



Cement Tile Installation

Tile Setting, Sealing, and Maintenance Requirements for Residential and Low-Traffic Installations

MUST READ

[Villa Lagoon Tile](http://www.VillaLagoonTile.com)

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Villa Lagoon Tile

Installation, Tile Setting, Sealing, and Maintenance Suggestions

Tools, Supplies and Equipment Needed

- Level
- Tile Wet Saw-Diamond Blade
- Carpenter's Square
- Notched 1/2" Hand Trowel
- Grout Float—Rubber
- Pencil
- Tape Measure
- Buckets for Mortar
- Chalk Line
- Tile Adhesive—Regular Thinset Mortar
- Grout
- 6 to 8 foot Straight Edge
- Containers to Wet & Drain the Tiles
- Sponge
- Clean Rags
- Goggles for Cutting Tile
- VLT NanoSealant
- Shur-Line or Padco Pad Paint Applicator

Important

Cement tiles show nuances in design and colors. Individual tiles will not be identical. This is a result of the hand-crafted process and the nature of cement. **Mixing tiles from different boxes during setting is necessary to produce a beautiful naturally rich appearance and avoid visual problems.**

Precautions

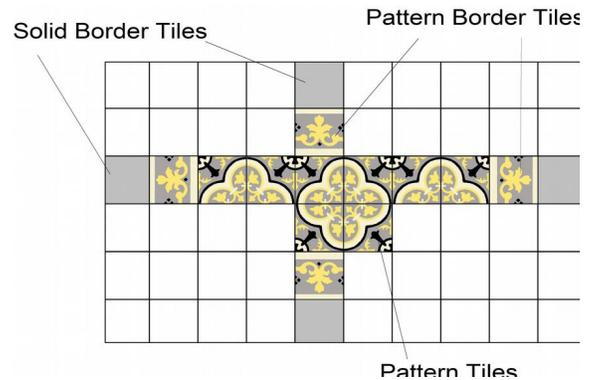
- Do not pre-seal tiles before setting or trapped moisture can cause blotches or discoloration. Do not use penetrating sealants prior to applying our recommended topical sealants.
- Cement tiles are very absorbent. **Raw tiles can be easily stained** until they are appropriately sealed. Avoid walking on the raw tiles or handling with dirty hands.
- Tiles must be clean and dry before each coat of sealant. Moisture in the tile can be trapped by the sealant, and cause discoloration later.
- Always test products on a single tile before applying to the entire floor.
- Do not make any unnecessary pencil marks on cement tiles as they may be impossible to remove later.
- Cement tiles, as with all building materials, are subject to contraction and expansion depending on climate. If you are covering a large area install it as a “floating floor” using an uncoupling membrane or a similar product and/or use expansion joints to prevent cracks in your tile. Ensure that the products you are using provide adequate support for the tile.

Procedure Outline

1. Tile Layout
2. Tile Setting
3. Cleaning and Drying
4. Applying Sealant as Grout Release
5. Grouting
6. Application of Sealant
7. Routine Maintenance

Step 1 - Tile Layout

- Prior to installing, lay out at least one row of your tiles dry (without adhesive) in each direction of your intended tile orientation (plan) to see if any adjustments need to be made. You may need to shift the layout to balance border tiles from the walls. If using pattern tiles make careful note of the tile's orientation.
- Snap guidelines using a chalk-line to suit your layout. A light coat of clear spray or hairspray will help preserve the chalk lines on your substrate.



Step 2 - Setting the Tile

Setting our cement tile is not difficult. Preparation is a key component to success. **Remember these tiles are porous and can be stained by dirt, thinset, chalk, pencil marks and greasy hands.**

We recommend the following procedure.

- Examine all the tiles for damage. There is some color variation between tiles. It is the nature of the hand-made tiles, not a flaw in the tile.
- Prepare the thinset mortar. It should be stiff enough to stand up, using a 1/2" trowel.
- Unsealed cement tile is very absorbent so **PRE-WETTING THE BACK SIDE OF THE TILES PRIOR TO SETTING IS REQUIRED.**
 - Fill a bucket with water. Briefly dip the tiles in the water (3 to 5 seconds) let the excess drip away in a second bucket or vessel (a beer cooler works great). Avoid letting the tiles sit in water for long periods of time.
 - **This is a good time to mix tiles from different boxes,** so that color variations are not laid in rows or clusters.
- Working in 2-3 square foot areas, spread the thinset on the tiling surface using the hand trowel.
- Use a 1/2" or 3/4" notched trowel.
- Press the tile down firmly with your hands, **DO NOT USE A HAMMER OR RUBBER Mallet.** This can break the tiles. **Traditionally cement tiles are set abutted to one another without spacers with a very narrow grout line - 1/8".**
- Avoid getting the thinset on the surface of the tile. **The thinset can stain the unsealed tile.**
- Follow the chalk line guides in one direction using whole tiles. Be sure to check for squareness, alignment and lippage on every tile. One good test for levelness is to slide a coin across your tiles.



Pre-wet tiles by dipping them for 3 to 5 seconds in water prior to setting. Then letting them drip off excess in a beer cooler

Step 3 - Cleaning and Drying (Before Applying Grout Release Sealant)

- Once the tiles are set, let stand/cure 24 hours until dry. Look for any surface dirt or dried mortar and remove with a razor blade carefully without scratching the surface. **DO NOT USE ACIDS, VINEGAR, ON CEMENT TILE.** A razor blade for scraping or medium sandpaper 220 with water is acceptable. Very fine sandpaper may polish instead of remove debris. It is acceptable to use drugstore Hydrogen Peroxide to remove some stains on cement tile. OxyClean can be safely used too.
- **Allow tiles to dry out completely.** If tiles are sealed and/or waxed when wet, it can impede evaporation and result in ghosting under the sealant and/or discoloration.
- During drying protect tile at all times from workmen, foot traffic, etc. [Ramboard®](#) is a breathable product on a roll made for this purpose.
- For best results, you can test that your tiles are thoroughly dry by using painter's tape to cover a small area of tile with plastic wrap, and allowing it to sit overnight. If the underside of the plastic has any moisture on it in the morning, the tiles are still not dry enough. **This test is highly recommended in humid environments, and in installations with radiant heating.** Powering "on" a sub-floor heating system (even for a brief test) while the tile is still damp can permanently damage your installation.

Step 4 - Applying Sealant as a Grout Release

We recommend the VLT NanoSealant as the grout release and a second coat after grouting as a top-coat sealant. Failure to use a grout release can result in the tiles being permanently embedded with grout residue or stained.

VLT NanoSealant is UV stable for exterior and interior use, over either tight or open surfaces.

Apply at 50°F - 85°F ambient air and substrate temperature.



Grout Release using the VLT NanoSealant

Directions for application:

- Surface must be clean, dry and free from contaminants such as grease, oil, or wax.
- It is important that the tile be dry. We recommend 24-36 hours after the tiles has been set. **NOTE:** Any residual moisture may cause ghosting/whitening of the sealant.
- The key for best results is applying the product in thin coats. Thick coats take longer to dry/cure and reduces abrasion and stain resistance.
- Apply the product prior to grouting using a **pad paint applicator**. Available at big box stores and paint shops or online.
- Pour a portion of the NanoSealant into a paint roller pan.
- Dip the applicator in the mixture and let drip off. Rake off excess on edge of pan.
- **ATTENTION:** The key to success is putting a thin coat of the product on the tile. **DO NOT** allow the sealant to puddle on the tile. Excess sealant will not dry evenly and can inhibit curing.
- Spread a thin coat of the mixture evenly using vertical or horizontal motions without pressure. Let the applicator glide over the tiles' surface.
- **DO NOT** go back over an area until it is dry to the touch.
- Let dry/cure for **at least 24 hrs before grouting**. For maximum hardness let cure for 48 hours.
- **IMPORTANT:** some tiles are more porous than others, try the sealant as first coat (grout release) full strength on a spare tile. If it tends to make too many bubbles which leave a pimped mark around them, dilute your first coat with 25% water. Subsequent coats can then be full strength.



Step 5 - Grouting the Tile

IMPORTANT: Do not use dark tinted grout unless it matches the color of your tile. This can stain your tiles in light areas. Test your grout on a spare tile. On solid color tiles, use grout of a similar color. On multi-color tiles, use mid-range gray untinted grout (sidewalk color).

- Before grouting make sure the first sealant coat is completely dry and has cured a minimum of 24 hours.
- Generally cement tiles are set abutted to one another with a small grout line. The only exception is for outdoor use or designs where some clients may prefer a wider grout line for better waterproofing.
- If the grout line is 1/8" or less, **unsanded** grout is recommended. With larger grout space use sanded grout.
- If closely spaced, mix the grout to a slurry consistency... slightly runny; not thick.
- Apply the grout to areas of 3-4 square feet and push the grout around the area using a grout float or squeegee. Repeat in 30 minutes, if using very thin grout.
- Clean up excess off the face of the tile using a soft sponge and water. Avoid pulling the grout from the grout line by wiping at an angle to all grout lines.
- Let dry/cure for minimum of 24 hours.

Step 6 - NanoSealant as a Top-coat Sealant (after grouting)

- Surface must be clean, dry and free from contaminants such as grease, oil, or wax a lint. **Any debris left on the floor will be there permanently after sealing.**
- It is important that the surface be dry.
- The key for best results is applying the product in thin coats. Thick coats cause problems.
- Pour a portion of the NanoSealant into a paint roller pan.
- Dip the applicator in the mixture and let drip off. Rake off excess on edge of pan.
- Spread the mixture thinly and evenly using vertical or horizontal motions without pressure. Let the applicator glide over the tiles' surface.
- **DO NOT** go back over an area until it is dry to the touch.
- Let dry/cure for at least 24 hrs before allowing traffic. **For maximum hardness let cure for 48 hours.**

Ongoing Maintenance of Cement Tiles

- Never use acid cleaners for cement tiles. **Use only pH neutral mild detergent.** See our website (www.VillaLagoonTile.com) for suggestions.
- If needed, re-apply sealant to high traffic areas.
- Swiffer® or similar cleaning tools are a good choice for tile floors. See our website for links to special 3M® sticky cloths that are more efficient than grocery store types.
- Many stains can be removed with inexpensive drug store Hydrogen Peroxide. Saturate a clean cloth or white paper towel and let it sit on the stain. It does not harm the tile and is similar to teeth bleaching. See our website for more stain removal tips.

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