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# **ARDEX TL 1000™**

## **Self-Leveling Underlayment**

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**Designed specifically for fast leveling of floors  
prior to installing tile**

**Portland cement-based**

**Smooth new or existing concrete, terrazzo,  
ceramic tile and wood subfloors**

**Install up to 1¼"**

**Walk on in 3 hours**

**Install tile after 6 to 8 hours**

**Use for interior floors only**

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# ARDEX TL 1000™

## Self-Leveling Underlayment

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### Description and Usage

ARDEX TL 1000™ is a self-leveling Portland cement-based underlayment with re-dispersible synthetic polymers designed specifically for fast leveling of floors prior to installing tile. Use to level and smooth interior concrete, terrazzo, ceramic tile and wood subfloors – on, above or below grade. Pourable or pumpable when mixed with water. Seeks its own level and produces a smooth, flat, hard surface. Hardens quickly and dries fast without shrinking, cracking or spalling. Walkable in 3 hours, most tile installations can proceed in 6 to 8 hours, and other floor covering installations can proceed in 1 to 3 days.

### Subfloor Preparation

All concrete substrates must be solid, thoroughly clean and free of oil, wax, grease, asphalt, latex and gypsum compounds, curing and sealing compounds, and any contaminant that might act as a bond breaker. If necessary, mechanically clean the floor down to sound, solid concrete by shot blasting, scarifying or similar. Overwatered, frozen or otherwise weak concrete surfaces must also be cleaned down to sound, solid concrete by mechanical methods. Acid etching, adhesive removers, solvents and sweeping compounds are not acceptable means of cleaning the substrate. Sanding equipment is not an effective method to remove curing and sealing compounds. Substrates must be dry and properly primed for a successful installation. Substrate and air temperatures must be a minimum of 50°F (10°C) for the installation of ARDEX products. For further information, please refer to the ARDEX Substrate Preparation Brochure.

### Recommended Tools

ARDEX T-1 Mixing Paddle, ARDEX T-10 Mixing Drum, ARDEX T-4 Spreader, ARDEX T-5 Smoother, ARDEX MB-5.0 Measuring Bucket and a ½" heavy-duty drill (min. 650 rpm).

### Priming

Standard absorbent concrete must be primed with ARDEX P 51™ PRIMER diluted 1:1 with water. Apply evenly with a soft pushbroom. Do not use paint rollers, mops or spray equipment. Do not leave any bare spots. Brush off puddles and excess primer. Allow primer to dry to a clear, thin film (min. 3 hours, max. 24 hours).

Extremely absorbent concrete may require two applications of ARDEX P 51 to avoid the formation of bubbles and pinholes in the ARDEX TL 1000. In such cases, make an initial application of ARDEX P 51 diluted with 3 parts water. Let dry thoroughly (1 to 3 hours) and install a second application of ARDEX P 51 mixed 1:1 with water as stated above.

Non-porous substrates, burnished concrete, terrazzo, quarry and ceramic tile must be primed with ARDEX P 82™ ULTRA PRIME. Follow the mixing instructions on container and apply with a short-nap or sponge paint roller, leaving a thin coat of primer. Do not leave any bare spots. Brush off puddles and excess primer. Allow primer to dry to a thin, slightly tacky film (min. 3 hours, max 24 hours).

Wood subfloors must also be primed with ARDEX P 82. Please refer to the "Preparation and Installation over Wood Subfloors" section in this brochure.

### Mixing and Application – Manually

ARDEX TL 1000 is mixed 2 bags at a time. Mix each 50 lb. bag with 5.0 quarts (4.75 liters) of water. Put the water in the mixing drum first, then add each bag of ARDEX TL 1000 while mixing with an ARDEX T-1 Paddle and a ½" heavy-duty drill (min. 650 rpm). Mix thoroughly for approximately 2 to 3 minutes to obtain a lump-free mix. Do not overwater! Yellowish foam while mixing, or settling of the sand aggregate while placing, indicates overwatering.

ARDEX TL 1000 has a flow time of 10 minutes at 70°F (21°C). Pour the liquid mix on the floor and spread with the ARDEX T-4 Spreader. Immediately smooth the material with the ARDEX T-5 Smoother. Wear baseball or soccer shoes with non-metallic cleats to avoid leaving marks in the liquid ARDEX TL 1000.

### Mixing and Application – Pumping

ARDEX TL 1000 can be pumped using the ARDEX Levelcraft™ Automatic Mixing Pump. The Levelcraft Pump provides for high productivity and a smooth, consistent installation. The pump may be rented from an authorized ARDEX Distributor and is supported by the ARDEX Technical Service Department.

Start the pump at a water setting of 165 gallons per hour, and then adjust to the minimum water reading that allows self-leveling properties. Do not overwater! Check the consistency of the product on the floor to ensure a uniform distribution to the sand aggregate at both the top surface and bottom of the pour. Conditions during the installation, such as variations in water, powder, and substrate and ambient temperature, require that the water setting be adjusted during installation to avoid overwatering.

ARDEX TL 1000 has a flow time of 10 minutes at 70°F (21°C). Pump the liquid mix on the floor and spread with the ARDEX T-4 Spreader. Immediately smooth the material with the ARDEX T-5 Smoother. Wear baseball or soccer shoes with non-metallic cleats to avoid leaving marks in the liquid ARDEX TL 1000. Contact the ARDEX Technical Service Department for complete pump installation instructions.

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## Thickness of Application

ARDEX TL 1000 must be installed at a minimum thickness of 1/8" over the highest point in the floor, which typically results in an average thickness of 1/4" over the entire floor. ARDEX TL 1000 installs to maximum thickness of 1 1/4", and can also be installed to a featheredge to match existing elevations.

## Preparation and Installation over Wood Subfloors

The wood subfloor must either be solid hardwood flooring, a minimum of 3/4" tongue-and-groove, APA-rated, Type 1, exterior exposure plywood, or OSB equivalent. The subfloor should be solid and fixed securely to provide a rigid base. Any boards exhibiting movement should be re-nailed. The surface of the wood must be clean and free of oil, grease, wax, dirt, varnish, shellac or 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 FEATHER FINISH® SELF-DRYING, CEMENT-BASED FINISHING UNDERLAYMENT.

It is the responsibility of the installation contractor to ensure that the subfloor is thoroughly clean and secure prior to the installation of any ARDEX material.

Prime the wood subfloor with ARDEX P 82 ULTRA PRIME. Follow the mixing instructions on the container and apply in as thin a layer as possible with a squeegee or a short-nap or sponge paint roller, leaving a coat of primer no heavier than a thin coat of paint. Do not leave any bare spots. Brush off puddles and excess primer. Allow primer to dry to a thin, slightly tacky film (min. 3 hours, max 24 hours). ARDEX P 82 should be applied in a thin layer within 1 hour of mixing. A thick coat will produce a soft, rubbery surface that can result in cracking of the ARDEX TL 1000. Low surface temperatures and/or high ambient humidity require a longer drying time for ARDEX primers. Do not install the ARDEX TL 1000 before the primer has dried thoroughly.

Install 3.4 galvanized, expanded diamond metal lath mesh ("plaster lath") to the primed wood subfloor, stapling approximately every 6 inches to prevent the mesh from floating. This procedure can be done while the primer is drying by placing the lath mesh onto a primed area and standing on the mesh while stapling. Do not walk on wet primer. Overlap adjacent pieces of lath mesh approximately 1". After the lath mesh has been placed, allow the primer to dry thoroughly as stated above.

ARDEX TL 1000 is mixed 2 bags at a time. For each bag, mix 2 quarts (1.9 liters) of ARDEX E 25™ RESILIENT EMULSION with 4 quarts (3.785 liters) of water. Put the liquid in the ARDEX T-10 Mixing Drum, and then add each bag of ARDEX TL 1000 powder while mixing at full speed

with an ARDEX T-1 Mixing Paddle and a 1/2" heavy-duty drill (min. 650 rpm). Mix thoroughly for 2 to 3 minutes to obtain a lump-free mix. Install at no less than 3/8" thickness over the highest point in the floor, following the installation instructions.

When installing material with the ARDEX Levelcraft Automatic Mixing Pump, contact the ARDEX Technical Service Department for instructions.

The floor can be walked on in 3 hours, and most tile installations can proceed in 6 to 8 hours. Other floor covering can be installed in 1-3 days. Low substrate temperatures and/or high ambient humidity will extend the drying time.

## Notes

This product is intended for interior use over dry substrates only. Do not use in areas of constant water exposure or in areas exposed to permanent or intermittent substrate moisture, as this may jeopardize the performance of the underlayment and the tile or floor covering. This product is not a vapor barrier and will allow free passage of moisture. **Follow the directives of the tile or floor covering manufacturer regarding the maximum allowable substrate moisture content, and test the substrate prior to installing ARDEX TL 1000.** Where substrate moisture exceeds the maximum allowed, Ardex recommends the use of ARDEX MC™ MOISTURE CONTROL SYSTEM. For further information, please refer to the ARDEX Technical Brochures.

Always install an adequate number of properly located test areas, including the tile or finish flooring, to determine the suitability of the product for its intended use. As tile and floor coverings vary, always contact and rely upon the tile or floor covering manufacturer for specific directives such as maximum allowable moisture content, adhesive selection and intended end use of the product.

Low substrate temperatures and/or high ambient humidity require longer drying times for ARDEX primers. Do not install ARDEX TL 1000 before primer has dried thoroughly.

## Precautions

ARDEX TL 1000 contains Portland cement and sand aggregate. Avoid eye and skin contact. Mix in a well ventilated area and avoid breathing powder or dust. KEEP OUT OF REACH OF CHILDREN. Carefully read and follow all cautions and warnings on the product label. For complete safety information, please refer to the Material Safety Data Sheet or visit our website at [www.ardex.com](http://www.ardex.com).

Never mix with cement or additives other than Ardex approved products. Observe the basic rules of concrete work. Do not install below 50°F (10°C) surface and air temperatures.

## Technical Data According to Ardex Quality Standards

All data based on a mixing ratio of 4 parts powder to 1 part of water by volume at 70°F (21°C)

<b>Mixing Ratio:</b>	5 qts. (4.75 l) of water per one 50 lb. bag.
<b>Coverage:</b>	25 sq. ft. per bag at 1/4"
<b>Flow Time:</b>	10 minutes
<b>Initial Set (ASTM C191):</b>	Approx. 30 minutes
<b>Final Set (ASTM C191):</b>	Approx. 60 minutes
<b>Compressive Strength (ASTM C109/mod – Air cure only):</b>	4000 psi at 28 days
<b>Flexural Strength (ASTM C348):</b>	1000 psi at 28 days
<b>Flammability (ASTM E84):</b>	Flame Spread -0- Fuel Contribution -0- Smoke Development -0-
<b>Walkable:</b>	3 hours
<b>Install Tile:</b>	6 to 8 hours
<b>Install Floor Covering:</b>	1 to 3 days
<b>Packaging:</b>	50 lb./22.7 kg net weight in paper bags
<b>Storage:</b>	Store in a cool dry area. Do not expose bags to sun.
<b>Shelf Life:</b>	One year if unopened
<b>Warranty:</b>	Please see the ARDEX Tile & Stone Installation System Warranty Brochure

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AT150 (Rev.E 07/08)

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