

ARDEX GUIDE SPECIFICATION

ARDEX TL 2000™ Fiber-Reinforced, Self-Leveling Underlayment

ARDEX Substrate Preparation, Mortar and Grout Materials to Receive Tile & Stone

SECTION 09 30 00

ARDEX TILE & STONE INSTALLATION MATERIALS AND SYSTEMS

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 all products including those regarding substrate preparation prior to installing tile and stone.
 - 1. ARDEX Primers
 - 2. ARDEX TL 2000™ Fiber-Reinforced Self-Leveling Underlayment
- B. Complete ARDEX product and system installation details are provided in their corresponding Technical Brochure available at www.ardexamericas.com.
- C. Related Sections include the following:
 - 1. Division 09 Tile & Stone Sections
 - 2. Division 03 Hydraulic Cement Underlayment

1.3 REFERENCES

- A. AMERICAN NATIONAL STANDARDS INSTITUTE (A.N.S.I.)
 - 1. A-108.01 General Requirements for Subsurfaces and Preparations by Other Trades

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. Manufacturer Experience: Provide products of this section by companies which have successfully specialized in production of this type for not less than 5 years. Contact Manufacturer Representative prior to installation.

1.6 WARRANTY

- A. When ARDEX TL 2000 is installed in conjunction with the recommended ARDEX Tile & Stone Installation Materials, as appropriate, the ARDEX SystemOne™ Comprehensive Warranty shall be provide.

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 SELF-LEVELING MATERIALS

- A. Acceptable Products:

1. ARDEX TL 2000™; Manufactured by ARDEX Engineered Cements: 400 Ardex Park Drive, Aliquippa PA 15001 USA, (724) 203 – 5000, www.ardexamericas.com
 - a. Performance and Physical Properties: Meet or exceed the following values for material cured at 70° F+/-3°F (21° C+/-3°C) and 50% +/-5% relative humidity:
 - i. Application: Barrel Mix or Pump
 - ii. Compressive Strength: 6000 psi (420 kg/cm²) at 28 days (ASTM C109/mod – Air Cure)
 - iii. Flexural Strength: 1600 psi (112 kg/cm²) (ASTM C348) at 28 days
 - iv. Install tile: See technical data sheet. Dry time is dependent on the depth at which the underlayment is installed.

2. WATER: Water shall be clean, potable, and sufficiently cool (not warmer than 70°F).

PART 3 – EXECUTION

3.1 PREPARATION

- A. Prepare substrate in accordance with manufacturer's instructions.

1. Concrete Subfloors:

- 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. Adhesive Residues on Concrete:

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- a. ARDEX TL 2000 also can be installed over non-water-soluble adhesive residue on concrete, only. The adhesive must first be tested to make certain it is not water-soluble. Water-soluble adhesives must be removed mechanically down to clean concrete.
- b. Non-water-soluble adhesives must be prepared to a thin, well bonded residue using the wet-scraping technique as recommended by the Resilient Floor Covering Institute (www.rfci.com) to remove thick areas and adhesive build-up. If the adhesive is not well-bonded to the concrete or is brittle, powdery or otherwise weak, it must be completely, mechanically removed down to clean, sound and solid concrete.

3. Wood:

- a. The wood subfloor either must be solid hardwood flooring; a minimum of 3/4" (19 mm) tongue-and-groove, APA-rated Type 1, exterior exposure plywood; or an approved OSB equivalent. 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 properly fastened to create a sound, solid subfloor. 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. Open joints should be filled with ARDEX SKM™ or similar. It is the responsibility of the installation contractor to ensure that the wood subfloor is

- thoroughly clean and properly anchored prior to the installation of any ARDEX
4. Gypsum:
 - a. ARDEX TL 2000 can be installed over gypsum underlayments that are sound, solid, well-bonded and properly primed. For instructions on priming gypsum underlayments, please refer to the Priming section of the technical data sheet. The gypsum must be thoroughly clean and free of dirt, debris, sealers and any contaminant that might act as a bond breaker. If necessary, mechanically clean the floor down to sound, solid gypsum by grinding or similar.
 - b. Please be advised, however, that a gypsum substrate has inherent weakness. ARDEX TL 2000 will provide a solid surface to which new flooring can bond but cannot change the fact that a weak substrate lies below.
 5. Other Non-Porous Substrates:
 - a. ARDEX TL 2000 also can be applied over other clean, sound and solidly bonded non-porous substrates, including terrazzo, burnished concrete, epoxy coating systems, VCT, and ceramic, quarry and porcelain tiles. The substrate must be clean, including the complete removal of existing waxes and sealers, dust, dirt, debris and any other contaminant that may act as a bond breaker. Floor polish must be stripped from surfaces such as VCT and terrazzo, and these surfaces must then be allowed to dry thoroughly. Where necessary, substrate preparation must be by mechanical means, such as shot blasting.
 6. Final Prep: Deep Vacuuming
 - a. After mechanical preparation is completed and prior to priming, ensure that all dust and debris is removed from the substrate by vacuuming thoroughly.
 7. Grade level: ARDEX TL 2000 is for use above grade, but it may also be used on or below grade over an ARDEX MC™ Moisture Control System.
 8. Coordinate installation with adjacent work to ensure proper sequence of construction. Protect adjacent areas from contact due to mixing and handling of materials.

B. Crack and Joint Preparation:

1. Under no circumstances should ARDEX TL 2000 be installed over any moving joints or moving cracks. All existing expansion joints, isolation joints and construction joints, as well as all moving cracks, must be honored up through the underlayment and flooring. As needed, dormant cracks and dormant control joints can be filled with ARDEX SKM™ or similar, following the instructions in each product's technical data sheet. However, please be advised that while dormant control joints and dormant cracks in the slab may be filled with ARDEX SKM prior to installing ARDEX TL 2000, this filling is not intended to act as a repair method that will eliminate the possibility of joints and cracks telegraphing. ARDEX SKM and ARDEX TL 2000 are non-structural materials and are, therefore, unable to restrain movement within a concrete slab. This means that while some dormant joints and dormant cracks may not telegraph through the ARDEX materials and up into the finish flooring, cracks will telegraph in any area that exhibits movement, such as an active crack,

an expansion or isolation joint, or an area where dissimilar substrates meet. We know of no method to prevent this telegraphing from occurring.

3.2 APPLICATION OF SELF-LEVELING UNDERLAYMENT

- A. Application: Comply with manufacturer's printed instructions for mixing of material, installation, and cure. For questions contact the ARDEX Technical Services Department at (724) 203-5000.
- B. Prime the properly prepared substrate with the selected ARDEX primer and allow to dry in accordance with the technical data sheet.
- C. Install and allow the ARDEX TL 2000 in accordance with the respective technical data sheet.

3.3 FIELD QUALITY CONTROL

- A. Where required, contact manufacturer for field sampling methods and procedures.

3.4 PROTECTION

- A. Protect the installation from abuse by other trades by the use of plywood, Masonite or other suitable protection course.

END OF SECTION