

### **Please read carefully before installing**

- Failure to follow all of the guidelines set forth in this document will void the manufacturer's warranty. The warranty does not cover damage from improper use, care, maintenance, or installation, including scratching, water leak or flood damage, scratching, denting, telegraphing, fading, staining, and separation or other damage caused by installation on improperly prepared subfloors. Please review our Limited Warranty for details.
- It is the installer's responsibility to inspect the flooring for proper color, visible manufacturing defects, damage, or otherwise unsatisfactory appearance. Upon receipt of the flooring, open 1-2 cartons to inspect and confirm with the job supervisor AND the end user that the material is satisfactory. Ensure adequate lighting for proper inspection. If any problem is found, do not open any additional cartons. Contact your retailer or distributor immediately. Do not install damaged or visibly unsatisfactory material. The manufacturer cannot accept responsibility for installation of flooring with visible defects. Installation constitutes acceptance by the installer AND end user of the visible quality of the material.
- It is the installer's responsibility to ensure that jobsite and subfloor conditions are acceptable prior to the installation of the flooring. The manufacturer is not responsible for any problems associated with the flooring that is related to or attributed to improper jobsite conditions or installation, including plank separation, edge lifting, edge fracturing, cupping/crowning, expansion/contraction, telegraphing, buckling, or chipping that occurs during or after installation as a result of abuse, misuse, improper maintenance or care, improper installation technique, or improper environmental conditions, including excessive heat from radiant heat systems. Installation constitutes approval by the installer that proper jobsite and subfloor conditions have been established as described in this document.
- Installer must document installation date, product SKU and Lot # information (taking a photo of the carton end label is sufficient), subfloor moisture content, site relative humidity, and site temperature. This information must be documented by the installer, and a copy must be provided to the property owner to ensure product warranty coverage.
- Calculate the room surface prior to installation and plan to purchase an extra 10% for cutting waste and culling. It is acceptable that up to 5% of the material be outside the range of acceptance before the batch might be considered defective.

### **JOB SITE AND PRE-INSTALLATION GUIDELINES:**

- This product does not need acclimation.
- **WARNING! DO NOT SAND, DRY SWEEP, DRY SCRAPE, DRILL, SAW, BEAD-BLAST, 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. 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 the current edition of the Resilient Floor Covering Institute (RFCI) publication Recommended Work Practices for Removal of Resilient Floor Coverings for detailed information and instructions on removing all resilient covering structures. For current information, go to [www.rfci.com](http://www.rfci.com).
- Flooring should be one of the last items installed for any new construction or remodel project. Install cabinetry, island and peninsula counters, vanities, tubs, and showers before the flooring. Then, install this flooring around them. Placing heavy permanent fixtures on top of a floating floor will impede the flooring's ability to perform as a floating floor and may cause failure.
- For any situations or questions not addressed in this document, please contact your retailer or distributor for clarification before proceeding with installation.

### **Jobsite Conditions**

- All “wet” work – i.e., paint, drywall, concrete, masonry, and plumbing must be complete and dry prior to the delivery of the flooring.
- This product is not suitable for any outside use, sunrooms/solariums, showers, saunas, seasonal porch-es, camping trailers, boats, RV's, or rooms that have the potential of flooding. Do not install in rooms or homes that are not temperature-controlled.
- Gutters and downspouts should be in place and the exterior grade complete to allow for proper drainage of water away from the building's exterior perimeter.
- Flooring should only be installed in temperature-controlled environments. HVAC should be on, operational, and maintained between 60 – 80 degrees with a relative humidity of 30%- 60% range a minimum of 5 days prior to delivery, during and after installation of the flooring. Portable heaters are not recommended as they may not heat the room and subfloor sufficiently. Kerosene heaters should never be used.
- Special conditions apply to installations over radiant heat systems. Please see the ‘Radiant Heat’ section below and review carefully prior to beginning installation.

### **JOB SITE AND PRE-INSTALLATION GUIDELINES (CONT):**

#### **Jobsite Conditions (Cont)**

- If HVAC control is not possible at the time of installation, the environmental conditions must be at or near normal living conditions between 60 – 80 degrees and at the average yearly relative humidity for the area.
- Basements and crawl spaces must be dry. Use of a 6-mil black polyethylene is required to cover 100% of the crawl space earth. Crawl space clearance from ground to underside of joist to be no less than 18", and perimeter vent spacing should be equal to 1.5% of the total square footage of the crawl space area to provide cross ventilation in accordance with local regulations.
- Exposure to long-term direct sunlight can cause damage to your floor. Failure to properly shade or UV tint windows can discolor, fade, or buckle vinyl planks. Use window treatments or UV tinting on windows.

#### **Choosing Your Installation Method**

- Acceptable installation methods for flooring installed on different grade levels:
  - Above Grade: Float or Glue Down
  - On Grade: Float or Glue Down
  - Below Grade: Float Only
- For glue down installation, use only a premium pressure-sensitive vinyl flooring adhesive. Please consult with the adhesive manufacturer to determine if it is suitable for use with this material. For the glue down method, follow the adhesive manufacturer's installation instructions in addition to all of the guidelines in this document.
- When doing the glue down installation method, DO NOT include a 6-mil poly vapor barrier in the assembly. Flooring material must be adhered directly to the subfloor. If subfloor conditions indicate the need for a polyfilm vapor barrier (see below under 'Preparing the Subfloor'), use the floating installation method only.
- Do not nail, screw or fasten this flooring to the substrate in any location. Glue to the substrate only as part of a full glue-down installation of the entire floor area. Do not glue down in localized areas.

#### **Tools and Supplies**

- Tape measure, chalk line, hand saw or power saw, utility knife, metal straight edge, tapping block, crow bar or pry bar, wood or plastic spacers (1/4"), rubber mallet, concrete testing kit & equipment or, for wood subfloors, a quality pin-type wood moisture meter.
- For glue down installations, use only a premium pressure-sensitive adhesive designed and approved for use with Vinyl flooring. Recommended adhesives: Titebond 675, Titebond 780, Bostik Uni-Lock, or Bostik LVT Lock+.

### PREPARING AND TESTING THE SUBFLOOR:

#### All Subfloors

- Must be flat within 1/8" (3.2mm) in any 6' (1.8m) radius, or within 3/16" (5mm) in any 10' (3m) radius.
- The substrate should not slope more than 1" (2.5cm) per 6 feet (1.8m) in any direction.
- Any gaps in the subfloor should not exceed 3/16" (5mm).
- Subfloors must be clean and swept free of any debris.
- In preparing the subfloor surface, do not use products containing petroleum, solvents, or citrus oils, as they can cause staining and expansion of the new flooring.
- Although this flooring is waterproof, it is not intended to be used as a moisture barrier. This flooring does not prevent the growth of mold under the floor or prevent structural problems associated with or caused by flooding, excessive moisture, alkalis in the subfloor, or conditions arising from hydrostatic pressure. Jobsite moisture and pH issues should be addressed and corrected prior to installation.

#### Concrete & Gypcrete Subfloors

- Subfloor material must have a minimum density of 3000 psi. Certain gypcrete and other non-cementitious subfloors may not meet this requirement.
- The subfloor must be fully cured, at least 60 days old, smooth, permanently dry, clean, and free of all foreign material such as dust, wax, solvents, paint, grease, oils, and old adhesive residue. Curing agents and hardeners could cause bonding failure and should not be used.
- Depressions, cracks, grooves, expansion joints, and other subfloor imperfections must be filled with an appropriate patch or leveling compound. Grind down any high spots as needed.
- Moisture and alkalinity tests should be performed on all concrete substrates regardless of grade level or age of slab. Perform either an In-Situ Relative Humidity (RH) Test (ASTM F2170) or a Calcium Chloride Moisture Test (ASTM F1869). Perform a pH test per ASTM F710 to determine the alkalinity of the slab.
- Concrete moisture vapor emissions should not exceed 90% RH per ASTM F2170 or 8 lbs. per ASTM F1869, and pH should not exceed 9 per ASTM F710. For floors outside of this range, a layer of 6-mil poly film moisture barrier is required beneath the flooring, taped at the seams with waterproof tape and free of tears/perforations. If the installation is above or at grade, poly-film is always recommended, but not required except when test results are outside these stated ranges.
- The manufacturer's warranty does not cover discoloration from mold or from flooding, floods, leaking plumbing or appliances, water entering through sliding glass doorways, or floor covering failure due to hydrostatic pressure or moisture vapor emission.

### PREPARING AND TESTING THE SUBFLOOR (CONT):

#### Wood Subfloors

- The subfloor must be structurally sound, with joists spaced a maximum of 16" in the center.
- Do not install over-chip boards, wafer boards, or floating wood floors.
- Wood subfloors must be CDX-rated plywood at least 3/4" thick, PS2-rated OSB at least 3/4" thick, APA-rated particle board (minimum rating of BB or CC), or existing wood flooring that is securely fastened to a wood subfloor beneath. Do not install over a floating wood floor, over solid subfloor planking, or over any wood floor or subfloor that is installed over concrete.
- Test wood subfloors for moisture content using a moisture meter recommended for wood flooring. Take a minimum of 20 readings per 1000 sq. ft. Subfloor moisture should not exceed 12% in any location.
- For all wood subfloors, repair any loose boards or squeaks before you begin the installation. Screw every 6" (15 cm) directly to the joists to avoid squeaking. When installing over an existing wood floor, repair any loose boards or squeaks before beginning installation and install the new flooring perpendicular to the existing wood floor.

#### Existing Non-Wood Floor Coverings

- The flooring can be installed over most existing hard surface floor coverings, provided that the existing floor surface is clean, flat, dry, securely fastened or adhered, structurally sound, and in compliance with the flatness requirements outlined above.
- Acceptable floor coverings include well-adhered linoleum (1 layer only), non-cushioned vinyl, terrazzo, ceramic, and stone tile. Tile floors with grout lines will require a cementitious patch to fill any grout lines, voids, or cracks.
- Unacceptable floor coverings include carpet (any type), foam underlayment, cushion-backed vinyl, loose-lay vinyl, rubber, cork, laminate, and any type of floating floor.

#### Sound Reducing Underlayments

- Once all of the applicable subfloor requirements are met, this product may be installed on top of a sound-reducing pad ONLY if the pad meets all of these requirements:
  - The pad is approved by the pad manufacturer for use with floating LVT flooring
  - Minimum density of pad: 30 lbs.
  - Maximum thickness of pad: 0.06" (1.5mm)
  - Recommended pad: Silencer LVT from Foam Products, Inc.
- Pads that are too thick or too soft will allow excessive vertical deflection that could result in damage to the edges and/or plank separation. Do not install this flooring over Cork or Rubber underlayment pads or soft foam pads intended for use with laminate and hardwood flooring.

### PREPARING AND TESTING THE SUBFLOOR (CONT):

#### Radiant Heat

- Radiant heat systems must have a minimum of 1/2" physical separation between the heating elements or tubing and this flooring product. Electric heating mats that are not embedded into the subfloor are not recommended for use underneath this flooring and will void the warranty.
- Floor temperature must never exceed 85°F (30°C). The use of an in-floor temperature sensor is recommended to avoid overheating.
- New Concrete or gypcrete must be allowed to properly cure and dry a minimum of 4 weeks prior to operation of the radiant heat system.
- Operation of the radiant heat system should be set to run at a minimum 2/3 of maximum output for a minimum of 2 weeks prior to installation of flooring to allow moisture from concrete to dissipate and reach a final moisture content. This must be done in both heating AND non-heating seasons.
- Reduce heat to a temperature of 65°F four days prior to installation.
- Turn the heat off for 24 hours before, during, and 24 hours after installation. In glue-down installations, failure to turn the heat off may result in a significantly shortened working time of the adhesive. Failure to strictly follow the adhesive manufacturer's guidelines may result in floor failure and void the warranty.
- In radiant-heated concrete or gypcrete subfloors, moisture vapor emissions must be reduced to a maximum of 3 lbs per ASTM F1869 or 75% RH per ASTM F2170, with a PH limit of 9, prior to installation. Wood subfloors must not exceed 12% moisture content.
- Ensure that the temperature in the room is at least 60°F (15°C) during installation.
- After 24 hours post-installation, slowly raise the temperature of the heating system to its preferred operating level in increments of 5°F per day. Please exercise caution and increase the heat slowly.
- An outdoor temperature sensor is highly recommended to adjust temperature to anticipated heat loss.
- Seasonal expansion and contraction are expected and do not mean that the flooring product is defective.

### EXPANSION SPACE & LAYOUT:

- This flooring WILL move/shrink/expand. This is normal for virtually all flooring products.
- Always ensure you leave a minimum 1/4" (6mm) gap between the flooring and any vertical obstruction, including walls, cabinets, islands, pipes, pillars, stairs, door jambs, sliding glass doors, fireplaces, etc. These gaps will be covered with trim moldings after the floor is installed. Tip: When installing around pipes, drill the holes 1/2" (12mm) larger than the diameter of the pipes.
- Pay careful attention to maintain this 1/4" expansion gap around doorways. The door trim should be undercut to allow the flooring to move freely without being pinched. Failure to undercut door trim will void all warranties.
- For floor surfaces exceeding 6400ft<sup>2</sup> (620m<sup>2</sup>) and/or lengths exceeding 80 lineal feet (25m), use expansion gaps covered by T-moldings to ensure that no contiguous installed area exceeds these size limits.
- Whenever possible, plan the layout so that the joints in the planks do not fall on top of joints or seams in the existing substrate. Do not install over-expansion joints that have not been filled/patched.
- Decide the installation direction. It is recommended to install the length direction of the planks parallel to the main light direction unless installing over an existing wood floor, in which case this flooring should be installed perpendicular to the plank direction of the wood. In hallways, it is recommended to install the floor parallel to the length of the hall if possible.
- Determine the longest, straightest wall to begin the installation. This is usually an exterior wall.

### INSTALLATION:

- Remove the baseboard, quarter-round moldings, wall base, appliances and furniture from the room. After preparation work, sweep and vacuum the entire work area to remove all dust and debris.
- To achieve a uniform appearance across the entire floor, work from a minimum of four cartons at a time and lay out the flooring ahead of time. Be sure to mix the planks for the best aesthetic appearance. Make certain the room is well-lit to ensure color is acceptable and that any visual defects can be seen and removed prior to installation.

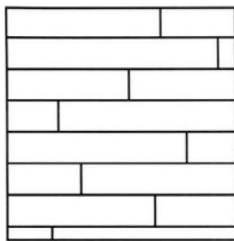
#### Step One – Plan the End Points

- Measure the area to be installed across the width of the planks and divide by the width of one plank. If the remainder is less than 2-1/2" (64mm), adjust the width of the first row to be installed so that the final row is wider than 2".
- Measure the area to be installed along the length of the planks and divide by the length of one plank. If the remainder is less than 8", cut your first plank in the row so that the final piece is at least 8" long. Plan each row with this requirement in mind.

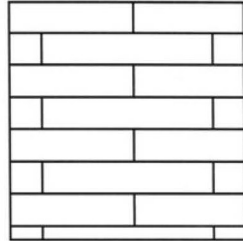
### INSTALLATION (CONT):

#### Step Two – Preparing the First Rows Prior to Installation

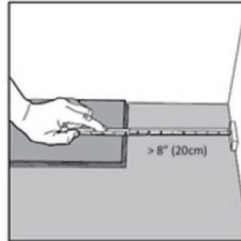
- Pre-cut the planks for the first three rows. Trim off the profiles facing the walls and position the cut edges at least ¼" from the wall. Randomly install different lengths to avoid a patterned "stair-step" appearance. End cuts from starter rows can be used at the opposite side of the room to complete rows or may be used to start the next row.
- Make sure to stagger end joints by at least 8" (20cm). Avoid "H" patterns, where the end joint aligns with the end joint in other nearby rows. Avoid installing pieces shorter than 8" (20 cm) at the beginning or end of rows.



Stagger End Joints



Avoid "H" Joints



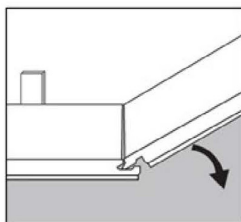
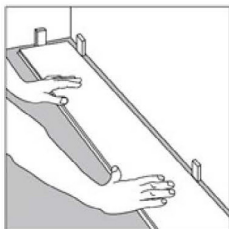
Minimum 8" long

- For glue-down installations, be sure not to apply any adhesive until the first three rows have been cut, racked out, and checked for proper fit.
- Set spacers to allow a minimum gap of ¼" (6mm) around the perimeter of the subfloor for movement or product expansion. Do not remove the spacers until the installation is complete.

#### Step Three - Installation of Flooring

- For glue-down installations, follow the adhesive manufacturer's recommendations regarding open time and only spread enough adhesive to cover an area that can be installed within that working time.
- Refer to these diagrams for subsequent steps:

#1		#3		#5		
#2	#4		#6		#7	
#8		#9		#10		#11

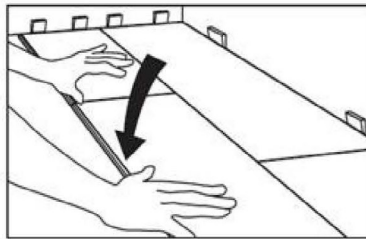
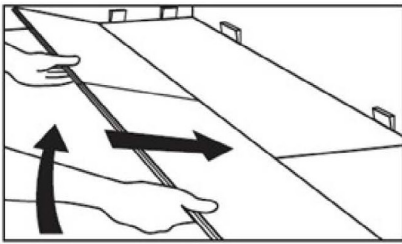




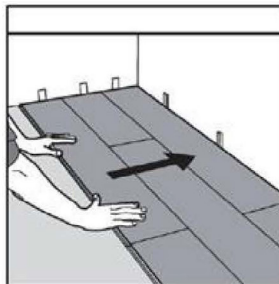
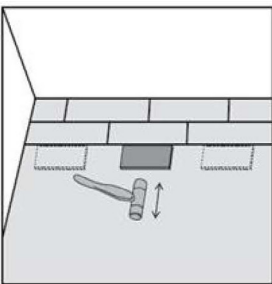
### INSTALLATION (CONT):

#### Step Three - Installation of Flooring (Cont)

- Align the first plank of the second row (#2) with the first plank of the first row (#1) at an angle as shown above and engage the long side joint by folding down until joints lock tightly. Use a small scrap of plank to gently tap along the entire length of the plank to ensure that the seam is tight. Lock the scrap piece's groove to the tongue or its tongue to the groove and gently tap the edge of the scrap with a tapping block. Make sure that the click system is engaged tightly. Any gapping can compromise the integrity of the installation.
- Align the second plank of the first row (#3) against the end joint of the first plank of the first row (#1) at a slight angle and fold down until the joints lock.
- Join the short edge of the second plank in the second row (#4) to the first plank in the second row (#2) in the same manner. There will be a gap on the long side joint between plank #4 and planks #1 and #3.



- Raise the outside long edge of plank #4 upward, approximately 1", as shown above. This will raise the outside long edge of planks in that row. Maintain this angle as you push the plank in until the long edge of the plank meets the long edge of the first row. Rotate downward on the plank until the joint locks. Gently tap the long side and short side joints closed, if necessary, using your scrap piece and tapping block.



- Continue this pattern until the first three rows are complete. After the first three rows are installed, check to ensure that the flooring is running parallel to the room. If it is not, it could be that the starting wall has some irregularities. If so, the starting row of planks may have to be scribed and re-trimmed to account for any unevenness in the wall. This can be done without having to disassemble the beginning rows.

### INSTALLATION (CONT):

#### Step Three - Installation of Flooring (Cont)

- From there, install row by row, cutting the last plank in each row to be at least 8" long and leaving at least ¼" space at the end wall. Continue to stagger end joints by at least 8" and avoid "H" patterns.
- It is usually necessary to rip the last row at the far wall to allow for the ¼" expansion. Use a pull bar to pull the click system together tightly at the last row.
- If it becomes necessary to separate planks already installed, separate the whole row by lifting it up delicately at an angle. To separate the end joints, place the planks flat on the subfloor and slide them apart.

#### Step Four - Completing the Job

- Replace molding or wall base, allowing slight clearance between the molding and the planks to allow the floor to expand and contract freely. Fasten base moldings to the wall, not to the flooring.
- At doorways and at other areas where the flooring planks may meet other floor coverings, use a T-molding or Reducer to cover the exposed edge. Always leave at least ¼" expansion space between the vertical portion of any molding or transition piece and the flooring.
- Clean the floor with a high-quality, pH-neutral vinyl cleaner. Avoid solvent-based cleaners, waxes, oils, or cleaners recommended for other types of flooring. Avoid any cleaners that describe themselves as a polish or 'cleaner and polish in one.'
- Any unused material should be stored in a dry place in case future repairs are needed. We recommend saving at least two boxes.
- Always protect the surface of the installed flooring during subsequent construction. Cover the floor with a quality floor protector such as RamBoard. Do not use Red Rosin paper, as it may discolor the flooring. Do not use plastic or polyethylene sheeting to cover the floor. To avoid damage, the flooring must be cleaned and completely free of all grit and debris prior to laying the floor protector. Secure the floor protector to the baseboards; never tape it directly to the flooring.

### CARE AND MAINTENANCE:

- Sweep or vacuum daily using soft bristle attachments.
- Place a walk-off mat at outside entrances to reduce the amount of dirt brought into your home. Do not use mats with latex or rubber backing since these backings can cause permanent discoloration.
- Clean up spills and excessive liquids immediately.
- Damp mop as needed with water or with a high-quality, pH-neutral vinyl cleaner such as Bona Pro Series Luxury Vinyl Floor Cleaner. Do not use solvent-based cleaners, waxes, oils, bleaches, abrasive cleaners, or products recommended for other types of flooring. Avoid any cleaners that describe themselves as a polish or 'cleaner and polish in one.' Polishes can leave a residue that will dull the finish, collect dirt, and can be extremely difficult to remove.
- Use proper floor protection devices such as felt protectors under furniture to prevent scratching. Under desk chairs, protect the floor with a hard, solid mat. Rubber, carpet, or other soft chair mats may allow indentations and/or damage to the locking mechanism.
- Do not roll heavy objects across the floor.
- Avoid walking on your vinyl floors with cleats, sports shoes, and high heels.
- Do not roll, drag, or slide heavy objects across the floor. When moving heavy furniture, pick up the furniture completely and place it on a protective surface such as cardboard or plywood so that the furniture can be 'walked' along that surface.
- After installation, make sure that the flooring is never exposed to temperatures less than 0°F (-15°C) or greater than 140°F (60°C). Direct sunlight on flooring can produce surprisingly high temperatures. Window treatments may be necessary to protect the flooring from high heat.