SMARTCORE® PRO

INSTALLATION INSTRUCTIONS

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Simple, easy-to-follow instructions for the handy DIYer.

Start to finish, everything you need to know to install your SMARTCORE floor like a professional.

If you've printed these instructions, use qr code to view the installation video.
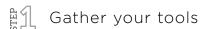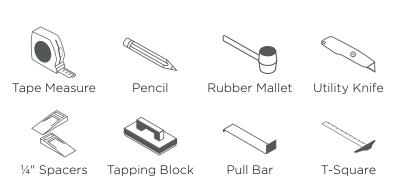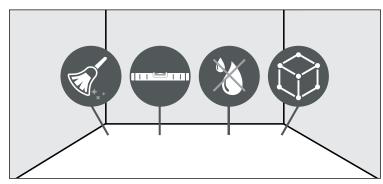
SMARTCORE® PRO

INSTALLATION 101

Follow these simple steps for an easy DIY installation with quick, professional results.
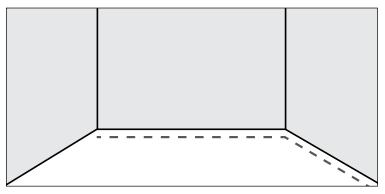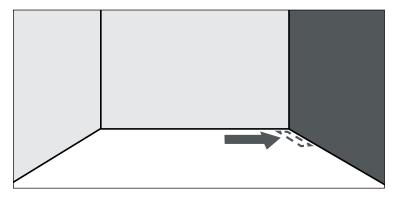
STEP 1 — Gather your tools

Tape Measure Pencil Rubber Mallet Utility Knife

¼" Spacers Tapping Block Pull Bar T-Square

STEP 2 — Make sure your space is: clean, flat, dry and structurally sound.

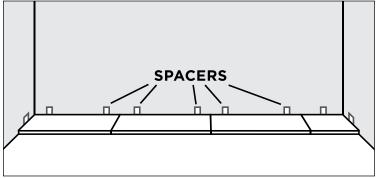### STEP 3 — Measure your space

STEP 4 — Choose your starting wall

STEP 5 — Place tongue side in the starting corner (work from left to right).

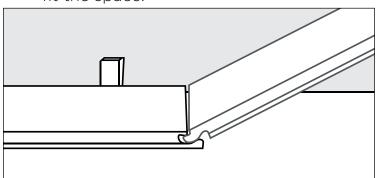### STEP 6 — Use several spacers to maintain 1/4" expansion gap along the walls.

SPACERS

SMART TIP An easy way to distinguish the tongue from the groove is that the tongue comes off the top of the plank.
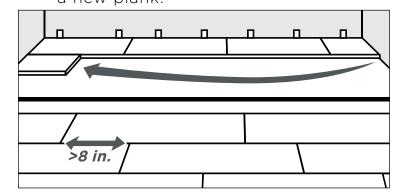
tongue
groove

STEP 7 Lock the short ends together to complete your first row. Cut the planks as needed to fit the space.

STEP 8 Start your second row. With a cut-off that is more than 8" long or start with a new plank.

>8 in.

SMART TIP

Remember to stagger end joints from row to row – 8+" for planks and 12+" for tiles.

Planks: Use the cut-off end from the previous row to begin the next row. If the cut-off end is less than 8", cut a new plank to be 8" or more to start the next row.

Tiles: Always begin a row with either a full tile or a half tile so the joints are consistently staggered in a "brick work" type pattern.

STEP 9 Connect the long end into the groove end of the plank in the previous row at a low angle and rotate the plank towards the floor. Align the tongue over the groove of the short end of the plank, applying light pressure to join the planks together.

STEP 10 To lock the planks, use a rubber mallet and lightly tap on the top of the flooring being installed near the joint seam. You should feel the planks lock together.

STEP 11 Continue to use your spacers to maintain the expansion gap along the walls. Repeat the steps to finish the room.

STEP 12 Enjoy your new floor!

RESILIENT INSTALLATION GUIDELINES FOR SPC PRODUCTS

I. GENERAL INFORMATION

All instructions and recommendations should be followed for a satisfactory installation.

- Acclimation of material prior to installation is not required; however, the floor covering should be installed in a climate controlled environment with an ambient temperature range between 55°F- 85°F (13°C-29°C) or average temperature of 70°F (21.1°C).
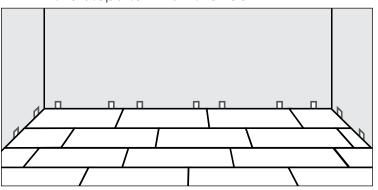- For installations involving 3 season scenarios, meaning, the dwelling or installed space is without climate control for extended periods during certain seasons of the year, the post installation temperature range allowed is an ambient room temperature between -25°F and 155°F (31.6°C- 68.3°C). This allowance is for floating floors only and does not apply to glue-down installations.
- Avoid exposure to direct sunlight for prolonged periods, doing so may result in discoloration. During peak sunlight hours, the use of the drapes or blinds is recommended. Excess temperature due to direct sunlight can result in thermal expansion and UV fading.
- Install product after all other trades have completed work that could damage the flooring.
- If cabinets are to be installed on top of the flooring (including islands), that area of material must be fully adhered to the subfloor (including an additional 2 ft. beyond the cabinets and islands).
- To minimize shade variation, mix and install flooring from several cartons.
- Inspect all flooring for damage before installing. If you have any concerns about the product fit or finish, call Shaw Information Services at 1-800-441-7429. Claims will not be accepted for flooring that has been cut to size and/or installed.
- Use cementitious patching and leveling compounds that meet or exceed maximum moisture level and pH requirements. Use of gypsum-based patching and/or leveling compounds which contain Portland or high alumina cement and meet or exceed the compressive strength of 3,000 psi are acceptable.
- Installation Methods: Floating (on, above or below grade) / Glue Down (on, above or below grade)
- Required perimeter expansion spacing for Floating or Glue Down installation is as follows:
  For areas less than 2500 sq/ft. use 1/4" gap
  For areas larger than 2500 sq/ft. use 1/2" gap.
- This flooring is waterproof and reliably secures the flooring panels on all four sides. However, excessive moisture in the subfloor could promote mold, mildew, and other moisture related issues like the trapping of moisture emissions under the flooring, which may contribute to an unhealthy indoor environment.
- Additional layer of 6-mil poly film or equal vapor retarder with a perm rating of 1 or less may be used as an additional layer of protection.
- A second underlayment is allowed under any currently sold SPC Product with attached underlayment in a residential application. If installed over a second underlayment, this underlayment cannot be greater than 3 mm thick. IIC (ASTM E492-09) and STC (ASTM E90-09) lab testing on certain SPC products tested with and without a second layer of underlayment, to date, does not indicate that a second underlayment will provide additional acoustic benefit.

II. SUBFLOOR INFORMATION

All subfloors must be clean, flat, dry and structurally sound. The correct preparation of the subfloor is a major part of a successful installation. Subfloor must be flat; 3/16" in 10' or 1/8" in 6'.

A. WOOD SUBFLOORS

Do not install material over wood subfloors that lay directly on concrete or over dimensional lumber or plywood used over concrete. Refer to ASTM F1482 for panel underlayment recommendations.

1. Do not apply sheet plastic over wood subfloors.
2. 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 is 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. Where necessary, local regulations prevail.
3. **DO NOT** install over sleeper construction subfloors or wood subfloors applied directly over concrete.

4. All other subfloors - Plywood, OSB, particleboard, chipboard, wafer board, etc. must be structurally sound and must be installed following their manufacturer's recommendations. Local building codes may only establish minimum requirements of the flooring system and may not provide adequate rigidity and support for proper installation and performance. If needed add an additional layer of APA rated underlayment, fasten and secure according to the underlayment manufacturer's recommendations.
5. Resilient flooring is not recommended directly over fire-retardant treated plywood or preservative treated plywood. An additional layer of APA rated 1/4" thick underlayment should be installed.

B. CONCRETE SUBFLOORS

NEW AND EXISTING CONCRETE SUBFLOORS SHOULD MEET THE GUIDELINES OF THE LATEST EDITION OF ACI 302 AND ASTM F 710, "STANDARD PRACTICE FOR PREPARING CONCRETE FLOORS TO RECEIVE RESILIENT FLOORING" AVAILABLE FROM THE AMERICAN SOCIETY FOR TESTING AND MATERIALS, 100 BARR HARBOR DRIVE, WEST CONSHOHOCKEN, PA 19428; 610-832-9585; HTTP://WWW.ASTM.ORG.

1. Floors shall be smooth, permanently dry, clean, and free all foreign material such as dust, wax, solvents, paint, grease, oils, and old adhesive residue. The surface must be hard and dense, and free from powder or flaking.
2. Concrete slabs must be dry with no visible moisture.
3. Required Moisture Testing - maximum moisture level per ASTM 1869 CaCl is 8 lbs. and ASTM 2170 In-situ Relative Humidity 90% per 1000 sq.ft. in 24 hours.
4. Do not install over concrete with a history of high moisture or hydrostatic conditions. Excessive moisture in the subfloor could promote mold, mildew, and other moisture related issues like the trapping of moisture emissions under the flooring, which may contribute to an unhealthy indoor environment. Shaw Industries does not warrant nor is responsible for damage to floor covering due to moisture related issues.
5. pH level of concrete should be between 7-10.
6. The final responsibility for determining if the concrete is dry enough for installation of the flooring lies with the floor covering installer.

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.

LIGHTWEIGHT CONCRETE

All recommendations and guarantees as to the suitability and performance of lightweight concrete under resilient flooring are the responsibility of the lightweight concrete manufacturer. The installer of the lightweight product may be required to be authorized or certified by the manufacturer. Correct on-site mixing ratios and properly functioning pumping equipment are critical. To ensure proper mixture, slump testing is recommended.

- Lightweight aggregate concretes having dry densities greater than 90 lbs. per cubic foot may be acceptable under resilient flooring.
- Concrete slabs with heavy static and/or dynamic loads should be designed with higher strengths and densities to support such loads.
- Surface must be permanently dry, clean, smooth, free of all dust, and structurally sound.
- Perform Bond testing to determine compatibility of adhesive to the substrate. Shaw 9050 primer (or equivalent / comparable primer) can be utilized to promote adhesion.
- Three internal relative humidity tests should be conducted for areas up to 1000 SF. One additional test, for each additional 1000 SF.

Radiant Heating: Radiant-heated subfloor systems can be concrete, wood or a combination of both.

The heating systems components must have a minimum of 1/2" separation from the flooring product. The system must be on and operational for at least 2 weeks prior to installation to reduce residual moisture. Three days prior to installation lower the temperature to 65°F, after installation gradually increase the temperature in increments of 5°F to avoid overheating. Maximum operating temperature should never exceed 85°F. Use of an in-floor temperature sensor is recommended to avoid overheating. Contact the manufacturer of your radiant heating system for further recommendations.

- *Electric Radiant Floors*: consist of electric cables (or) mats of electrically conductive materials mounted on the subfloor below the floor covering. Mesh systems are typically embedded in thin-set. When embedding the system components, use cementitious patching and leveling compounds that meet or exceed Shaw's maximum moisture level and pH requirements. Use of gypsum-based patching and/or leveling compounds which contain Portland or high alumina cement and meet or exceed the compressive strength of 3,000 psi are acceptable.
- *Hydronic Radiant Floors*: pump heated water from a boiler through tubing laid in a pattern under the flooring. Typically installed in channels under a wooden subfloor (or) imbedded in concrete slabs. Requires the installer follow a specific nailing pattern to avoid penetration of the heat system.

C. EXISTING FLOOR COVERINGS

Flooring can be installed over most existing hard-surface floor coverings, provided that the existing floor surface is fully adhered, clean, flat, dry, structurally sound and free of deflection.

- Existing sheet vinyl floors should not be heavily cushioned and not exceed more than one layer in thickness. Soft underlayment and soft substrates will compromise the product's locking ability as well as diminish its indentation resistance.
- Installation is **NOT** allowed over any type of carpet.
- Do **NOT** install over wood floors adhered to concrete.
- Never use solvents or citrus adhesive removers to remove old adhesive residue. Solvent residue left in and on the subfloor may affect the new floor covering.

III. INSTALLATION

Tools: Tape Measure, Utility Knife, Jigsaw, Tapping Block or Rubber Mallet, Pull Bar, 1/4" Spacers, T-Square, Safety Glasses, Broom or Vacuum and, if necessary, tools for subfloor repair.

> **INSTALL TIP**
> To cut the flooring, simply measure and mark the flooring. Then, use a **t-square** and **utility knife** to score and snap. You will also need to back-cut the under pad (if applicable) on the bottom of the flooring. If you have difficulty using this method, you can use a jigsaw, circular saw or miter saw.

Floating Installation

SPC flooring is designed to be installed utilizing the floating method. Proper expansion space 1/4" (6.35 mm) is required. Undercut all doorjambs. Do not fasten wall moldings and or transition strips to the flooring.

Glue Down Installation: SPC flooring products is approved for glue down installation over approved wood and concrete substrates. Follow adhesive label application instructions. Maintain 1/4" (6.35 mm) perimeter expansion space. Refer to adhesive label for moisture limits of the adhesive.

- **Recommended adhesive:** Shaw T-180 or equivalent / comparable adhesive. If alternate adhesives are used, a bond test should be performed to ensure compatibility.

Flooring must be installed in a staggered (offset) pattern.

> **INSTALL TIP**
> Remember to stagger end joints from row to row – 8+" for planks and 12+" for tiles.
>
> Planks: Use the cut-off end from the previous row to begin the next row. If the cut-off end is less than 8", cut a new plank to be 8" or more to start the next row.
>
> Tiles: Always begin a row with either a full tile or a half tile so the joints are consistently staggered in a "brick work" type pattern.
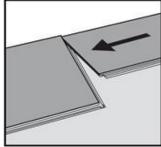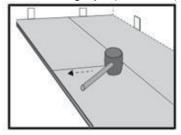
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1. Before you start with the installation, it is important to determine the layout of the flooring. Proper planning and layout will prevent having narrow flooring widths at wall junctures or very short length pieces at the end of rows.
2. Determine if the starter row will need to be cut. (*In order to have a balanced floor layout, the width of the flooring for the first and last row may need to be cut). The cut width of the flooring should be ½ the width of the flooring. If the first row of flooring does not need to be trimmed in width, it will be necessary to cut off the unsupported tongue so that a clean, solid edge shows towards the wall.
3. Installation of the product must start from the left side of the room, working to the right when working in front of the flooring or facing the starting wall. Use spacers along the walls to maintain proper expansion space (1/4") and align the first piece.
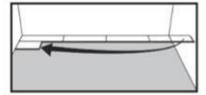

4. Install the second row by aligning and dropping the end tongue over the end groove of the first piece. Apply light pressure to join the two pieces together.

5. If needed use a rubber mallet to fully engage the short side of the flooring by lightly tapping on the top of the flooring to engage and sit flush with the adjacent piece. Maintain an expansion gap of approximately 1/4" from the wall. Repeat this process to complete the first row. At the end of the row, Measure and cut the flooring to complete the row. **Note:** to create a cut edge, use a straight edge on the face of the flooring to score and snap the flooring. Install the cut edge closest to the wall. If the end is raised use a non-marking rubber mallet to lightly tap the end (tongue side) about 1" from the seam. Do NOT tap directly on the seam.

6. Start the second row by cutting the flooring to the desired length. Keep in mind that piece must not be shorter than 6" (15cm) to achieve the best appearance.

7. Install the first piece in the second row by inserting the long side tongue into the groove of the piece in the first row. This is best done with a low angle. Maintain light pressure into the side seam as you rotate the flooring to the subfloor. Use a rubber mallet to engage the short side by tapping lightly on the top of the flooring. Very little force is required to seat the tongue into the groove. You should feel the tongue lock into the groove. Repeat the process with the remaining additional pieces to complete each row.

8. It is critical to keep the first two rows straight and square, as they are the "foundation" for the rest of the installation. Check for squareness and straightness often.

9. Continue installation and make sure to achieve a random appearance with end pieces of minimum 6" (15cm). Check that all pieces are fully engaged; if a slight gapping is found, the gap can be tapped together by using a tapping block and a scrap of flooring to cover the tapping block in order to avoid damages to the flooring.

10. When fitting under door casings, if necessary, a flat pull bar may be used to assist in locking the joints. Doorjambs or at row ends near walls where space is limited, the tongue can be "shaved" and glue containing "cyanoacrylate" can be applied to the groove to join the pieces together.

11. When fitting around obstacles or into irregular spaces, the flooring can be cut easily and cleanly using a utility knife with a sharp blade. It is often beneficial to make a cardboard template of the area and transfer this pattern to the flooring.

COMPLETION

1. Protect all exposed edges of the flooring by installing wall moulding and/or transition strips. Make sure that no flooring will be secured in any way to the sub floor.
2. For wet areas such as bathrooms; caulk the perimeter of the floor with a silicone caulk.
3. Protect the finished flooring from exposure to direct sunlight to reduce fading and thermal expansion.
4. Cutting resilient product into a fine point may lead to delamination. Use an ethyl cyanoacrylate based glue to help fuse the resilient point together. Be sure to clean all glue from the top surface immediately. Alcohol based glues may cause resilient products to swell.
5. Adhering tape to the surface of your resilient flooring could damage the surface.
   Do not use tape to secure floor protection directly to the floor during construction or renovation. Instead, adhere tape to the material used to protect the floor and secure it to the base molding along the wall. A material such as ram board can also be used to protect your flooring.