General Residential Installation Guide

LVT

ivcus
Materials Required for Installation:

- Tape Measure
- Square Ruler
- Utility Knife
- Chalk Line
- Scrap piece of LVT/P material tapping to tighten joints
- Small Hand Roller (Seam Roller)

Acceptable Underlayments

IVC US’s LVT Click products can be installed directly over most existing floor coverings, except for carpet, laminate, floating floors systems and cushioned vinyl flooring.

- **Wood Underlayment**
  Can go over virtually any sound wood underlayments/subfloors. Always fasten underlayment in accordance with the manufacturer’s recommendations. For “special needs” glue down applications (steps, ramps, landings, etc.), IVC US recommends underlayment that are underlayment grade and warranted by the manufacturer. Any failure of the underlayment or flooring as a result of the underlayment is NOT the responsibility of IVC US.

- **Concrete**
  Moisture levels of concrete slabs before, during and after installation must be 8 lbs. or less per 1000 square feet per 24 hours using an anhydrous calcium chloride test according to ASTM F1869 and pH must be between 5.0 and 9.0; or, if using ASTM F2170 IN-Situ Probes, should be less than 90% RH (relative humidity). In some instances, it may be necessary to adhere the LVT to “Special needs” areas (steps, ramps, landings, etc.) Refer to the IVC US LVT Glue Down instructions if adhering is necessary.

- **Radiant Heated Floors**
  Radiant heated floors must be approved by the manufacturer for the use of their product with resilient vinyl flooring applications. The subfloor temperature should not exceed 85°F (29°C) and the system should be turned off 24 hours prior to and after installation. **Note:** IVC does not recommend the use of Kalm underlayment with radiant heated floors.

Storage and Handling

Acclimate the flooring a minimum of 24 hours before installation in the area it is to be installed. Conditions between 65°F and 85°F (18°C and 29°C) are required before, during and after installation. Cartons should be evenly stacked no more than five high on a flat surface and away from any heating/cooling ducts or direct sunlight.

Subfloor and Wall/Door Preparation

**Note:** Do not install cabinets on top of floating LVT. The surface beneath the floor must be sufficiently prepared in advance to guarantee a successful installation of the flooring.

- Fill any low spots in the subfloor greater than 3/16 inch in 10 foot span with a Portland cement leveling compound.
- Ceramic tile and embossed flooring will require skim coating with a Portland based patch to avoid bottom up pattern telegraphing.
- Remove any existing floor molding. Removal of wall baseboards is optional as quarter round can be installed to avoid baseboard removal.
- Undercut doorjamb so the ¼ inch expansion space is maintained, allowing the LVT to slip under doorjamb/case molding.
- Sweep the subfloor clean. The floor must also be free of all contaminants.

**PLEASE NOTE** warranty exclusions with respect to rolling loads. If you have frequent or heavy rolling conditions, click products can be glued down to help reduce the risk of joint separation from rolling load traffic; however our warranty still excludes any problems associated with rolling loads.
Start of Installation
It is the installer’s responsibility to inspect the flooring prior to installation to ensure that there are no visual defects. Do not install flooring with visible defects. If visible defects are present, contact your retailer immediately.

- Floor must be clean, smooth, flat and dry before installation.
- Check the tongue and groove to assure it is free of debris or damage.
- To achieve maximum appearance, mix planks from two to three cartons from the same production.

The advantage of IVC US LVT Click product is that it allows you to choose your own starting position, direction and can work one plank/tile at a time.

Walls are not always straight. Snap a chalk line for your first row to follow.
Maintain a 1/4” (1/2 cm) expansion space around all walls. Quarter round or baseboard molding will cover this expansion space. IMPORTANT: Maintain the 1/4 inch space around cabinets, pipes, toilet flanges and any obstacle in the floor.

- For plank installation, we recommend staggering the end joints a minimum of 6 inches.
- For tile installation, we recommend staggering the end joints a minimum of 3 inches.

NOTE: Do not install four corners together, as this will not provide a stable installation.

Clicking Planks/Tiles Together
To click the end joint of the plank/tile together, click the short side of the plank/tile vertically into the previous one by pressing it by hand and rolling it with a hand roller or seam roller to ensure a fully compressed tight fit.

To click the length joint of the plank/tile together, place long joint together, lifting slightly to engage lock. Rotate downward, clicking together for a tight fit. Use a small hand roller or seam roller to press/lock the compression fit end joint.

To tap along the entire length of plank or tile to properly seal the joint, use a small scrap piece of plank/tile with the lock on the edge. Lock groove-to-tongue or tongue-to-groove for this application. Lock the scrap piece to the area requiring tapping, and lightly tap the edge of the material. This will bring the tile edges tight together. Do not use a tapping block.

Cut the plank/tile by scoring through the top wear layer with a utility knife then snap the plank/tile across the score.

Install adjoining rows as you did the first; one piece at a time. Holding the plank/tile at a slight angle, place it against the profile in the first row. Rotate the plank/tile down to secure the length joint assuring there are no gaps along the joint.

The adjoining planks/tiles are aligned by sliding the long joint into position, shifting it to properly match the end joint against the previous plank/tile. Repeat until you reach the final row of material.

To install the final row of planks/tiles, you will usually need to cut them. We recommend the following: lay a panel on top of the last row installed. Lay another plank/tile against the edge of the wall. Mark the plank/tile underneath. Cut the plank/tile through the wear layer and snap along the score. Install the last row leaving ample expansion space.

Additional Notes

Molding and Transitions Installation
- All molding and transition strips need to provide a 1/4 inch expansion space to allow expansion and contraction of the subfloor. Ensure moldings and transitions strips will not pinch the flooring.
- Never allow nails or screws to enter into the LVT flooring or the expansion zone around the flooring perimeter, as it will prevent proper expansion and contraction of the structure and flooring.
**Treads, Risers and Ramps**

Glue-down method is required on all treads, risers and wheelchair ramps using IVC US iGrip Adhesive. Apply the adhesive following the manufacturer’s instructions. Install the riser after installing the tread. Install stair nose moldings afterwards to protect the edge of the LVT.

**Plank Replacement**

Should one of your planks/tiles become damaged and need to be replaced, follow these simple instructions:

1. Score top of damaged plank/tile with a utility knife. Make two triangle cuts near the end joint and then connect the points with one long cut in the middle of the plank/tile. (See diagram below)

   ![Score Tile Diagram]

2. Use an awl or screwdriver to tap down through plank/tile on scored triangle cut points.

3. Lift and remove damaged tile.

4. With the pattern side facing up on the new replacement plank/tile, trim off the short lip on the tongue side and the groove on the compression joint side, making it flush with the edge of the plank/tile. Be careful not to damage the finish surface of the tile.

5. Cut several pieces of acrylic double face tape made for vinyl floors and slide under the edges of the existing floor on the two edges where the replacement plank/tile will have its lips cut off. Tape should face sticky side up; leave the paper on the side facing down on the floor.

6. Using IVC FLEX-SEAM Premium Seam Bond, or an approved secondary alternative (such as Taylor 2062*), run a small bead of sealer on the groove edge of the planks/tiles on the existing floor where the replacement plank/tile will rest that has the lips cut off.

   • **NOTE:** The long tongue of the replacement plank/tile and the uncut compression fit end joint will not need tape or seam adhesive as you will be using the plank’s/tile’s locking mechanism.

7. Install replacement plank/tile by sliding the long groove of the replacement plank/tile under the tongue of the floor plank/tile until the finish edge of the replacement plank/tile is tight against the finish edge of the floor plank/tile, and the compression end joint is lined up. Rotate down, locking the long tongue joint and roll the compression end joint to lock into place with a small or hand roller.

8. Wipe any excess sealer that comes to the surface of the tiles with a damp cloth and follow with a dry cloth to assure all sealer is removed from tile surface.

9. Keep foot traffic off the replaced plank/tile for 24 hours.

*IVC will not be held responsible for problems that may arise for approved secondary alternative seam sealers. Please contact the approved secondary alternative seam sealer’s manufacturer with issues.
IVC US Residential Installation Guide - LVT Glue Down with iGrip for LVT/P

NOTE: for Vision LVT products, iGrip LockSet LVT/LVP Adhesive is required for glue down applications. Please see the iGrip LockSet LVT/LVP instructions a few pages ahead.

Materials Required for Installation:

- Tape Measure
- 100 lb. Roller
- Square Ruler
- Chalk Line
- Utility Knife

Acceptable Underlayments:

- **Wood Underlayment**
  Wood underlayment panels require a double layer construction and must be underlayment grade as specified and warranted by the manufacturer. Always fasten underlayment panels in accordance with the manufacturer’s recommendations. Any failure of the underlayment or IVC US flooring as a result of the underlayment is NOT the responsibility of IVC US. Any porous wood underlayment must be primed.

  IVC US does not recommend installing resilient flooring over wood flooring or subfloors applied directly over concrete or sleeper-construction floors.

- **Concrete** — See Grade Levels below. All concrete underlayments require moisture testing.

  **Grade Levels**
  - **Suspended:** An acceptable suspended floor is a concrete or wood substrate with a minimum of 18” (460mm) of well-ventilated air space beneath it. IVC US recommends that a moisture vapor barrier be placed on the ground below the air space.
  - **On-Grade:** An acceptable on-grade floor is a concrete substrate in direct surface contact with the ground at the surrounding ground level. The concrete slab should be protected from moisture penetration and incorporate a proven moisture vapor barrier.
  - **Below-Grade:** An acceptable below-grade floor is a concrete substrate partially or completely in contact with the ground below the average surrounding ground level. The concrete slab should be protected from moisture penetration and incorporate a proven moisture vapor barrier.

- **VCT** (well bonded, on and above grade – in absence of waxes or sealers)
- **Ceramic** (well bonded & properly prepared)
- **Terrazzo** (well bonded & properly prepared)
- **Self-leveling and patching compounds** (latex fortified Portland cement based only)
- **Resilient floor** (no more than 1 layer, well bonded, non-cushioned)
- **Radiant heat floor system** (not exceeding 85°F (29°C) and approved by the manufacturer for the use of their product with resilient vinyl flooring applications)

Unacceptable Surfaces:

- Cushion-back vinyl
- Laminate
- Inter-flex and any perimeter bonded products
- Any floating floor system
- Cork
- Carpet

IVC US will not warrant or accept responsibility of any kind for flooring failures related to the use of unacceptable substrates and surfaces.
Storage and Handling
Acclimate the flooring a minimum of 48 hours before installation in the area it is to be installed. Conditions between 65°F and 85°F (18°C and 29°C) are required before, during and after installation. Cartons should be evenly stacked no more than five high on a flat surface and away from any heating/cooling ducts or direct sunlight.

Floor Preparation:
Floor must be clean, smooth, flat and dry. Remove all foreign substances such as wax, grease, dirt, construction marks and contaminants, and any substance or chemical that would interfere with a good bond. Avoid using sweeping compounds. Do not install over substrates that have been chemically cleaned. The flatness of wood subfloors or underlayments must not exceed on variation of 1/4” in 10 feet (1/2cm in 3 meters).

The flatness of concrete subfloors must meet or exceed the requirements of ACI FF25. Fill all holes and cracks with a latex fortified Portland cement based patching compound. IVC US only recommends the use of latex fortified Portland cement based products as a satisfactory patching or leveling compound.

IVC US recommends priming extremely porous floors with IVC FLEX -PRIM Acrylic Latex Primer to prevent over absorption of adhesives, dust containment, and to insure a better bond of the adhesive to the subfloor/underlayment.

Sustainability: Regardless of the type of concrete or cement-like material used as a base for IVC US LVT Glue Down, the responsibility for its use or suitability rests with that product's manufacturer or specifier and not with IVC US.

Moisture Testing: It is the responsibility of the flooring contractor and the installer to test all concrete substrates, both old and new, for moisture transmission using the Calcium Chloride Moisture Test according to ASTM F1869. Moisture vapor transmission should not exceed the recommended levels of 6 lbs. or less per 1,000 sq. ft. in 24 hours. This test should be performed and documented prior to installation. Also test for relative humidity in concrete floor slabs using in-situ probes, which should be no more than 85% RH per ASTM F2170 before, during and after installation.

These acceptable moisture readings are only applicable when using iGrip for Luxury Vinyl Tile & Plank adhesive.

PH LEVELS: pH on concrete substrates must be between 7 and 9

Inspection of flooring material prior to installation is required. Any defects should be immediately reported to the retail store from which the flooring was purchased before installation. IVC US will not be responsible for labor costs to repair or replace material with defects that were apparent before or noticed at the end of an installation. The job site and all flooring material and adhesive must be kept for 48 hours before, during and after installation between 65˚ F and 85˚ F (18° and 29°C).

PLEASE NOTE: If removal of existing resilient floor covering is required, follow all recommended Resilient Floor Covering Institute (RFCI) work practices at www.rfci.com.

IVC US only recommends the use of Portland cement based products as a satisfactory patching or leveling compound for the installation of all IVC flooring products.

Common Uses
- Leveling Substrates
- Embossing existing resilient floor, ceramic tile or VCT
- Filling holes
- Leveling non water-soluble adhesives
- Filling cracks
- Filling saw cuts and/or construction joints

Do not fill actual expansion joints or other moving joints with elastomeric fillers that are designed to absorb movement in concrete slabs. Cementitious underlayment, patches and resilient flooring installed across true expansion joints will often buckle or crack when the slabs move. Usually architects will specify expansion joint covers for the use with various floor coverings.
WARNING: For installation over old resilient floor coverings or when considering removing existing resilient floors, please be advised that these products may possibly contain asbestos fibers or crystalline silica. Please follow all recommended Resilient Floor Covering Institute (RFCI) work practices at www.rfci.com.

Cutting
Tiles and planks may be cut with a small tile cutter or scored and snapped.

Start of Installation – Planks/Tiles
When using planks/tiles from two or more cartons, check to be sure all pattern and lot numbers are the same to ensure proper color match. On larger installations, open several cartons and mix them as they are installed to help blend any slight shade differences from one carton to the next.

Products with directional arrows on the back should be installed with the arrows all pointing in the same direction unless you are installing custom layouts.

Before installing the material, plan the layout so plank/tile joints fall at least 6 inches (15 cm) away from subfloor and underlayment joints. Find the center point in the room. Divide the room into equal quadrants by marking two perpendicular lines on the subfloor intersecting at the center point. Depending on your layout you may also start your row along a wall. Since walls are not always straight, snap a chalk line. Do not install over expansion joints.

Step 1
Apply iGrip for Luxury Vinyl Tile & Plank adhesive with the recommended trowel and allow to dry to the touch before installing floor. Don’t install in wet adhesive. Only spread as much adhesive as you can cover within 2 hours depending on temperature and humidity.

Step 2
Install all planks/tiles with directional arrows pointing in the same direction. Install the field area first.

Step 3
Apply adhesive as noted in Step 1 to the remaining portion of the room, allow adhesive to dry and complete the installation.

Step 4
Roll the installed flooring in four directions within 30 minutes after completing installation using a 100 lb. roller (45 kg.) (minimum). Use a hand roller under toe kicks and other hard to get areas. Immediately remove any excess adhesive from the surface of the flooring using a clean white cloth dampened with a neutral detergent and water.

NOTE: Drying time will vary depending on substrate porosity and ambient temperature and humidity.

PRECAUTIONS: Planks/tiles may be walked on immediately; however, the floor should be protected with plywood when moving heavy furniture and appliances back into the room.

DO NOT wash or scrub the new flooring for at least 5 days after the installation. This will allow planks/tiles to become “seated” in the adhesive and prevent excess moisture from interfering with the adhesive bond.
ivc US Residential Installation Guide – iGrip LockSet LVT/LVP Adhesive

iGrip LockSet LVT/LVP Adhesive is approved and warranted to be used with all IVC US manufactured luxury vinyl plank and tile (LVP/LVT) products, but is required to be used with IVC’s Vision LVT products.

Adhesive is applied using a 3/8” nap roller and dries quickly to facilitate fast installation times. Coverage is approximately 350-400 square feet per gallon.

Materials Required for Installation:

- 3/8” nap paint roller
- Tape measure
- Square Ruler
- Utility knife
- Chalk line
- 100 lb. roller

Acceptable Underlayments:

- **Wood Underlayment**
  
  Wood underlayment panels require a double layer construction and must be underlayment grade as specified and warranted by the manufacturer. Always fasten underlayment panels in accordance with the manufacturer’s recommendations. Porous wood substrates must be primed with a thin coat of iGrip LockSet. See “Floor Preparation” section for full set of priming instructions for both Porous and Non Porous substrates.

  Any failure of the underlayment or flooring due to the underlayment is NOT the responsibility of IVC US. IVC US does not recommend installing resilient flooring over wood subfloors applied directly over concrete or sleeper-construction floors.

- **Concrete** — See Grade Levels below. All concrete underlayments require moisture testing.

  Grade Levels
  
  Suspended: An acceptable suspended or above-grade floor is a concrete or wood substrate with a minimum of 18” (460mm) of well-ventilated air space beneath it. IVC US recommends a moisture vapor barrier be placed on the ground below the air space.

  On-Grade: An acceptable on-grade floor is a concrete substrate in direct surface contact with the ground at the surrounding ground level. The concrete slab should be protected from moisture penetration and incorporate a proven moisture vapor barrier.

  Below-Grade: An acceptable below-grade floor is a concrete substrate partially or completely in contact with the ground below the average surrounding ground level. The concrete slab should be protected from moisture penetration and incorporate a proven moisture vapor barrier.

- **Self-leveling and patching compounds** (latex fortified Portland cement based only)

- **VCT** (on or above grade only; well bonded, non-cushioned, and no more than one layer. Remove waxes, sealers, floor finishes and other foreign materials by thoroughly mopping the floor with a wax stripper, and thoroughly rinsing)

- **Vinyl resilient floor** (well bonded, non-cushioned, and no more than one layer. Remove waxes, sealers, floor finishes and other foreign materials by thoroughly mopping the floor with a wax stripper, and thoroughly rinsing)

- **Ceramic Tile** (Strip of all contaminants followed by lightly abrading or sanding to a matte or dull finish. Grout lines must be embossed or covered with a polymer modified Portland cement based self-leveling screed or skim coat)

- **Terrazzo** (Finishes must be removed by sanding to a matte or dull finish. Grout lines must be embossed or covered with a polymer modified Portland cement based self-leveling screed or skim coat)

- **Radiant heat floor system** (radiant heat cannot exceed 85°F (29°C) and must be approved by the radiant heating system’s manufacturer for the use of their product with resilient vinyl flooring applications. The system must be on and operational for a minimum of two weeks prior to the installation to reduce residual moisture within a concrete substrate 72 hours prior to the installation lower the temperature to 65°F /18.33°C. Following the installation it is recommended to gradually increase the temperature in increments of 5°F (3°C). This will assist in avoiding overheating.)

  **NOTE**: IVC does not recommend the use of Kalm Underlayment with radiant heat.

This document is reviewed on an ongoing basis.

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**Unacceptable Surfaces:**

- Cushion-back vinyl  
- Carpet  
- Inter-flex and any perimeter bonded products  
- Laminate  
- Cork  
- Cushion underlayment  
- Any floating floor system

*IVC US will not warrant or accept responsibility of any kind for flooring failures related to the use of unacceptable substrates and surfaces.*

**Storage and Handling**

The installation site must be acclimated with HVAC in operation. The floor and room temperature, as well as flooring materials and adhesive, must be maintained at 65°– 85° F (18° and 20° C) and the humidity between 40% - 65% for 48 hours before, during, and after the moisture testing and installation.

Cartons of flooring material should be evenly stacked no more than five high on a flat surface and away from any heating/cooling ducts or direct sunlight.

**Floor Preparation:**

**NOTE: A CLEAN, DUST-FREE SUBSTRATE IS ESSENTIAL!** All substrates must be clean, smooth, dry and free of waxes, existing adhesives, dirt, dust, grease, oil, paint, sealers, silicates or curing compounds. It is necessary to properly sweep and vacuum the substrate prior to applying the adhesive. The flatness of wood subfloors or underlayments must not exceed on variation of 3/16” in 10 feet (0.476 cm in 3 meters).

The flatness of concrete subfloors must meet or exceed the requirements of ACI FF25. Fill all holes and cracks with a latex fortified Portland cement based patching compound. IVC US only recommends the use of latex fortified Portland cement based products as a satisfactory patching or leveling compound.

It is recommended a test bond be performed on any questionable substrate to ensure appropriate adhesive bond will be achieved. This adhesive cannot be used over chemically cleaned substrates.

**Porous surfaces**

For porous substrates you will need to apply a thin coat of iGrip LockSet to act as a bonding coat allowing it to completely dry followed by a medium coat of iGrip LockSet leaving a slight “orange peel” texture. This is to assure the adhesive has a thorough application.

**Non-Porous surfaces**

The surface must be clean and free from all contaminates. Using a 3/8” nap roller, apply a medium coat of iGrip LockSet leaving a slight “orange peel” texture. Make sure the coat is even. **A test bond must be performed to ensure the adhesive adheres properly to the substrate.** Further floor preparations may be needed to achieve a satisfactory bond.

**Sustainability:** Regardless of the type of wood, concrete or cement-like material used as a base for IVC US LVT Glue Down, the responsibility for its use or suitability rests with that product’s manufacturer or specifier and not with IVC US.

**Moisture Testing:** Moisture testing of concrete slabs is required to be performed in strict accordance with the latest versions of ASTM F2170 to determine in-situ Relative Humidity (RH), and for moisture vapor emission rate (MVER) per ASTM F1869. iGrip LockSet must only be applied to properly prepared or bare concrete substrates in acclimated conditions according to these installation guidelines.

For concrete, MVER in-situ Relative Humidity readings of 90% RH or less (per ASTM F1869). Calcium Chloride must be 8 lbs. or less (per ASTM F2170). In addition, pH must be between 7.0 – 10.
Inspection of flooring material prior to installation is required. Any defects should be immediately reported to the retail store from which the flooring was purchased before installation. IVC US will not be responsible for labor costs to repair or replace material with defects that were apparent before or noticed at the end of an installation.

**PLEASE NOTE:** If removal of existing resilient floor covering is required, follow all recommended Resilient Floor Covering Institute (RFCI) work practices at www.rfci.com.

IVC US only recommends the use of Portland cement based products as a satisfactory patching or leveling compound for the installation of all IVC flooring products.

**Common Uses**

- Leveling Substrates
- Filling holes
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- Embossing existing resilient floor, ceramic tile or VCT
- Leveling non water-soluble adhesives
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Do not fill actual expansion joints or other moving joints with elastomeric fillers that are designed to absorb movement in concrete slabs. Cementitious underlayment, patches and resilient flooring installed across true expansion joints will often buckle or crack when the slabs move. Usually architects will specify expansion joint covers for the use with various floor coverings.

**Cutting**

Tiles and planks may be cut with a small tile cutter or scored and snapped.

**Start of Installation — Planks/Tiles**

When using planks/tiles from two or more cartons, check to be sure all pattern and lot numbers are the same to ensure proper color match. On larger installations, open several cartons and mix them as they are installed to help blend any slight shade differences from one carton to the next.

Products with directional arrows on the back should be installed with the arrows all pointing in the same direction unless you are installing custom layouts.

Before installing the material, plan the layout so plank/tile joints fall at least 6 inches (15 cm) away from subfloor and underlayment joints. Find the center point in the room. Divide the room into equal quadrants by marking two perpendicular lines on the subfloor intersecting at the center point. Depending on your layout you may also start your row along a wall. Since walls are not always straight, snap a chalk line. Do not install over expansion joints.

**Application:**

A roll-on application method is necessary using a 3/8” nap roller to achieve a smooth even full-spread coating. Spread rate and drying time of the adhesive will depend on the porosity and texture of the substrates and the ambient temperature, humidity, and air flow. Once the coating has dried, it must be kept clean and apart from any contact with other surfaces until ready to begin the bonding process.

Do not spread more adhesive than can be covered in a four-hour period after the adhesive has dried.
Installation:

Once the iGrip LockSet has completely dried, carefully position the flooring to achieve a precise fit and proper alignment before securing. Once in place, use a hand roller to secure the LVT in place. When the tiles or planks are down, roll the entire assembly in both directions with a 100 lb. roller to achieve full adhesive contact. Note: After the assembly is rolled, re-positioning is usually not possible. Clean up spills and drips with a clean cloth dampened with water. Dry adhesive may require the use of an appropriate solvent cleaner.

NOTE: Normal traffic on flooring installations may resume as soon as the installation is completed. Wait at least 72 hours before full cleaning and polishing.

For additional information contact our Technical Services Department 1-888-225-8287, Option 5