

ARDEX GUIDE SPECIFICATION
ARDEX EB2™
Fast Setting Screed Cement

SECTION 09 30 00
GUIDE SPECIFICATION FOR
ARDEX EB2™ FAST SETTING SCREED CEMENT

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 fast-setting polymer-modified Portland cement-based hydraulic cement for producing bonded, unbounded or floating screed beds for use with all types of flooring systems. Suitable for use prior to installing an ARDEX Moisture Control System or ARDEX Self-Leveling Topping and Underlayment.
 - 1. ARDEX EB2™ Fast Setting Screed Cement
 - 2. ARDEX P51™ Primer
- B. Related Sections include the following:
 - 1. Section 03 30 00, Cast-In-Place Concrete
 - 2. Section 07 62 00, Topical Moisture Vapor Mitigation

1.3 REFERENCES

- A. ASTM C 109, Compressive Strength
- B. ASTM 710 – Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring
- C. ASTM D4263 – Standard Test Method for Indicating Moisture in Concrete by Plastic Sheet Method
- D. ASTM C144 Standard Specification for Aggregate for Masonry Mortar
- E. ASTM F2170 – Relative Humidity in Concrete Floor Slabs Using in situ Probes

- F. ASTM F1869 – Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride
- G. Tile Council of North America, Inc.
 - 1. Handbook for Ceramic Tile Installation at www.tileusa.com (F111-07 & F112-07).

1.4 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. 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 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.
- 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.
- D. Provide all setting materials and grouts from one source. Additives, installation materials and grouts shall be from the same manufacturer.

1.6 WARRANTY

- A. ARDEX SystemOne - ARDEX EB2™ 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 10-year comprehensive 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° 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 PORTLAND CEMENT-BASED HYDRAULIC SCREED CEMENT

- A. Fast-setting polymer-modified Portland cement-based hydraulic cement for producing bonded, unbounded or floating screed beds for use with all types of flooring systems
 - 1. Acceptable Products:
 - a. ARDEX EB2™; Manufactured by ARDEX Engineered Cements: 400 Ardex Park Drive, Aliquippa, Pa 15001 USA 724-203-5000
 - 2. Performance and Physical Properties: Meet or exceed the following values for material cured at 73° F (23° C) and 50 percent relative humidity:
 - a. Application: Manual
 - b. Working Time: Approx. 60 minutes
 - c. Compressive Strength: 4200 psi at 1 day, 8400 psi at 28 days, ASTM C109M.
 - d. Walkable: Approx. 3 hours
 - e. Install Floor Covering: Ceramic Tile: 3 hours, Other floor coverings: Pending plastic sheet test after 24 hours

- 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. 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.

3. Substrates shall be inspected in accordance with ASTM F1869 or 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 07 62 00, Topical Moisture Vapor Mitigation Systems and install the appropriate ARDEX Moisture Control System.
4. For bonded screeds, a bonding slurry must be used. Follow manufacturer's written recommendation for mixing instructions.

B. Joint Preparation

1. Moving Joints – honor all expansion and isolation joints up through the underlayment. A flexible sealing compound such as ARDEX ARDISEAL™ may be installed.
2. Saw Cuts and Control Joints – fill all non-moving joints with ARDEX ARDIFIX™ Joint Filler or ARDEX SD-F™ FEATHER FINISH® as recommended by the manufacturer.

3.2 APPLICATION OF ARDEX EB2™:

- 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. Mixing: Comply with manufacturer's printed instructions for mixing proportions, sand and water ratio's for Industrial, Commercial and Light Commercial & Residential Service Grade.
 1. Mix the ARDEX EB2™ mortar to a workable and compactible consistency. The mixer used should be of a "forced action" type such as a pan, trough or paddle mixer. Normal "free fall" mixers are not suitable for mixing screeds.
 2. Do not use other cements, screed additives or admixtures in the mix.
 3. To make the bonding slurry for a bonded screed, dilute ARDEX P51™ primer 1:1 with water. Separately, mix 1 part of ARDEX EB2™ powder with 1 part of the masonry sand by volume (#4 down to 200). Using the same part of measuring container, combine 1 part of the diluted ARDEX P51 with all of the blended ARDEX EB2/sand mix. For best results, use a drill and mixing paddle to mix the slurry.
 4. The sand used should be good quality, properly graded masonry sand conforming to ASTM C144 with a grading size of #4 down to 200. The sand should be reasonably dry (less than 1 gallon of water per 90 lbs of sand) and should not contain lime or other materials that could be detrimental to the workability of the screed mortar during application or to the performance of the set and hardened screed.

D. Application: Comply with manufacturer's printed instructions and the following.

1. Apply at temperatures above 50° F (10° C).
2. ARDEX EB2™ can be installed at the following thicknesses:
 - a. Bonded Screed Bed: Min. ¾" and max 2".
 - b. UnBonded Screed Bed: Min 2" and max no limit.
 - c. Floating Screed Bed: Min. 3" and max no limit.
3. Where a new section is placed against a set and hardened screed, it is recommended that the ARDEX EB2™ bonding slurry be used to join the adjacent areas.
4. For bonded screeds, the bonding slurry must be wet when applying the ARDEX EB2™; therefore, only brush an area of a size that can easily be covered before the bonding slurry dries. Do not apply the bonding slurry to an area until you are also ready to install the ARDEX EB2™.
 - a. NOTE: If the bonding coat dries before the ARDEX EB2™ is applied, mechanically remove the dried material and reapply.

E. Curing

1. To obtain maximum surface hardness and abrasion resistance for heavy/duty/industrial uses, the ARDEX EB2™ screed should be cured by covering with polyethylene sheeting (min. 6 mil.) for at least 24 hours
 - a. NOTE: Where vinyl and other floorings that require a dry base are to be applied to an ARDEX EB2™ screed, do not cover cure. Allow the screed to dry for 24 hours and then evaluate dryness by using the plastic sheet method described in ASTM D4263.

F. INSTALLATION OF FLOORING:

1. Ceramic tile can be installed after the EB2™ has cured for approximately 3 hours at 70°F (21°C).
2. For all other floor coverings, once the ARDEX EB2™ has cured for a minimum of 24 hours, the installation should be tested for dryness by placing a piece of heavy plastic or a smooth rubber mat down over a 2' x 2' area. After 24 hours, lift the barrier material and inspect for surface darkening. A darkened area indicates excessive moisture is still present and further drying time is required. Repeat the above test at regular intervals until no darkening is observed.

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.

3.5 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