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# ARDEX A 11<sup>TM</sup>

## Drainage Mortar (Cement Binder)

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Walkable in 6 hours

Hydrophobic; formulated to allow water to easily pass through the mortar

Will not contribute to efflorescence

Designed for exterior applications



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# ARDEX A 11™

## Drainage Mortar (Cement Binder)



### Description

ARDEX A 11™ Drainage Mortar (Cement Binder) is a high-performance drainage mortar with special additives and hydrophobic agents for use prior to the installation of natural stone, ceramic tile, porcelain tile, concrete stones and paver stones on patios, decks, pool surrounds, walkways, roof top terraces and exterior balconies. When used as part of ARDEX Exterior Tile & Stone Systems, ARDEX A 11 allows water to pass through the mortar matrix to the ARDEX ProDrain® Drainage Mat and moves water away from the installation to minimize capillary action, also minimizing the possibility of efflorescence, disbonding and cracked tile and stone. ARDEX A 11 will not contribute to efflorescence.

### Substrate Preparation Prior to Pre-Sloping / Smoothing

All substrates must be structurally sound, solid, 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. Plywood substrates must be APA-rated, Type 1 exterior-grade plywood. Refer to ANSI A108 AN-2 "General Requirements for Subsurfaces," the Tile Council of North America's "Handbook for Ceramic Tile Installation" and TTMAC for detailed information on surface preparation and guidelines for substrate construction. Floor surfaces must have a minimum slope of 1.5% towards the drain(s).

Mechanical preparation method must comply with OSHA Silica Standard for Construction CFR §1926.1153. After mechanical preparation is completed and prior to priming, ensure that all dust and debris is removed from the substrate by vacuuming thoroughly. The vacuum filter must comply with OSHA Silica Standard for Construction CFR §1926.1153.

Should pre-leveling, substrate repair or sloping be required before installing ARDEX ProDrain over cementitious substrates, use ARDEX AM 100™ Rapid Set Pre-Tile Smoothing and Ramping Mortar.

### 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.

### Joints and Cracks

Under no circumstances should ARDEX A 11 be installed over any joints or moving cracks. All existing expansion joints, isolation joints, construction joints and control joints, as well as all moving cracks, must be honored up through the ARDEX A 11 and the tile in accordance with ANSI A108 AN-3.7.

### Recommended Tools and Accessories

Forced action mixer (such as pan, trough or paddle mixer) or screed pump.

### Aggregate Selection

The gravel should be reasonably dry, should be 5/64" - 5/16" (2 - 8 mm) granite basalt or quartz gravel and should not contain lime, calcium or other materials that could be detrimental to the workability of the drainage mortar during application or to the performance of the set and hardened mortar. Do not use other cements or screed additives in the mix.

### Mixing and Application

We recommend mixing the ARDEX A 11 cement binder and aggregate using a standard forced action mixer, free-fall mixer or screed pump. Use clean equipment. If desired, ARDEX A 11 can be mixed by hand using a shovel or hoe. The mixing ratio of 1:4 parts by weight depends on the mixer being used:

- For a 26-gallon (100 L) mixer, mix one bag of ARDEX A 11 with 200 lb. (91 kg) of aggregate until well-blended, then add 7 - 7.5 quarts (6.5 - 7 L) of water, depending on aggregate moisture.
- For a 52-gallon (200 L) mixer, mix two bags of ARDEX A 11 with 400 lb. (181 kg) of aggregate until well-blended, then add 14 - 15 quarts (13 - 14 L) of water, depending on aggregate moisture.
- If mixing by hand with a shovel or hoe, mix one bag of ARDEX A 11 with 200 lb. (91 kg) of aggregate until well-blended, then add 7 - 7.5 quarts (6.5 - 7 L) of water, depending on aggregate moisture.

Please note that the mixer must not be filled above the manufacturer's recommended volume, typically, 3/4 the total volume. Mix to a normal screed mortar consistency. When a sample of mortar is squeezed in the hand, the sample should retain its shape and not crumble, and the hand should be left slightly moist. When a sample is compacted on the base, no film of water should form on the surface.

The working time of the ARDEX A 11 drainage mortar is approximately 1 hour at 70°F (21°C), or 30 - 40 minutes if screed pumps are used. Mix an appropriate amount of material so that mixing, placing, compaction and finish troweling can be completed within this working time. The pot life of ARDEX A 11 is approximately 60 minutes at 70°F (21°C).

### Work Practice Control Methods

ARDEX recommends controlling airborne dust during mixing ARDEX A 11 by using an enclosed forced-action mixer or by using a mixing barrel fitted with a vacuum attachment such as the ARDEX DUSTFREE™ or a standard "gutter hook" vacuum attachment in combination with a HEPA dust extraction vacuum. Handle the bag with care, and empty the bag slowly to avoid creating a plume of dust. Contact the ARDEX Technical Service Department for more details on ARDEX products and OSHA Engineering and Work Practice Control Methods.

### Application with Standard Waterproofing

Install ARDEX TLT™ Waterproofing Membrane and Vapor Retarder for Tile & Stone Installations in accordance with the technical data sheet. Lay a loose polyethylene or plastic sheet (min. 4 mils) over the ARDEX TLT prior to installing ARDEX ProDrain Drainage Mat in accordance with the installation brochure, then mix and install ARDEX A 11 in accordance with the wet in wet application or standard thin set application instructions detailed below.

### Wet in Wet Application

Mix and install ARDEX A 11 as detailed above at a minimum thickness of 2" (50 mm) up to any thickness. Once the ARDEX A 11 is placed, use minimum 1/4" x 1/4" square notch trowel to apply a layer of ARDEX X 90 OUTDOOR™ MicroteC3 Rapid-Set, Flexible Tile and Stone Mortar to the back of the tile or stone, then immediately lay the tile or stone into the wet ARDEX A 11 layer. Using a non-marring rubber mallet, tap the tile or stone into place until the desired position is achieved.

## Standard Thin Set Application

Mix and install ARDEX A 11 as detailed above at a minimum thickness of 2" (50 mm) up to any thickness. When installing the tile or stone utilizing the thin set application, allow the ARDEX A 11 to dry for 24 hours (70°F / 21°C). Once the ARDEX A 11 is dry, apply a layer of ARDEX X 90 to the back of the tile or stone using a minimum 1/2" x 1/2" square notch trowel, then place the tile or stone onto the dry ARDEX A 11 layer.

Note: Once the ARDEX A 11 has dried for 6 hours (70°F / 21°C), it must be protected from construction trade traffic by a suitable protection system (e.g. plywood, Masonite or similar) until tile and stone is installed. Please note that ARDEX A 11 must not be exposed to heavy traffic until the tile or stone is set and dry.

## Notes

FOR PROFESSIONAL USE ONLY.

Always install an adequate number of properly located test areas, including the tile or stone, to determine the suitability of the products for the intended use. As tile and stone materials vary, always contact and rely upon the tile or stone manufacturer for specific directives regarding the intended end use of the product.

Never mix with cement or additives. 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.

To preserve its freshness, ARDEX A 11 must be protected from air while not in use. Protect unused material by removing the air from the bag and sealing tightly. Open and reseal as necessary.

Store at temperatures between 40 and 90°F (5 - 32°C). Do not freeze.

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

## 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

All data based on a mixing ratio of (1) 50 lb. (22.7 kg) bag ARDEX A 11, 200 lb. (91 kg) gravel and 7 quarts (6.5 L) water at 70°F (21°C). Physical properties are typical values and not specifications.

<b>Mixing Ratio:</b>	Approximately 200 lb. (91 kg) of gravel and approximately 7 - 7.5 quarts (6.5 - 7 L) of water per 50 lb. (22.7 kg) bag
<b>Coverage Per 50 lb. (22.7 kg) Bag:</b>	16 sq. ft. (1.5 sq. m) at a thickness of 2" (5 cm)  Coverage will vary depending on the texture of the surface being smoothed.
<b>Compressive Strength (ASTM C109/mod - Air cure only):</b>	3,500 psi (246 kg/cm <sup>2</sup> ) at 28 days
<b>Flexural Strength (ASTM C348):</b>	385 psi (27 kg/cm <sup>2</sup> ) at 28 days
<b>Working Time:</b>	Approximately 60 minutes 30 - 40 minutes when mixed with a screed pump
<b>Pot Life:</b>	60 minutes
<b>Drying Time:</b>	Tile or stone can be placed immediately for wet in wet applications 24 hours for standard thin set applications
<b>Walkable:</b>	6 hours
<b>Packaging:</b>	50 lb. (22.7 kg) bag
<b>Storage:</b>	Store in a cool, dry area. Do not expose packages to sun. Protect unused material by removing air from bag and sealing tightly.
<b>Shelf Life:</b>	1 year
<b>Warranty:</b>	ARDEX Standard Limited Warranty applies. Also eligible for the ARDEX SystemOne™ Limited Warranty when used in conjunction with select ARDEX mortars and grouts.

Made in the USA.

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