

# INSTALLATION GUIDELINES

## FOR GLUE-DOWN LUXURY VINYL HERRINGBONE

Please read all the instructions before you begin the installation.

Improper installation will void warranty.

### I. GENERAL PREPARATIONS

**TOOLS REQUIRED:** Ruler, pencil, tape measure, utility knife, gloves, safety glasses.

- Prior to installation, inspect material in daylight for visible faults/damage, including defects or discrepancies in color or shine; check the edges of the flooring for straightness and any damage. No claims on surface defects will be accepted after installation.
- Check if subfloor/site conditions comply with the specifications described in these instructions. If you are not satisfied, do not install, and contact your supplier. Directional designs are optional, however, once the installation is started, you have accepted those conditions.
- Flooring products can be damaged by rough handling before installation. Exercise care when handling and transporting these products. Store, transport and handle the flooring planks in a manner to prevent any damage. Store cartons flat, never on edge.
- Flooring products can be heavy and bulky. Always use proper lifting techniques when handling these products. Whenever possible, make use of material-handling equipment such as dollies or material carts. Never lift more than you can safely handle; get assistance.
- Calculate the room surface prior to installation and plan an extra 5-10% of flooring for cutting waste.
- Do not install flooring with an attached pad over any type of soft substrate, including additional pad type underlayment.

#### 1. INDOOR ENVIRONMENT

- The environment where the flooring is to be installed is critically important with regard to successful installation and continued performance of the flooring products. The flooring is intended to be installed in interior locations only. These interior locations must meet climatic and structural requirements as well.
- Flooring should only be installed in temperature-controlled environments. It is necessary to maintain a constant temperature before, during and after the installation. Portable heaters are not recommended as they may not heat the room and subfloor sufficiently. Kerosene heaters should never be used.
- After installation, make sure that the flooring is not be exposed to temperatures less than 60°F / 15°C or greater than 95°F / 35°C. Excessively high or low temperatures may cause this product to expand or contract and lead to visual defects of the floor that will not be warranted.

#### 2. MATERIAL STORAGE AND ACCLIMATION

- Flooring material must be acclimated to the installation area for a minimum of 48 hours prior to installation.
- The permanent HVAC system turned on and set to a minimum of 65°F / 18°C or a maximum of 75°F / 23°C, for a minimum of 7 days prior to and during installation.
- Store cartons of tile or plank products flat and squarely on top of one another. Tile or plank products should be stacked no more than 6 high and allow for air flow around stacks when un-palletized. 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 job site vinyl plank or tiles need to be stacked 2 rows high side by side with no airspace between. Then quarter turned for 2 rows side by side, not to exceed 12 boxes high. A 5/8" / 16 mm or thicker plywood must also be placed on the pallet first.
- Please follow the adhesive manufacturer's guidelines for storing, acclimation or preparation of the glue prior to installation.
- Do not stack pallet's 2 high unless utilizing a 1" / 25 mm thick plywood in between pallets.

#### 3. GENERAL SUBFLOOR INFORMATION

- Inspect your subfloor before you begin, it must be clean, dry and level to 1/8" / 3 mm within a 6 ft. / 2 m radius.
- Substrates must be free from excessive moisture or alkali. Remove dirt, paint, varnish, wax, oils, solvents, any foreign matter and contaminants.
- Do not use products containing petroleum, solvents or citrus oils to prepare substrates as they can cause staining and expansion of the new flooring.
- This product is also not to be installed in areas that have a risk of flooding such as saunas or outdoor areas.

#### 4. CONCRETE SUBFLOORS

NEW AND EXISTING CONCRETE SUBFLOORS MUST BE STRUCTURALLY SOUND AND IN COMPLIANCE WITH LOCAL BUILDING CODES.

- Floors 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, deep grooves, expansion joints and other subfloor imperfections must be filled with patching & leveling compound.
- Concrete substrates must be flat within 1/8" / 3 mm within a 6 ft. / 2 m radius. The substrate should not slope more than 1" / 2.5 cm per 6 ft / 2 m in any direction.
- F-Number System: Overall values of FF 36 / FL 20 may be appropriate for resilient floor coverings.
- Moisture and alkalinity tests should be performed on all concrete substrates regardless of grade level or age of slab. Perform either ASTM F2170 In-Situ Relative Humidity (RH) test or ASTM F1869 Calcium Chloride Moisture Test (MVER: Moisture Vapor Emission Rating).
- Perform pH test per ASTM F710 to determine alkalinity of the slab. PH reading must not exceed 9.0. Readings below 5.0 and in excess of 9.0 affect resilient flooring and adhesives negatively. Rinsing the surface with clear water may lower alkalinity.

- The concrete moisture vapor emissions should not exceed 8 lb / 3.63 kg (ASTM F1869) / 75 % RH (ASTM F2170) with a PH limit of 9 / max. 2.5 % moisture content (CM method).
- Refer to the adhesive information for the acceptable moisture limits.
- Perform Bond testing to determine compatibility of adhesive to the substrate.
- Porosity - water drop test will help determine porosity - if drop remains on the surface after 1-2 mins concrete should be considered non-porous.
- Working and open times of adhesives may vary based on job conditions, substrate, temperature, and humidity.
- Areas to receive flooring should be adequately lighted during all phases of the installation process.

**NOTE:** IT MAY NOT BE THE FLOOR COVERING INSTALLER'S RESPONSIBILITY TO CONDUCT THESE TESTS. IT IS, HOWEVER, THE FLOOR COVERING INSTALLER'S RESPONSIBILITY TO MAKE SURE THESE TESTS HAVE BEEN CONDUCTED, AND THAT THE RESULTS ARE ACCEPTABLE PRIOR TO INSTALLING THE FLOOR COVERING. WHEN MOISTURE TESTS ARE CONDUCTED, IT INDICATES THE CONDITIONS ONLY AT THE TIME OF THE TEST.

#### 5. WOOD SUBFLOORS

WOOD SUBFLOORS MUST BE STRUCTURALLY SOUND AND IN COMPLIANCE WITH LOCAL BUILDING CODES.

- Double-layered APA rated plywood subfloors should be a minimum 1" / 25 mm total thickness, with at least 18" / 45 cm well ventilated air space beneath.
- Chip board, OSB, particleboard, construction grade plywood are generally not acceptable substrates – add a layer of APA underlayment grade ply wood that is dimensionally stable, non-staining, with a smooth fully sanded face.
- Insulate and protect crawl spaces with a vapor barrier covering the ground.
- DO NOT install over sleeper construction subfloors or wood subfloors applied directly over concrete.
- Underlayment panels can only correct minor 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 on the panel manufacturer.
- 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.
- This product 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" / 6 mm thick underlayment should be installed.
- Always follow the underlayment manufacturer's installation instructions.

#### 6. RESILIENT FLOOR COVERING

- 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 floor covering must be repaired or replaced.
- Embossing leveler recommended to aid in proper bonding and to prevent telegraphing.
- Do not install over rubber-based substrates.

**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 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.

#### 7. QUARRY TILE, TERRAZZO, 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. Waxes, polishes, grease, grime, and oil must be removed.
- Show no signs of moisture or alkalinity.
- Cuts, cracks, gouges, dents, and other irregularities in the existing floor covering 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.
- Quarry tile or Ceramic tile grout joints and textured surfaces must be filled with an embossing leveler or substrate manufacturer approved material.

#### 8. SUBFLOOR HEATING

DUE TO THE SPEED OF SUDDEN TEMPERATURE CHANGES, WHICH HAS THE POTENTIAL TO NEGATIVELY AFFECT THIS FLOORING, IT IS NOT RECOMMENDED TO INSTALL OVER ANY ELECTRICAL RADIANT HEATING SYSTEM. INSTALLATION OVER ELECTRICAL RADIANT HEATING SYSTEMS WILL NOT BE COVERED BY THE MANUFACTURER'S WARRANTY. BELOW INSTRUCTIONS ARE FOR EMBEDDED RADIANT HEATING SYSTEMS USING WATER.

- Ensure the radiant heat surface temperature never exceeds 80°F / 27°C.
- Before installing over newly constructed radiant heat systems, operate the system at maximum capacity to force any residual moisture from the cementitious topping of the radiant heat system.
- Shut down the floor heating at least 48 hours prior to installation.
- Make sure that the temperature in the room is maintained consistent between 65-75°F / 18-23°C before and during the installation.
- It is recommended that the radiant heat be applied in a gradual manner after installing the floor. Use of an in-floor temperature sensor is recommended to avoid overheating.
- Refer to the radiant heat system's manufacturer recommendations for additional guidance.

## II. LAYOUT AND INSTALLATION

### 1. GENERAL RULES

- It is customary to center rooms and hallways, so borders are not less than half a tile or plank.
- It is preferable to lay boards following the direction of the main source of light. For the best result, make sure to always work from 3 to 4 cartons at a time, mixing the planks during the installation.
- In hallways and small spaces, it may be simpler to work lengthwise from one end using a center reference line as a guide.
- Make sure cut edges are always against the wall.

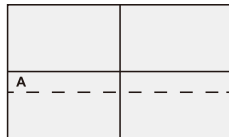
### 2. ADHESIVE

**IMPORTANT: FOR OPTIMAL ADHESION A WATERPROOF, HARD-SETTING ACRYLIC ADHESIVE IS RECOMMENDED FOR RESIDENTIAL APPLICATION AND A TWO-PART POLYURETHANE OR EPOXY ADHESIVE FOR COMMERCIAL APPLICATIONS. IT IS ADVISED TO PERFORM ADHESION TESTING TO DETERMINE THE COMPATIBILITY OF THE ADHESIVE TO THE SUBSTRATE, IF INSUFFICIENT, A PRIMER CAN BE UTILIZED TO IMPROVE ADHESION. NOTE THAT WORKING AND OPEN TIMES OF ADHESIVES MAY VARY BASED ON JOB CONDITIONS, SUBSTRATE, TEMPERATURE AND HUMIDITY.**

- Use an A2 glue trowel to glue to ensure an even and correct distribution of vinyl glue over the base floor.
- Apply the vinyl glue on the floor for about the same width as the two first rows. Always take into account the instructions of the vinyl glue.
- Place the planks into the adhesive, adjust the correct position and push or roll down to ensure good adhesive transfer to the back of the planks.
- All glue residue should immediately be removed with a damp cloth. Never use detergents.
- Use the same procedure to complete the rest of the room.
- Use a heavy roll to ensure the best bonding and adhesive transfer. Wait no longer than 30 minutes before rolling on the installed area.

### 3. LAYOUT OF THE ROOM

- Find the center point of the room. Strike a line.
- Obtain a true 90° angle by using a carpenter's square.
- Strike a second line which will divide the room in to four equal parts.
- Measure the distance from the center to the wall, parallel to the direction of the plank.
- Divide the measurement by the width of the plank. If less than half remains as the border plank, adjust the point to compensate. This will give a larger border along the wall and reduce the chance of having to cut a small sliver of flooring to place along the wall.

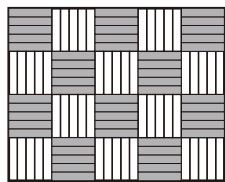


### 4. FLOORING LAYOUT

- We recommend to dry fit first (without glue). Start the first row with a whole plank in length.
- Carefully place the first piece of plank at the junction of the chalk lines.
- Continue to lay the plank, making sure each plank flush against the chalk line and tight against the adjoining plank.
- Make sure the plank is well seated into the adhesive paying special attention, to the edges.

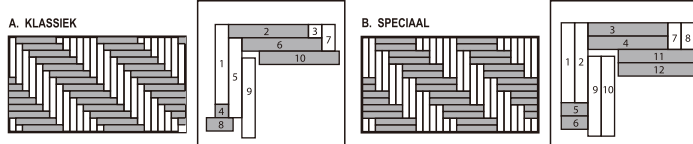
#### 4.1 BLOCK PATTERN

- This installation method consists in grouping 5 planks with the same profiling together.
- Measure the area to be installed: the board width of the last row shall not be less than 2" / 50 mm. If so, adjust the width of the first row be installed.
- In narrow hallways, install the floor parallel to the lengthways. The planks that have to be cut will be installed at the end to avoid mistake in measuring.



#### 4.2 FISHBONE DIAGONAL PATTERN

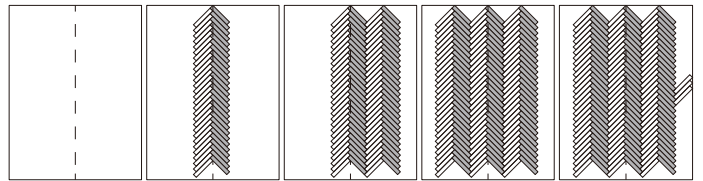
- Using a pencil, a string and a ruler, draw a line at 45° that will be used to align the pattern according to the image.
- Start from the left corner opposite from the door.
- Continue the installation according to the sequences:



#### 4.3 FISHBONE/DOUBLE HERRINGBONE PATTERN

- Measure the length and the width of your room.
- Find the center point of the room and strike a main control line.
- Use a carpenter's square to determine that your angle (90 degrees) is correct from the start.
- Dry fit the planks along the chalk line. Using the set square to achieve the correct angle, align the top corner of the first plank with the main control line. Use the first plank's edge to lay the next board.
- Start laying the planks. Install all of the whole pieces first, then come back and install the cut pieces.
- Make sure the plank is well seated into the adhesive paying special attention, to the edges.

##### A. Fishbone pattern

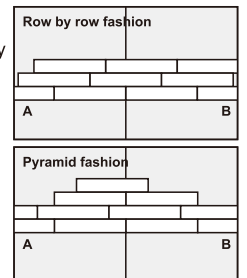


##### B. Double herringbone pattern



#### 4.4 ROW BY ROW / PYRAMID PATTERN

- Lay row by row or in a pyramid fashion (see below).
- It is strongly recommended to stagger the rows by at least 12" / 30 cm so that the short edge seams are not in a straight uniform line. However, you may want to try other patterns of planks to suit your taste.
- Make sure the first rows are on a perfect straight line. For instance, it is possible that your starting wall has a slight angle. You can check this by holding a thin rope and adjust the straightness of your floor where necessary. Before placing the planks in the glue, please make sure you have cut them to the right size, so they neatly fit between the wall and the already installed plank.



### 5. BOARDER

- Measure the distance from the last plank in the row to the wall.
- Mark the plank and cut it against the mark.
- Lay the plank in place, making sure that the cut edge is against the wall.

### 6. FITTING AROUND IRREGULAR OBJECTS

- Make a pattern out of heavy paper to fit around pipes and other irregularities.
- Place the pattern on the plank, trace cutting along the trace lines.

### 7. CUTTING

Use a simple utility knife and ruler, and with the top side facing up, cut heavily and several times on the same axis. The knife will not go through the surface but make a deep cut. You can then lift one half of the plank using your other hand to hold down the second placing it very close to the cut. The plank will split naturally.

## III. FINISHING THE INSTALLATION

- The glue must be able to cure 100% before moving in furniture. Hence, leave the floor untouched for 24 hours after installation between 65°F / 20°C and 77°F / 25°C for the curing process to complete.
- Wait at least 4 hours before walking on your new installed vinyl floor.
- For rooms with a high moisture level like bathrooms, a waterproof transparent silicone must be used around the perimeter.
- Replace molding or wall base, allowing slight clearance between the molding and the planks.
- Nail the molding to the wall surface, not through the flooring.
- At doorways and at other areas where the flooring planks may meet other flooring surfaces, it is preferable to use a "T" molding, or similar, to cover the exposed edge but not pinch the planks.
- Leave a small gap between the planks and the adjoining surface.
- Sweep or vacuum daily using soft bristle attachments.
- Clean up spills and excessive liquids immediately.
- Damp mop as needed and use cleaners recommended for vinyl flooring.
- The use of residential steam mops on this product is allowed. Use at lowest power with a suitable soft pad, and do not hold a steam mop on one spot for an extended period of time (longer than 5 minutes). Refer to the steam mop's manufacturer instructions for proper usage.
- Use proper floor protection devices such as felt protectors under furniture.
- Place a walk-off mat at outside entrances to reduce the amount of dirt brought into your home. Do not use mats with a latex or rubber backing since these backings can cause permanent discoloration.
- Do not use abrasive cleaners, bleach or wax to maintain the floor.

