



## INSTALLATION GUIDE: HOME LUXURY VINYL TILES (LVT)

### GENERAL GUIDELINES

- Product to be installed indoors only
- Product to be acclimated in the area of installation for 48 hours before installing
- Should only be installed after the jobsite has been cleaned and cleared of debris that could potentially damage a finished plank floor
- During the installation, mix and install planks from several different cartons of the same dye batch to minimize shade variation
- The finished installation should be protected from exposure to direct sunlight. UV film on windows may be required where there is exposure to direct sunlight. Please check with your Lime Green representative before installation
- Legno Home LVT must be installed with the specified adhesives unless otherwise authorised by Lime Green Sourcing Solutions
- Installation can only take place after all permanent fixtures have been fitted. Do not install permanent fixtures on top of flooring
- **In addition to the preparation and installation instructions below, also refer to the SABS installation of resilient thermoplastic and similar flexible floor covering materials standard, SANS 10070**
- **Although specific reference is made to certain sections in the SANS 10070, the complete contents of this document must be adhered to for all applications**

### PRODUCT HANDLING AND SITE CONDITIONS

- Store open boxes stacked one on top of the other to a maximum of 12 layers. Do not store on end or allow boxes to bend during storage or transportation
- Product to be acclimated in the area of installation for 48 hours before installing. Store at 18 to 24 degrees celcius for 48 hours prior to installation
- The ambient temperature shall be between 18 and 24 degrees celcius for 48 hours before installation, during installation and for 48 hours after installation. UV film on windows may be required where there is exposure to direct sunlight
- To prevent damage to the newly installed floor, the installation of flooring products shall begin after all other trades have completed their work
- To prevent adhesion problems, floors to be installed on shall be permanently dry, clean, smooth and be structurally sound



- They shall be free of dust, solvents, paint, wax, oil, grease, residual adhesive, adhesive removers, curing, sealing, hardening, or parting compounds, alkaline salts, excessive carbonation or laitence, mould, mildew, and other foreign materials that may prevent adhesive bond

## SUBSTRATE PREPARATION AND TESTING

### REFER TO SANS 10070, POINT 5.2.1

- **Concrete slab construction:** concrete moisture problems are a major cause of floor covering failure. Refer to industry standards for specifications related to concrete mix design, curing methods and drying times to prevent such problems. The moisture shall not be more than 3% when testing for moisture with a moisture meter or 12% WME on the survey master protimeter, any time before, during or after installation
- **On-grade or below-grade slabs:** the use of a vapour retarder directly beneath concrete slabs in contact with the ground is required. Every concrete floor slab on- or below-grade to receive resilient flooring should have a moisture retarder (often improperly called a vapour barrier) installed directly below the slab
- **Above-grade slabs:** it is often assumed that above-grade slabs (also known as suspended slabs) are less prone to moisture than slabs on- or below-grade. However, these slabs may take much longer to dry. Floors containing lightweight aggregate or excess water and those which are allowed to dry from only one side, such as concrete on a metal deck construction, may need a much longer drying time and should not be covered with resilient flooring unless the moisture vapour emission meets the manufacturer's installation specifications
- **Curing and drying:** new concrete slabs shall be properly cured and dried before installation of resilient flooring. Drying time before slabs are ready for moisture testing will vary depending on atmospheric conditions and mix design. The use of membrane curing compounds may slow the drying process and can also hinder adhesive bond. If curing compounds are used they shall be removed as soon as possible after the initial cure of the concrete is complete so that the concrete can begin to dry. The cover cure method is an alternative that can speed up the drying process

## PREPARING CONCRETE SLABS

- Concrete slabs shall be clean and smooth prior to installing floor coverings. Concrete floors to receive resilient flooring shall be free of sealers, coatings, finishes, dirt, film-forming curing compounds, or any other substances which may affect the rate of moisture dissipation from the concrete or the adhesion of resilient flooring to the concrete
- Concrete floors shall be smooth so as to prevent irregularities, roughness, or other defects from telegraphing through the new resilient flooring
- The surface of concrete floors shall be flat and even with not more than a 3 mm variance over 3 metres (self-levelling compound is recommended)
- Smoothing or levelling floors using a high quality levelling compound is recommended for commercial use
- Surface cracks, grooves, depressions, control joints or other non-moving joints, and other such irregularities shall be filled or smoothed with latex patching or an underlayment compound recommended by the resilient flooring manufacturer for filling or smoothing or both



- Patching or underlayment compounds shall be moisture-, mildew- and alkali-resistant, and for commercial installations, shall provide a minimum of 3000 PSI compressive strength
- If the surface of the concrete is porous, soft or dusty, it is not suitable for installation of resilient floor coverings. It may be necessary to remove the top layer of concrete in such cases and/or these surfaces may need to be primed and covered with a cement based underlayment compound
- Follow levelling compound manufacturer's instructions for preparation of the concrete surface, priming if necessary
- Note the mixing ratio of powder to liquid, thickness of application and drying time required for floor covering installation
- Expansion joints: joints such as expansion joints, isolation joints, or other moving joints in concrete shall not be filled with patching compound or covered with resilient flooring

### **WOOD SUBFLOORS - HIGH RISK - NOT RECOMMENDED**

Do not install Lime Green Legno vinyl products over the following:

- "Sleeper" system floors
- Plywood floors that have been installed directly over a concrete slab
- Particle board or chip board
- Plywood, oil-treated or otherwise coated wood
- Plywood with knots
- Underlayment made of pine or other soft woods
- Masonite or other hardboard underlayment
- Hardwood flooring
- Textured or cushioned resilient flooring
- Paint, wax, oil, grease, residual adhesive, mould, mildew, and other foreign materials that might prevent adhesive bond
- Any uneven or unstable substrates
- Suspended floors

### **CRITERIA FOR INSTALLING OVER EXISTING RESILIENT FLOORS - HIGH RISK - NOT RECOMMENDED FOR FULLY BONDED PRODUCTS:**

The existing floor shall be:

- A single layer only. Do not install over multiple layers
- Non-cushioned



- Thoroughly stripped of all wax, floor finish dirt and other contaminants that may affect adhesive bond
- Firmly bonded to the substrate
- Flat and smooth with no curling edges or loose seams
- Dry. All concrete floors shall be tested for moisture regardless of age or grade level. Do not assume that an existing floor is free of moisture-related issues. Conduct moisture testing

## RISKS OF INSTALLING OVER AN EXISTING RESILIENT FLOOR

- Telegraphing (showing through) of irregularities in the existing floor (dents, gouges, curling edges, loose seams, etc)
- The new luxury vinyl floor may not perform as well over an existing resilient floor as it would over a wood or concrete substrate, especially with regard to indentation resistance
- Do not install over existing resilient flooring if the new floor will be subjected to heavy point loads or rolling traffic

## OTHER SUBSTRATES

- Epoxy terrazzo, rubber, cork and asphalt tiles are not acceptable substrates and shall be removed or covered with an approved underlayment
- Cement terrazzo may be suitable. Check with the patching/levelling compound manufacturer for guidelines on preparing these substrates

## OLD ADHESIVE

- Adhesive residue shall be completely removed prior to installing flooring and the installation surface shall be prepared as per the section in this document referring to **“preparing concrete slabs and concrete subfloors”**
- Adhesive removers : there are a number of commercial adhesive removers that will properly remove adhesive residue from a subfloor - however, there are concerns that these products may adversely affect the new adhesive and new floor covering. If chemical adhesive removers are used, any damage (including, but not limited to: adhesive failure, indentation, bubbling, delaminating, etc) is the responsibility of the company using the adhesive remover, and is not covered by the Lime Green vinyl warranty

## INSTALLING LEGNO HOME LVT FLOORING

### LAYOUT AND INSTALLATION: REFER TO SANS 10070, POINTS 9.4.1, 9.6, 9.61

- Installation can only take place after all permanent fixtures have been fitted. Do not install permanent fixtures on top of flooring
- Determine in which direction you want the flooring to run (consider light source). Typically for plank products, the flooring runs the length of the room. There may be exceptions as this is a matter of preference
- In order to obtain the best possible result aesthetically, thoroughly mix the contents of multiple boxes prior to installation



- Legno Home LVT products are designed to simulate real wood floors and can therefore be installed in the same patterns as a wood plank floor : in a random pattern, staggered design, diagonally or other
- To avoid narrow plank widths or short plank lengths near the walls/doors, it is important to pre-plan the floor. Using the width of the room, calculate how many full boards will fit into the area and how much space remains that will need to be covered by partial planks. Divide the remaining space by two to calculate the width of the partial planks. Do the same along the length of the room
- Set out the job and use chalk lines as you would for any other floor tile installation. Dry lap/loose-lay a section of floor to be sure the pattern is centred in the room. Planks should not be cut less than 20 cm long, or less than half the width of the plank. Avoid small pieces in border areas, and adjust the lines as needed to achieve a proper pattern
- Once the recommended LVT adhesive has been applied as per the adhesive manufacturers recommendations (see adhesive guidelines below), begin laying the LVT planks at the intersection of the setting out lines. Make certain that the LVT is fitted squarely on the lines. After the first plank is in place, begin laying planks outward along both guide lines, stair stepping the planks into the field area. Press planks firmly along adjoining planks and into adhesive. Maintain the squareness of the installation by keeping planks along guide lines. Lay all planks in the same direction
- The planks can be cut easily with a utility knife, by scoring the top of the plank and snapping the plank in two knife blades must be sharp for easy, accurate and safe cuts
- Stick-down vinyl must be rolled with 68 kg three-sectional articulated rollers in both directions during and after installation to ensure proper adhesive transfer and a secure bond. Roll as material is being installed

## UNDERFLOOR HEATING

- Legno Home LVT can be installed with underfloor heating, using the screeding system. Install LVT's on top of a screeded surface. Maximum temperature allowed is 27 degrees celcius
- **A floor probe and thermostat must be installed to control the temperature**

## AFTER INSTALLATION – FULLY BONDED PRODUCTS

- **Be sure the LVT is set** - before leaving site, make sure all planks are flat with tight edges. Re-roll the floor if necessary to ensure the LVT is firmly set into the adhesive. Once the adhesive has dried, it is not possible to re-activate the adhesive
- **Clean adhesive residue** - remove any adhesive from the surface of the LVT while wet, using a clean white towel moistened with water. Dried adhesive can be removed using a clean white cloth moistened with water or denatured alcohol. Do not pour water or denatured alcohol directly on the floor. If working with epoxy or polyurethane adhesive, clean adhesive while still wet according to adhesive manufacturer's instructions. Do not allow epoxy to dry on the surface of the floor as it cannot be removed later
- **Adhesive curing time** - it is important to allow the adhesive to set properly before foot traffic or point loads are allowed. Failure to do so can lead to shifting LVT, adhesive oozing or permanent indentations. Do not allow foot traffic on the newly installed floor for 12 to 24 hours. Do not allow rolling traffic, furniture or fixtures on the floor for 24 to 48 hours



## PROTECTING THE FLOOR DURING AND POST-INSTALLATION

- It is recommended to only install floor coverings after all other finishing operations have been completed
- However, if there will be construction traffic on the newly installed floor, the adhesive must first completely cure and the floor must settle before the floor can be covered with a thick durable plastic for protection

## INITIAL MAINTENANCE

- Do not wash the floor for 48 hours after installation
- Wait 5 days after installation is complete before thoroughly cleaning the floor using a general purpose cleaner and a buffing machine or auto scrubber with a green or blue pad. Do not use black or brown pads
- Rinse thoroughly and allow to dry
- After initial cleaning is completed the flooring is ready for use
- Normal cleaning and slow speed buffing is recommended to extend the life of your new flooring

## ADHESIVE

### REFER SANS 10070, POINTS 7.2 TO 7.2.2.6 AND 9.50

#### Adhesive selection for fully bonded products:

- QAR 179A (qualichem) is recommended. **Material to be layed into the adhesive while wet – please note there is a short open time - see adhesive suppliers method statement.**
- Contact adhesive can be used, but proper flash off is required
- Do not capture volatiles between installation surface and material
- Two part epoxy or two part polyurethane adhesives can be used in:
  - High traffic areas
  - Floors that will be frequently wet
  - Floors subjected to heavy point loads and/or rolling loads
  - Floors exposed to extremes of temperature
  - Entrance/vestibule areas

#### These adhesives require special techniques – see adhesive manufacturer's recommendations

- Adhesive shall be approved by the adhesive manufacturer for LVT and adhesive manufacturer's instructions shall be consulted for proper mixing, trowel notch size, open time, working time, rolling the installed tile and curing time – **see adhesive manufacturers recommended use instructions**



## USING ADHESIVE

- **Check for porosity:** after preparing the substrate and before laying chalk lines, test the substrate for porosity by sprinkling a few drops of water on the floor. If the drops are not absorbed within two minutes, the substrate could be considered non-porous
- Examples of porous substrates are wood underlayment board, apa a/c grade plywood, cementitious underlayments and many concrete substrates
- Non-porous substrates include steel-trowelled concrete, staircases, terrazzo, ceramic tiles, existing fully-adhered non-cushion-backed resilient flooring on all grade levels and poured polymeric floors. If the surface is not porous then the adhesive may not bond to the surface and an LVT stick product may not be the correct product for the application
- **Trowel recommendations:** use only the recommended trowel notch size for the substrate you are covering. **Do not use a larger trowel!** More adhesive is not better! Spread/apply adhesive using a 1.50 mm x 1.50 mm x 1.50 mm V-notched trowel at 4 mm intervals. Allow adhesive to flash off properly
- Do not exceed flash off time as proper bonding will not take place – **see adhesive manufacturer's recommendations.** Consideration must be given to telegraphing/adhesive ridging. This will be determined by screed conditions, quantity of adhesive applied and flash-off time of adhesive. Rolling the LVT with 68 kg three-sectional articulated rollers is also essential to avoid this issue