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# ARDEX X 77™ MICROTEC®

## Fiber Reinforced, Polymer Modified Thin Set Mortar

**Ideal for large format porcelain tile installations, exterior or interior, floor or wall**

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**Use for setting porcelain, glass, mosaic, quarry, ceramic and most natural stone tiles\***

**Use over exterior concrete and masonry surfaces, as well as over common interior surfaces, including exterior grade plywood**

**Extended open time of 60 minutes – double the ISO standard**

**Unmatched sag resistance – double the ISO standard**

**Outstanding coverage – 110 sq. ft. per bag with 1/4" sq. notch trowel**

**Water and frost resistant - ideal for swimming pools and high traffic areas**

**Extremely easy to mix and apply**

**Highly flexible**

**3 hour pot life**

**Available in white and gray**



**SystemOne™**

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# ARDEX X 77™ MICROTEC®

## Fiber Reinforced Polymer Modified Thin Set Mortar

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### Description and Usage

A high performance, microfiber reinforced, polymer modified, thin set mortar formulated especially for large format tile installations. Can be used to install porcelain, glass, mosaic, quarry, ceramic and most natural stone tiles\* over interior or exterior concrete and masonry floor and wall surfaces. Also, use for interior applications over exterior-grade plywood. Ideal for use in swimming pools and fountains and may be used over in-floor heating systems.

ARDEX X 77™ MICROTEC® Fiber Reinforced Thin Set Mortar is formulated to provide excellent bond strength, sag resistance and flexibility, making it ideal for the installation of large format tiles (exterior and interior), as well as high traffic areas, wet areas and exterior building façades.

### Substrate Preparation

ARDEX X 77 MICROTEC 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 dry, 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. Wallboards must be dry, sound and solidly anchored to structural components in the wall. The plane of wall surfaces must be plumb and true. Floor surfaces must have minimal variation in the plane or slope.

Should interior pre-leveling or subfloor repair be required use ARDEX LIQUID BACKERBOARD™, ARDEX AM 100™, ARDEX TL 1000™, ARDEX TL PATCH™ or ARDEX EB 2™, as appropriate.

ARDEX X 77 MICROTEC will bridge dormant cracks up to 1/8" (3 mm) wide. 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.

Highly absorbent substrates must be treated with a scratch coat of ARDEX X 77. Allow the scratch coat to harden completely (8 hours for wall tiles, 24 hours for floor tiles) before proceeding with the tile installation. Alternatively, apply ARDEX P 51™ Primer diluted 1:3 with water (interior applications in dry areas only).

For tile over tile installations, use a scratch coat of ARDEX 77, and let the scratch coat harden completely (8 hours for wall tiles, 24 hours for floor tiles) before proceeding with the tile installation. Alternatively, existing tiles can receive a coat of ARDEX 8+9™ Waterproofing and Crack Isolation Compound, which must dry 1-2 hours before proceeding with the tile installation. As a third alternative for interior, dry applications only, prime the existing tiles with ARDEX P 82™ Ultra Prime and allow this course to dry thoroughly (min. 3 hours, max. 24 hours) prior to proceeding with the tile installation.

Existing metal, glass, and other non-porous surfaces must be primed with ARDEX P 82™ (interior applications in dry areas only). For exterior applications or wet areas, these non-porous substrates must receive a coat of ARDEX 8+9 Waterproofing and Crack Isolation Compound, and this course must be allowed to dry 1-2 hours prior to proceeding with the tile installation.

### Mixing and Application

For one 40 lb. (18 kg) bag of ARDEX X 77 MICROTEC use 8 1/4 (7.8 L) to 8 3/4 (8.2 L) quarts of clean water. To mix smaller quantities by hand, use 2 parts powder to 1 part water by volume. Use a margin trowel and mix vigorously for 2 to 3 minutes. Pour water in the mixing container first, and then add the ARDEX X 77 MICROTEC while mixing for 2 to 3 minutes. For best results, mix with an ARDEX T-2 Ring Paddle and 1/2" heavy-duty drill. 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 77 MICROTEC 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 that which can be covered with tile while the mortar remains plastic. Do not set tile into skinned over mortar. 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 installation.

### Grouting

Wall tiles can be grouted after 8 hours; floor tiles after 24 hours in accordance with ANSI A 108.10 using the appropriate ARDEX grout.

\* For setting moisture-sensitive natural stone or agglomerate tile use ARDEX X 32™ MICROTEC® Fiber Reinforced Rapid Setting Thin to Thick Bed Mortar or ARDEX S 16™ Rapid Setting Thin Set Mortar for Marble & Stone.



## Notes

The pot life of ARDEX X 77 MICROTEC is roughly 3 hours at 70°F (21°C). Jobsite conditions and temperature may affect pot life. If the material begins to harden within this time, retemper with a drill and mixing paddle.

**DO NOT ADD MORE WATER!**

When setting certain types of tiles, it may be necessary to trowel a layer of mortar on the back of each tile prior to placement on the combed mortar bed in order to achieve the required mortar-to-tile contact. Press each tile firmly into the freshly combed mortar to ensure maximum mortar contact with the tile.

For cases requiring waterproofing, please refer to the ARDEX 8+9™ Waterproofing and Crack Isolation Compound data sheet and the ARDEX 8+9 “5 Step Application Guide.”

ARDEX X 77 MICROTEC is intended for use at material and surface temperatures between 50° and 85° F (10° to 29° C). Do not install below 50°F (10°C) surface and air temperatures. For warm weather installation instructions, please contact the ARDEX Technical Service Department.

Never mix with cement or additives. Observe the basic rules of tile work.

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

ANSI A 118.4 SHEAR BOND (28 DAYS)	
Porcelain Tile	450 psi
Wall Tile	650 psi
ANSI A 118.11 SHEAR BOND (28 DAYS)	
Quarry Tile on plywood	225 psi
ISO/EN C2 FT (T) E (E) S1	

## Precautions

ARDEX X 77 MICROTEC contains Portland cement, sand aggregate and microfibers. 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 product label. For complete safety information, please refer to the Material Safety Data Sheet or on our website at [www.ardexamericas.com](http://www.ardexamericas.com).

## Technical Data According to ARDEX Quality Standards

All data based on a mixing ratio of 2 parts powder to 1 part water by volume at 70°F (21°C). Physical properties are typical values and not specifications.

### Mixing Ratio:

#### 40 lb bag:

8 1/4 (7.8 L) to 8 3/4 (8.2 L) quarts per 40 lb. (18 kg) bag  
2 parts powder to 1 part water by volume

#### 20 lb bag:

4 1/8 (3.9 L) to 4 3/8 (4.1 L) quarts per 20 lb. bag  
2 parts powder to 1 part water by volume

### Coverage (approx.):

1/8" x 1/8" V-Notch trowel

#### 40 lb bag:

220 sq. ft. per bag

#### 20 lb bag:

110 sq. ft. per bag

1/4" x 1/4" x 1/4" Sq.-Notch

#### 40 lb bag:

110 sq. ft. per bag

#### 20 lb bag:

55 sq. ft. per bag

1/4" x 3/8" x 1/4" Sq.-Notch

#### 40 lb bag:

82.5 sq. ft. per bag

#### 20 lb bag:

41.25 sq. ft. per bag

1/2" x 1/2" x 1/2" Sq.-Notch

#### 40 lb bag:

55 sq. ft. per bag

#### 20 lb bag:

27.5 sq. ft. per bag

### Open time:

Up to 60 minutes

### Pot Life:

3 hours

### Time to Grout:

Walls: 8 hours  
Floors: 24 hours

### Color:

40 lb bag Gray, White  
20 lb bag White

### Packaging:

40 lb (18 kg) bag net weight  
20 lb (9 kg) bag net weight

### Storage:

Store in a cool dry area.  
Do not expose bags to sun.

### Shelf Life:

1 year if unopened

### Warranty:

ARDEX Engineered Cements Standard Limited Warranty applies. Also eligible for the ARDEX SystemOne™ Warranty when used in conjunction with select ARDEX GROUT and ARDEX FLEX CAULK.

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



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