I. GENERAL INFORMATION

These installation guidelines apply to mineral core flooring products only. 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° - 85°F (13°-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°- 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.
- Regardless of new construction or remodeling projects, keep flooring stored in rooms that are not being worked in and only install product after all other trades have completed work that could damage the flooring.
- To minimize shade variation, mix and install planks from several cartons.
- Inspect all planks 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.
- For cracks or saw cuts deeper than 1", follow the preparation and application instructions for Shaw QuikFill. QuikFill is a 2-part urethane treatment that prevents future damage from moisture penetrating to the surface of the slab that may damage or breakdown adhesives or unapproved patching compounds.
- Installation - Floating installed on, above, or below grade.
- Required perimeter expansion spacing for floating 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.
- Cut outside whenever possible to minimize airborne contaminants that may become embedded in the grain.
- A masonary blade is requires to keep from fraying the edges.
- When cutting inside, dust collection bags should be clean and in place.
- Always wear adequate eye protection and safety masks.
- 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.
- Crumb rubber underlayments are not an acceptable option for use with resilinet floor coverings due to performance issues resulting from chemical incompatibilities.

Tools: Tape Measure, Utility Knife, Saw (masonary blades are required), Guillotine Cutter, Tapping Block or Rubber Mallet, Pull Bar, ¼" Spacers, T-Square, Safety Glasses, Broom or Vacuum and, if necessary, tools for subfloor repair.

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'.

If a chemical abatement has been performed, use Shaw Surface Prep EXT; to remove any residual chemicals present. Once Shaw Surface Prep EXT has been properly cleaned and removed, apply one coat of Shaw MRP for additional protection. Adhesive removal through the use of solvents or citrus adhesive removers is not recommended. Solvent residue left in or on the subfloor may affect the new adhesive and floor covering.

WARNING! DO NOT SAND, DRY SWEEP, DRY SCRAPE, DRILL, SAW, BEAD BLAST OR MECHANICALLY CHIP OR PULVERISE EXISTING RESILIENT FLOORING, BACKING,LINING FELT,ASPHALTIC CUT BACK ADHESIVES OR OTHER ADHESIVES.

These products may contain either asbestos fibers and/or crystallie silica. Avoid creating dust. Inhalation of such dust is a cancer and respiratory tract hazard. Smoking by individuals exposed to asbestos fibers greatly increases the risk of serious bodily harm. 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 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

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, 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. Mineral core flooring is not recommended for direct glue down applications 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

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. If moisture test results exceed these limits, we recommend use of a moisture remediation system.
4. Do not install over concrete with a history of high moisture or hydrostatic conditions.
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.

Radiant Heat: 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 degrees, 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.

WARNING! Drilling, sawing, sanding or machining wood products can expose you to wood dust a substance known to the State of California to cause cancer. Avoid inhaling wood dust or use a dust mask or other safeguards for personal protection. For more information go to https://www.p65warnings.ca.gov/products/wood-dust

C. Existing Floor Coverings

- Mineral core flooring can be installed over most existing hard–surface floor coverings, provided that the existing floor surface is clean, flat dry and structurally sound.
- 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.

Raised access panels

- Must be stable, level, flat, free and clean of existing adhesives
- 24" x 24" panels are recommended.
- Lippage (variation of height) between panels must not exceed 0.0295" (0.75 mm)
- Gaps between panels must not exceed 0.039" (1mm)
- There should be no deflection of the individual panels – Concave less than 0.0295" (0.75 mm) Flatness 1/8" in 10'
- Stagger the flooring tiles/planks to overlap the access panels
- Telegraphing of access panel seams may be visible and is not considered a product defect nor warranted by the flooring manufacturer.
- If needed overlay the panels with a ¼" (6 mm) plywood and properly fasten to the access panels prior to the installation of the floorcovering. Prior to underlayment installation, repair any loose or unstable panels. Use the appropriate installation methods for the product

III. INSTALLATION

Installation of 6 mil Poly Film Underlayment is recommended only for floating applications over concrete subfloors.

For use only over concrete substrates - seams **MUST** be taped.

- Begin at the starting wall. Roll underlayment out parallel to the starting wall and allow the poly film to run 2 inches up the wall.
- After the flooring has been installed trim back the poly film from the wall.
- Roll the next course of poly film parallel to the first run and overalap a minimum of 4 inches. Smooth out any wrinkles or creases in the poly film. Use clear tape to tape the seams together when installed over concrete substrates.
- Continue to install the flooring over top of the poly film taking care not to damage the poly film.

Note: Do not cover the entire area of the substrate to prevent damage or present a slip hazard. Roll the poly film out one row at a time.

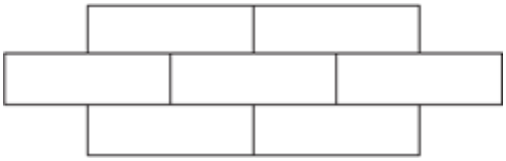
Floating Installation

Mineral core flooring is designed to be installed utilizing the floating method. Never secure the planks to the subfloor when using the floating installation method. Proper expansion space (1/4"), 6mm is required. Undercut all doorjambs. Do not fasten wall moldings and or transition strips to the planks.

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). If gluing down the flooring, follow the adhesive manufacturer's instructions with regards to moisture and temperature limitations.

For wet areas such as bathrooms caulk the perimeter of the floor with a silicone caulk.

Must be installed in a staggered (offset) pattern.



INSTALLING THE FIRST ROW:

1. Starting from the LEFT with the tongue facing the wall, carefully place the first board in place. Use spacers along the wall allowing the required expansion spacing (1/4").
2. When installing the end joints on the first row of the floor, you will need to have GORILLA GEL SUPER GLUE or CLEAR GORILLA NON-FOAMING ADHESIVE on hand and glue the end joints of the planks of the first Row.
3. Align the next piece by overlapping the end of the first board so that the joint is tight when the board lays flat. Some slight adjustment of the board may be necessary to assure a tight fit. Place spacers against wall to restrain movement and maintain expansion gap.
4. Continue in this manner until reaching the final plank in the first row.
5. Cut the final board piece to length allowing for the required expansion gap.
6. Place spacers against wall to restrain movement and maintain expansion gap.

CONTINUING THE INSTALLATION:

1. Begin the second row with the cut piece from the first row. If the cut piece is shorter than 8", **do not** use it. Instead, begin with a new board that is at least 8" in length and allows 8" between the end joints on the adjacent planks.
2. Position the first board in place by angling it up slightly, pushing forward and interlocking the side tongue. Slide the board to the left as necessary to align the edges of the end joint.
3. Carefully push the board down until the tongue and groove lock together on the side and ends.
4. A slight tap with a tapping block is necessary for the long side joint only.
5. The lippage from the previous row will come into proper placement as the next row is tapped into place.
6. Restrain the movement of the board by inserting a spacer in the expansion gap at the end of the board.
7. Install the remaining boards and rows in the same manner.
8. Cut the last board to size allowing for the required expansion gap. Place spacers against wall to restrain movement and maintain expansion gap. If necessary, complete the tight fit by tapping the board into place with a pull bar.
9. Whenever practical, use cut pieces from previous rows as the starter board to reduce waste.
10. Maintain 8" spacing between end joints after the first four rows for best appearance.

INSTALLING FINAL ROW:

1. The last row may need to be cut lengthwise (ripped).
2. Place the last row of planks to be fit on top of the last row of installed planks. Use a piece of plank as a scribe to trace the contour of the wall.
3. Mark where the board will be cut. If the fit of the wall is simple and straight, simply measure for the correct fit and cut.
4. After boards are cut, position planks and tighten the fit using the pull bar.

NOTE: 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.

INSTALLING UNDER A DOOR JAMB:

1. Installation under moldings (such as door jambs) may require that the top lip of the groove on the end be reduced in size
2. Using a small plane or knife plane, carefully shave off the ledge of the groove.
3. After the groove ledge has been trimmed, place the board in place and tighten with a pull bar to test for fit. The installer must be sure that the required expansion gap has been maintained and the flooring is **not** pinched.
4. If fit is **not** correct, re-trim as necessary.
5. Place a bead of adhesive on the bottom lip of the groove.
6. Insert the tongue into the groove and tighten the fit with a pull bar. Hold the board in place with painters tape until the adhesive is dry. **Do not** use masking tape or duct tape as they may damage the floors finish.