

# INSTALLATION & MAINTENANCE INSTRUCTIONS

---

## HANSHAN

### RIGID CORE SPC FLOORING

#### I. IMPORTANT INFORMATION

**Read all installation instructions and warranties prior to installing HANSHAN RIGID CORE SPC plank floor.**

Owner/Installer should carefully inspect material prior to installation. Materials installed with visible defects are not covered by warranty. Any unacceptable material should not be installed. Rejection of material must be done on the full shipment of product, not box-by-box or piece-by-piece. Our flooring is manufactured within accepted industry standards. It is recommended to add 10% to order quantities to allow for installation waste and non-conforming product, 18% if installing on a diagonal.

#### ACCEPTABLE JOBSITE CONDITIONS

1. HANSHAN SPC planks are waterproof. This means no moisture will penetrate or pass through the planks. However, moisture can still pass through improperly seated seams and along walls.
2. Liquids should be cleaned up as soon as possible to prevent migration to the substrate.
3. HANSHAN SPC FLOOR Collection is not designed for continually wet or outdoor applications. Residential bathrooms, kitchens, and laundry rooms are acceptable rooms for installation.
4. HANSHAN SPC FLOOR Collection is constructed for floating floor applications only. Do Not Use Adhesives to Attach to the Subfloor.
5. Permanent fixtures like cabinets, vanities, and islands should be installed prior to flooring installation. They should not be placed on top of the flooring.
6. Direct sunlight over long periods of time can fade or discolor your floor. Use UV-tinting or window treatments to help protect your floor. Occasionally move rugs and other coverings to avoid defined lines in the flooring.
7. HANSHAN SPC FLOOR Collection is designed from real wood images. Blend and mix planks during installation to randomize the natural features of the floor.
8. For residential installations, acclimate flooring to room temperature between 60° F and 80° F. Once the flooring is the same temperature as the room and subfloor, it is ready to install.
9. Commercial installation must remove planks from the carton and lie flat for at least 48 hours prior to installation. Maintain room temperatures between 60° F and 80° F.

#### II. SUBFLOORS

The subfloor must be flat, meeting a minimum of 3/16" within 10' or 1/8" in 6'. The flooring installer is responsible for ensuring a level and flat subfloor.

The subfloor must be dry. Moisture in the subfloor can lead to problems in the subfloor and installed flooring. Correct subfloor moisture issues prior to flooring installation.

**NOTE: Damage to HANSHAN SPC FLOOR planks, or to the subfloor, caused by mold, mildew, hydrostatic pressure or excessive moisture content in the subfloor are not covered under warranty.**

The subfloor must be clean. Construction debris, dirt, dust, and all other foreign substances should be removed from the subfloor prior to installing HANSHAN SPC FLOOR Collection planks.

#### ACCEPTABLE SUBFLOORS

# INSTALLATION & MAINTENANCE INSTRUCTIONS

---

- Concrete
- Plywood and OSB
- Particle Board and Waferboard (when used over plywood or OSB)
- Tile, Terrazzo, and Marble
- Resilient Flooring without padding or cushioning

## CONCRETE SUBFLOORS

• Grind high spots or use a cement based leveling material (minimum compressive strength 3000 psi) to fill all low spots. Follow the leveling compound manufacturer's instruction. Leveling compounds must be allowed to thoroughly cure and dry prior to flooring installation.

NOTE: The installer is responsible for determining if the subfloor is dry enough to install the flooring. HANSHAN SPC FLOOR Collection should never be installed in areas with excessive moisture.

- Concrete slab moisture content cannot exceed 5 lbs. per 1,000 sqft per 24 hrs. on an ASTM F1869 Calcium Chloride test and cannot exceed 80% if using an ASTM F2170 situ relative humidity test. If the slab falls outside of these limits, proper moisture abatement should be done.
- Trapped moisture underneath HANSHAN SPC FLOOR Collection can cause damage to the surrounding structure and create conditions that distort the shape of the flooring. Such conditions can develop even after the slab has tested as being dry. For the long-term success of the product and dwelling, 6 mil plastic or approved roll-on moisture barrier must be used between the flooring and concrete subfloor. Plastic seams must be overlapped 6 inches and taped.
- Concrete pH level must be between 7-9.
- New concrete slabs must be dried for at least 60 days and fully cured.
- Concrete must be sound, free from chipping, flaking, and dusting.
- Adhesive residue from previous floor coverings must be scraped, sanded, or otherwise removed prior to installing HANSHAN SPC FLOOR.

## RADIANT HEAT SUBFLOORS

**HANSHAN SPC FLOOR Collection planks can be installed over radiant heat in concrete. Consult your radiant heat subfloor manufacturer for compatibility with luxury vinyl flooring.**

- Radiant heating mats are unacceptable. The radiant heat system must be installed in the concrete.
- Hydronic or Electric systems are acceptable.
- Heating elements must be 1/2" or more below the installed flooring.
- Heating system must be operational for at least 14 days prior to flooring installation to ensure proper operation and temperature regulation. • Installed floor surface temperature must not exceed 85° F.
- Rooms with radiant heat should be given a 1/2" expansion gap around the perimeter. Take special care to ensure expansion at or near door jambs.
- Rooms with radiant heat must be separated from rooms without radiant heat by a 1/2" expansion gap and covered with a molding like a T-Mold.

## PANEL WOOD SUBFLOORS (PLYWOOD, OSB, PARTICLE BOARD)

- Do not install HANSHAN SPC FLOOR planks on wood panel subfloors installed over concrete, or solid wood installed directly over concrete.
- Do not install directly over dimensional lumber, like 2x6's diagonal across joists.
- All wood panel subfloors must be properly installed per the manufacturer's instructions and meet or exceed local building

# INSTALLATION & MAINTENANCE INSTRUCTIONS

---

codes.

- Local building codes may only provide a minimum requirement for flooring systems. If deflection or bounce occurs in the subfloor, fasten an additional layer of APA rated underlayment to the subfloor per the underlayment manufacturer's instructions.
- Particle Board and Waferboard underlayments are only acceptable if installed over structurally rated plywood and OSB. These subfloors, however, are prone to failure when contacted by moisture; HANSHAN SPC FLOOR Collection does not prevent moisture damage to these subfloors.
- Loose panels must be fastened to the joists to prevent panel movement.

**NOTE: squeaks, cracking or popping sounds due to subfloor and flooring movement are not covered under warranty. The installer is responsible for ensuring subfloors are firm and flat.**

- Do not install HANSHAN SPC FLOOR Collection planks over treated wood panel subfloors. Fasten an additional layer of APA rated underlayment per the underlayment manufacturer's instructions over treated wood panel subfloors.
- Crawl spaces must be dry.
- Do not place sheet plastic between HANSHAN SPC FLOOR Collection and wooden subfloor.
- Crawl space must be a minimum of 18" from the ground to the underside of the joist.
- The crawl space earth (or thin "rat slab") must be covered 100% by a vapor retarder of 6 mil black polyethylene. • Where the 6 mil black polyethylene ground covering is in place, the crawl space should have perimeter venting equal to a minimum of 1.5 square feet, per 100 square feet of crawl space. • Crawl space vents should be properly located to foster cross ventilation.
- Unvented crawl spaces need ground covering of 6 mil black polyethylene, which must be overlapped 6 inches and be sealed or taped as well as run 6 inches up stem walls and vertical obstructions like support piers. Continuously operated mechanical exhaust and perimeter wall insulation or conditioned air supply and insulation must be provided.
- Wood panel subfloors must be tested with a pin or scan type meter, and the moisture should not exceed 12%.

## TILE, TERRAZZO, MARBLE

- HANSHAN SPC FLOOR Collection planks can be installed over existing hard surface flooring like tile, terrazzo, and marble provided the existing flooring is stable, firm, fully bonded to the substrate, and dry. • Tile grout lines or other gaps greater than 1/4" should be filled with a cementitious leveling compound.
- Uneven tile or natural stone flooring should be smoothed with a cementitious leveling compound. RESILIENT FLOORING
- The HANSHAN SPC FLOOR Collection can be installed over sheet vinyl and monolithic vinyl (poured vinyl) flooring. • Vinyl flooring should not be padded underneath the vinyl. Excessive padding will cause "bounce" to your new floor once installed, and it may cause damage to planks.
- Do not install flooring over multiple layers of vinyl. Only one layer of vinyl flooring is acceptable.

## III. TOOLS NEEDED FOR INSTALLATION

- Utility Knife or plank cutter
- Ruler or straight edge
- Tape Measure
- Pencil
- Tapping Block
- Pull Bar
- Rubber Mallet
- Wall Spacers or Wedges
- Drill and necessary bits, if needing to cut holes for pipes or in-floor electrical outlets.

# INSTALLATION & MAINTENANCE INSTRUCTIONS

---

## IV. JOB SITE PREPARATION

**Inspect the Flooring:** Inspect material from several boxes and get written customer approval for appearance, color, and finish. Hold out pieces that may not be acceptable once installed.

**NOTE: We do not accept responsibility for any costs incurred when plank(s) with visible defects have been installed. Installation is acceptance of the product.**

**Ensure the Environment is Correct:** The environment must be between 60-80° F, and the permanent HVAC system must be operating prior to and during the installation.

**NOTE: squeaks, cracking or popping sounds are not covered under warranty, and can be expected to some degree on floated floors. Proper subfloor preparation should minimize these noises.**

**Undercut Door Casings:** Undercut all door casings 1/16" higher than the thickness of the flooring being installed. To do this, use a scrap piece of flooring as a guide. Lay it on the substrate and cut the casing with a handsaw or use a power jamb saw set at the correct height.

**Blending of Cartons:** HANSHAN SPC FLOOR Collection planks are designed from real wood images. To achieve a natural appearance across the entire floor, we highly recommend that you open and work from several cartons at a time and mixing the planks from several cartons as you install. This will allow you to blend the planks for maximum aesthetic appearance. Make certain the room is well lit to ensure color is consistent and that any visual defects can be seen and removed.

**Match Transition Moldings:** For best appearance, blend all transitions and moldings to planks that have similar color and imaging. Set them aside for use as needed.

**Layout of Flooring:** Laying out several rows prior to installation is essential to achieve a random appearance. Be sure to lay flooring perpendicular to the joists. Never waste materials; the end cuts from starter rows should be used at the opposite end of the room to complete rows or used to start the next row.

**Expansion Space:** Expansion space around the room perimeter and all fixed objects is required and should be at least 1/4". Rooms with radiant heat need a minimum of 1/2" expansion space.

**Large Spaces:** HANSHAN SPC FLOOR Collection planks can be installed up to 50' x 50', or up to 2500 sqft, with a 1/4" expansion gap. Larger areas up to 100' x 100', or up to 10,000 sqft, require a 1/2" expansion gap. Any run over 50', length or width, needs to have a 1/2" expansion gap around the perimeter of each 50' section.

## V. INSTALLING THE FLOOR

- HANSHAN SPC FLOOR Collection is designed for floating installations only. Never fasten or adhere the planks to a subfloor.
- Always work left to right and start along a wall or longest run for your first row.
- Planks should not be cut narrower than half the width of the manufactured width, nor cut shorter than 8".
- Cut planks by first marking a straight line across the plank or lengthwise down the plank. Then place a straight edge along the line, and score with a utility knife along the straight edge. Snap the plank on the score line. Flip the plank over and cut the pad along the snap line to finish the cut.
- You may also use a jigsaw, circular saw, miter saw, or LVT Plank Cutter, to cut planks. Use blades that are recommended for vinyl and stone composite flooring. Refer to tool manufacturer's instructions for proper use.

**Step 1:** Plan the layout of the floor prior to installing the first plank. Proper planning will prevent narrow rows along walls and short pieces at ends of rows.

**Step 2:** Set 1/4" spacers (or wider spacers as otherwise defined in this document) along all walls and fixtures in the installation space.

**Step 3:** Place the first plank with the tongue side of the plank facing the wall.

**Step 4:** Connect the next plank to the end of the first plank by placing the tongue into the groove at a slight angle and fold the second plank down to the subfloor to lock the planks together.

# INSTALLATION & MAINTENANCE INSTRUCTIONS

---

Make sure the planks are square to one another by using a tapping block and soft rubber mallet to tap the planks into position.

Tap down on the end seam lightly with a soft rubber mallet to fully seat the tongue and groove. There should be no gap between the planks when properly seated.

**\*\*Improperly seated planks will cause installations to be out of square to the room, create a visual curve to the planks, and cause subsequent rows to not seat properly.\*\***

Continue installing the first row of planks according to this guideline.

**Step 5:** Starting the second row, make sure the end seams are at least 8" apart from the first-row end seams. Cut the second-row plank as necessary to ensure proper seam spacing.

Angle the second-row plank and place the long-edge tongue into the groove side of the first-row plank. Fold down the plank to the subfloor to lock the seam.

Ensure there are no gaps the full length of the seam. Use a tapping block and soft rubber mallet to make sure the seam is properly seated.

The long edge seam must be properly and fully seated prior to inserting the short end of the next piece. Damage and misalignment of planks can occur if not properly seated.

The plank can be lifted out of place and reinstalled as needed to ensure the seams are seated properly.

**Step 6:** Angle the next plank and place the long-edge tongue into the groove side of the first-row plank. Align the short-end tongue over the preceding plank groove. Fold down the plank to the subfloor to lock the long-edge seam into place.

Ensure the long-edge seam is tight with no gaps. Once the long-edge seam is seated properly, tap the short-end seam in place connecting to the plank on the left. Use a soft rubber mallet to tap the seam in place. Make sure there are no gaps on the end seam.

Continue installing the second row according to this guideline.

**Step 7:** Once the first two rows are assembled, push the planks gently against the spacers along the wall. Run a chalk line along the entire length of the inner row to ensure the planks are assembled in a straight line.

Adjust planks as necessary to ensure the first two rows are assembled square and in a straight line.

**Step 8:** Continue installing the remaining flooring rows following the method in Step 6, making sure that each plank is square and properly seated to its connecting planks. There should be no gaps between planks.

**Step 9:** The last row of the installation may need to be cut to fit next to the wall. Measure the width of the final row, ensuring you leave a 1/4" gap (or wider as otherwise defined in this document). Mark the width to be cut on each plank of the last row measuring from the tongue side of the plank. Score the length of the plank along the marked line, and snap to width.

Install the plank into place as in Step 6. Use a pull bar along the wall to seat long edge seam. The pull bar should be resting against the cut side of the plank to pull it into place. Never use a pull bar against a tongue or groove side of a plank.

Continue to install as per this guideline until the last plank in the last row is installed.

## FITTING AROUND OBJECTS

- When cutting planks around objects, make sure not to damage the surrounding tongue or groove. Damaged locking mechanisms can lead to improper seating or movement between planks.
- Draw a template of the object on a piece of paper or thin cardboard.
- Place the template on the plank to be cut, and trace the lines using a utility knife or jigsaw. Snap or cut the plank as needed to fit the template.
- Install the cut plank around the object following the installation guidelines above ensuring the proper expansion gap around the fixed object.

# INSTALLATION & MAINTENANCE INSTRUCTIONS

---

## VI. COMPLETE INSTALLATION

1. Remove the spaces along walls and permanent fixtures.
2. In areas where water may occasionally be on the floor, like bathrooms and kitchens, fill the expansion gaps with waterproof 100% silicone caulk.
3. Clean the floor with an appropriate cleaner.
4. Install or re-install any moldings or trim, making sure to cover expansion gaps along the walls, permanent fixtures.
5. Trim nails must go into the subfloor or the wall, never drive trim nails into HANSHAN SPC FLOOR Collection planks.
6. Cover HANSHAN SPC FLOOR Collection planks with a breathable material like cardboard to protect from other construction traffic. Sweep the floor thoroughly before laying any covering material.
7. Save leftover planks. Do not discard. Leftover planks can be used for replacement planks in the future. These planks match the dyelot of your installed floor.

## VI. MAINTENANCE

- Install protector pads on bottom of all furniture.
- Place rugs at all points of entrance to capture abrasives and moisture. Shake out rugs regularly.
- Use protective mats below rolling chairs and heavy furniture.
- Use non-marring wheels and casters meant for hard surfaces
- Use colorfast mats that are non-rubber. Check mat manufacturer guidelines to ensure they will be non-marring and will not leave a residue on your new floor.
- Vacuum with a brush attachment or sweep and/or dust mop regularly to remove abrasives and dirt. • Do not use household dust treatments to clean the floor as they will contaminate the finish making it harder to refinish the floor later.
- Keep high heels and other shoe bottoms in good repair as they can damage the floor. Cleats and other point shoes should not be worn on the floor.
- Keep animal nails trimmed to prevent scratching.
- Wipe up spills immediately with a dampened cloth and follow up with approved cleaner.
- Remove stains with a cloth dampened with approved cleaner.
- Remove standing water and other liquids immediately. • Use a neutral pH floor cleaner made for vinyl flooring or similar hard surfaces.

**NOTE: Damage, including but not limited to mold, mildew, and discoloration, to the subfloor caused by moisture from above the installed floor seeping to the subfloor is not covered under warranty.**

### DO NOT USE THE FOLLOWING CHEMICALS OR TREATMENTS

- Cleaners with Wax, Polish, or Oil
- Vinegar
- Multi-Purpose Cleaners
- Ammonia
- Bleach
- Steel Wool or Scouring pad
- Steam Cleaners
- Vacuums with beater bars
- Wet sweeper pads