**ARDEX GUIDE SPECIFICATION**

**ARDEX K 34TM Lightweight Self-Leveling Underlayment**

A Self-Leveling Underlayment Cement for Interior Applications

**SECTION 03 54 16**

**HYDRAULIC CEMENT UNDERLAYMENT**

**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 premium self-leveling that is used to level and smooth interior concrete, terrazzo, ceramic & quarry tile, epoxy coating systems installed over concrete or gypsum substrates, ARDEX K 34TM Self-Leveling Underlayment

1. ARDEX EP 2000™ with sand broadcast
2. ARDEX MC Rapid™
3. ARDEX P 51TM Primer
4. ARDEX P 82TM Ultra Prime
5. ARDEX P4™ Multipurpose 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

1. ASTM C109M, Compressive Strength Air-Cure Only
2. ASTM C348, Flexural Strength of Hydraulic-Cement ASTM F2170, Relative Humidity in Concrete Floor Slabs Using in situ Probes
3. ASTM F710, Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring
4. ASTM C1708, Standard Test Method for Self-Leveling Mortars Containing Hydraulic Cements
5. ASTM D4263, Standard Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method

1.4 SUBMITTALS

1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.

1.5 QUALITY ASSURANCE

1. 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 Installer.
2. Product must have a wet density of 81 pcf (1.3 g/cm3) and a dry density of 74 pcf (1.2 g/cm3)

1.6 WARRANTY ARDEX K 34TM 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. The length of the warranty depends on the system installed.

1.7 DELIVERY, STORAGE AND HANDLING

1. Deliver products in original packaging, labeled with product identification, manufacturer, batch number and shelf life.
2. Store products in a dry area with temperature maintained between 50° and 85°F (10° and 29°C) and Protect from direct sunlight.
3. 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.

**PART 2 - PRODUCTS**

2.1 HYDRAULIC CEMENT UNDERLAYMENT

A. Cement-based Self-Leveling Underlayment

1. Acceptable Products:

a. ARDEX K 34TM LIGHTWEIGHT; Manufactured by ARDEX AMERICAS, USA, (724) 203-5000, [www.ardexamericas.com](http://www.ardexamericas.com)

i. Primer

1. Standard Absorbent Concrete: ARDEX P 51TM Primer
2. Non-porous substrates: ARDEX P 82TM Ultra Prime
3. Multi-purpose primer; ARDEX P4™
4. For deep pour applications - ARDEX EP 2000™ with sand broadcast or ARDEX MC Rapid™

2. Performance and Physical Properties: Meet or exceed the following values for material cured at 73° F+/-3°F (23° C+/-3°C) and 50% +/-5% relative humidity:

1. Application: Barrel Mix or Pump
2. Compressive Strength: 3,000 psi (371 kg/cm2) at 28 days, ASTM C109M.
3. Flexural Strength: 1,000 psi (70 kg/cm2) at 28 days, ASTM C348
4. VOC: 0

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, Gypsum

1. Substrates must be dry and free of excess moisture and alkali. All substrates to be prepared per manufacturer directions.

 B. Crack and Joint Preparation:

1. Moving Joints and Moving Cracks – honor all moving joints and moving cracks up through the underlayment as recommended by the manufacturer.
2. Saw Cuts, Dormant Control Joints and Dormant Cracks – fill all dormant control joints and dormant cracks.

3.2 APPLICATION OF ARDEX K 34TM

1. Examine substrates and conditions under which materials will be installed. Do not proceed with installation until unsatisfactory conditions are corrected.
2. Coordinate installation with adjacent work to ensure proper sequence of construction. Protect adjacent areas from contact due to mixing and handling of materials.
3. Priming: Comply with manufacturer’s printed instructions
4. Mixing: Comply with manufacturer's printed instructions

1. For pump installations, ARDEX K 34TM can be mixed using the ARDEX ARDIFLOTM Automatic Mixing Pumps.

2. When mixing sanded materials, ARDEX recommends using the ARDEX DUSTFREETM or a standard “gutter hook” vacuum attachment in combination with a wet/dry vacuum and HEPA dust extraction vacuum system. Additionally, each bag should be handled with care and emptied slowly to avoid creating a plume of dust.

1. Curing
2. ARDEX K 34TM can be walked on in 2-3 hours after installation. 24 hours and mat testing before installing finish flooring.

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**