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# ARDEX X 4™

## Thin Set Mortar

Use for setting porcelain, quarry, moisture-insensitive stone, ceramic and all types of mosaic tile over common interior surfaces, including exterior-grade plywood

Also use for setting quarry, moisture-insensitive stone, ceramic and all types of mosaic tile over exterior concrete and masonry surfaces

Water and frost resistant

Easy to mix and apply, 3 hour pot life

Use for interior and exterior floors, walls and countertops



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## Thin Set Mortar

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### Description And Usage

Use for setting porcelain, quarry, moisture-insensitive stone, ceramic and all types of mosaic tile over common interior surfaces, including exterior-grade plywood.

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### Substrate Preparation

ARDEX X 4™ adheres to both dry and damp substrates that are structurally sound, solid and free from any contaminant that can act as a bond breaker. Plywood substrates must be APA-rated, Type 1 exterior-grade plywood. Refer to ANSI A 108 AN-2 "General Requirements for Subsurfaces" and the Tile Council of North America's "Handbook for Ceramic Tile Installation" for detailed information on surface preparation and guidelines for substrate construction. The plane of wall surfaces must be plumb and true. Floor surfaces must have minimal variation in plane or slope. Expansion joints must be provided over existing moving joints and cracks, and where substrate materials change composition or direction, per ANSI A 108 AN-3.7.

For interior pre-leveling or subfloor repair, use ARDEX AM 100™, ARDEX TL PATCH™, ARDEX TL 1000™ or ARDEX EB 2™ or ARDEX LIQUID BACKERBOARD™.

Highly absorbent substrates such as plaster must be primed with ARDEX P 51™ PRIMER diluted 1:3 with water (interior applications in dry areas only). Existing tiles, metal, glass and other non-porous surfaces must be primed with ARDEX P 82™ ULTRA PRIME (interior applications in dry areas only). For exterior applications and wet areas, non-porous substrates must be coated with ARDEX 8+9™ WATERPROOFING COMPOUND.

### Mixing And Application

For one 40 lb. bag of ARDEX X 4, use 5 to 5 1/2 quarts of clean water. Put the water in the mixing container first, and then add the ARDEX X 4. For best results, mix with

an ARDEX T-2 Ring Paddle and 1/2" heavy-duty drill. To mix smaller quantities by hand, use 1 part water to 2.75 parts powder (parts by volume). Use a margin trowel and mix vigorously for 2 to 3 minutes. Just prior to application on the substrate, the mixture should be stirred again to ensure a creamy, smooth, lump-free consistency. The pot life of ARDEX X 4 is approximately 3 hours at 70°F (21°C). If surface skinning occurs within this time, remix before using.

Installation should proceed in accordance with ANSI A 108.5.

After mixing, apply the mortar to the substrate with the flat side of a trowel to obtain a solid mechanical bond. Apply to an area no greater than can be covered with tile while the mortar remains plastic (approx. 10 minutes open time, depending on substrate and job site conditions). Comb the mortar with a notched trowel of sufficient depth to ensure that the tiles are covered uniformly over their entire surface. The type and size of the tiles will dictate the size of the notched trowel to be used. The position of the tiles may be corrected for approximately 15 minutes after their installation.

Rough or uneven substrates may first be treated with a full scratch coat of ARDEX X 4 up to 1/4" thick. Installation of tiles may begin after the scratch coat has hardened overnight.

When setting tiles onto existing wallboards, the boards must be sound and solidly anchored to structural components in the wall.

### Grouting

Wall tiles can be grouted after 8 hours; floor tiles after 24 hours. ARDEX recommends the use of ARDEX FLEX SANDED™ grout, in accordance with ANSI A 108.10.

### Notes

The pot life of ARDEX X 4 is 3 hours at 70°F (21°C). If surface skinning occurs within this time, remix the mortar before using.



When setting certain types of tiles, it may be necessary to trowel a layer of mortar on the back of each tile prior to placing it on the combed mortar bed in order to achieve the required mortar-to-tile contact specified. Press the tile firmly into the freshly combed mortar to ensure maximum mortar contact with the tile. Tiles must not be applied to skinned-over mortar.

When setting paper-faced glass mosaic or porcelain mosaic tiles, apply sufficient mortar such that when the mosaic is pressed into place, the mortar rises up through the joints. Any subsequent grouting that is necessary must also be done with ARDEX X 4.

For cases requiring waterproofing, please refer to the ARDEX Technical Brochures for ARDEX waterproofing compounds.

For setting and grouting tiles in hot tubs and water-holding tanks, use ARDEX WA™ EPOXY GROUT AND ADHESIVE.

For high traffic or high stress areas use ARDEX X 9™ PREMIUM SHEARFLEX® MORTAR, ARDEX FB 9 L™ POURABLE SHEARFLEX® MORTAR, or ARDEX WA™.

ARDEX recommends the installation of test areas to confirm the suitability of the product for the intended use.

ARDEX X 4 must be worked at surface and air temperatures over 50°F (10°C).

For setting moisture-sensitive stones on interior applications, use ARDEX S 16™, ARDEX S 20™ or ARDEX WA™, as appropriate.

## Precautions

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 tile 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 2.75 parts powder to 1 part of water by volume at 70°F (21°C). Physical properties are typical values and not specifications.

**Mixing Ratio:** 5 to 5 1/2 quarts (4.7 to 5.2 L) per bag (2.75 parts powder to 1 part water by volume)

**Coverage (Approx.):** 160 sq. ft. per bag using a 1/8" x 1/8" V-Notch trowel  
80 sq. ft. per bag using a 1/4" x 1/4" x 1/4" Sq-notch trowel  
60 sq. ft. per bag using a 1/4" x 3/8" x 1/4" Sq-notch trowel

**Open Time:** Approx. 10 minutes

**Pot Life:** 3 hours

**Time to Grout:** Walls 8 hours; Floors 24 hours

**Packaging:** 40 lb/18 kg net weight

**Storage:** Cool and dry. Do not leave bags exposed to sun.

**Shelf Life:** One year if unopened

**Warranty:** Please see the ARDEX SystemOne Warranty Brochure

ANSI A 118.4 SHEAR BOND (28 DAYS)	
Porcelain Tile	275 psi
Wall Tile	350 psi
ANSI A 118.11 SHEAR BOND (28 DAYS)	
Quarry Tile on plywood	175 psi
ISO/EN C 1 T	

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