

GLASS MOSAIC INSTALLATION GUIDELINES

Paper Face Mount

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RECOMMENDED TOOLS:

¼" square notch trowel, margin trowel, epoxy grout float (green), utility knife, hydrophilic sponges, non-abrasive scouring pad (white), two 5 gallon buckets, grout mixer mixing paddle, I-beam level or laser level, carpenters pencil, tape measure, 4" or 4 ½" continuous rim diamond blade, variable speed angle grinder, hammer drill, wheeled mosaic tile nippers, safety glasses, latex gloves, sanding stone, hand broom (or vacuum), hard bristle brush, heat gun (only if needed to remove cured epoxy grout), mesh tape (only for cracks or seams), paint brush and paint roller with tray (only for waterproofing).

RECOMMENDED PRODUCTS:

Polymer modified tile and stone mortar (white cement), epoxy bonding mortar (only if installing on metal or plastic), crack-prevention membrane, waterproofing membrane (only if waterproofing), cementitious grout or epoxy grout (color complementary to that of the tile; contrasting color not recommended), and Palmolive Pure & Clear dish detergent (for grout cleaning).

STEP 1: PREPARE SUBSTRATE

Prepare substrate by removing any imperfections on surface with sanding stone. Remove dust from substrate using hand broom (or vacuum). For seams or cracks in substrate apply crack prevention membrane and/or mesh tape. If waterproofing is required, apply waterproofing membrane as directed. Mix thin-set according to product instructions. Setting material used for skim coat should be the same used for installation, for bonding purposes. Apply a skim coat to substrate with the flat edge of the notch trowel. Allow appropriate drying time according to product instructions, sand surface with sanding stone and clean using hand broom (or vacuum). Additional coats may be applied for coarse surfaces, until substrate is smooth, level and plum.

STEP 2: LAYOUT AND CUTTING

Perform a dry layout on floor to ensure all material is accurate and sufficient. During layout, make sure the faint lines in the surface of paper-face mounted sheets are running in the same direction, to ensure uniformity of grout joints. Allow joint space between sheets—parallel to the lines on paper—to be slightly larger (⅛" total) than the grout joints between the mosaics on paper face mounted sheets. Take measurements of 3 by 3 sheet area. When marking substrate use pencil and be sure to apply lightly, as to not have any markings shown through tile and grout. Using level, apply horizontal line at the measurement of 3 sheets above highest point of floor (easiest way to determine the high point is by using a horizontal laser level and checking different locations of floor, measuring down from horizontal level line to the floor). From this horizontal guideline, mark additional horizontal line above 3 more sheets and repeat this until you reach the end of designated installation area. Mark vertical line 3 sheets from starting point. When starting in a corner where adjacent wall receives mosaic add thickness of tile and grout joint to vertical measurement, allowing space for mosaic installation on connecting wall (the same allowance should be made to horizontal floor measurement if installing tile to floor). It is good practice to not mark additional guidelines until mosaic has been installed in the existing square's, in case adjustments are necessary. If cutting tile is necessary, use a variable speed angle grinder with a continuous rim diamond blade. Mark the face of the tile where the cut is needed and set the grinder speed to the middle. It is best to cut the tile on top of a smooth, rigid surface such as stone or wood. Secure the good section of tile under a grout float, and begin cutting along the mark lightly. You do not want to cut the tile completely through in one pass, as doing so will cause chipping and breaks. Pass the grinder along cut mark, deepening the cut with each pass until tile is cleanly through (at least 3 passes). Individual tile can be cut with standard tile nippers (similar to using scissors).

STEP 3: SETTING PAPER FACE MOUNTED MOSAIC & PAPER REMOVAL

Mix thin-set according to product instructions. To begin installing, spread thin-set inside of square guideline using notched side of ¼" square notch trowel. Hold trowel at 45 degree angle from surface and forcefully spread thin-set to achieve a uniform direction of thin-set ridges. Thin-set ridges should be full and even with no thin-set remaining between ridges. Clean notch trowel. Using the flat side of notch trowel carefully flatten thin-set ridges by holding trowel at 20 degree angle from surface of thin-set and pull gently across the ridges until thin-set surface is uniform and flat, removing little to no thin-set in process. It is important to spread and flatten thin-set as quickly as possible to ensure the thin-set does not develop a skin on the top layer. Wind and heat will expedite this skinning process (if tile is set into thin set after skinning, the bond weakens resulting in tiles falling free from surface).

GLASS MOSAIC INSTALLATION GUIDELINES CONTINUED

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Paper Face Mount

STEP 3: SETTING PAPER FACE MOUNTED MOSAIC & PAPER REMOVAL CONTINUED

Set 9 sheets of paper face mounted tile into the designated thin-set square guideline, making sure the lines on the surface of paper face mounted sheets are running in the same direction, as in layout. After the sheets have been positioned into the thin-set, firmly hit or tap the mosaics with the clean grout float to ensure maximum adhesion. Allow joint space between sheets running parallel with the lines on the mounting paper to be slightly larger ($\frac{1}{8}$ " total) than the individual grout joints on paper face mounted sheets (paper face mounted sheets will expand slightly in the direction perpendicular to the lines on the paper, during the wetting process, eliminating the difference in joint space). Using a utility knife, clean any excess thin-set that has filled the grout joints or spread outside the boundaries of the tile. It is important to do this before the thin set hardens. Use the flat edge of the margin trowel and scrape the thin-set off the substrate around the boundaries. Failure to remove all thin-set will result in a raised edge of adjacent tile and a rigid surface with overcasting shadows. The dimensions of the sheets may be adjusted by slicing individual grout joints and either contracting or expanding the sheet. This may be needed to fit or reach a certain distance. Before the thin-set has hardened, remove mounting paper so that any necessary minor adjustments to grout joints and mosaic positioning can be made. Wet the mounting paper with sponge. Wait a few minutes until paper appears to be drying (this shows that the water is transferring through the paper to the glue). Repeat the wetting process 2 – 3 times and the paper used by American Glass Mosaics will easily be removed. After paper has been removed, grout joints and mosaic positioning can be carefully adjusted by inserting the flat edge of the notch trowel into joint and pressing against the substrate, then by wedging the tile in any direction to straighten and align grout joints. Grout joint and mosaic positioning should be made using extreme care because any major adjustments to the grout joints thickness may become evident after grouting. Allow appropriate drying time, according to product instructions, for thin-set to cure before grouting.

STEP 4: GROUTING PROCESS

Clean all glue residue from surface of tile using hot water (clean with sponge and/or scouring pad). Prepare joints for grout by removing any thin-set that is close or flush to the face of the tile. Prepare to grout after joints have been cleaned and are completely dry. Before mixing grout you should have all necessary items ready. This includes two 5 gallon buckets $\frac{3}{4}$ full of hot water mixed with a small amount of detergent, multiple sponges and scouring pads, grout float and margin trowel. Either cementitious or epoxy grout is acceptable for use. Epoxy grout has a tendency to stain anything it comes into contact with (cloth, wood, stone, etc.), be sure to cover area around work site to prevent any damages. It is also advised to protect hands by wearing latex gloves. Mix grout according to product instructions until smooth, uniform consistency is reached. With grout float, push grout across the face of the tile diagonally with force, holding the grout float at a 45 degree angle. When the grout joints are completely full, the majority of the excess grout can be removed from the surface of the tile by using the same motion but holding the grout float at a 90 degree angle. Only apply and clean one container of grout at a time. If using epoxy grout, remember it has a small workable window and extreme heat lessens the working time considerably (it may be necessary to shade outside installations in warm weather). To clean grout from face of tile, soak sponge in 5 gallon bucket and begin washing face of tile using circular motion (scouring pad should be used for this process if grout has slightly hardened). Do not wash too firmly because grout is still soft and can be easily removed from joints. After grout has been removed a layer of haze remains. To remove this layer, gently clean the surface using new water and new sponge. During the final cleaning you can smooth grout joint with sponge as needed. Allow proper drying time according to product instructions. If you need to remove epoxy grout which has already cured, it can be softened by applying heat from a heat gun (if heat gun is aimed at one area too long it will burn and discolor the grout, so heat area using a back and forth motion about an inch from surface). For non-epoxy grouts it is recommended to protect the grout by applying grout sealant, apply according to the manufacturers directions. After proper time for curing, your American Glass Mosaics installation can be cleaned with any household glass cleaner, and stains can be removed from epoxy grout joints with a standard cleaning solution and hard bristle brush.