



ARDEX X 78TM MICROTEC[®]



Fiber Reinforced, Semi-Pourable, Polymer Modified Thin Set Mortar

*Ideal for large format floor tile installations, especially in
high traffic areas, interior or exterior*

Use for setting porcelain, glass, quarry, ceramic, all types
of mosaic 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 up to 60 minutes - double the ISO standard

Especially suited for large format tile installations

Very high bond strength, highly flexible for excellent shear resistance

Unique, semi-pourable consistency makes it extremely easy to mix and apply

Ideal for high traffic areas

Special additives virtually eliminate the risk of efflorescence

Use for interior and exterior floors and horizontal surfaces

Outstanding coverage – 105 sq. ft. (9.75 sq. m) per bag with
1/4" sq. notch trowel

4 hour pot life

Available in gray and white



systemONE[™]
warranty

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ARDEX X 78™ MICROTEC®

Fiber Reinforced, Semi-Pourable, Polymer Modified Thin Set Mortar

Description and Usage

A high performance, microfiber reinforced, polymer modified, semi-pourable, thin set mortar especially formulated for horizontal, large format tile installations. Use for installing porcelain, glass, mosaic, quarry, ceramic and most natural stone tiles* over interior or exterior concrete and masonry floor surfaces. Also, use for interior applications over exterior-grade plywood. May be used on floors with in-floor heating systems. Special additives virtually eliminate the risk of efflorescence.

ARDEX X 78™ MICROTEC® Fiber Reinforced, Semi-Pourable, Polymer Modified Thin Set Mortar is formulated to provide high bond strength and flexibility, making it ideal for the installation of large format tiles in high traffic areas. Its unique, semi-pourable consistency makes application over large areas fast and easy. Also, it provides excellent contact upon setting eliminating the need to back butter the tile in most instances.

Substrate Preparation

ARDEX X 78 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. Floor surfaces must have minimal variation in the plane or slope as outlined by the Tile Council of North America.

Should pre-leveling or subfloor repair be required, use ARDEX AM 100™ or ARDEX EB 2 for exterior or interior use, or use ARDEX LIQUID BACKER BOARD™, ARDEX TL 1000™, ARDEX TL PATCH™ or for interior use, as appropriate. Observe the instructions and dry times in the ARDEX technical brochures.

Expansion joints must be provided over existing moving joints and moving cracks and where substrate materials change composition or direction per ANSI A 108 AN-3.7.

Priming/Treating the Substrate

Highly absorbent substrates, existing tiles and certain non-porous substrates must be primed or treated as detailed below before proceeding with the tile installation.

*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 (interior applications only).

HIGHLY ABSORBENT SUBSTRATES

Option 1: Apply a scratch coat of ARDEX X 78. Allow the scratch coat to harden and dry completely before proceeding with the tile installation.

Option 2 (interior applications only): Prime with ARDEX P 51™ Primer diluted 1:3 with water and allow this course to dry thoroughly (min. 3 hours, max. 24 hours) before proceeding with the tile installation.

EXISTING TILES (TILE OVER TILE APPLICATIONS)

Option 1: Apply a coat of ARDEX 8+9 Waterproofing and Crack Isolation Compound, which must dry 1 to 2 hours before proceeding with the tile installation.

Option 2 (interior 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) before proceeding with the tile installation.

EXISTING METAL, GLASS, AND CERTAIN OTHER NON-POROUS SURFACES

Option 1: Apply a coat of ARDEX 8+9 Waterproofing and Crack Isolation Compound, which must dry 1 to 2 hours before proceeding with the tile installation.

Option 2 (interior applications only): Prime with ARDEX P 82™ ULTRA PRIME, and allow this course to dry thoroughly (min. 3 hours, max. 24 hours) before proceeding with the tile installation.

For more information, refer to the ARDEX Substrate Preparation Brochure at www.ardexamericas.com.

Recommended Tools

Margin trowel, mixing container, ARDEX T-2 Ring Paddle and 1/2" (12 mm) heavy-duty drill (min. 650 rpm) and appropriate notched trowel.

Mixing and Application

For one 40 lb. (18 kg) bag of ARDEX X 78, use 6 3/4 to 7 1/2 quarts (6 1/4 to 7 L) of clean water. Pour water in the mixing container first, and then add the ARDEX X 78 while mixing for 2 to 3 minutes. For best results, mix with an ARDEX T-2 Ring Paddle and 1/2" heavy-duty drill (12 mm, min. 650 rpm). To mix smaller quantities by hand, use 2 1/4 to 2 3/4 parts powder to 1 part water 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.

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 or stone into skinned over mortar. Comb the mortar with a notched trowel of sufficient depth to ensure that the tile or stone is covered uniformly over the entire surface. Follow the recommendations of the Tile Council of North America for proper transfer of ARDEX X 78 from the substrate to the tile or stone. The type and size of the tile or stone will dictate the size of the notched trowel to be used to achieve proper transfer. The position of the tile or stone may be corrected for Up to 15 minutes after installation.

Grouting

Tiles can be grouted after 24 hours in accordance with ANSI A 108.10 using the appropriate ARDEX grout.

Notes

FOR PROFESSIONAL USE ONLY.

The pot life of ARDEX X 78 is roughly 4 hours at 70°F (21°C). Jobsite conditions and temperature may affect pot life. If the material begins to harden within this time, re-temper with a drill and mixing paddle.

DO NOT ADD MORE WATER!

When setting certain types of tile or stone, it may be necessary to trowel a layer of mortar on the back of each tile or stone 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 technical data sheet and the ARDEX 8+9 "5 Step Application Guide."

ARDEX X 78 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.

Precautions

Carefully read and follow all precautions and warnings on the product label. For complete safety information, please refer to the Material Safety Data Sheet available at www.ardexamericas.com.

Technical Data According to ARDEX Quality Standards

All data based on a mixing ratio of 2 1/4 to 2 3/4 parts powder to 1 part water by volume at 70°F (21°C). Physical properties are typical values and not specifications.

Mixing Ratio: 6 3/4 to 7 1/2 quarts (6 1/4 to 7 L) of water per 40 lb. (18 kg) bag
For smaller batches, use 2 1/4 to 2 3/4 parts powder to 1 part water by volume

Approximate Coverage per 40 lb. (18 kg) bag:

1/4" x 1/4" x 1/4" Sq. Notch
105 sq. ft (9.75 m²) per bag
1/4" x 3/8" x 1/4" Sq. Notch
75 sq. ft (6.97 m²) per bag
1/2" x 1/2" x 1/2" Sq. Notch
50 sq. ft (4.65 m²) per bag

Open Time: Up to 60 minutes

Pot Life: 4 hours

Working Time: Up to 15 minutes

Time to Grout: 24 hours

Colors: Gray, White

VOC: 0

Packaging: 40 lb. (18 kg) net weight bag

Storage: Store in a cool, dry area. Do not leave bags exposed 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 ARDEX Grouts and Caulks.

IMPORTANT TECHNICAL UPDATES

Technical update effective June 28, 2018:
ARDEX Tile Mortar Thicknesses over Membranes

[CLICK HERE](#)

Technical update effective June 23, 2017:
ARDEX Tile Setting Materials over Membranes in Exterior Applications

[CLICK HERE](#)

Technical update effective September 18, 2017:
Recommendations for Resin-Backed Tiles

[CLICK HERE](#)

Technical update effective 2018-01-04:
Recommendation Clarifications for Glass Tile Installations

[CLICK HERE](#)

ANSI A 118.4 SHEAR BOND (28 DAYS)**Porcelain Tile 300 psi (21.09 N/mm²)****Wall Tile 400 psi (28.12 N/mm²)****ANSI A 118.11 SHEAR BOND (28 DAYS)****Quarry Tile 225 psi (15.82 N/mm²)****ISO/EN C2 FT(T) E(E) S1**

28-Day Test	Test Method	ANSI Specification	Test Results
Impervious ceramic (porcelain) mosaics shear strength	ANSI A 118.15 F	≥50 psi (0.35 MPa / 3.5 kg/cm ²)	Pass
Impervious ceramic (porcelain) mosaics shear strength	ANSI A 118.15	>400 psi (2.76 MPa / 28 kg/cm ²)	642 psi (4.42 MPa / 45.1 kg/cm ²)
Impervious ceramic (porcelain) mosaics shear strength with freeze-thaw cycling	ANSI A 118.15	>250 psi (1.73 MPa / 17.5 kg/cm ²)	467 psi (3.22 MPa / 32.8 kg/cm ²)
Impervious ceramic (porcelain) mosaics with heat aging	ANSI A 118.15	>400 psi (2.76 MPa / 28 kg/cm ²)	529 psi (6.65 MPa / 37.2 kg/cm ²)
Glazed wall tile shear strength	ANSI A 118.15	>450 psi (3.11 MPa / 31.5 kg/cm ²)	757 psi (5.22 MPa / 53.2 kg/cm ²)
Quarry tile shear strength	ANSI A 118.15	>150 psi (1 MPa / 10.5 kg/cm ²)	594 psi (4.10 MPa / 41.7 kg/cm ²)
Quarry tile to plywood shear strength	ANSI A 118.11	>150 psi (1 MPa / 10.5 kg/cm ²)	225 psi (1.55 MPa / 15.8 kg/cm ²)
7-Day Test	Test Method	ANSI Specification	Test Results
Impervious ceramic (porcelain) mosaics shear strength with water immersion	ANSI A 118.15	>200 psi (1.38 MPa / 14 kg/cm ²)	480 psi (3.31 MPa / 33.7 kg/cm ²)

Made in the USA.

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Supersedes all previous versions. Check www.ardexamericas.com for most recent version and for technical updates, which may supersede the information herein.

Visit www.youtube.com/ARDEX101 to watch ARDEX Americas product videos.

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



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