



Globally Proven
Construction Solutions

Installation of Glass Mosaic Tiles

TDS-1145

For thin-bed glass mosaic tile installation where a cementitious bonding material will be used, the maximum allowable variation in the tile substrate shall be 5mm in 3m from the required plane with no more than 1.5mm variation in 300mm when measured for the high points in the surface. Where used in combination with large format tile with one edge greater than 375mm in length, or where greater surface tolerance is required, the maximum allowable variation shall be 3mm in 3m from the required plane with no more than 1.5mm variation in 600mm when measured from the high points in the surface.

LATICRETE Australia strongly recommends the use of installers who have demonstrated their commitment to their craft and taken the time to stay current with the latest materials and methods. Requiring references and a portfolio along with a tender or estimate is a good way to ensure the installer has successfully completed work of similar size, scope, and complexity.

PREPARATION OF UNEVEN VERTICAL OR HORIZONTAL SURFACES

If the substrate to receive the glass mosaic installation is uneven then it will be necessary to level the surface with 3701 Fortified Mortar Bed; or, 226 Thick Bed Mortar gauged with 3701 Mortar Admix. The wetter, plasters consistency levelling mortar is applied to the clean, damp substrate using a flat trowel to level the surface to tolerances as stated above. LATICRETE Levelling Mortars can be applied from a feather-edge to 12 mm thick in a single application (for walls). For vertical installations requiring levelling of more than 12 mm then "scratch" the surface of the wet initial coat and allow the mortar to harden. The next levelling coat can be directly applied to the hardened scratch coat.

Semi-dry tilers screed mortars with thickness from feather edge to 50mm, shall be applied over slurry bond coats, be well compacted and struck to the levels required. Apply mortar beds greater than 50mm in layers.

Follow glass tile manufacturer's specific installation requirements for minimum cure time of skim coat, levelling mortars or self-levelling underlayment's.

Use only enough mortar to fill in the low areas of the surface and to make the entire surface level, plumb and smooth. Allow levelling coat to cure for 24 – 72 hours at 21°C.

Wet area installations can be waterproofed with HYDRO BAN®.

NOTE: Some glass tile manufacturers prohibit the use of a waterproofing or crack isolation membrane under their tile. Follow glass tile manufacturer's specific installation requirements for use of waterproofing membranes, anti-fracture membranes and vapour barrier placement.

INSTALLATION OF PAPER-FACE MOUNTED GLASS MOSAICS:

Make sure that the substrate is clean, structurally sound, and free of any dirt, oil, grease, paint, sealers, form release agents, or curing compounds. Clean the surface with a damp sponge just before installation of the tile.

This installation requires the same adhesive mix to be used to set the glass mosaic tile and do the initial grouting. This is commonly referred to as the One-Step Method. PERMACOLOR® Grout mixed with 4237 Latex Additive is an ideal combination for this installation. For the one-step installation of paper-face mounted glass mosaic tile, mix approximately 2.5 L of 4237 Latex Additive with 10 kg of PERMACOLOR Grout.

Place each sheet of glass mosaics face down and work a small amount of the adhesive into the back of each sheet with a rubber grout float or the flat side of a trowel. Remove excess adhesive from the back of the mosaic sheets with the straight edge of the trowel or float. This should fill all of the joints and leave a thin, wet layer of adhesive on the back surface of the sheet. For sheets with varying thickness of glass mosaics then level grout to the thickest tile on the sheet.

Key the adhesive into the substrate using the flat side of a trowel to initiate a bond coat. Using the appropriate sized V-notch or small square notch trowel (e.g. 4 mm square notch), add more adhesive and notch the adhesive in a horizontal, straight pattern. The freshly prepared sheet of glass mosaics is placed onto the fresh combed adhesive on the floor or wall. After each sheet is placed, a flat wood block or rubber grout float is used to beat the face of the tiles and firmly embed the tiles into the adhesive. A minimum of 95% coverage of adhesive to tile should be achieved after the beat in. Check to make sure that a flat, uniform surface is attained.

Note: DO NOT APPLY EXCESSIVE ADHESIVE ON THE SURFACE TO BE COVERED WITH MOSAICS. Too much adhesive will squeeze up through the joints and produce an uneven finished surface. Excessive thickness of adhesive can also slow the hardening of the adhesive which means that the adhesive will remain soft for an extended period and delay the removal of the paper mounting.

Transparent and translucent glass tiles can show shadowing (ghosting) if the glass tile manufacturer's installation instructions are not followed. Please be aware of visual and technical limitations with transparent and translucent glass tiles. A mock-up is strongly suggested to verify final appearance and acceptance.

Apply the remaining sheets and make sure that the vertical and horizontal grout joints line up and a consistent pattern is maintained. The glass mosaic paper face mounting should be removed as soon as the tiles have set firm but the "grout" is still pliable enough to make adjustments and repair pinholes or voids in the grout. Use a sponge dampened with clean water to moisten the paper sheets covering the mosaics. Two or more applications of water may be needed to safely remove the paper facing from the tile. When the paper is properly saturated, peel the paper from the face of the tile being careful not to pull tile away from the adhesive. Inspect the grout joints for pinholes and voids and fix as necessary. Within one hour of initial set, clean any residual glue and paper from the surface using a light, damp sponge and buff with a dry cloth. Follow with an application of the same adhesive used to set the glass mosaics and grout the areas between each sheet as necessary.

INSTALLATION OF PAPER-FACE MOUNTED, BACK-MOUNTED, EDGE-MOUNTED, CLEAR FILM FACE-MOUNTED GLASS MOSAICS, OR RESIN-BACKED/REAR COATED GLASS MOSAICS:

FOR SWIMMING POOL INSTALLATIONS OF BACK-MOUNTED (DOTS OR MELTS) AND EDGE MOUNTED GLASS MOSIAC TILE IT IS NECESSARY TO CHECK WITH THE MANUFACTURER OF THE TILE TO DETERMINE SUITABILITY AND TO SELECT THE ADHESIVE MORTAR TYPE.

Although Australian and ANSI standards allow for the installation of back-mounted mosaics with latex thin-set mortars, the unstable nature of some of these mountings may not be entirely suitable for the long term performance of this type of tile installation when installed with latex thin-set mortar. LATAPOXY® 300 Adhesive can be used to install most dot mounted, melt mounted or resin backed mosaic tile; however, consult with the glass tile manufacturer for their specific installation instructions. For installation of resin-backed glass mosaic tile, please refer to TDS1150 "Installation of Resin-Backed Tile and Stone".

Make sure that the substrate is clean, structurally sound, and free of any dirt, oil, grease, paint, sealers, form release agents, or curing compounds. Clean the surface with a damp sponge just before installation of the glass mosaic tile.

This installation requires that the glass mosaic tile be installed and grouted in separate procedures. This is commonly called the Two-Step Method.

Check with the glass tile manufacturer to determine the type of adhesive recommended for installation of their product. Use 254 Platinum, 335 Premium, 335 Premium Rapid, 211 Powder (white) gauged with 4237 Latex Additive, LATAPOXY 300 Adhesive, or LATAPOXY SP-100 (for applications where a coloured epoxy adhesive is desired) as the setting adhesive. Key the adhesive into the substrate using the flat side of a trowel to initiate a bond coat. Using the appropriate sized small square notch trowel, add more adhesive and notch the adhesive in a horizontal, straight pattern. Using the flat side of the trowel, flatten the notches to attain a smooth, consistent setting bed. Place the glass mosaic sheets onto the fresh adhesive and bring all surfaces to a true plane at the proper position. Use a flat wood block or rubber grout float to beat the face of the tiles and firmly embed the tiles into the adhesive or follow the tile manufacturers methods of bedding tiles. A minimum of 95% coverage, of mortar to tile, should be achieved after the beat in.

Apply the remaining sheets and make sure that the vertical and horizontal grout joints line up and a consistent pattern is maintained.

For paper faced mounted glass mosaics, allow to set before grouting. Paper can be removed as described above before or after setting.

For back-mounted and clear film face-mounted glass mosaic tile, allow the setting material to harden for 24 hours minimum (vertical installation) and 48 hours minimum (horizontal installation) prior to cleaning tile face and then grouting. Use warm water and a white scrub pad (or stiff nylon brush) to remove any residual setting material, glue or paper from the tile's face prior to grouting. Allow the installation to air dry before grouting.

Grout using PERMACOLOR® Grout, SPECTRALOCK® Pro Premium Grout or LATAPOXY SP100 as specified. It is recommended that a test area be performed to determine suitability of grout with glass tile. Sand may scratch the surface of the tile.

NOTE: Some glass tile manufacturers will allow the use of an epoxy grout. If instances where epoxy grouts are acceptable use SPECTRALOCK PRO Premium Grout.

Notes: Exterior installations in hot and dry conditions can cause a rapid drying of the setting mortar. To obtain longer working time it may be necessary to dampen the substrate with a damp sponge immediately before the mortar is applied. Cold weather installations can slow the curing of the setting mortar. A longer waiting time may be required for the mortar to cure before the face-mounting (if present) can be removed or the installation can be grouted.

Expansion Joints:

Expansion joints must be installed in accord with AS3958.1 & 2 or the Tile Council of North America (TCNA) detail EJ-171. The expansion joints need to be brought through to the tile surface and treated with a flexible sealant.

Use LATASIL™ to treat the joints. Expansion joint requirements will vary due to application types and locations. An architect and engineer should be consulted when specifying expansion joint placement, construction and materials.

Cleaning and Maintenance:

Check with the glass tile manufacturer for their recommendations on routine cleaning and maintenance requirements.