

# North Star EVP

## Rigid Core Vinyl - Installation Guide

North Star EVP Vinyl Flooring is a rigid waterproof High Density Plastic Composite flooring with patent pending technology that uses no adhesive to bond the vinyl layers together and features a patented locking installation system which is installed as a glueless floating floor. The interlocking planks lock together to provide a tight water-resistant seam, can be installed over most flooring surfaces, and is suitable for both residential and medium commercial interior applications.

### General Information

1. Flooring should be transported and stored in a neatly stacked fashion on a smooth flat surface.
2. Inspect the run numbers/production dates on the boxes as different runs may be slightly different, once installed it becomes the installers responsibility. Purchase enough material to do at least 105% of the covered area.
3. Acclimation of flooring is not required unless the product has been exposed to extreme temperatures of under 10 C (50 F) or over 38 C (100 F) for over two hours.
4. After installation, the installed flooring must be maintained at temperatures between -18° C (0° F) to 60° C (140° F).
5. North Star EVP should only be installed after other trades have finished and the jobsite has been cleaned and cleared of debris that could potentially damage a finished installation.
6. No additional padding is required as there is an attached padding on the back of the planks.
7. Inspect flooring for damage, defects, or shading issues before installation; claims for visual defects will not be accepted after cutting and/or installed.
8. Mix and install planks from several different cartons during installation to ensure a random appearance.
9. Leave 1/4 in. gap for expansion around the **entire** perimeter of the flooring.
10. Flooring should be protected from direct exposure to UV light by using shades or blinds when necessary.
11. All flooring will scratch, please be cautious when moving or transporting items across your floor as scratches are not a warranted issue.

### Pre-Installation

#### Subfloors:

North Star EVP flooring be installed over a variety of subfloor surfaces including concrete on all grade levels, wood and many other existing hard surface floors. The subfloors must be clean, smooth, flat, solid (no movement), and dry. **Do not install planks over floors that are sloped for drainage.** Any uneven areas greater than 3/16" in a 10 ft. radius should be leveled with a Portland cement based patching compound. North Star EVP does not prevent the transmission of moisture from either top-down water or bottom-up moisture. Care should be taken to keep moisture from collecting on either side of the flooring to prevent the growth of unhealthy mold and mildew.

#### Concrete Subfloors:

Planks can be installed over concrete on all grade levels; a moisture barrier is required if moisture levels in the concrete exceed the levels listed below, and should consist of at least a 6 mil polyethylene film with the sheets overlapping 6" and taped to prevent moisture migrating to the flooring. Moisture vapor emissions should not exceed 5 lbs./24 hour per 1,000 sq. when tested with the Anhydrous Calcium Chloride Test in accordance with ASTM F 1869 or 85% RH in accordance with ASTM F 2170 "Standard Test Method for Determining Relative Humidity in Concrete Slabs using in situ Probes. Any uneven areas greater than 3/16" in a 10 ft. radius should be leveled with a Portland cement based patching compound. Holes and cracks in the cement should be patched, and expansion joints should be filled with a latex patching compound. Newly poured concrete floors must cure for a minimum of 90 days. Please note it is the person installing the floor and/or the homeowner's responsibility to ensure a smooth substrate and that any moisture or alkalinity issues are resolved **prior** to installing the floor. Once installed, it becomes the installer's responsibility.

**NOTE: Excessive moisture may cause the growth of unhealthy mold or mildew and/or cause staining of the flooring which is not covered by our Warranty.**

**Wood Subfloors:**

Planks can be installed over a smooth, flat, level wood subfloor, underlayment grade plywood, lauan plywood, and other wood underlayment's recommended by the manufacturer for use with a floating plank floor. Subfloor should be flat within 3/16" in a 10-foot radius. Wood subfloors must be suspended at least 18 inches above the ground. Adequate cross-ventilation must be provided, and the ground surface of the crawl space should be covered with a suitable moisture barrier. If installing over an existing wood floor, the flooring must be attached to the existing subfloor with nails or adhesive. A floating floor is not an acceptable subfloor for this product. If installing over a crawl space, a minimum 6 mil polyethylene moisture barrier must be used over the ground surface in the crawl space.

**NOTE: Avoid subfloors with excessive vertical movement or deflection because subfloor movement may cause the locking mechanism to wear down, or even break. Indications of excessive deflection are subfloor fastener release, squeaking, compromised or sectional contours such as bowing or dipping in floors and uneven flooring material. Nail or screw subfloor panels to secure boards with excessive vertical movement or deflection prior to installation of the flooring material. Our warranties DO NOT cover any problems caused by inadequate substructures or improper installation of substructures.**

**Existing Flooring:**

North Star EVP can be installed over a variety of finished floors including single layer resilient sheet flooring/ tile, ceramic, marble and terrazzo. The surface must be in good condition and show no signs of excessive moisture conditions. Grout joints and heavy embossing in tile or vinyl must be leveled so they are flush with the flooring surface. Additionally the tile may require several skim coats to achieve a flat surface. Carpet, existing floating floors, heavily cushioned vinyl floors or vinyl floors consisting of multiple layers are NOT a suitable subfloor for installation.

**Radiant Heat Subfloors:**

North Star EVP planks can be installed over in-floor radiant heating systems provided the subfloor surface does not exceed 85°F (29.44°C) at any point. The initial floor temperature should not exceed 70°F (21.11°C) for 24 hours prior, during, and 48 hours after installation. Thereafter the temperature should be gradually increased to the desired setting up to 85°F (29.44°C). Because heat does affect plastic more than wood, you may need additional room for expansion (larger expansion gap) and contraction (wider base to allow for contraction) Radiant heating systems that are installed directly on top of the subfloor surface are not recommended.

**Important Notes:**

**Before removing any existing resilient flooring or tiles, please consult with a flooring professional to determine if asbestos abatement is necessary to avoid exposure. See 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 covered structures. The products in this carton DO NOT contain asbestos or crystalline silica.**

**Moisture Barrier and Underlayment:**

While it is not necessarily difficult to install a floating floor, you may want to consider having it done by a professional installer. Planks have an attached padding so no additional padding is required or recommended. Installations over a concrete slab; a moisture barrier is recommended but not required unless the moisture levels in the concrete exceed the levels stated above. The moisture barrier should consist of at least a 6 mil polyethylene film with the sheets overlapping 6" and taped to prevent moisture migrating to the flooring.

**Pre-installation inspection:**

It is the duty of the person installing the floor to inspect all flooring before installation. If during inspection the installer or buyer feels the floors is the wrong color, improperly manufactured, is off-grade or is the wrong gloss level, he/she should NOT install the flooring. Please immediately contact the retailer from which the flooring was purchased. No claims will be accepted for flooring which is visibly wrong if such flooring is installed. **Installed flooring is deemed to be visibly acceptable.**

## General Tips

- Do not secure individual planks to the subfloor as it is designed to be a floating floor.
- Do not install cabinets on top of Vinyl Plank flooring.
- Not recommended to install outdoors, or in travel trailers/motorhomes.
- Electric wheelchairs are not recommended over floating floors, the pressure and torque of the wheels can damage the locking joint causing the planks to break apart.

## Tools and supplies required

- Spacers
- Soft Faced Hammer
- Ruler
- Pencil
- Tape Measure
- Utility Knife
- Tapping Block

## Installation

### Plank Installation

1. Remove wall base and undercut door jambs, this can be accomplished by turning a scrap piece of flooring upside down and using a “jamb saw” or equivalent to cut the jambs.
2. Level the substrate by sanding high spots or using a concrete based leveling agent to reduce any other floor deviations.
3. Sweep or vacuum the substrate to remove any debris that may transfer through the flooring after time.
4. First, determine how you want the flooring to run. Typically for plank products, the flooring runs the length of the room. There may be exceptions since it is all a matter of preference.
5. To avoid narrow plank widths or short plank lengths near the walls/doors, it is important to do some pre-planning. 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.
6. Start with a whole plank in the left hand corner of the room with the tongue side and the overlap end toward the wall. Lay the first row of planks along a chalk line and trim to fit to the wall allowing a 1/4 in. expansion space. If starting the first row with a whole width plank it will be necessary to trim the tongues next to the wall, then place the cut ends next to the wall. To trim the planks, use a utility knife and a straight edge to score the top surface of the plank and then bend it downward to separate the pieces, then cut the padding from the back side, you can also use a VCT (Vinyl Composition Tile) cutter for end cuts; a table saw or saber saw also works well for both end and length cuts.
7. Align and attach the end joints of the planks in the first row using the fold and lock method, the end joints should be tapped firmly using a tapping block on top of the end joint and tapping with rubber mallet until locked (**Diagram 1a**). For length joints insert the tongue into the groove while holding the plank at a 20° to 30° angle to the floor, apply pressure inward and down until the planks lock together (**Diagrams 1b & 1c**). Use spacers between the long edge and end of the planks next to the wall to maintain the expansion space. For each row the use of a rubber mallet with tapping block or scrap is recommended to ensure all joints are tightly assembled in each row. Do not hit flooring directly with mallet.

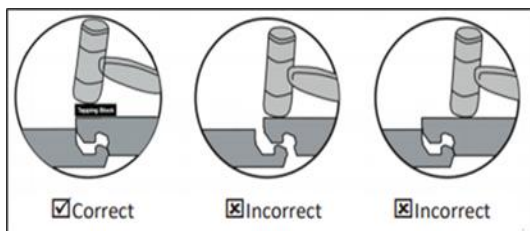


Diagram 1a

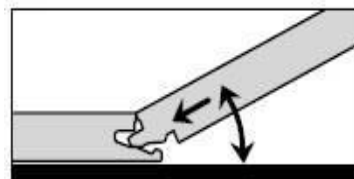


Diagram 1b

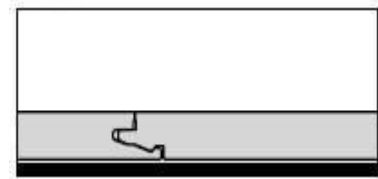
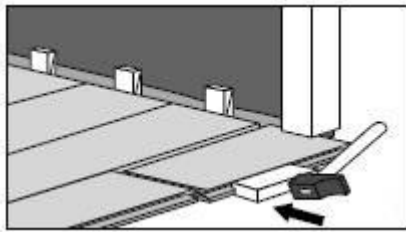
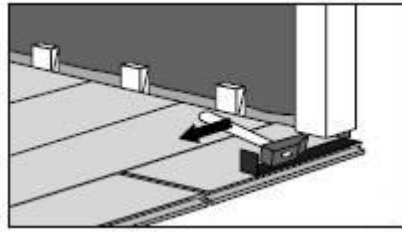


Diagram 1c

8. Start the second row using 1/3rd of a plank allowing 1/4 in. expansion space at the start of the row. Place the cut end against the wall. Insert the tongue on the long side of the plank into the groove of the plank in the first row. Hold the plank in a 20° to 30° angle while applying pressure inward and down until they lock together (**diagram 1b**) and (**diagram 1c**). A tapping block may be needed for additional force. Complete the second row by inserting the length joints first, and overlapping the end joints. Tap the length joint together using a tapping block or scrap flooring using light taps to fully engage the joint till flat, and tap the end joint down firmly as explained in segment 7.
9. Start the third row using a 2/3rd length of a plank with the cut end against the wall. Complete each row thereafter using a random layout with end joints off-set by at least 8". Plan the layout to avoid using small planks (less than 6") at the walls. The cut piece at the end of the row can often be used to start the next row provided it achieves a random layout. Always place the cut end against the wall and allow for the expansion space.
10. To cut the last row, lay your planks on top of the existing row and use a small scrap the width of the plank and score or mark the material to show where to cut, make sure to add the additional 1/4" for expansion space. Insert normally.
11. HDPC Vinyl planks are unique in that they can also be installed using a pull bar, tapping block and rubber mallet, or hammer in difficult areas such as the last row, and when fitting under door trim. Use a pull bar and rubber mallet or hammer to lock the joints together in the last row. Always use a pull bar on the cut edge of the plank; factory edges can be damaged if the pull bar or hammer is used directly against them.
12. When fitting around door trim it will be necessary to slide the plank under the trim. This can be accomplished easily by starting the row on the side of the room with the door trim and then sliding the plank into place once it is attached. The row can be completed by inserting the tongue onto the groove or the groove under the tongue depending on the direction. A tapping block and pull bar (**Diagrams 2a & 2b**) can also be used to lock the joints together while the planks are in a flat position. Use a series of light taps until the joint is gradually locked together.



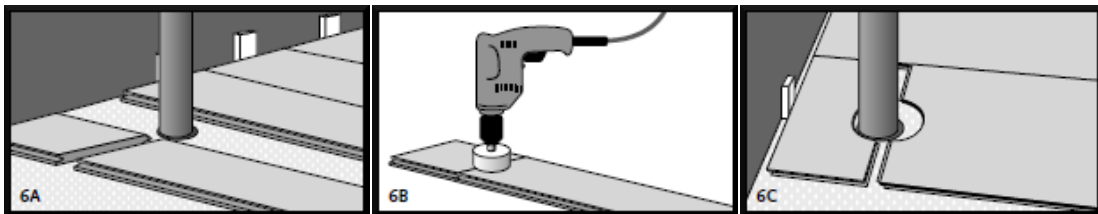
**Diagram 2a**



**Diagram 2b**

**Bathrooms:** When North Star Vinyl planks are installed in a bathroom the flooring should be installed around the toilet leaving a 1/8-inch expansion space. Use 100% silicone caulking to fill the expansion space at the toilet, tub, shower, and all wet areas to help prevent surface water seepage under the floor. You can install the toilet directly on top of the vinyl flooring if there are no other cabinets or fixtures installed on top of the flooring, additionally the room would need to be separated from adjoining rooms using a T molding or transition.

**Pipes:** In rows where there is a pipe or other vertical object through the subfloor, make sure the object lines up exactly where two boards will meet on the short ends. Take care to measure carefully before cutting so the two boards end at the middle of the object. Use a drill or hole bit that is the diameter of the pipe or object, plus 1/2 in. for expansion/contraction. Place the two short sides of the boards together, then drill the hole centered on the joint between the boards as shown. Now you can separate the two boards and install as normal. See Diagrams 6A – 6C.



## Transitions, moldings, and wall base

Reducer and T moldings are recommended when transitioning between other hard surface floors to cover expansion space between the two flooring products. All transition pieces should be attached to the subfloor using the track supplied with the molding, or glue down using a high grade contractor adhesive, dependent on the transition purchased. If adhered directly, ensure the transition sits firmly in the adhesive and take care not to get any adhesive on the flooring. Remove any adhesive from the surface immediately with mineral spirits and buff off any residue with a dry soft cloth. It may be necessary to place heavy weights on the transition until the adhesive dries to ensure it will lay flat. Never attach the transitions directly to the flooring.

### Finishing The Job:

Inspect your work, as it will cost you more if you have to come back to do a repair later. Replace original baseboards, or install matching hardwood baseboard. Install matching transitions as needed or recommended by your dealer or installer. It is not recommended or necessary to seal this floor after installation. Protect your floor from scratches by using felt pads on chair legs or furniture feet. Plastic rollers/castors can damage your flooring; if necessary try to replace with softer rubber wheels/castors. When moving heavy items like refrigerators, use at least two sheets of 1/4" Masonite or plywood while moving (sliding the appliance from one sheet to the next) to protect the flooring against scratching and gouging.

### Congratulations!

**You have just installed a beautiful, and elegant North Star EVP Floor!**

## Care and Maintenance

**Care and maintenance of your new North Star EVP floor is essential for long term performance and appearance. Because this is a low maintenance floor, it will not require waxing or polishing. Please read the following to ensure that your floor will give you many years of service and maintain its original appearance for as long as possible.**

- Use doormats outside the entry doors to your home to prevent grit, sand, and dirt and other substances such as oil, asphalt, and other contaminants from being tracked indoors and possibly stain or damage the flooring.
- Do not use rubber-backed, latex-backed, coco fiber mats, or area rugs on your flooring, as some types of backings can stain or scratch the floor.
- Use floor protectors (felt pads recommended) under heavy furniture to spread the weight and help to prevent scratches and dents. Chairs and other moveable furniture with castors should have at least 2 in. flat rolling surface. When furniture or chairs have metal caps, be sure to remove and use felt floor protectors.
- Never push or drag heavy furniture or appliances across the floor; always use strips of wood or Masonite (hardboard) to serve as a runway underneath the rollers or wheels (including dolly's) to avoid damage to the floor.
- Avoid prolonged exposure to direct sunlight as it can cause swelling, and/or the surface to fade or discolor over time. During peak exposure times to direct sunlight, we strongly recommend the use of drapes or blinds on windows and sliding glass doors.

## Maintenance

- Sweep, dust mop, or vacuum regularly; please be aware that vacuum beater bars can sometimes cause damage to the floor.
- When necessary, damp mop the floor with a standard no-wax vinyl floor cleaner; do not use waxes or polishes as they will increase the gloss level, turn yellow, decrease slip resistance, or build up over time. This will turn your low-maintenance floor into a high maintenance floor.
- Manufacture does not recommend the use of steam cleaners on our vinyl flooring.
- This flooring has excellent resistance to common household stains, and will not be affected by most household spills. Help prevent stains by wiping up spills with a clean damp cloth immediately; the longer the stain sits, the more likely it will create a permanent stain.
- Difficult spills can be soaked for 5 – 15 minutes in a heavy duty vinyl cleaner or mineral spirits; carefully scrape up excess with a dull knife, remove the rest of the residue with soft nylon pad or soft bristle brush, then rinse and wipe with a clean white cloth.