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# ARDEX ProDrain<sup>®</sup>

## Drainage System

### Installation Guide for Balconies, Patios and Other Surfaces Not Over Living Spaces\*

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Innovative, capillary-passive water management system with hydrophobic drainage mortar

For pre-sloped exterior wood or concrete balconies, patios, terraces, etc.

Helps prolong the life of exterior paver applications

Minimizes disbonding risk due to freeze and thaw cycling

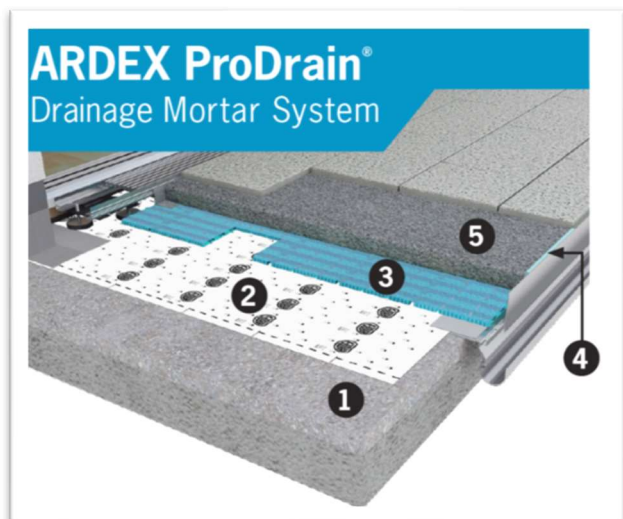
Minimizes the risk of efflorescence, staining and discoloration

\*For installations over living spaces, an intact roofing membrane must be previously installed by a professional roofing contractor.

# ARDEX ProDrain®

## Drainage System

### System Design



### Components Shown

1. 1.5 to 2% sloped substrate
2. ARDEX TLT Waterproofing and Vapor Retarder Membrane
3. ARDEX ProDrain Drainage Mat
4. ARDEX UD 146 Perimeter Edge Strip
5. ARDEX A 14™ Drainage Mortar

### Other Components

Sloping and smoothing materials (as needed)

ARDEX SX 100% Silicone Sealant (joints may also be left open; rigid grouts are not used)

Accessories - see below

### Suitable Substrates

Surfaces NOT over living spaces:

- Exterior wood (pre-sloped)
- Exterior concrete

For installations over living spaces, an intact roofing membrane must be previously installed by a professional roofing contractor.

Substrate must be flat and smooth with a 1.5 - 2% slope prior to installation. See section entitled "Step 2: Pre-Sloping / Smoothing Options (if needed)" below.

### Suitable Applications

- Installation of porcelain pavers (minimum size 12 x 12" / 30 x 30 cm; minimum thickness 3/4" / 2 cm)
- Installation of stone pavers; minimum size 12 x 12" (30 x 30 cm; minimum thickness 1 1/8" / 3 cm depending on the breaking point listed by the manufacturer)

### Job Conditions

During installation and cure, substrate and ambient temperatures must be a minimum of 50° F / 10° C (Maximum 85°F / 29°C). Substrate must also be dry.

### Step 1: Substrate Preparation (Proper Prep™)

It must be verified that the substrate is sufficiently sound to support the installation weight; verify with a structural engineer as necessary.

Floor surfaces must have minimal variation in the plane or slope as outlined by the Tile Council of North America (TCNA). Refer to ANSI A108.01 "General Requirements: Subsurface and Preparation by Other Trades" and the most current version of the TCNA "Handbook for Ceramic Tile Installation" for detailed information on surface preparation and guidelines for substrate construction.

If necessary, mechanically clean the substrate by shot blasting or similar means. Do not use acid etching, adhesive removers, solvents or sweeping compounds, as these are bond breakers. Sanding is not an effective method to remove contaminants from concrete.

Substrate must be dry and free of excess moisture and alkali. All substrates must be sound, solid and thoroughly clean of all bond-breaking contaminants, including but not limited to: overwatered or otherwise loose or weak material; dirt, dust, wax, grease, paints and oils; unapproved curing compounds and sealers; and all adhesive residues.

Following preparation, thoroughly vacuum to remove all excess dirt and debris.

Handle and dispose of asbestos and other hazardous materials in accordance with prevailing regulations, which supersede the recommendations in this document.

For full details on Proper Prep, reference the following articles at [ardexamericas.com/services/properprep](http://ardexamericas.com/services/properprep):

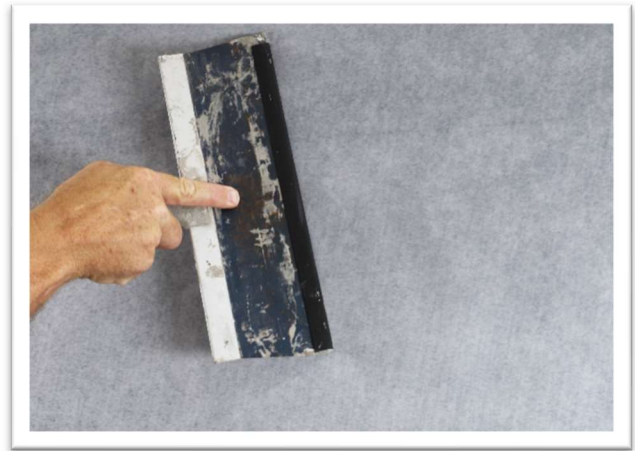
- [Article 1: Preparing Concrete for Bonded ARDEX or HENRY Applications](#)
- [Proper Prep Brochure](#)

## Step 2: Pre-Sloping / Smoothing Options (if needed)

ARDEX AM 100™ Rapid Set Pre-Tile Smoothing and Ramping Mortar  
ARDEX A 38™ Rapid Set Screed

Substrate must be flat and smooth with a 1.5 - 2% slope prior to installation. Observe the substrate preparation, mixing, application and drying instructions in the appropriate ARDEX technical data sheet. Per ANSI A 108 AN-3.7, expansion joints must be provided over existing moving joints and moving cracks and where substrate materials change composition or direction.

## Step 3: ARDEX TLT Membrane Installation



Install ARDEX TLT Membrane as a Vapor Retarder\* with an ARDEX Mortar over the sloped substrate and place up to the plastic side of the ARDEX US 420 ProDrain Tape, covering the fleece. Please refer to the ARDEX TLT technical data sheet for application information.

Do not penetrate the membrane, including fixing any posts or railings once the draining system is installed.

\* ARDEX TLT is NOT a replacement for waterproofing protection over occupied living spaces. Applications over occupied living spaces require an existing, intact primary roofing membrane prior to the installation of an ARDEX Exterior System. ARDEX TLT is to provide protection against vapor transmission from the substrate.

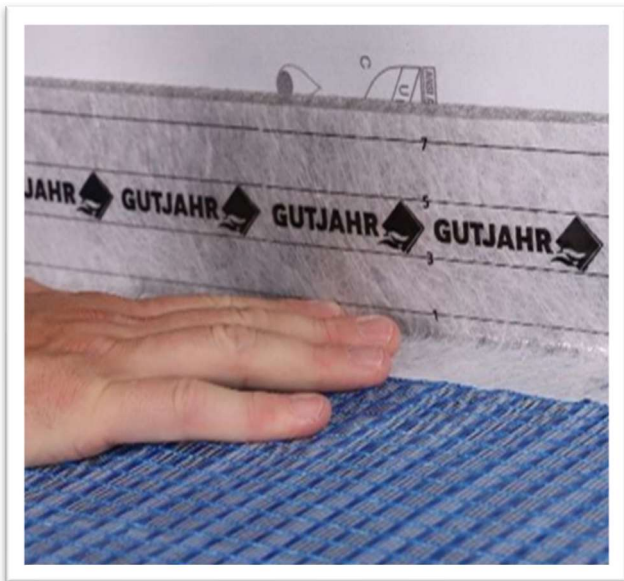
#### Step 4: Drainage Mat Installation



Roll the mat into place and cut to size using ARDEX FLEXBONE Shears or a utility knife. Ensure that the waterproofing or vapor retarder membrane is not cut.

NOTE: Roll the mat with the drainage channels facing the direction of the slope. Always ensure that the self-adhesive tape on the mat is facing outwards to allow the next mat to abut neatly. Use ARDEX UD 158 Seam Reinforcement Tape to join any roll ends.

#### Step 5: Installation of Perimeter Strip



Once the mat is laid, install the self-adhesive ARDEX UD 146 Edge Insulation Strip around the edges of the installation and the ARDEX UG 203 ProDrain Joint Tape around the drain housing. This allows movement between different materials and ensures the required 3/8" (10 mm) gap around the perimeter. After the tile is set, cut the edge insulation strip to the required height.

#### Step 6: Mixing and Placement of ARDEX A 14 Drainage Mortar

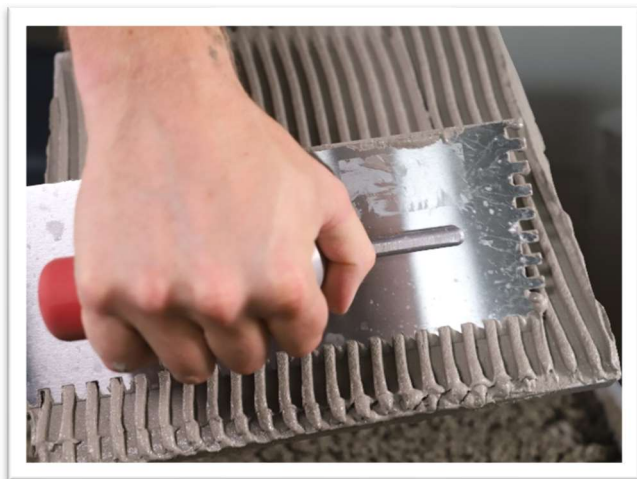


Mix the ARDEX A 14 Drainage Mortar with 5/64" - 5/16" (2 - 8 mm) aggregate per the ARDEX A 14 technical data sheet installation instructions. Install at a minimum thickness of 2" (5 cm). The drainage mortar is not limited by a maximum thickness. Approved lathe may be used to provide additional reinforcement, but not required. Proceed with next installation step immediately while ARDEX A 14 is still wet.

## Step 7: Paver Installation



ARDEX X 90 / X 78: Mix in accordance with its technical data sheet.



Flat trowel and then comb the mortar to the back of the paver using a 1/4" x 3/8" (6 mm x 10 mm) notched trowel. Always apply the mortar onto the paver NOT onto the ARDEX A 14, and install wet in wet.

**IMPORTANT:** Do not cover or block the entire surface of the ARDEX A 14 Drainage Mortar with the setting mortar. Please note that completely covering the drainage mortar with the mortar will prohibit water from passing through the system properly.

## Step 8: Finishing with ARDEX Grout



Allow the mortar to dry as detailed in the technical data sheet, and then clean the grout joints of any excess mortar. Also, clean the paver surface and allow to dry. Once the surface is dry, mix and apply ARDEX FL™ Rapid Set Sanded Grout or ARDEX WA™ Epoxy Grout in accordance with the corresponding technical data sheet, and place into the grout joints.



NOTE: Once the ARDEX FL or ARDEX WA grout has dried properly, ARDEX SX™ 100% Silicone Sealant can be used to apply a soft bead of sealant around the perimeter and moving joints.

NOTE: Grouting must NOT be applied around the perimeter edge. All installations must include soft joints using ARDEX SX™ 100% Silicone Sealant in accordance with ANSI A 108.01-3.7 and TCNA EJ 171.

## Notes

Intended for use by professional contractors who are trained in the application of this product and/or similar products. Not sold by ARDEX through home improvement centers. For information on ARDEX Academy trainings, visit: [www.ardexamericas.com](http://www.ardexamericas.com).

Observe the basic rules of concrete work, including the minimum surface and air temperatures detailed above. Install quickly if the substrate is warm, and follow the warm weather installation guidelines available on our website. Observe the basic rules of tile work.

Never mix with cement or additives outside of our written recommendations. In accordance with industry standards, and to determine the suitability of the products for the intended use, always install an adequate number of properly located test areas.

Dispose of packaging and residue in accordance with prevailing regulations. Do not flush material down drains. Do not reuse packaging.




Made in the USA and Germany.

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## Technical Data According to Manufacturer Quality Standards

<b>Storage and Transport</b>	Store and transport rolls vertically in the original packaging. Store in temperatures from 32°F - 72°F (0°C - 22°C), and protect from sunlight.
<b>Warranty:</b>	Eligible for the ARDEX Exterior Drainage System 5 -Year Limited Warranty. For full warranty details: <a href="http://ardexamericas.com/services/warranties">ardexamericas.com/services/warranties</a> .

## System Components and Available Accessories

System	Product	Description	Image	Size
<b>Waterproofing</b>	ARDEX US 420 ProDrain®	Flashing Tape		65.6 ft. (20 m)
<b>Matting</b>	ARDEX UE 190-8 ProDrain®	Drainage Mat		107.6 sq ft. (10 sq. m)
<b>Matting</b>	ARDEX UD 158 ProDrain®	Seam Reinforcement Tape		32.8 ft. (10 m) or 82 ft. (25 m)
<b>Matting</b>	ARDEX UD 146	Perimeter Edge Strip	N/A	65.5 ft. (20 m)

Visit [www.youtube.com/ARDEX101](http://www.youtube.com/ARDEX101) to watch ARDEX product demonstration videos. For recommended installation tools, visit DTA USA at [www.dtausagroup.com](http://www.dtausagroup.com). For easy-to-use ARDEX Product Calculators and Product Information On the Go, download the ARDEX App.



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