-nailed. The surface of the wood must be clean and free of oil, grease, wax, dirt, varnish, shellac and any contaminant that might act as a bond breaker. If necessary, sand down to bare wood. A commercial drum sander can be used to sand large areas. Do not use solvents, strippers or cleaners. Vacuum all dust and debris. It is the responsibility of the installation contractor to verify that the wood subfloor is thoroughly clean and properly anchored.
 - b. Some flooring manufacturers recommend a finish-grade wood underlayment be installed over the existing wood subfloor. If necessary, ARDEX FEATHER FINISH can be used to smooth fasteners and/or joints in the wood underlayment. Please note that the wood underlayment must be suitable for the installation of the specific floor covering and must be installed in accordance with the wood underlayment manufacturer's recommendations.
 5. Metal: Metal substrates must be rigid, well supported, properly anchored, and free of undue flex and vibration. They must also be clean, including the complete mechanical removal of rust, corrosion and any contaminant that may act as a bond breaker. It is the responsibility of the installation contractor to ensure that this is so. To prevent, rust from recurring, steel surfaces must be coated with an anticorrosive epoxy coating and allowed to dry thoroughly. The coating must be installed in strict accordance with the coating manufacturer's written recommendations and allowed to cure fully. Lead, copper and aluminum do not need to be coated with an anticorrosive epoxy.
 6. Adhesive residues on concrete must first be tested to make certain they are not water-soluble. Water-soluble adhesives must be completely mechanically removed down to clean concrete. Non-water-soluble adhesives should be prepared to a thin, well-bonded residue using the wet-scraping technique as recommended by the Resilient Floor Covering Institute (www.rfci.com). The prepared residue should appear as nothing more than a transparent stain on the concrete after scraping.
 7. Other Non-Porous Substrates: The substrate must be clean, including complete removal of existing waxes and sealers, dust, dirt, debris and any other contamination that may act as a bond breaker. Substrate preparation must be by mechanical means, such as shot blasting.

3.2 APPLICATION OF ARDEX FEATHER FINISH® XF™:

- 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 from contact due to mixing and handling of materials.
- C. Priming:
 - 1. Gypsum: Make an initial application of ARDEX P 51 diluted with 3 parts water using a soft push broom. Do not leave any bare spots. Remove all puddles and excess primer. Allow to dry thoroughly (1 to 3 hours) before proceeding with the second application of ARDEX P 51 diluted 1:1 with water. Allow thorough drying to a clear, thin film (min. 3 hours, max. 24 hours).
 - 2. Epoxy coating systems, concrete treated with silicate compounds and metal shall be primed with ARDEX P 82 Ultra Prime. Do not leave any bare spots. Brush off puddles any excess primer. Allow primer to dry to a thin, slightly tacky film (min. 3 hours, max. 24 hours).
- D. Mixing: Comply with manufacturer's printed instructions and the following.
 - 1. Add 2 1/2 quarts (2.4 L) of clean potable water per 10-pound (4.5 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. Do not overwater.
- E. Application: Comply with manufacturer's printed instructions and the following.
 - 1. ARDEX FEATHER FINISH XF can be installed from a true featheredge up to 1/2" (12.7 mm) over large areas. It can also be installed up to any thickness in small, well-defined areas.
 - 2. Apply the ARDEX FEATHER FINISH XF to the substrate with the flat side of a trowel to obtain a solid mechanical bond before applying the desired thickness.
- F. Curing
 - 1. As soon as the ARDEX FEATHER FINISH XF can be worked on without damaging the surface (15-20 minutes), standard floor coverings such as VCT, sheet vinyl and carpeting can be installed. If installing wood flooring, or, if high-performance adhesives will be used, such as epoxies or urethanes, ARDEX FEATHER FINISH XF must first cure for 16 hours (70°F).

3.3 FIELD QUALITY CONTROL

- A. Where specified, field sampling of the ARDEX underlayment is to be done by taking an entire unopened bag of the product being installed to an independent testing facility to perform

compressive strength testing in accordance with ASTM C 109/modified: air-cure only. There are no in situ test procedures for the evaluation of compressive strength.

3.4 PROTECTION

- A. Prior to the installation of the finish flooring, the surface of the underlayment should be protected from abuse by other trades by the use of plywood, Masonite or other suitable protection course.

END OF SECTION