

# LVT Installation Instructions

[www.interface.com](http://www.interface.com)

**InterfaceFLOR, LLC**  
1503 Orchard Hill Road  
LaGrange, GA 30240  
1.800.336.0225 ext.56511



Climate change is undeniable. And reversible. Our mission is to prove it. Join the #ClimateTakeBack and help create a climate fit for life.

## Important Notices

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It is recommended that resilient floorcovering installation shall not begin until all other trades are completed. All substrates to receive LVT require proper moisture testing.

Use only Portland based patching and leveling compounds. Do not install resilient floorcovering over gypsum-based patching and/or leveling compounds. Material should always be visually inspected prior to installation.

When moving any type of furniture or heavy equipment, protect the floor by covering with plywood, Masonite or other hard shell material to prevent scratching or permanent damage.

Use appropriate protectors under furniture. These should be felt or other soft material specifically designed to protect the hard surface from scratches or damage to the wear layer.

NOTE: Interface recommends using floor protection after installation. DO NOT use plastic adhesive based protection system.

These Installation Instructions cover most installation procedures. If you run across a situation that isn't addressed in this document or requires more detailed assistance, please contact the Interface Help Desk. U.S. (877) 733-7403 / Canada (888) 224-2972. Should you encounter any conditions or defects during installation that could jeopardize the installation or affect the installation procedure, you should STOP the installation immediately and call the Interface Help Desk. U.S. (877) 733-7403 / Canada (888) 224-2972.

The LVT products are warranted in accordance with Interface's Standard LVT Product Warranty. If you do not have a copy of Interface's Standard LVT Product Warranty and wish to obtain one, call the Interface Help Desk. U.S. (877) 733-7403 / Canada (888) 224-2972 or visit our website at [www.interface.com/warranty](http://www.interface.com/warranty).

**WARNING: IN THE EVENT THAT ANY ASBESTOS-CONTAINING MATERIALS OR OTHER HAZARDOUS MATERIALS ARE ENCOUNTERED DURING INSTALLATION, YOU SHOULD STOP THE INSTALLATION IMMEDIATELY AND OBTAIN ASSISTANCE FROM A QUALIFIED REMEDIATION CONSULTANT OR CONTRACTOR PRIOR TO PROCEEDING**

## Storage and Handling

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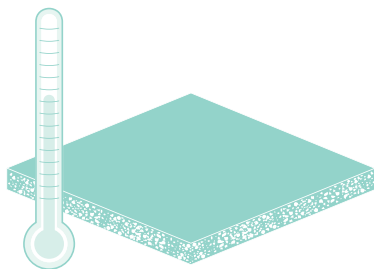
Flooring material and adhesive must be acclimated to the installation area a minimum of 48 hours prior to installation.

Store cartons of tile or plank products flat and squarely on top of one another. Preferably, locate material in the "center" of the installation area (i.e. away from vents, direct sunlight, etc.). Storing cartons in direct sunlight may affect proper acclimation by inducing thermal expansion/contraction.

When palletizing on a jobsite, vinyl tiles (squares or planks) need to be stacked two (2) rows high side by side with no airspace between and then quarter turned for two (2) rows side by side, not to exceed 12 boxes high. A 5/8" or thicker plywood must also be placed on the pallet first. Do not stack pallets two (2) high unless utilizing a 3/4" thick plywood cap between pallets.

## Pre-Installation Visit

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New concrete needs at least 90 days to dry under ideal conditions. Lightweight concrete and concrete poured above grade in metal pans take a considerably longer time to dry. Installation cannot begin until it is fully dried and in compliance with moisture and alkalinity requirements.

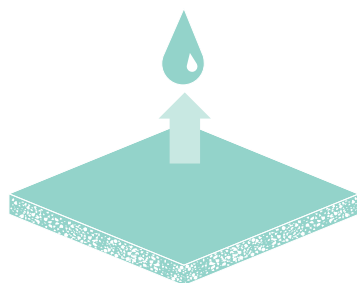
Areas to receive resilient flooring should be adequately illuminated during all phases of the installation process.

Controlled environments are critical. Fully functional HVAC systems are the best way to ensure temperature and humidity control.

DO NOT install resilient flooring products until the work area can be temperature controlled.

The permanent HVAC system must be operational and functional and set to a minimum of 65°F (18.5°C) or a maximum of 85°F (29°C) for a minimum of 7 days prior to, during, and after installation. Once the installation is complete, the temperature should not exceed 85°F (29°C).

## Concrete Moisture and Alkalinity Testing



Before installing, all concrete floors, regardless of age, must comply with the moisture and pH requirements stated below, and must otherwise be suitable for LVT installation as set forth herein. The moisture conditions of the concrete should be determined by use of the In Situ probe relative humidity (RH) test method. See chart for specific requirements.

Interface allows for installation under a variety of conditions depending on the type of slab and the moisture and pH test results at time of installation. For best results we recommend the pH test developed by Interface. Please see **Standard Practice for pH Testing Concrete Floors** p. 9.

LVT Product Thickness	Adhesive	Moisture Limit	Surface pH Limit (Must use Interface pH Testing Protocol)
4.5mm	<b>XL Brands Adhesive 2000 Plus (U.S.), Adhesive 2500 Plus (Canada)</b>	Up to 85% RH	Between 7.0 and 9.0
	<b>XL Brands HM99 High Moisture Adhesive</b>	Up to 99% RH with ASTM F2170 Up to 4% with ASTM F2659 (Both tests are required)	Between 8.0 and 12.0
3mm	<b>XL Brands Adhesive 3800</b>	Up to 90% RH	Between 8.0 and 10.0
	<b>XL Brands HM99 High Moisture Adhesive</b>	Up to 99% RH with ASTM F2170 Up to 4% with ASTM F2659 (Both tests are required)	Between 8.0 and 12.0

*\*Concrete substrate should have a working vapor barrier. Concrete compromised by ground water intrusion and/or Hydrostatic Pressure are not acceptable substrates. There should be no visible signs of water or water marking.*

All XL Brands written requirements for product application, including, but not limited to moisture and pH testing protocols, must be met for Interface warranty eligibility. More information concerning the proper use of XL Brands can be obtained through your local Interface representative or by visiting [www.xlbrands.com](http://www.xlbrands.com).

NOTE: Moisture and pH tests reflect only the conditions of the concrete at the time of testing. Stated moisture and pH limitations must be maintained before, during and at all times following installation to avoid installation and product failures and to preserve warranty coverage. If the concrete moisture and/or pH test results are outside of the stated allowable limits, STOP and DO NOT PROCEED with the installation. Seek further advice from Interface before proceeding.

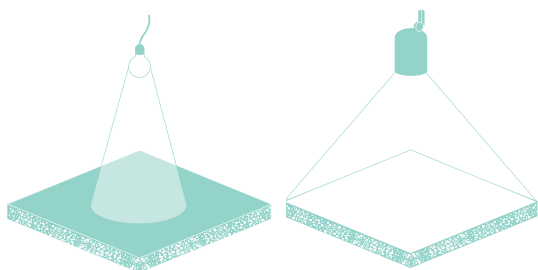
## Product Inspection

INSPECT INTERFACE LVT TO BE SURE IT MEETS THE ORDER SPECIFICATIONS. IF THE WRONG PRODUCT OR COLOR IS INSTALLED, INTERFACE WILL NOT BE RESPONSIBLE FOR CORRECTING THE PROBLEM.

The labels on each carton indicate product style, pattern, color and run number. Be sure the style, pattern and color match the specifications for each area of your installation.

Check to confirm that you have the right quantity and correct installation method. Be sure you also have enough tiles to establish an "attic stock" for future replacements. Open all cartons to inspect for damaged or defective tiles. If you find any, call the Interface Help Desk. U.S. (877) 733-7403 / Canada (888) 224-2972.

## Lighting



The lighting to be used by the building occupants must be in service for proper inspection of color and joints.

## Preparing the Subfloor

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NOTE: All substrates to receive resilient flooring shall be dry, clean, smooth and structurally sound. They shall be free of dust, solvent, paint, wax, oil, grease, residual adhesive, adhesive removers, curing, sealing, hardening/parting compounds, alkaline salts, excessive carbonation/laitance, mold, mildew and other foreign materials.

### Preparing the Subfloor (Concrete)

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NEW AND EXISTING CONCRETE SUBFLOORS SHOULD MEET THE GUIDELINES OF THE LATEST EDITION OF ACI 302 AND ASTM F 710, "STANDARD PRACTICE FOR PREPARING CONCRETE FLOORS TO RECEIVE RESILIENT FLOORING" AVAILABLE FROM THE AMERICAN SOCIETY FOR TESTING AND MATERIALS, 171 NEPEAN RD, SUITE 400, OTTAWA, ON K2P 0B4, 613.751.3409 / 100 BARR HARBOR RIVE, WEST CONSHOHOCKEN, PA 19428; 610.832.9585; **[HTTP://WWW.ASTM.ORG](http://www.astm.org)**

Substrates shall be smooth, structurally sound, dry, clean and free of all foreign material such as dust, wax, solvents, paint, grease, oils, old adhesive residue, curing/hardening compounds, sealers and other foreign material.

On or below grade slabs must have an effective vapor barrier under the slab.

LEVELNESS - Concrete floors shall be flat and smooth within 1/8" in 6 feet or 3/16" in 10 feet.

F-number System: Overall values of FF 36/FL 20 may be appropriate for resilient floorcoverings.

Expansion and isolation joints in concrete are designed to allow for the expansion and contraction of the concrete. Resilient flooring products should never be installed over expansion joints. Expansion joint covers designed for use with resilient floor coverings should be used. Control joints (saw cuts) may be patched and covered with resilient once the concrete is thoroughly cured, dry and acclimated.

### Preparing the Subfloor (Wood)

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Wood subfloors must be structurally sound and in compliance with local building codes.

It is recommended that your chosen APA underlayment grade panels be designed for installation under resilient flooring and carry a written warranty covering replacement of the entire flooring system.

Double-layered APA rated plywood subfloors should be a minimum 1" total thickness with at least 18" well ventilated air space beneath. Insulate and protect crawl spaces with a vapor retarder covering the ground.

Particleboard, chipboard, flakeboard, OSB, hardboard or similar are not recommended subfloor materials and require the additional layer of 1/4" APA approved underlayment. DO NOT install over sleeper construction subfloors or wooden subfloors applied directly over concrete.

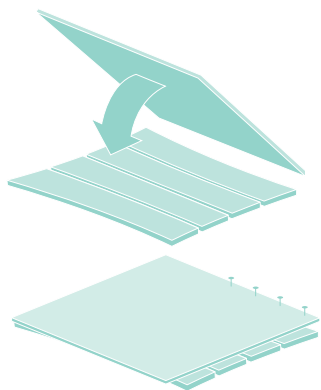
Underlayment panels can only correct minor deflection deficiencies in the subfloor while providing a smooth, sound surface on which to adhere the resilient flooring. Any failures in the performance of the underlayment panel rest solely with the panel manufacturer and not with Interface.

Interface modular resilient flooring is not recommended directly over fire-retardant treated plywood or preservative treated plywood.

The materials used to treat the plywood may cause problems with adhesive bonding. An additional layer of APA rated 1/4" thick underlayment should be installed.

### Preparing the Subfloor (Strip-Plank Wood)

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Due to expansion/contraction of individual boards during seasonal changes a 1/4" or thicker APA underlayment panel must be installed over these types of subfloors.

## Preparing the Subfloor Continued (Raised Access Floors)

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**Only Interface's 4.5mm LVT may be installed over RAF.** There are very specific guidelines for installing LVT over RAF. When LVT is installed over RAF, some degree of panel telegraphing may be visible. To minimize this, the panels need to be flat and level with a maximum gap between panels of no more than 1 mm. The difference in height between adjacent panels shall not exceed 0.75 mm. The concavity or convexity of any panel shall not exceed 0.75 mm. Also, if there are concerns about the suitability of the RAF for direct application of the LVT due to damage, instability, unevenness or quality issues of the RAF panels, the entire area should be overlaid with an approved rigid underlayment to limit telegraphing of the RAF through to the surface of the LVT. Regardless of whether or not an underlayment is used, any unstable or uneven panels should be repaired or replaced. There should be no flexing or movement of the system/panels.

NOTE: Interface is not responsible for the impact that any subsequent movement of the building or subfloor may have on the LVT installation of product itself. Also, LVT is not designed to be installed in register with the RAF panels.

If you decide to use rigid underlayment, Interface recommends plywood and/or cementitious board, which should have a minimum thickness of 1/4" and be permanently secured to the surface of the RAF by use of construction grade permanent adhesive, screws, and/or nails. The maximum gap between panels should not exceed 1 mm. Sanding and/or taping of the seams may help to limit telegraphing of the underlayment seams to the surface of the LVT. Ensure LVT does not align with the underlayment seams.

## Preparing the Subfloor (Radiant Heated Floors)

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Radiant heated substrates must not exceed 85°F (29°C) surface temperature.

Seven days prior to installing resilient products over newly constructed radiant heated systems, make sure the radiant system has been on and operating at maximum temperature to reduce residual moisture within the concrete.

24 hrs. prior to installation lower the temperature to 70°F (21°C) and maintain that temperature for 48 hrs. after installation. After continuous operation of the radiant system, ensure the temperature of the surface does not exceed 85°F (29°C).

Use of an in-floor temperature sensor is recommended to avoid overheating.

**WARNING! DO NOT SAND, DRY SWEEP, DRY SCRAPE, DRILL, SAW, BEADBLAST OR MECHANICALLY CHIP OR PULVERIZE EXISTING RESILIENT FLOORING, BACKING, LINING FELT, ASPHALTIC (CUTBACK) ADHESIVES OR OTHER ADHESIVES.**

These products may contain either asbestos fibers and/or crystalline silica. Avoid creating dust. Inhalation of such dust is a cancer and respiratory tract hazard. Smoking by individuals exposed to asbestos fibers greatly increases the risk of serious bodily harm. Unless positively certain that the product is a non- asbestos-containing material, you must presume it contains asbestos. Regulations may require that the material be tested to determine asbestos content and may govern the removal and disposal of material. See current edition of the Resilient Floor Covering Institutes (RFCI) publication Recommended Work Practices for Removal of Resilient Floor Coverings for detailed information for instructions on removing all resilient covering structures. For more information go to [www.rfci.com](http://www.rfci.com).

NOTE: Open time and working times may vary based on temperature, humidity, substrate porosity and air flow.

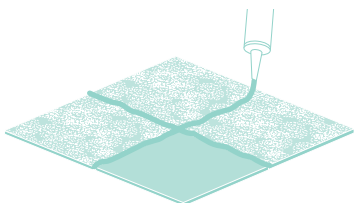
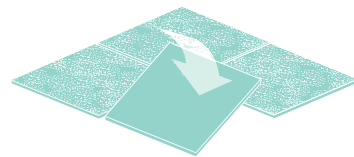
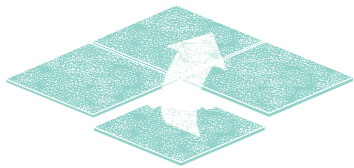
## Preparing the Subfloor (Existing Resilient Floorcovering)

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Do not install Interface LVT over sheet vinyl. The sheet vinyl must be removed with a scraper. Any existing adhesive remaining on subfloor should be removed by grinding/scraping and residue encapsulated. Once removed, follow instructions for subfloor found under the sheet vinyl.

- Must be single layered, non-cushion backed, fully adhered and smooth.
- Show no signs of moisture or alkalinity.
- Waxes, polishes, grease, grime and oil must be removed.
- Cuts, cracks, gouges, dents, and other irregularities in the existing floorcovering must be repaired or replaced.
- Embossing leveler recommended to aid in proper bonding and to prevent telegraphing.

NOTE: The responsibility of determining if the existing flooring is suitable to be installed over top of with resilient, rests solely with installer/ flooring contractor on site. If there is any doubt as to the suitability, the existing flooring should be removed, or an acceptable underlayment installed over it. Installations over existing resilient flooring may be more susceptible to indentation.



### EXISTING QUARRY TILE, TERRAZO, CERAMIC TILE, POURED FLOORS (EPOXY, POLYMERIC, SEAMLESS)

- Must be totally cured and well bonded to the concrete.
- Must be free of any residual solvents and petroleum derivatives.
- Show no signs of moisture or alkalinity.
- Waxes, polishes, grease, grime and oil must be removed.
- Cuts, cracks, gouges, dents and other irregularities in the existing floorcovering must be repaired or replaced.
- Fill any low spots, holes, chips and seams that may telegraph through the new flooring.
- Grind any highly polished or irregular/smooth surfaces.
- Tile grout joints and textured surfaces must be filled with an embossing leveler or substrate manufacturer approved material.

### OLD ADHESIVE RESIDUE

Adhesive residue must be dealt with in one of two ways:

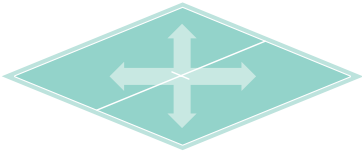
1. It may be mechanically removed by methods such as: sanding, grinding, bead blasting or scarifying. Encapsulate the residual with XL Brands TriSeal or similar product specifically designed for adhesive encapsulation.
2. A self-leveling Portland based underlayment may be applied over it. Check with a substrate manufacturer for suitability, application instructions, and warranties.

NOTE: Never use solvents or citrus adhesive removers to remove old adhesive residue. Solvent residue left in/on the substrate may affect the new adhesive and floorcovering.

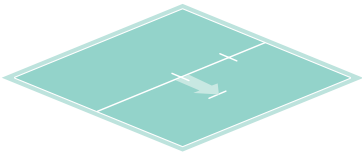
## Establishing the Starting Point

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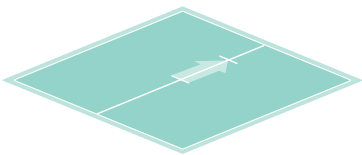
Interface LVT (squares and planks) – install using conventional square and plank tile installation techniques. Plank products should have a minimum of 6-8" seam stagger. Carefully determine where to begin square or plank tile installation based on your center line of the main room. It is customary to center the rooms and hallways so borders are not less than half a square or plank tile.



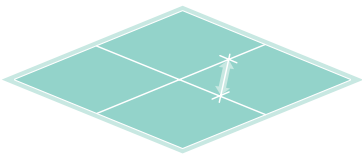
1. Measure to determine the center point and mark. Snap a chalk line.



2. Measure 8' (243.8 cm) out from your center point along the chalk line.



3. Measure 6' (182.9 cm) from your center point at a right angle to your chalk line and make a mark.



4. Measure the distance between your marks. It should be exactly 10' (304.8 cm).

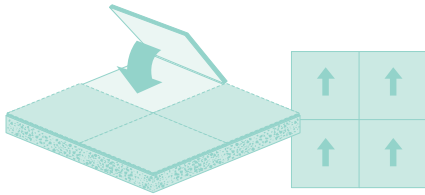
NOTE: If the room is too small for the above measurements, reduce them by half. Measure 4' vertically and 3' horizontally. The measurement between your marks should be exactly 5'.

## Installation Methods

Approved installation methods vary by product and are printed on box labels. An arrow is printed on the back of each tile to indicate direction.

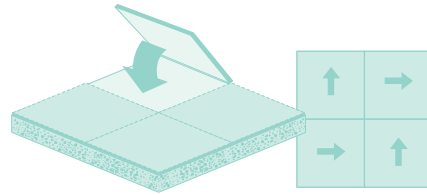
### SQUARE TILES

#### Monolithic Installation



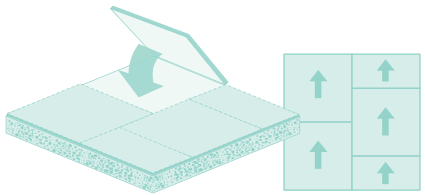
Point all arrows in the same direction.

#### Quarter-Turn Installation



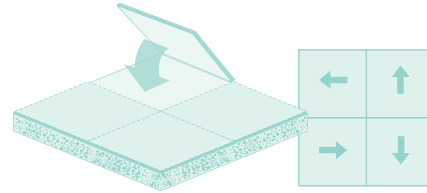
During installation, rotate tiles so that arrows are turned 90 degrees every other tile.

#### Ashlar Installation



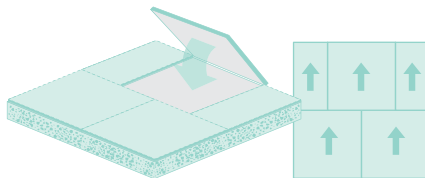
Offset front and back tile joints with arrows facing in the same direction.

#### Non Directional Installation



Lay tiles in any direction without regard for the arrows.

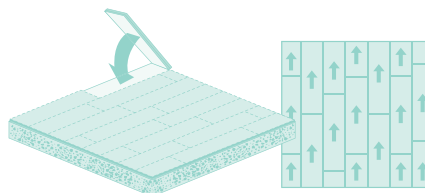
#### Brick Installation



Offset the side joints of the tiles with arrows facing in the same direction.

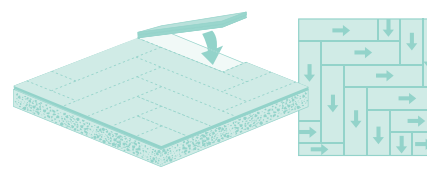
### 25CM X 1M SKINNY PLANK TILES

#### Ashlar Installation



Offset the front and back tile joints. We recommend a variable drop ashlar for our Skinny Planks, as shown here, but our products can also be installed with a half drop ashlar.

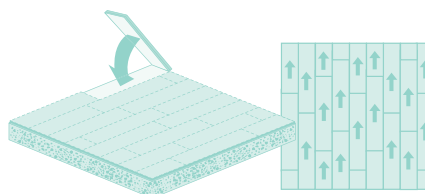
#### Herringbone Installation



Lay tiles in an L pattern.

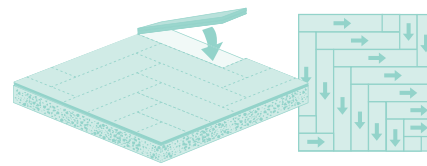
### 12.5CM X 1M SKINNY PLANK TILES

#### Ashlar Installation



Offset the front and back tile joints. We recommend a variable drop ashlar for our Skinny Planks, as shown here, but our products can also be installed with a half drop ashlar.

#### Herringbone Installation



Lay tiles in an L pattern.

NOTE: Interface assumes no liability for issues related to or resulting from installing out of specification, including, but not limited to, recommended installation method.



## Installation Tips

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- Working out of multiple boxes at a time is recommended.
- Make sure cut edges are always against the wall.
- To properly cut LVT products, score the top side of the material with a utility knife. Bend the product and finish the cut through the backside. This will ensure the cleanest cut. It may be necessary to use a heat gun to cut around vertical obstructions. Allow the heated LVT to return to room temperature before installation.
- Cutting the product into a fine point may lead to delamination. Use an ethyl cyanoacrylate based super glue to help fuse the LVT point together. Be sure to clean all glue from the decorative surface immediately. Alcohol based super glues may cause the vinyl to swell.
- Floor outlets are usually wired after tiles have been installed. Consequently, you should install tiles directly over floor outlets and mark the location with tape. This way, it will be easy to see which tiles need to be lifted for cutouts later.
- Tile layout should allow trench headers to be centered under a row of tile. Secure the tiles on either side of trench headers with adhesive. This will prevent the installation from shifting while servicing trench headers.

## Adhesive Installation

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Use the adhesive that is recommended for your subfloor conditions. **See p. 2 for details.** Follow the manufacturer's guidelines for use.

When installing LVT, allow adhesive to set according to adhesive manufacturer's specifications prior to installation. Roll the tiles with a 3 section coated 100 lb. roller. Re-roll the entire glued floor area with the 100 lb. roller within the working time of the adhesive. Continue to roll the floor throughout the working day to ensure proper bond.

NOTE:

**Over non-porous substrates,** adhesive should be applied as follows:

Adhesive 2000 Plus/Adhesive 2500 Plus/XL 3800 – using a 1/16" x 1/32" x 1/32" u-notch trowel (spread rate 220-260 sq. ft. per gallon)

**Over porous substrates,** adhesive should be applied as follows:

- Adhesive 2000 Plus/Adhesive 2500 Plus - using a 1/16" x 1/32" x 1/32" u-notch trowel (spread rate 220-260 sq. ft. per gallon)
- XL 3800 – using a 1/16" x 1/16" x 1/16" sq-notch trowel (spread rate 160-180 sq. ft. per gallon)

NOTE: In applications where the surface temperature of the LVT is over 85 degrees Fahrenheit (29 degrees Celsius), we recommend the use of permanent adhesive.

IMPORTANT: DO NOT use any adhesive that is not intended to be used with resilient flooring. Loss of adhesion can result if the flooring is not installed within the working time of the adhesive. Perform bond testing to determine compatibility of adhesive to substrate. A primer can always be used to promote better adhesion.

## Installation in Bathrooms

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1. Make sure the floor is clean, smooth, and dry. Refer to **Preparing the Subfloor** in this document (pp. 3-5).
2. Use the adhesive that is recommended for your subfloor conditions, following the manufacturer's guidelines. **See p. 2 for details.**
3. Once adhesive has flashed off, position first LVT tile.
4. Add a small bead of solvent based vinyl seam sealer to the base of the LVT tile, ensuring the sealer bead is also in contact with the subfloor.
5. Lay in second LVT tile pressing into place.
6. Use a clean wet rag to remove any excess sealer that may have transferred to the surface.
7. Continue in this manner adding seam sealer along the joints (head seams, butt seams, and/or side seams) prior to installing adjacent LVT tiles and using a clean wet rag to remove any excess sealer from the surface of the LVT.
8. Once bathroom installation is completed, apply a bead of silicone caulking around perimeter seams and plumbing fixtures where the LVT tile terminates.

### Prior To Installation

All concrete floors, old and new, should be tested for alkalinity using an approved pH test kit. The approved pH test kit should include pH test strips capable of measuring a range of 0 -14 along with deionized or distilled water. The area to be tested must be weather-tight and conditioned, via the building's HVAC system, to a temperature range of 65° - 85°F (18° - 29°C) and a relative humidity range of 40% - 60%. These temperature and humidity ranges must be maintained for at least 48 hours prior to commencing the test and at all times during the test. The concrete surface temperature should not be less than 65°F (18°C).

All adhesives, coatings, finishes, dirt, curing compounds, sealants and other substances should be removed from the area to be tested. Non-chemical methods, such as sanding, grinding, or bead blasting should be used to remove these substances to achieve an appropriate state for testing. Any cleaning should take place a minimum of 48 hours before testing.

Once the above conditions have been met:

1. Abrade the surface using 100 grit sand paper to a minimum depth of 1/32" but no more than 1/8".
2. Apply a small amount (approximately 1" in diameter) of de-ionized or distilled water.
3. Allow the de-ionized/distilled water to stand for 60 seconds.
4. Dip the 0-14 pH test strip into the puddle and remove.
5. Allow the test strip to stand for 15 seconds.
6. Compare to the pH chart in the test kit to determine pH level.
7. At least three pH tests must be performed for the first 1,000 square feet of space. One additional test should be performed for each additional 1,000 square feet thereafter.

The concrete slab should have an alkalinity level between 7.0 and 9.0 to be suitable for LVT installation without a primer except in the case of installation using XL Brands HM99 High Moisture Adhesive or XL Brands Adhesive 3800. **Refer to the chart on p. 2.** If pH levels fall outside of acceptable ranges STOP, and DO NOT proceed with installation. Call the Interface Americas Help Desk. U.S. (877) 733-7403 / Canada (888) 244-2972.

NOTE: Results obtained by this method reflect only the conditions of the concrete at the time of testing. Stated pH limitation must be maintained to avoid installation and product failures and to preserve warranty coverage.