



# CALIFORNIA ART TILE Installation Specification

# CALIFORNIA ART TILE

## SCOPE

Applies to installations of CALIFORNIA ART TILE for Walls and Floors.

## NOTE TO SPECIFIER

Tiles, mortars, and grouts do not provide a completely waterproof barrier. Detail and specify LATICRETE® HYDRO BAN™ in all wet areas and over existing, non-structural, hairline cracks ( $\leq 1/8"$  or 3mm) in the substrate. LATICRETE® Systems are covered by a comprehensive 25 year warranty (Reference LATICRETE DS 025.0APD).

## MATERIALS

**Tiles:** CALIFORNIA ART TILE as manufactured by CALIFORNIA ART TILE ; <https://www.caarttile.net/>

203-946-0861 [Todd@CAArtTile.net](mailto:Todd@CAArtTile.net)

**Latex Portland Cement Thick Bed Mortar:** LATICRETE® 3701 Fortified Mortar Bed

**Waterproofing and Crack Isolation Membrane:** LATICRETE HYDRO BAN®

**Latex Portland Cement Mortar:** LATICRETE MULTIMAX™ LITE

**Latex Portland Cement Sanded Grout:** LATICRETE PERMACOLOR® Grout or LATICRETE® PERMACOLOR® Select Grout

**Sealer:** LATICRETE® STONETECH® Heavy Duty Exterior Sealer (Natural Look) Or LATICRETE STONETECH® ENHANCER PRO SEALER (Enhanced Look)

**100% Silicone Caulk:** LATICRETE LATASIL™

Tile installation materials are to be supplied 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).

## 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 1/8" in 10' (3 mm in 3 m) using LATICRETE 3701 Fortified Mortar Bed, or using LATICRETE NXT Level Plus, and related LATICRETE NXT Primer, as a self-leveling underlayment. 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.

## WATERPROOFING / CRACK ISOLATION MEMBRANE INSTALLATION

Install LATICRETE® HYDRO BAN® in all applications required by Tile Council of North America (TCNA) guidelines and LATICRETE International, Inc. Installations are to comply with current revisions of ANSI A108.1 (2.7 Waterproofing), ANSI A108.13, and ANSI A108.17. 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 Portland cement thinset mortar. 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 tiles. When the membrane has dried to the touch, seal with LATICRETE LATASIL™.

**Main Application** - Allow 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 defects.

**Movement Joints** – See LATICRETE HYDRO BAN installation instructions (DS 663.5 included in pails). Apply a liberal coat\* of LATICRETE HYDRO BAN, approximately 8" (200mm) wide over the areas. Then embed and loop the 6" (150 mm) wide LATICRETE Waterproofing/Anti-Fracture Fabric and allow to bleed through; immediately followed by top coat with a second coat^^ of LATICRETE HYDRO BAN.

\* Dried and cured thickness of HYDRO BAN liquid membrane is 20 – 30 mil (0.02 - 0.03" or 0.5 - 0.8mm); ^^ Wet coat thickness is 15 – 22 mils (0.4 – 0.6 mm). Consumption per coat is -0.01/gal/ft<sup>2</sup> (-0.4 ℓ/m<sup>2</sup>); Use wet film gauge to check thickness. Coverage, per coat, 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 HYDRO BAN Membrane to pre-treat cracks, joints, curves, corners, drains, and penetrations per the installations described above, but use of the Fabric with HYDRO BAN 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 guidelines (F125-Full; F-125Partial methods).

**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, after the final liquid coat has dried to darker "olive green" color, 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 LATICRETE printed product instructions included with each product package.

## FLOOR TILE INSTALLATIONS

**Bonded Thick Bed Method: (Interior and Exterior)** Apply LATICRETE® 254 Platinum with flat trowel as a slurry bond coat approximately 1/16" (1.5mm) thick in compliance with current revision of ANSI A108. Place LATICRETE 3701 Fortified Mortar Bed, over slurry bond coat while still wet and tacky; fully compact bed by tamping. Spread LATICRETE 254 Platinum with flat trowel over surface of "green"/fresh mortar bed as a slurry bond coat approximately 1/16" (1.5mm) thick. Apply LATICRETE 254 Platinum bond coat to back of tile and place each piece while bond coats are wet and tacky. Beat with a hardwood block or rubber mallet to level/imbed pieces before mortar bed takes initial set. Clean excess mortar/adhesive from finished surfaces. For installation of tiles

over cured (pre-floated) latex-Portland cement thick bed mortars, follow ***Thin Bed Method or Large Heavy Tile Mortar Method*** as follows.

**Tile Mortar:** Install LATICRETE MULTIMAX™ LITE in compliance with current revisions of ANSI A108.02 (3.11), A108.1B and ANSI A108.5. Use the appropriate trowel notch size to ensure proper bedding of the tiles. Work LATICRETE MULTIMAX™ LITE into good contact with the substrate and comb with notched side of trowel. Spread only as much LATICRETE MULTIMAX™ LITE as can be covered while the mortar surface is still wet and tacky. When installing large format (>8" x 8"/200mm x 200mm) tiles, rib/button/lug back tiles, pavers or sheet mounted ceramics/mosaics, apply LATICRETE MULTIMAX™ LITE onto the back of (i.e. 'back-butter') each piece/sheet in addition to troweling LATICRETE MULTIMAX™ LITE over the substrate. Beat each piece/sheet into the Mortar with a beating block or rubber mallet to insure full bedding and flatness. Allow installation to set until firm. Clean excess LATICRETE MULTIMAX™ LITE from tile or stone face and joints between pieces.

### CEMENT GROUT INSTALLATION:

For interior installations, either penetrating or topical sealers are to be applied to all tile faces, prior to grouting, to help facilitate grout clean-up. For exterior installations use only penetrating sealers for superior durability and slip resistance. Either grout bags or grout floats may be used to place the grout in the joints. Joints must be packed full and free of all voids and pits. Excess grout must be cleaned from the surface of the tile work while it is fresh and before it hardens. Residual cement grout film may be removed using a neutral pH detergent and clean water solution. No acid or alkaline cleaners are to be used for cleaning ARTO Ceramic Tiles.

**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 and spacers. Sponge or wipe dust/dirt off veneer face and remove any water standing in joints. Apply a suitable tile pre-sealer or grout release as recommended by ARTO. Surface temperature must be between 40-90° F (4-32°C). Pour approximately 64 oz. (1.9 L) of clean, potable water into a clean mixing container. Add a 25 lb. (11.3 kg) bag of LATICRETE PERMACOLOR Grout to the container while mixing. Mix with a slow speed mixer to a smooth, stiff consistency. Install PERMACOLOR® 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 20-30 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, dampened sponge, diagonally over the tiles faces to remove any grout haze left after "squeegeeing." Rinse sponges 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. Inspect joints 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. PERMACOLOR® Select Mixing Use approximately 2 – 2.25 quarts (1.9 L – 2.1 L) of clean potable water for 2 PERMACOLOR Select Color Packs and 25 lbs (11.3 kg) of PERMACOLOR Select Grout Base. Do not use with 1776 Grout Enhancer or any other latex additive. Place water in a clean mixing container. Remove Color Packs from the cardboard container as well as the protective plastic sleeve. The internal bag is a water dispersible pack – when using the 25 lbs. (11.3 kg) bag of PERMACOLOR Select, drop both color packs directly to water in clean mixing container. Mix with a drill mixer until pigment is dispersed evenly in container and the dispersible pack is no longer visible. Add PERMACOLOR Select Base. Mix with a slow speed drill mixer (300 rpm) for 1 minute. Wait for 5 minutes and remix with drill for 1 minute. If using the 12.5 lbs bag, drop only one color pack into 1 – 1.1 quarts (.8L – 1.0 L) of clean water

### EXPANSION AND CONTROL JOINTS

Provide control or expansion joints as located in contract drawings and in full conformity, especially in width and depth, with architectural details.

1. Substrate joints must carry through, full width, to tile surface.
2. Install expansion joints in tile work over construction joints ("saw cuts") /cold joints in substrates.
3. Install expansion joints where tiles abut restraining surfaces (such as perimeter walls, curbs, columns), changes in plane and corners.
4. Joint width and spacing depends on application - follow TCNA "**Handbook for Ceramic, Glass, and Stone Tile Installation**" Detail "EJ-171 Expansion Joints" or consult sealant manufacturer for recommendation based on project parameters.
5. Joint width:  $\geq \frac{1}{8}$ " (3mm) and  $\leq 1$ " (25mm).

6. Joint width: depth ~2:1 but joint depth must be  $\geq \frac{1}{8}$ " (3mm) and  $\leq \frac{1}{2}$ " (12mm).
7. Layout (field defined by joints): 1:1 length: width is optimum but must be  $\leq 2:1$ . Remove all contaminants and foreign material from joint spaces/surfaces, such as dirt, dust, oil, water, frost, setting/grouting materials, sealers and old sealant/backer. Use LATICRETE® LATASIL™ 9118 Primer to increase primer adhesion to tile edges. Install appropriate backing material (e.g. closed cell backer rod) based on expansion joint design and as specified in section 07 92 00. Apply masking tape to tile faces for protection during application. Use caulking gun, or other applicator, to completely fill joints with sealant. Within 5-10 minutes of filling joint, 'tool' sealant surface to a smooth finish. Remove masking tape immediately after tooling joint. Wipe smears or excess sealant off all surfaces immediately.

## SEALERS

**STONETECH® Enhancer Pro™ Sealer:** is the color enhancing, penetrating sealer that provides maximum color & stain protection on natural stone, masonry and grout. It deepens the natural rich color of porous surfaces without altering the finish and penetrates deep to protect it from staining. This solvent-based enhancing sealer is of professional grade, weather & UV resistant, and designed for use in interior and exterior applications. Great for augmenting the look of a stone floor or reviving a worn surface.

### Surface Preparation

Read entire label before using. Use only as directed. Always test in a small inconspicuous area with a 24-hour cure time to determine ease of application and desired results. Allow new grout installations to cure for a minimum of 72 hours prior to application. Make sure surface is clean, free of waxes, coatings, and previous sealers, and is dry for 24-72 hours. Surface temperature should be between 50°F and 80°F (10°C and 27°C). Ensure that the area is well-ventilated during application and until treated surface is dry. Keep children and pets out of the area until treated surface is dry. Directions 1.Mask off any surfaces not intended to be treated. 2.Liberally apply an even coat of STONETECH® Enhancer Pro Sealer™ using a paint pad, roller, brush, or pump-up garden sprayer. Do not use a power sprayer, towel, or sponge for application. Do not thin before using. See Method of Application below for more instructions. 3.Allow Sealer to penetrate surface for 15-20 minutes. Denser material may require more time to penetrate. DO NOT ALLOW EXCESS SEALER TO DRY ON SURFACE. Failure to remove excess sealer from surface may result in residue that may need to be mechanically removed. 4.Thoroughly wipe surface with multiple dry cloths to remove all excess sealer. 5.A second coat may be needed for more absorbent surfaces or if darker appearance is required. Sealer should be applied one hour after start of initial application, as directed in steps 2-4. 6.Full cure is achieved after 24-72 hours. Avoid surface traffic for 6-8 hours after application. If surface traffic must resume sooner, cover the floor with red rosin paper to protect it until full cure has been achieved. Red rosin paper is not needed to apply second coat. 7.Clean up promptly after job is complete. Rags and equipment that are wet with product may be flammable. Clean equipment with mineral spirits and allow to dry in a well-ventilated area. Allow rags to dry in a well-ventilated area out of reach of children and pets. When dry, dispose of in accordance with local waste disposal regulations. Method of Application: For small jobs, use a paint pad, roller, or brush. For larger jobs, use a pump-up garden sprayer available at your local garden center, hardware store, or home improvement center. Do not use a power sprayer. Power sprayers create a significant amount of overspray, resulting in wasted product and the need for additional clean-up. A pump-up garden sprayer will reduce the potential for over-exposure to vapors and produce better results. Distribute sealer evenly over entire surface. Uneven penetration will result in blotchy appearance.

**STONETECH® Heavy Duty Exterior Sealer** is a solvent based, penetrating sealer which offers advanced stain protection and weather resistance on natural stone, masonry and grout surfaces. Designed specifically to meet the challenges of STONETECH Heavy Duty Exterior Sealer minimizes efflorescence and repels water.

### Directions:

- 1.Mask off any surfaces not intended to be treated. 2.Liberally apply an even coat of STONETECH® Heavy Duty Exterior Sealer with a paint pad, paintbrush, paint roller or solvent-resistant, low-pressure sprayer. Do not use power sprayer. Do not thin before using. See method of application. 3.Allow sealer to penetrate the surface for 5–15 minutes; denser material may require more time for sealer to penetrate. During this time, distribute excess sealer over entire area to insure even penetration. DO NOT ALLOW EXCESS SEALER TO DRY ON THE SURFACE. 4.Thoroughly wipe dry the entire surface with a clean dry cloth to completely remove all excess sealer from the surface. 5.A second coat may be needed for porous, absorbent surfaces and should be applied one hour after initial application as directed in steps 2–4. 6.If sealer was not completely wiped off and a residue appears, wipe entire surface with a towel dampened with sealer. Use a white nylon pad to loosen residue and follow

with a clean, white absorbent towel to remove. 7. Full cure is achieved in 24–72 hours. Surface use may resume in 4-6 hours. 8. Clean up promptly after job is complete, since rags and equipment that are wet with product may be combustible. Clean equipment with mineral spirits and allow equipment and rags to dry in a well-ventilated area out of reach of children and pets. After rags are dry, dispose of in accordance with local waste disposal regulations. METHOD OF APPLICATION: DO NOT USE A POWER SPRAYER. Power sprayers increase exposure hazard. Power sprayers also create a significant amount of overspray resulting in wasted product and the need for additional clean-up. A pump-up garden sprayer will reduce the potential for over-exposure to vapors and produce better results. Expected Wear • Up to 10 years on exterior surface

## PROTECTION

- A. Protect finished installation under provisions of section 01 50 00. To avoid damage to finished tile work, schedule installations to only after all structural work, building enclosure, and overhead finishing work are completed. Keep all traffic and trades off finished tile begin until they have fully cured.
- B. Tent / shade and heat areas that will be subjected to the elements, or freezing temperatures, during installation and cure periods.
- C. Protect newly installed exterior adhered veneer installations from direct exposure to rain for 7 days at 70°F (21°C). Protection and corrective action primarily requires temporary enclosures or tarpaulins prior to, during, and immediately after installation to shield from rain. If prolonged exposure occurs, surfaces that appear dry may be saturated internally and require testing to determine suitability of certain overlay substrates, membranes, and adhesives. Protection applies to the substrate, the installation of adhesives and joint grouts, post-installation (rain and temperature protection) until suitable cure, and also the storage and handling of the cladding material.
- D. The minimum substrate temperature requirement for cement based thin set mortars and grouts is 40° F (4°C) and the maximum temperature is 90° F (32°C). Extend period of protection of tile work at lower temperatures, below 60° F (15°C), and at high relative humidity (>70% R.H.) due to retarded set times of mortar/adhesives. Replace or restore work of other trades damaged or soiled by work under this section.

## COLD WEATHER NOTE

The curing of installation 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), installation materials take twice as long to cure.

## HOT WEATHER NOTE

Moisture evaporation, in Portland cement materials, is accelerated by hot, dry conditions. Apply installation materials to dampened surfaces and protect freshly installed materials and finished work from direct sunlight exposure, when installing in temperatures over 95 degrees F (35 degrees C). Typically, for every 18° F above 70° F (10°C above 21°C), installation materials cure twice as quickly. Refer to [LATICRETE TDS 176](#) for more detailed suggestions.

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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