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# ARDEX K 15<sup>®</sup>

## Premium Self-Leveling Underlayment

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Use to level and smooth interior concrete, terrazzo, ceramic and quarry tile, epoxy coating systems, wood, metal and non-water soluble adhesive residue on concrete

A blend of Portland cements and other hydraulic cements

Installs up to 1 1/2" (4 cm) neat, 5" (12.7 cm) with aggregate

Can be tapered to meet existing elevations

Walkable in 2 to 3 hours

Install moisture-insensitive tile and stone after 6 hours, all other floor coverings after 16 hours

Designed specifically for fast-track installations



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# ARDEX K 15®

## Premium Self-Leveling Underlayment

### Description and Usage

ARDEX K 15® Premium Self-Leveling Underlayment is formulated with a special blend of Portland cement, other hydraulic cements and polymers. ARDEX K 15 is used to level and smooth interior concrete, terrazzo, ceramic and quarry tile, epoxy coating systems, metal, wood substrates and non-water soluble adhesive residue on concrete prior to the installation of finished flooring – on, above or below grade. It also can be installed over concrete treated with certain curing compounds (see below). Designed specifically for the fast leveling of floors, ARDEX K 15 provides a durable, flat, smooth floor surface with minimum labor and installation time. It is pourable or pumpable when mixed with water and seeks its own level to produce a smooth, flat, hard surface. ARDEX K 15 is recommended and specified by many flooring manufacturers, architects and contractors.

### Substrate Preparation

For each of the substrates listed below, acid etching, adhesive removers, solvents and sweeping compounds are not acceptable means for cleaning the substrate. Substrate and ambient temperatures must be a minimum of 50°F (10°C) for the installation of ARDEX products. Substrates must be dry during installation and cure. For more detailed information on substrate preparation, please refer to the ARDEX Substrate Preparation Brochure at [www.ardexamericas.com](http://www.ardexamericas.com).

**Concrete:** All concrete substrates must be solid, structurally sound, thoroughly clean and free of oil, wax, grease, asphalt, latex and gypsum compounds, curing compounds\*, sealers and any contaminant that might act as a bond breaker. If necessary, mechanically clean down to sound, solid concrete by shot blasting or similar. Overwatered, frozen or otherwise weak concrete surfaces also must be cleaned down to sound, solid concrete by mechanical methods. Sanding equipment is not an effective method to remove contaminants from concrete.

**\*Note on curing compounds:** Test areas of ARDEX K 15 can be installed and evaluated over concrete slabs that have been treated with either silicate or acrylic resin curing compounds. These compounds must be installed in strict accordance with the compound manufacturer's written recommendations. If a silicate type has been used, all residual salts must be removed. For instructions on priming concrete with acceptable curing compounds, please refer to the Priming section of this technical data sheet.

Please be advised, however, that there are a number of curing compounds sold today that are wax- or petroleum-based emulsions. These are permanent bond breakers that must be removed completely prior to patching or leveling. Dissipating compounds must also be removed completely by mechanical means prior to installing any ARDEX material.

It is imperative to be able to determine the type of curing compound that was used before proceeding. Any curing compound that cannot be identified should be completely, mechanically removed.

**Adhesive Residues on Concrete:** ARDEX K 15 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.

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](http://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, solid concrete. Any existing patching materials below the adhesive must also be removed completely.

**Wood:** 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 refastened 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 FEATHER FINISH®. 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 material.

**Metal:** Metal substrates must be rigid, well supported, properly anchored, and free of undue flex and vibration. They must also be clean, including the complete mechanical removal of rust, corrosion and any contaminant that may act as a bond breaker. It is the responsibility of the installation contractor to ensure that this is so.

Non-lead metal substrates must be mechanically cleaned and profiled to create a bonding surface. Please note that care must be taken when mechanically preparing thin metal foils so that the metal foil is not compromised. Use an #80 or #100 grit sanding screen to mechanically profile the metal surface. A hand or floor sander may be used. After sanding, thoroughly sweep and deep vacuum to remove all loose material, and then wipe the metal using a clean, white cloth dampened with 91% isopropyl alcohol. Repeat wiping using a new cloth on each pass until the degree of discoloration on the cloth remains consistent on subsequent passes (typically, approximately 5 - 7 passes). Lightly shot blasting also is suitable. From this point until the metal has been primed, disposable shoe covers should be worn by anyone traversing the surface of the prepared metal. Allow 15 - 20 minutes for residual alcohol to evaporate before proceeding.

Contact the ARDEX Technical Service Department for guidelines on preparing lead substrates.

**Other Non-Porous Substrates:** ARDEX K 15 also can be applied over other clean, sound and solidly bonded non-porous substrates, including terrazzo, burnished concrete, epoxy coating systems, 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. Where necessary, substrate preparation must be by mechanical means, such as shot blasting.

**Note on Asbestos-Containing Materials:** Please note that when removing existing flooring, any asbestos-containing materials should be handled and disposed of in accordance with applicable federal, state and local regulations.

### Recommended Tools

ARDEX T-1 Mixing Paddle, ARDEX T-10 Mixing Drum, ARDEX T-4 Spreader, ARDEX T-5 Smoother, ARDEX MB-7 Measuring Bucket (7 quarts / 6.6 L per 55 lb. / 25 kg bag), a 1/2" (12 mm) heavy-

duty drill (min. 650 rpm) and baseball or soccer shoes with non-metallic cleats.

## Priming

**Note:** ARDEX primers may need longer drying times with low surface temperatures and/or high ambient humidity. Do not install ARDEX K 15 before the primer has dried thoroughly.

## Absorbent Concrete

Standard absorbent concrete must be primed with ARDEX P 51™ Primer diluted 1:1 with water. Apply evenly with a soft bristled push broom. 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 minimize the potential for pinholes forming in the ARDEX K 15. Make an initial application of ARDEX P 51 diluted with 3 parts water by volume. Let dry thoroughly (1 to 3 hours), and install a second application of ARDEX P 51 mixed 1:1 with water as stated above.

**Wood:** Wood subfloors require priming with ARDEX P 82™ Ultra Prime. Follow the mixing instructions on the 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. A thick coat will result in cracking of the ARDEX K 15. ARDEX P 82 should be applied within 1 hour of mixing. The primer will need to dry to a thin, slightly tacky film (min. 3 hours, max. 24 hours) before the ARDEX K 15® is installed.

Once the primer is applied, install 3.4 galvanized, expanded diamond metal lath mesh ("plaster lath"), stapling approximately every 6 inches (15.2 cm). 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" (2.54 cm). After the lath mesh is placed, allow the ARDEX P 82 to dry thoroughly as stated above prior to proceeding.

**Metal:** Prime the prepared subfloor with ARDEX EP 2000™ Substrate Preparation Epoxy Primer in accordance with the technical data sheet, and immediately broadcast fine sand to refusal into the fresh ARDEX EP 2000. After a 16-hour cure (70°F), remove all excess sand. Thoroughly sweep and vacuum to ensure all loose sand is removed.

**Other Non-Porous:** Non-porous substrates such as burnished concrete, terrazzo, ceramic, quarry and porcelain tiles, epoxy coating systems, non-water soluble adhesive residue on concrete and concrete treated with silicate compounds must be primed with ARDEX P 82. Follow the mixing instructions in the ARDEX P 82 technical data sheet, and apply with a short-nap or sponge paint roller, leaving a thin coat of primer. Do not leave any bare spots. Back roll with a dry roller to remove excess primer. ARDEX P 82 should be applied within 1 hour of mixing. Allow primer to dry to a thin, slightly tacky film (min. 3 hours, max. 24 hours).

**Note:** 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.

## Joints and Cracks

Under no circumstances should ARDEX K 15 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 honed up through the underlayment and flooring.

As needed, dormant cracks and dormant control joints can be filled with ARDEX FEATHER FINISH® or ARDEX ARDIFIX™, following the instructions in each product's technical data sheet. Please note that if ARDEX ARDIFIX is used, it must be sand-broadcasted to refusal.

However, please be advised that while dormant control joints and dormant cracks in the slab may be filled with ARDEX FEATHER FINISH or ARDEX ARDIFIX prior to installing ARDEX K 15, this filling is not intended to act as a repair method that will eliminate the possibility of joints and cracks telegraphing. ARDEX FEATHER FINISH, ARDEX ARDIFIX and ARDEX K 15 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.

## Mixing and Application – Manually

ARDEX K 15 is mixed two bags at a time. For standard applications, mix each 55 lb. (25 kg) bag with 7 quarts (6.6 L) of clean water. For applications over wood and metal, the addition of ARDEX E 25™ Resilient Emulsion is required to increase the resiliency of the ARDEX K 15. In these cases, mix 2 quarts (1.9 L) of ARDEX E 25 with 6 quarts (5.68 L) of water for each bag of ARDEX K 15.

Pour the water / water and ARDEX E 25 in the mixing drum first, and then add the ARDEX K 15 while mixing with an ARDEX T-1 Mixing paddle and a 1/2" (12 mm) 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.

## Mixing and Application – Pumping

ARDEX K 15 can be pumped using ARDIFLO™ Automatic Mixing Pumps. ARDIFLO Pumps provide high productivity and smooth, consistent installations. Pumps may be rented from an authorized ARDEX Distributor. Contact the ARDEX Technical Service Department for complete pump operation instructions.

ARDEX K 15 has a flow time of 10 minutes at 70°F (21°C). Pour the mix onto the floor and spread with the ARDEX T-4 Spreader. Immediately smooth the material with the ARDEX T-5 Smoother. Work in a continuous manner during the entire self-leveling installation. Wear baseball or soccer shoes with non-metallic cleats to avoid leaving marks in the liquid ARDEX K 15.

## Thickness of Application

Installations over metal and other non-porous substrates should be limited to a thickness of 1/2" (12.7 mm) unless otherwise approved by the ARDEX Technical Services Department. For all other substrates, install at a minimum thickness of 1/8" (3 mm) over the highest point in the floor, which typically results in an average thickness of 1/4" (6 mm) or more over the entire floor. Installations over metal and other non-porous substrates should be limited to a thickness of 1/2" (12.7 mm) unless otherwise approved by the ARDEX Technical Services Department. For all other substrates, ARDEX K 15 can be installed up to 1 1/2" (4 cm) thick neat, and up to 5" (12.7 cm) with the addition of proper aggregate.

For areas with a thickness greater than 1 1/2" (4 cm), mix ARDEX K 15 with washed and well-graded 1/8" to 3/8" (3 to 9.5 mm) pea gravel. Please note that the aggregate size must not exceed 1/3 the depth of the pour. Mix the

ARDEX K 15 with water first, and then add 1 part aggregate by volume, mixing until the aggregate is completely coated. Do not use sand. If the aggregate is wet, reduce the amount of water to avoid overwatering.

The addition of aggregate will diminish the workability of the product and may make it necessary to install a neat coat to obtain a smooth surface. Allow the initial application to dry for 12 to 16 hours, and then prime this layer with ARDEX P 51 mixed 1:1 with water. Allow the primer to dry (min. 3 hours, max. 24 hours) before installing the neat coat of ARDEX K 15.

## Wear Surface

ARDEX K 15 is not to be used as a permanent wear surface, even if coated or sealed. ARDEX K 15 must be covered by a suitable floor covering material, such as carpet, vinyl flooring, ceramic tile, etc. For resurfacing and leveling indoor concrete floors in warehouses, storage areas, hallways or other areas where a wear surface is required, use ARDEX SD-T® Self-Drying, Self-Leveling Concrete Topping.

## Installation of Flooring

ARDEX K 15 is walkable 2 to 3 hours after installation. Moisture-insensitive tiles such as ceramic, quarry and porcelain, can be installed after just 6 hours. All other floor coverings can be installed after 16 hours at 70°F (21°C). Drying time is a function of jobsite temperature and humidity conditions. Low substrate temperatures and/or high ambient humidity will extend the drying time. Adequate ventilation and heat will aid drying. Forced drying can dry the surface of the underlayment prematurely and is not recommended.

## Notes

FOR PROFESSIONAL USE ONLY.

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 floor covering. This product is not a vapor barrier, and it will allow free passage of moisture. **Follow the directives of the floor covering manufacturer regarding the maximum allowable substrate moisture content, and test the substrate prior to installing ARDEX K 15.** Where substrate moisture exceeds the maximum allowed, ARDEX recommends the use of ARDEX Moisture Control Systems. For further information, please refer to the ARDEX technical data sheets at [www.ardexamericas.com](http://www.ardexamericas.com).

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

For installations over electrical, in-floor heating systems, please contact the ARDEX Technical Service Department.

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. Install quickly if the substrate is warm, and follow warm weather instructions available from the ARDEX Technical Service Department.

Dispose of packaging and residue in accordance with federal, state and local waste disposal regulations. Do not flush material down drains.

Visit [www.youtube.com/ARDEX101](http://www.youtube.com/ARDEX101) to watch ARDEX K 15® product demonstration video.

For easy-to-use ARDEX Product Calculators and Product Information On the Go, download the ARDEX App at the iTunes Store or Google Play.



## Precautions

Carefully read and follow all precautions and warnings on the product label. For complete safety information, please refer to the Safety Data Sheet (SDS) available at [www.ardexamericas.com](http://www.ardexamericas.com).

## Technical Data According To ARDEX

### Quality Standards

Physical properties are typical values and not specifications. All data based on a partial, in-lab mix. Mixing and testing completed at 70°F / 21°C and in accordance with ASTM C1708, where applicable.

**Mixing Ratio:** 7 quarts (6.6 L) of water per 55 lb. (25 kg) bag

**Coverage:** 30 sq. ft. per bag at 1/4" (2.8 sq. m at 6 mm)  
Coverage will vary depending on the texture of the surface being smoothed.

**Flow Time:** 10 minutes

**Compressive Strength (ASTM C109/mod – Air cure only):** 5500 psi (385 kg/cm<sup>2</sup>) at 28 days

**Flexural Strength (ASTM C348):** 1,200 psi (84 kg/cm<sup>2</sup>) at 28 days

**Walkable:** 2 to 3 hours

**Install Flooring:** 6 hours for moisture-insensitive tile, such as ceramic, quarry and porcelain; 16 hours for all other floor coverings

**VOC:** 0

**Packaging:** 55 lb. (25 kg) bag

**Storage:** Store in a cool, dry area. Do not leave bags exposed to sun.

**Shelf Life:** 1 year, if unopened.

**Warranty:** ARDEX, L.P. Standard Limited Warranty applies. Also eligible for the ARDEX/HENRY SystemOne™ Warranty when used in conjunction with select HENRY® Flooring Adhesives.

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## IMPORTANT TECHNICAL UPDATES

**Technical update effective April 27, 2018:**  
ARDEX Underlayments and Non-Porous Substrates

[CLICK HERE](#)

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