

APPROPRIATE AREAS OF USE

Check akdo.com for the appropriate areas of use for your stone selection.

SURFACE PREPARATION

Substrate Preparation

Appropriate substrates: concrete, masonry, existing well bonded ceramic tile, proper tiling underlayment over wood or steel framed construction.

General Substrate Requirements

All substrates must be flat, smooth and free of all surface contaminants that could act as a bond breaker. Overly absorbent as well as non-absorbent substrates require priming prior to installation. A surface flatness of 1/4" in 10' is required for all tile and stone installations per TCNA installation guidelines. Large-Format Tiles: Any tile larger than 15" in any facial dimension requires a surface flatness of 1/8" in 10' and no more than 1/16" variation in any 24" span.

Crack Isolation

All existing substrates cracks as well as any area susceptible to future surface cracking requires the installation of a crack isolation membrane meeting ANSI 118.12.

Wet Areas

Wet Areas require the installation of a waterproofing membrane meeting ANSI 118.10 prior to installation. Steam Rooms (continuous use): require a waterproofing and vapor retarding membrane with a perm rating of .05 perms or less.

Substrate Preparation Products

- ARDEX Liquid BackerBoard® Self-Leveling Underlayment for Interior Wood and Concrete Subfloors
- ARDEX A 38™ MIX Rapid-Set Pre Mixed Scream
- ARDEX AM 100™ Rapid Set Pre-Tile Smoothing and Ramping Mortar
- ARDEX SKM™ Skimcoat Patch & Finishing Underlayment
- ARDEX 8+9™ Rapid Waterproofing and Crack Isolation Compound (Shower Walls)
- ARDEX SK 175™ Waterproofing Membrane and Vapor Retarder for Tile & Stone Installations (Steam Room Applications)

For complete information regarding substrate preparation requirements,

material selection, required installation tools and application, visit www.ardexamericas.com and view the individual product technical data sheets or contact ARDEX technical service at (888) 512-7339

CUTTING & DRILLING

Use a diamond wet saw blade meant for cutting natural stone.

To create holes, use a 3/8" drill with a water swivel attachment. Drill using diamond drill bit made for natural stone, at a slow speed.

To achieve a bullnose on the edge of the tile, use a bullnose blade meant for natural stone.

SETTING

Before installation, dry lay all material to inspect for quality and to determine the best blend of the material. All materials must be acclimated prior to installation, and air and surface temperature must be between 50 F and 80 F during installation. Be sure to clean tiles to remove any dust, dirt or packing contaminants prior to installation.

It is required to select a notch trowel size that will achieve the proper coverage rate and maintain a minimum bed thickness of 3/32". A minimum coverage of 95% with no voids exceeding 2 square inches and no voids within 2" of the tile corners is required for all natural stone tile installations. Per ANSI A108.5, apply mortar to the substrate using a notched trowel, and place tiles while material is wet and offers transfer. Once setting materials have adequately set (see product specifications for dry time) grouting can proceed. Before grouting, treat stone with a grout release product.

Honor all expansion and moving joints in accordance with TCNA EJ 171. In addition, all perimeter and change of plane areas must be filled with an appropriate flexible sealant (ARDEX SX™ 100% Silicone Sealant for Tile and Stone Applications).

Back-Layered/Resin-Backed Tiles

Back-layering of natural stone tiles is common as the applied mesh serves as reinforcement and adds additional strength

to the tile. Many mesh backings are adhered by using a resinous adhesive, such as: epoxy, urethane or polyester. As these materials can be potentially difficult to bond to with traditional cements, proper setting material selection is critical. If setting mesh backed stones with a traditional thinset cement mortar, it is required to first prime the tile backing with ARDEX P 82 Primer. AKDO back layered stones can also be installed with ARDEX WA epoxy adhesive, without the need of priming.

Moisture Sensitive Stone

Prior to installation, be sure to determine if the natural stone being installed is prone to staining, discoloring, curling or warping. If the stone being installed is moisture sensitive, it is recommended to install with ARDEX N 23™ Rapid-Set Natural Stone Mortar or ARDEX X 32™ Thin to Thick Bed Mortar. All non-moisture sensitive stones can be installed with ARDEX X 77™ Microtec® Fiber Reinforced Tile and Stone Mortar.

Recommended Mortar and Adhesive (Mesh Backed Stone)

- ARDEX P 82™ - Waterborne two component primer – recommended bonding agent, to be applied to tile backing
- ARDEX X 77™ Microtec® – Fiber Reinforced Tile and Stone Mortar - recommended for interior, dry applications once stone backing is primed
- ARDEX WA™ Epoxy Adhesive (Recommended for steam rooms and wet areas)

Recommended Mortar and Adhesive (Non-Mesh Backed Stone)

- ARDEX X 77™ Microtec® – Fiber Reinforced Tile and Stone Mortar – recommended for non-moisture sensitive stone tiles
- ARDEX N 23™ Microtec® – Rapid-Set Natural Stone Mortar – Recommended for moisture sensitive stones (interior and dry areas)
- ARDEX X 32™ Microtec® – Thin to Thick Bed Mortar - recommended for moisture sensitive stones (wet areas)

Recommended Grout Release

- MP90 Eco Plus (for polished acid sensitive stones like marble, travertine, limestone)
- PRW200 (for natural finishes like honed, etched, sand blasted)

(guidelines continued on next page)

Recommended Grout

- ARDEX FL™ Rapid Set, Flexible, Sanded Grout
- ARDEX WA™ High Performance, 100% Solids Epoxy Grout and Adhesive

Caulking

- ARDEX SX™ 100% Silicone Sealant for Tile and Stone Applications

See complete setting material product technical information and installation instruction at ardexamericas.com.

For complete information regarding grout release products from FILA, visit filasolutions.com or call 844-FILA123

SEALING

Using a soft, clean cloth, apply a penetrating natural stone sealer. For wet areas, two coats of sealer is recommended. Always follow the sealer manufacturer's guidelines.

Recommended Sealant

- MP90 Eco Plus (natural look)
- Stoneplus Eco (enhanced matte look)

For complete information regarding sealant products from FILA, visit filasolutions.com or call 844-FILA123

CARE & MAINTENANCE

For day-to-day cleaning, apply a pH neutral cleaner with a soft cloth. Remove the residue with a clean cloth and rinse thoroughly.

Recommended Maintenance Cleaner

- FILACLEANER

For complete information regarding care & maintenance products from FILA, visit filasolutions.com or call 844-FILA123

CAUTION

AKDO will not accept claims for any reason after the material has been cut, modified or installed.

You have chosen to install your own Stone Tile product. Neither AKDO Intertrade, Inc. ("AKDO") nor the manufacturer shall have any responsibility for damage to property or for personal injury resulting from or related

to the installation process. You have determined the appropriate product and measurements for your needs. Except as otherwise set forth in writing, AKDO disclaims any and all representations and warranties regarding the suitability of the product for its intended use or the accuracy of measurements.

Please read all instructions with care before beginning installation. These instructions are considered a guide, to help prevent problems caused by errors in installation. The instructions should not be considered complete. Many details of installation are learned through experience and general construction knowledge, which we cannot provide. The installation guidelines are intended to be recommendations only, and they are not intended to serve as a step-by-step installation checklist.

Selection of an experienced installer is your sole responsibility. You should consult with a professional installer to determine the best installation procedure for your project. Installers should refer to the most current industry standards and specifications for installation. You assume all risks of loss or damage in connection with the installation and use of the Stone Tile product.

APPROPRIATE AREAS OF USE

Check akdo.com for the appropriate areas of use and grout joint for your stone selection. All stones are appropriate for interior use only.

SURFACE PREPARATION

Substrate Preparation

Appropriate substrates: concrete, masonry, existing well bonded ceramic tile, proper tiling underlayment over wood or steel framed construction.

Natural Stone Substrate Deflection Requirements

All natural stone tile installations over framed construction require a substrate deflection rating of L/720. See the Tile Council of North America (TCNA) handbook for complete details regarding specific methods of preparing substrates for natural stone installation.

General Substrate Requirements

All substrates must be flat, smooth and free of all surface contaminants that could act as a bond breaker. Overly absorbent as well as non-absorbent substrates require priming prior to installation. A surface flatness of 1/4" in 10' is required for all tile and stone installations per TCNA installation guidelines.

Crack Isolation

All existing substrates cracks as well as any area susceptible to future surface cracking requires the installation of a crack isolation membrane meeting ANSI 118.12.

Wet Areas

Installation of a waterproofing membrane meeting ANSI 118.10 prior to installation is recommended for wet areas. Steam Rooms (continuous use) require a waterproofing and vapor retarding membrane with a perm rating of .05 perms or less.

Substrate Preparation Products

- ARDEX Liquid BackerBoard® Self-Leveling Underlayment for Interior Wood and Concrete Subfloors
- ARDEX A 38™ MIX Rapid-Set Pre Mixed Screed
- ARDEX AM 100™ Rapid Set Pre-Tile Smoothing and Ramping Mortar
- ARDEX SKM™ Skimcoat Patch & Finishing Underlayment
- ARDEX 8+9™ Rapid Waterproofing and Crack Isolation Compound (Shower Walls)

- ARDEX SK 175™ Waterproofing Membrane and Vapor Retarder for Tile & Stone Installations (Steam Room Applications)

For complete information regarding substrate preparation requirements, material selection, required installation tools and application, visit www.ardexamericas.com and view the individual product technical data sheets or contact ARDEX technical service at (888) 512-7339

CUTTING & DRILLING

Stone Mosaics

For all stone mosaics, use a diamond wet saw blade meant for cutting natural stone.

To create holes, use a 3/8" drill with a water swivel attachment. Drill using diamond drill bit made for natural stone, at a slow speed.

Stone & Glass, Stone & Shell Mosaics

For mixed medium mosaics that combine stone with other glass or shell, use a diamond wet saw blade meant for cutting glass.

To create holes, use a 3/8" drill with a water swivel attachment. Drill using diamond drill bit made for glass, at a slow speed.

Stone & Metal Mosaics

For mixed medium mosaics that combine stone with metal, use a diamond wet saw blade meant for cutting glass.

To create holes, use a 3/8" drill with a water swivel attachment. Drill using drill bit made for metal, at a slow speed.

SETTING

Before installation, dry lay all material to inspect for quality and to determine the best blend of the material. All materials must be acclimated prior to installation, and air and surface temperature must be between 50 F and 80 F during installation. Be sure to clean tiles to remove any dust, dirt or packing contaminants prior to installation.

It is required to select a notch trowel size that will achieve the proper coverage rate and maintain a minimum bed thickness of 3/32". A minimum coverage of 95% is

required. Per ANSI A108.5, apply mortar to the substrate using a notched trowel, and place tiles while material is wet and offers transfer. Once setting materials have adequately set (see product specifications for dry time) grouting can proceed. Before grouting, treat stone with a grout release product. When applying grout release to mixed medium mosaics that combines stone with other materials, thoroughly wipe off excess grout release from non-stone materials to avoid build up.

Butt jointed mosaics and stone mosaics with glass and mirror accents should be grouted with ARDEX FG-C™, non-sanded grout. Honor all expansion and moving joints in accordance with TCNA EJ 171. In addition, all perimeter and change of plane areas must be filled with an appropriate flexible sealant (ARDEX SX™ 100% Silicone Sealant for Tile and Stone Applications).

Moisture Sensitive Stone

Prior to installation, be sure to determine if the natural stone being installed is prone to staining, discoloring, curling or warping. If the stone being installed is moisture sensitive, it is recommended to install with ARDEX N 23™ Rapid-Set Natural Stone Mortar.

Recommended Mortar and Adhesive

- ARDEX X 5™ Flexible Tile and Stone Mortar
- ARDEX X 77™ Microtec® – Fiber Reinforced Tile and Stone Mortar – recommended for non-moisture sensitive stone tiles

Recommended Grout Release

- FILA MP90 Eco Plus (for polished acid sensitive stones like marble, travertine, limestone, or for mixed medium mosaics that combines stone with other materials)
- FILA PRW200 (for natural finishes like honed, etched, sand blasted)

Recommended Grout

- ARDEX FL™ Rapid Set, Flexible, Sanded Grout
- ARDEX WA™ High Performance, 100% Solids Epoxy Grout and Adhesive
- ARDEX FG-C™ Microtec®, Unsanded Grout

(guidelines continued on next page)

Caulking

- ARDEX SX™ 100% Silicone Sealant for Tile and Stone Applications

See complete setting material product technical information and installation instruction at ardexamericas.com.

For complete information regarding grout release products from FILA, visit filasolutions.com or call 844-FILA123

SEALING

Using a soft, clean cloth, apply a penetrating natural stone sealer. For wet areas, two coats of sealer is recommended. When applying sealer to mixed medium mosaics that combines stone with other materials, thoroughly wipe off excess from non-stone materials to avoid build up. Always follow the sealer manufacturer's guidelines.

Recommended Sealant

- FILA MP90 Eco Plus (natural look)
- FILA Stoneplus Eco (enhanced matte look)

For complete information regarding sealant products from FILA, visit filasolutions.com or call 844-FILA123

CARE & MAINTENANCE

For day-to-day cleaning, apply a pH neutral cleaner with a soft cloth. Remove the residue with a clean cloth and rinse thoroughly.

Recommended Maintenance Cleaner

- FILACLEANER

For complete information regarding care & maintenance products from FILA, visit filasolutions.com or call 844-FILA123

CAUTION

AKDO will not accept claims for any reason after the material has been cut, modified or installed.

You have chosen to install your own Stone Mosaic product. Neither AKDO Intertrade, Inc. ("AKDO") nor the manufacturer shall have any responsibility for damage to property or for personal injury resulting from or related to the installation process. You have determined the appropriate product

and measurements for your needs. Except as otherwise set forth in writing, AKDO disclaims any and all representations and warranties regarding the suitability of the product for its intended use or the accuracy of measurements.

Please read all instructions with care before beginning installation. These instructions are considered a guide, to help prevent problems caused by errors in installation. The instructions should not be considered complete. Many details of installation are learned through experience and general construction knowledge, which we cannot provide. The installation guidelines are intended to be recommendations only, and they are not intended to serve as a step-by-step installation checklist.

Selection of an experienced installer is your sole responsibility. You should consult with a professional installer to determine the best installation procedure for your project. Installers should refer to the most current industry standards and specifications for installation. You assume all risks of loss or damage in connection with the installation and use of the Stone Mosaic product.

HINTS FOR INSTALLING DIFFERENT MOSAIC PATTERNS

Heavy Rain

Due to the thin nature of the Heavy Rain mosaic tesserae, they may not all lay flat when initially laid in the thinset. This can be manually corrected during installation. Ensuring the thinset is smooth and flat before laying the mosaic reduces the occurrence of this issue.

Butt Jointed Mosaics

Before installation, use a razor to trim any excess glue or mesh from the outside edges of each mosaic sheet. Clean the material to remove any dust, dirt or packing materials.

Apply the first mosaic sheet to the substrate, gently and firmly pressing it into the mortar bed using the broad, flat side of a grout float. Make sure the mosaic stays level to avoid lippage in the installation.

For the remainder of the mosaic sheets use the "slide and drop" technique: Put the

next sheet of mosaic on top of the installed piece, and slide it until it drops into place. This ensures the setting material does not get in between the two sheets. Firmly press the mosaic sheet into place, and "slide and drop" the next sheet of mosaic.

Choose a grout color that matches the color of the stone as closely as possible. It is recommended to test a few small pieces of mosaic with different grout options during the design process.

Mirror, Metallic and Shell in Wet Area

When using mosaics with mediums not suitable for wet areas in a backsplash design, include a 4" splash guard of wet area appropriate material in areas where water may pool, such as behind faucets.

Beam Mosaic

The Beam mosaic should be installed butt jointed in order to create the best alignment of the stripes in the mosaic.