ARDEX E 90™
Mortar Admix
Tile and Stone Mortar Enhancer

For use with select ARDEX tile and stone mortars (see chart for full details)

Improves adhesion and flexibility when setting all tile types
Achieves ISO 13007 S2 deformability when used with ARDEX X 90, X 77, X 78, S 28 and N 23
For interior or exterior use
Provides a water-repellant mortar for tiling showers, swimming pools and other wet areas; helps reduce the risk of efflorescence
Ideal for setting glass tile when used with ARDEX X 77 White along swimming pool water lines
Allows direct tile installation over existing tiles without profiling or priming
Suitable for use over in-floor heating systems
Low VOCs
ARDEX E 90™ Mortar Admix
Tile and Stone Motar Enhancer

Description
ARDEX E 90™ Mortar Admix is a synthetic additive for use with select ARDEX tile and stone mortars (see chart below for full usage details). ARDEX E 90 is diluted with water prior to mixing with mortars (see chart below for mix ratios).

The addition of ARDEX E 90 results in a mortar that, once set and hardened, has high bond strength and excellent elastic and water-repellent properties. ARDEX E 90 is ideal for internal and external tile and stone installations.

Substrate Preparation
Follow the substrate preparation instructions in the technical data sheet for the selected ARDEX tile and stone mortar.

Mixing and Application
See the chart on the back for the proper mix ratios when mixing ARDEX E 90 with ARDEX tile and stone mortars.

Pour the ARDEX E 90 and the water into the mixing container first and mix. Next, add the selected tile and stone mortar while mixing for 2 to 3 minutes. For best results, mix with an ARDEX T-2 Mixing Paddle and 1/2” heavy-duty drill (12 mm, min. 650 rpm). If mixing by hand, use a margin trowel and mix vigorously. 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 and the technical data sheet for the selected mortar. 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 the mortar 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.

Warranty
ARDEX Engineered Cements Standard Limited Warranty. Failure to follow written directions will void the warranty. For complete warranty details, please contact our Customer Service Center at 888-612-7339.

Notes
FOR PROFESSIONAL USE ONLY.

*For setting moisture-sensitive natural stone or agglomerate tile, use ARDEX X 32, ARDEX S 28 or ARDEX N 23 without ARDEX E 90 (interior, dry applications only).

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

Shelf life is 1 year, if unopened.

VOC: 0.2 g/L, calculated, SCAQMD

Do not reuse container. 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.

Made in the USA.

© 2015 ARDEX, L.P. All rights reserved.

Content updated 03-14-2017. Published 11-09-2017. Supersedes all previous versions. Check www.ardexamericas.com for most recent version and for technical updates, which may supersede the information herein.

AT-451 (09/17)
## Mixing Ratios and Suitable Uses

<table>
<thead>
<tr>
<th>Thin Set:</th>
<th>ARDEX E 90 per 40 lb. (18 kg) Bag</th>
<th>Water per 40 lb. (18 kg) Bag</th>
<th>Suitable Uses</th>
</tr>
</thead>
</table>
| ARDEX X 5™ Flexible Tile and Stone Mortar | 2 quarts (1.89 L) | 4 quarts (3.79 L) | 1. Standard applications of tiles and most natural stone* over wood and concrete where improved strength, flexibility or water repellency is needed  
2. Tile-on-tile installations |
| ARDEX X 32™ MICROTEC® Fiber Reinforced, Rapid Set, Thin-to-Thick Bed Mortar | 2 1/4 quarts (2.13 L) | 4 1/2 quarts (4.26 L) | 1. Standard applications of tiles and most natural stone* over wood and concrete where improved strength, flexibility or water repellency is needed  
2. Tile-on-tile installations |
| ARDEX X 77 MICROTEC® Fiber Reinforced Tile and Stone Mortar | 3 3/8 quarts (3.2 L) | 6 3/4 quarts (6.38 L) | 1. Standard applications of tiles and most natural stone* over wood and concrete where improved strength, flexibility or water repellency is needed  
2. Tile-on-tile installations  
3. Applications of mesh-backed tile and stone.  
4. Improved deformability - ISO 13007 S 2 (≥ 0.2” / 5 mm) |
| ARDEX X 78 MICROTEC® Fiber-Reinforced, Semi-Pourable Tile and Stone Mortar | 2 5/8 quarts (2.48 L) | 5 1/4 quarts (5 L) | 1. Standard applications of tiles and most natural stone* over wood and concrete where improved strength, flexibility or water repellency is needed  
2. Tile-on-tile installations  
3. Applications of mesh-backed tile and stone.  
4. Improved deformability - ISO 13007 S 2 (≥ 0.2” / 5 mm) |
| ARDEX N 23™ MICROTEC® Rapid Set Natural Stone and Tile Mortar | 2 1/2 quarts (2.37 L) | 5 quarts (4.73 L) | Installations of glass tile at the water line of a swimming pool** |
| ARDEX X 77 (White only) | 3 3/8 quarts (3.2 L) | 6 3/4 quarts (6.38 L) | Installations of glass tile at the water line of a swimming pool** |
| ARDEX S 28™ MICROTEC® Rapid-Set, Rapid-Dry, Super-Format and Uncoupling Membrane Mortar | 2 1/2 quarts (2.37 L) | 5 quarts (4.73 L) | 1. Applications of resin-coated or mesh-backed tile and stone  
2. Tile-on-tile installations |
| ARDEX X 90 OUTDOOR™ Microtec3 Rapid-Set, Flexible Tile and Stone Mortar | 2 1/2 quarts (2.37 L) | 5 quarts (4.73 L) | 1. Standard applications of tiles and most natural stone* over wood and concrete where improved strength, flexibility or water repellency is needed  
2. Applications of approved resin-coated or mesh-backed tile and stone  
3. Tile-on-tile installations  
4. Improved deformability - ISO 13007 S 2 (≥ 0.2” / 5 mm) |

See appropriate technical data sheet(s) for complete installation details.

**Tile must be installed in accordance with ASTM A108.16.