



Globally Proven  
Construction Solutions

# Surfaces Inc. – Tile Installation Systems Glass Mosaics/Tiles



## SPECIFICATION

This specification covers the installation of the following tile series manufactured/supplied by **Surfaces Inc.** on interior and exterior wall surfaces:

- **Aurora Collection** - all glass, translucent with plastic face mounting. <http://www-surfaces.net/products/glass-mosaic/aurora-collection/>
- **Classic Collection** - all clear glass. <http://www-surfaces.net/products/glass-mosaic/classic-collection/>
- **Crayola Collection** - all clear glass. <http://www-surfaces.net/products/glass-mosaic/crayola-collection/>
- **Crayola Recycled Glass Collection** - made from recycled champagne bottles & windshields. <http://www-surfaces.net/products/glass-mosaic/crayola-recycled-glass-collection/>
- **Feel Collection** - all glass mosaics. <http://www-surfaces.net/products/glass-mosaic/feel-collection/>
- **Gemini Collection** - all glass Bisazza style material. <http://www-surfaces.net/products/glass-mosaic/feel-collection/>
- **Iridescent Collection** - all glass. <http://www-surfaces.net/products/glass-mosaic/iridescent-collection/>
- **Murano Collection** - translucent glass pieces, not mesh mounted. <http://www-surfaces.net/products/glass-mosaic/murano/>
- **Ocean Collection** - this is a frosted glass with a slight texture, available in 2x2 mesh mounted sheets & individual 4x8 loose pieces. <http://www-surfaces.net/products/glass-mosaic/ocean-glass/>
- **Tiffany Glass Collection** - all glass. <http://www-surfaces.net/products/glass-mosaic/tiffany-collection/>

## NOTE ABOUT QUALITY LABOR

LATICRETE® International, Inc. champions the use of Quality Labor for all tile and stone installations, specifically those represented by the NTCA Five Star Contractor Program ( [www.tile-assn.com/Member/FiveStar](http://www.tile-assn.com/Member/FiveStar) ), the TCAA Trowel of Excellence Program ( [www.tcaainc.org/trowel-of-excellence.php](http://www.tcaainc.org/trowel-of-excellence.php) ), and the LATICRETE® Most Valued Partner (MVP) Program ( [www.laticrete.com/contractors/mvp\\_site.aspx](http://www.laticrete.com/contractors/mvp_site.aspx) ).

## NOTES TO SPECIFIER

Detail and specify LATICRETE® Hydro Ban™ in all wet or exterior areas, and over existing, non-structural, hairline cracks (≤ 1/8" or 3mm) in the substrate.

A LATICRETE® "System" approach to installation is covered by a comprehensive 25 year warranty (Reference LATICRETE DS 0250APD) for all interior and exterior floor installations. A LATICRETE® "System" approach to exterior façade installation, over steel/wood stud walls, is covered by a comprehensive 15 year warranty (Reference LATICRETE DS 23015APD) - Note the limitations in applicable product assortments below.

## MATERIALS – 25 YEAR WARRANTY

*Wall Tile produced by **Surfaces Inc.**, including **The Aurora, Classic, Crayola, Crayola Recycled, Feel, Gemini, Iridescent, Murano, Ocean and Tiffany Glass Collections**, [www.surfaces.net](http://www.surfaces.net).*

*Thick Bed Mortar (for wall renders or smoothing rough/uneven substrates):* LATICRETE® 3701 Fortified Mortar Bed.

*Waterproofing:* LATICRETE® Hydro Ban.

*Crack Suppression:* LATICRETE® Hydro Ban.

*Thinset Mortar:* LATICRETE® Glass Tile Adhesive.

*Grout:* LATICRETE® 1600 Unsanded Series Grout plus 1776 Grout Admix -or- LATICRETE® PermaColor Grout -or- LATICRETE® SpectraLOCK PRO Premium Grout.

*100% Silicone Caulk:* LATICRETE® Latasil™ (and LATICRETE® Latasil 9118 Primer as needed)

## MATERIALS – 15 YEAR WARRANTY, STEEL OR WOOD FRAMED EXTERIOR FACADES

*Wall Tile produced by **Surfaces Inc.**, including **The Aurora, Classic, Crayola, Crayola Recycled, Feel, Gemini, Iridescent, Murano, Ocean and Tiffany Glass Collections**, [www.surfaces.net](http://www.surfaces.net).*

*Waterproofing Membrane:* LATICRETE® Hydro Ban (Liquid-Applied).

*Thick Bed Mortar / Scratch & Brown:* LATICRETE® 3701 Fortified Mortar Bed

*Thinset Mortar:* LATICRETE® 254 Platinum Thinset (Regular or Rapid Version) or LATICRETE® 255 MultiMax Thinset.

*Grout:* LATICRETE® PermaColor Grout

*100% Silicone Caulk:* LATICRETE® Latasil (with LATICRETE® Latasil 9118 Primer as needed)

Tile and stone installation materials to be supplied solely by LATICRETE® International, Inc.; Bethany, CT; USA Telephone: 1 (203) 393-0010; Fax: 1 (203) 393-1684; E-mail: [technicalservices@laticrete.com](mailto:technicalservices@laticrete.com); Website: [www.laticrete.com](http://www.laticrete.com).

## STEEL OR WOOD FRAMED EXTERIOR FACADES NOTE

Due to increased variables in movement-related issues, steel and wood framed exterior facades require particular attention to detail when designing tile installation systems. As a result, LATICRETE® limits warranty coverage to 15 years, and strictly limits product selection to those listed above under the 15 Year Warranty “Materials” section. **No substitutions** will be accepted.

Furthermore, the following will apply: Substrate deflection under all live, dead and impact loads, including concentrated loads, must not exceed L/600 where L=span length. Applications must not exceed 30 ft (9.1 m) in height or 25,000 SF (2250 Sq M) in area. Installations must conform to all applicable building codes including the International Building Code (IBC) and International Residential Code (IRC) requirements. Tile units shall not exceed 36 inches in the greatest dimension nor more than 720 sq inches in total area, and shall not weigh more than 15 lbs per sq ft, unless approved by the local governing officials and the engineer of record.

In the specification that follows, when used as an aid to develop all steel/wood framed exterior façade specifications, disregard references/verbage related to products NOT LISTED in the 15 Year warranty “Materials” section above.

Please contact your local LATICRETE® representative for assistance.

## PREPARATIONS

Prior to commencing the installation, the contractor must examine substrates and advise the General Contractor and Architect of any existing conditions or surface contamination which will require correction before the work commences. Before starting, substrates must be cleaned to remove curing compounds, sealers, soil, mortar, dirt, dust, etc. Curing compounds or sealers must be removed by bead-blasting, grit / sand blasting, hydro blasting, diamond wheel grinder with dustless vacuum attachment, or equivalent methods of mechanical scarifying. After removal of the curing compounds and sealers, all rough, uneven or "out-of-plumb" surfaces must be made "plumb and true" to within 1/4" in 10' (6 mm in 3 m) using LATICRETE® 3701 Fortified Mortar Bed. Dry or dusty concrete or masonry surfaces must be water washed and excess water removed just prior to the application of LATICRETE® membranes and mortars.

## EXPANSION AND CONTROL JOINTS

Existing joints in substrate must be carried through the tile work and must conform to architectural details. Expansion joints must be installed where tile or panels abut restraining surfaces, such as perimeter walls, curbs, columns, corners, etc. Expansion joints must be installed at all "changes of plane" in the tile work. Refer to Tile Council of North America (TCNA) Detail EJ-171 (Current Year) for industry recommendations. Use LATICRETE® Latasil Sealant for all such joints.

## INSTALLATION OF WATERPROOFING AND/OR CRACK SUPPRESSION MEMBRANE

### Liquid-Applied Membrane:

Install LATICRETE® HydroBan membrane to all applicable vertical and horizontal tile applications, in compliance with current revisions of ANSI A108.1 (2.7 Waterproofing), ANSI A108.13 (Waterproofing) and ANSI A108.17 (Crack Isolation). Review the installation and plan the application sequence. Shake or stir before using.

**Pre-Treat Cracks and Joints** - Fill all substrate cracks, cold joints and control joints to a smooth finish using a LATICRETE® latex-fortified thin-set. Alternatively, a liberal coat\* of LATICRETE® Hydro Ban applied with a paint brush or trowel may be used to fill in non-structural joints and cracks. Apply a liberal coat\* of LATICRETE® Hydro Ban approximately 8" (200mm) wide over substrate cracks, cold joints, and control joints using a paint brush or heavy napped paint roller.

**Pre-Treat Coves and Floor/Wall Intersections** - Fill all substrate coves and floor/wall transitions to a smooth finish and changes in plane using a LATICRETE® latex-fortified thin-set. Alternatively, a liberal coat\* of LATICRETE® Hydro Ban applied with a paint brush or trowel may be used to fill in cove joints and floor/wall transitions <1/8" (3mm) in width. Apply a liberal coat\* of LATICRETE® Hydro Ban approximately 8" (200mm) wide over substrate cracks, cold joints, and control joints using a paint brush or heavy napped paint roller.

**Pre-Treat Drains** - Drains must be of the clamping ring type, with weepers as per ASME A112.6.3. Apply a liberal coat\* of LATICRETE® Hydro Ban around and over the bottom half of drain clamping ring. Cover with a second liberal coat of LATICRETE® membrane. When the membrane dries, apply a bead of LATICRETE® Latasil™ where the LATICRETE® Hydro Ban meets the drain throat. Install the top half of drain clamping ring.

**Pre-Treat Penetrations** - Allow for a minimum 1/8" (3mm) space between drains, pipes, lights, or other penetrations and surrounding ceramic tile, stone or brick. Pack any gaps around pipes, lights or other penetrations with a LATICRETE® latex-fortified thin-set. Apply a liberal coat\* of LATICRETE® Hydro Ban around penetration opening. Cover the first coat with a second liberal coat\* of membrane. Bring LATICRETE® Hydro Ban up to level of tile or stone. When the membrane has dried to the touch, seal with LATICRETE® Latasil.

**Main Application** - Allow any pre-treated areas to dry to the touch. Apply a liberal coat\* of LATICRETE® Hydro Ban with a paint brush or heavy napped roller over substrate including pre-treated areas and allow to dry to the touch. Install another liberal coat\* of LATICRETE® Hydro Ban over the first coat. Let the top coat of membrane dry to the touch approximately 1 – 2 hours at 70°F (21°C) and 50% RH. When the top coat has dried to the touch inspect the surface for pinholes, voids, thin spots or other defects. LATICRETE® Hydro Ban™ will dry to an olive green color. Use additional LATICRETE® Hydro Ban to seal any defects.

**Movement Joints** - Apply a liberal coat\* of LATICRETE® Hydro Ban, approximately 8" (200mm) wide over the areas. Immediately apply a second coat of either LATICRETE® membrane.

\* Dry coat thickness of HydroBan liquid membrane is 20 – 30 mil (0.02 - 0.03" or 0.5 - 0.8mm); consumption per coat is approximately 0.01 gal/ft<sup>2</sup> (approx. 0.4 L/m<sup>2</sup>); coverage is approximately 100 ft<sup>2</sup> /gal (approx. 2.5 m<sup>2</sup>/ L).

LATICRETE® Waterproofing/Anti-Fracture Fabric is not needed with LATICRETE® HydroBan Membrane to pre-treat cracks, joints, curves, corners, drains, and penetrations per the installations described above, but use of the Fabric with HydroBan may be an option if desired – consult a LATICRETE® representative for more information.

**Crack Suppression** – For crack suppression only, LATICRETE® Hydro Ban membranes may be used as partial or full coverage over substrates per TCNA Method F125 concerning the treatment of hairline cracks, shrinkage cracks, and saw cut or control joints.

**Protection** - Provide protection for newly installed membrane, even if covered with a thin-bed tile installation against exposure to rain or other water for a minimum of 2 hours at 70°F (21°C) and 50% RH. For temperatures between 45°F and 69°F (7°C to 21°C) allow a minimum 24 hour cure period.

## MIXING

Mix according to printed product instructions included with each LATICRETE® product package.

## INSTALLATION OF WALL TILE

**Wall Renders (Scratch & Brown Method):** No slurry bond coat is required prior to placing wall renders. Apply LATICRETE® 3701 Fortified Mortar Bed with a steel trowel pressing mortar into good contact with the substrate. Apply “scratch coat” first – not to exceed 1/2" (12 mm) thickness. Scratch mortar before it hardens. After “scratch coat” hardens, apply the “brown or float coat” working the mortar into good contact with the scratch coat. Do not exceed 5/8" (15 mm) thickness per lift. Scratch all lifts that will receive additional float coats. Float wall with steel trowel and straight edges to form a plumb and true mortar surface. Allow the completed render coats to cure for 24 hours at 70°F (21° C) prior to the installation of tile with the Thin Bed Method.

**Thin Bed Method:** Install LATICRETE® Glass Tile Adhesive in compliance with current revisions of ANSI A108.02, A108.1B and ANSI A108.5. Use the appropriate trowel notch size to ensure proper bedding of the tile selected. Work the thinset into good contact with the substrate and comb with notched side of trowel. Spread only as much thinset as can be covered while the mortar surface is still wet and tacky. Backbutter tiles to assure 100% coverage and prevent visible mortar ribbons. Allow installation to set until firm. Clean excess thinset from tile face and joints between pieces.

## INSTALLATION OF GROUT:

**NOTE TO SPECIFIER** – *With all glass tile installations, verify that grout will not scratch glass surface prior to actual installation.*

**Polymer Fortified Cement Grout (ANSI A118.7):** Allow tile installation to cure a minimum of 24 hours @ 70° F (21°C). Verify grout joints are free of dirt, debris or tile spacers. Sponge or wipe dust/dirt off veneer face and remove any water standing in joints. Apply grout release as recommended. Surface temperature must be between 40-90° F (4-32°C). Use LATICRETE® 1600 Unsanded Series Grout plus 1776 Grout Admix, or LATICRETE® PermaColor Grout, as desired. Pour approximately 64 oz. (1.9 L) of clean, potable water into a clean mixing container. Add Grout to the container while mixing. Mix by hand or with a slow speed mixer to a smooth, stiff consistency. Install latex fortified cement grout in compliance with current revisions of ANSI A108.1A, ANSI A108.02 and ANSI A108.10. Dampen dry surfaces with clean water. Spread using a sharp edged, hard rubber float and work grout into joints, packing joints full and free of voids/pits. Hold float face at a 90° angle to grouted surface and use float edge to "squeegee" off excess grout, stroking diagonally to reduce pulling grout out of filled joints. Initial cleaning can begin as soon as grout has become firm, typically 15-20 minutes after grouting @ 70° F (21°C). Begin initial cleaning by lightly dampening the entire grouted area with a damp sponge. Then wash clean the entire area with a damp (not wet) sponge. Drag a clean towel, dampened with water, or wipe a clean, dampened sponge, diagonally over the veneer face to remove any grout haze left after “squeegeeing.” Rinse towel/sponge frequently and change rinse water at least every 200 ft<sup>2</sup> (19m<sup>2</sup>). Repeat this cleaning sequence again if grout haze is still present. Allow grout joints to become firm. Buff surface of grout with clean coarse cloth. Inspect joint for pinholes/voids and repair them with freshly mixed grout. Within 24 hours, check for remaining haze and remove it with warm soapy water and a nylon scrubbing pad. Do not use acid cleaners on latex portland cement grout less than 10 days old.

**Chemical Resistant, Water Cleanable Tile-Grouting Epoxy (ANSI A118.3):** Follow manufacturer’s recommendations for minimum cure time prior to grouting. Substrate temperature must be 40-95°F (4-35°C). Verify joints are free of dirt, debris or grout spacers. Sponge or wipe dust/dirt off tile faces and remove water standing in joints. Apply grout release to face of tile if recommended by tile manufacturer. Cut open pouch and pour LATICRETE® SpectraLOCK PRO Grout Part A Liquid into a clean mixing pail. Then open pouch and pour LATICRETE® SpectraLOCK PRO Grout Part B Liquid into the mixing pail. Mix by hand or with a slow speed mixer until the two liquids are well blended. Then, while mixing, add LATICRETE® SpectraLOCK PRO Grout Part C Powder and blend until uniform. Install LATICRETE® SpectraLOCK PRO Grout in compliance with current revisions of ANSI A108.02 and ANSI A108.6. Spread using a sharp edged, hard rubber float and work grout into joints, packing joints full and free of voids/pits. Then hold float face at a 90° angle to grouted surface and use float edge to "squeegee" off excess grout. Once excess grout is removed, a thin film/haze will be left. Initial cleaning of the remaining film/haze can begin approximately 20-30 minutes after grouting. Begin by mixing cleaning additive packet

with 2 gallons (7.6 L) of clean water in a clean bucket to make cleaning solution. Dip a clean sponge into the bucket and then wring out cleaning solution until sponge is damp. Using a circular motion, lightly scrub grouted surfaces with the damp sponge to dissolve grout film/haze. Then drag sponge diagonally over the scrubbed surfaces to remove froth. Rinse sponge frequently and change cleaning solution at least every 50 ft<sup>2</sup> (4.7m<sup>2</sup>). Discard sponges as they become "gummy" with residue. Within one (1) hour of finishing first cleaning, clean the same area again following the same procedure but utilizing a clean white scrub pad and fresh cleaning solution. Rinse scrub pad frequently. Drag a clean sponge diagonally over the scrubbed surfaces to remove froth. Use each side of sponge only once before rinsing and change cleaning solution at least every 50 ft<sup>2</sup> (4.7m<sup>2</sup>). Allow cleaned areas to dry and inspect tile/stone surface. For persistent grout film/haze (within 24 hours), repeat scrubbing procedure with undiluted white vinegar and clean pad. Rinse with clean water and allow surface to dry. Inspect grout joint for pinholes/voids and repair them with freshly mixed LATICRETE® SpectraLOCK®\* PRO Grout.

## PROTECTION

The contractor must take precautions to protect the finished work from damage by other trades. Protect exterior veneer installations from exposure to rain for a minimum of 7 days at 70° F (21° C).

## COLD WEATHER NOTE

The curing of latex and Portland cement based materials is retarded by low temperatures and finished work should be protected for an extended period of time. Typically, for every 18° F below 70° F (10°C below 21°C), latex and Portland cement based materials take twice as long to cure.

## HOT WEATHER NOTE

The evaporation of moisture in Portland cement grouts is accelerated by hot, dry conditions. Apply grout to dampened surfaces & protect freshly spread grout & finished work when installing in temperatures over 95 degrees F (35 degrees C).

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LATICRETE Technical Services provides review of job specifications and plans, project detail planning and review, and provides answers to questions concerning the installation of ceramic tile, brick, marble and stone. Call toll free USA +1 (203) 393-0010. Fax: USA +1 (203) 393-1684. E-mail: [technicalservices@laticrete.com](mailto:technicalservices@laticrete.com), Internet: [www.laticrete.com](http://www.laticrete.com). To obtain a copy of detailed product information, most recent revisions of LATICRETE data sheets, and answers to installation questions, E-mail: [technicalservices@laticrete.com](mailto:technicalservices@laticrete.com) or call (800) 243-4788 x.235.

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