ARDEX GUIDE SPECIFICATION

ARDEX V 1000™ Self-Leveling Underlayment

A Self-Leveling Underlayment that Consists of a Blend of Portland Cements, Other Hydraulic Cements and polymers 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 self-leveling underlayment that consists of a blend of Portland cements, other hydraulic cements and polymers that is used to level and smooth interior concrete, cementitious terrazzo prior to the installation of finished flooring on all grade levels.

1. ARDEX V 1000™ Self-Leveling Underlayment

2. ARDEX P 51™ Primer

0. ARDEX P 82™ Ultra Prime

B. Related Sections include the following:

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

2. Section 09 05 61.13, Topical Moisture Vapor Mitigation

3. Division 09 Flooring Sections

1.3 REFERENCES

A. ASTM C109M, Compressive Strength Air-Cure Only

B. ASTM C348, Flexural Strength of Hydraulic-Cement Mortars

C. ASTM F2170, Relative Humidity in Concrete Floor Slabs Using in situ Probes

D. ASTM F710, Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring

1.4 SUBMITTALS

A. Product Data: Submit manufacturer's product data, a Revit file with applicable materials meeting the Revit Content Style Guide, 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. Contact ARDEX Americas (724) 203-5000 for a list of recommended installers.

B. Product must have hydraulic cement-based inorganic binder content as the primary binder which includes Portland cement per ASTM C150: Standard Specification for Portland cement and other specialty hydraulic cements. Gypsum-based products are not acceptable.

C. Manufacturer Experience: Provide products of this section by companies which have successfully specialized in production of this type of products for not less than 10 years. Contact Manufacturer Representative prior to installation.

1.6 WARRANTY: ARDEX V 1000™ installed as part of a floor system, shall be installed in conjunction with the recommended ARDEX Tile & Stone Installation Materials ARDEX SystemOne Limited Warranty or WW HENRY Flooring Adhesive, as appropriate, to provide the ARDEX/HENRY SystemOne 5-Year Limited Warranty.

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 HYDRAULIC CEMENT UNDERLAYMENT

A. Hydraulic Cement-Based Self-Leveling Underlayment

1. 1. Acceptable Products:

a. ARDEX V 1000™; manufactured by ARDEX Americas, Aliquippa, PA, USA, (724) 203-5000, www.ardexamericas.com

i. Primer Standard Absorbent Concrete or Cementitious Terrazzo: ARDEX P 51™ Primer

ii. Primer Extremely Absorbent Concrete or Cementitious Terrazzo: May require two applications of ARDEX P 51

iii. Primer Non-Porous Cementitious Terrazzo: ARDEX P 82™ Ultra Prime

iv. Primer Suitable Acrylic Curing Compound: If a suitable acrylic curing compound is used, test the surface for porosity. If the concrete is porous, prime with ARDEX P 51. If it is non-porous, prime with ARDEX P 82.

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:

a. Application: Barrel Mix or Pump
b. Flow Time: 10 minutes
c. Walkable: 4 - 5 hours
d. Compressive Strength: 4400 psi (308 kg/cm^2) at 28 days, ASTM C109M
e. Flexural Strength: 1000 psi (70 kg/cm^2) at 28 days, ASTM C348
g. 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 or Cementitious Terrazzo

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, certain curing compounds and any contaminant 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 underlayment. A flexible sealing compound such as ARDEX ARDISEAL™ Rapid Plus Semi-Rigid Joint Sealant may be installed.

b. Saw Cuts, Control Joints and Dormant Cracks – Fill all dormant joints and dormant cracks with ARDEX ARDIFIX™ Low Viscosity Rigid Polyurethane Crack & Joint Repair or ARDEX FEATHER FINISH® Self-Drying, Cement-Based Finish Underlayment as recommended by the manufacturer.

3.2 APPLICATION OF ARDEX V 1000™:

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: Comply with manufacturer's printed instructions.

D. Mixing: Comply with manufacturer's printed instructions.

E. Application: Comply with manufacturer's printed instructions.

F. Curing

1. ARDEX V 1000™ can be walked on in 4-5 hours after installation. The cure time required prior to installing finish flooring will vary with the thickness of the ARDEX V 1000™ installation and the type of flooring being installed. Access the technical data sheet for information regarding recommended cure times.

3.3 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