INSTALLATION GUIDELINES FOR STA-TITE VINYL PLANK AND TILE

1. TEST BEFORE STARTING INSTALLATIONS

All substrates to receive moisture sensitive floor covering must be tested for moisture.

CONCRETE SUBSTRATES:

- Calcium Chloride – Tests must be performed per the latest edition of ASTM F 1869 or Internal Relative Humidity – Tests must be performed per the latest edition of ASTM F 2170.

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.

a. Substrates shall be smooth, structurally sound, permanently dry, clean and free of all foreign material such as dust, wax, solvents, paint, grease, oils, old adhesive residue, curing and hardening/ curing compounds, sealers and other foreign material that might prevent adhesive bond.
b. Concrete floors shall be flat and smooth within 1/8” in 6 feet or 3/16” in 10 feet.
c. F-Number System: Overall values of FF 36/ FL 20 may be appropriate for resilient floor coverings.
d. ASTM 1869 - Three calcium chloride tests should be conducted for areas up to 1000 ft^2. One additional test required per additional 1000 ft^2**. Moisture vapor emission rate when using the calcium chloride test should not exceed 8lbs. per 1000 sq ft. in 24 hours**
e. ASTM 2170 - IRH (Internal Relative Humidity Test), three tests should be conducted for areas up to 1000 ft^2. One additional test, for each additional 1000 ft^2. **The relative humidity readings should not exceed 85% per 1000 sq. ft. in 24 hours.**

LIGHTWEIGHT CONCRETE:

Internal Relative Humidity – Tests must be performed per the latest edition of ASTM F 2170.

a. Three internal relative humidity tests should be conducted for areas up to 1000 ft^2. One additional test, for each additional 1000 ft^2.
b. Internal relative humidity rate may not exceed **85%**. Per ASTM F 710.
c. Surface must be dry, clean, smooth, free of all dust, and structurally sound.

WOOD SUBSTRATES:

A moisture test is required using a pin-type moisture meter. The maximum allowable moisture content must not exceed 15%.

a. Wood subfloors must be structurally sound and in compliance with local building codes.
b. Wood subfloors should be suspended with a minimum of 18” of well ventilated air space below.
c. Crawl spaces must have a vapor barrier covering the ground.
d. Wood subfloors directly fastened to concrete, or sleeper construction, are not recommended.
e. APA rated Sturdi-I-Floor panels are designed as combination subfloor/underlayment, but exposure to construction conditions including weather may necessitate installation of a 1/4” underlayment panel prior to resilient flooring installation.
f. SHAW resilient flooring 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" thick underlayment should be installed.

TEMPERATURE - AMBIENT:

Controlled environments are critical. Fully functional HVAC systems are the best way to ensure temperature and humidity control.

- Do not install resilient flooring products until the work area can be temperature controlled.
- Minimum installation temperature is 65°F with a maximum installation temperature of 85°F.

TEMPERATURE – RADIANT HEAT:

Radiant heated substrates must not exceed 85°F (29°C) surface temperature.

- Several days prior to installing resilient products over newly constructed radiant heated systems, make sure the radiant system has been on and operating at maximum temperature to reduce residual moisture within the concrete.
- Three days prior to installation lower the temperature to 65 degrees, 24 hours after installation gradually increse the temperature in increments of 5° F to avoid overheating.
- After continuous operation of the radiant system, ensure the surface of the floor does not exceed 85^{o}F.
- Use of an in-floor temperature sensor is recommended to avoid overheating.

pH:

Concrete floors must be tested per the latest edition of ASTM F 710.

- pH reading must not exceed 9.0.
- Readings below 7.0 and in excess of 9.0 affect resilient flooring and adhesives.
- Rinsing the surface with clear water is the best way to lower alkalinity. “DAMP MOP”

Note: It may not be the floor covering installer’s responsibility to conduct the 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.

2. JOB SITE CONDITIONS

a. It is recommended that resilient floor covering installation shall not begin until all other trades are completed.
b. Areas to receive flooring shall be clean, fully enclosed, with the permanent HVAC set at a uniform temperature range of 65^{o}F to 85^{o}F and maintained following the installation.
c. Areas to receive flooring should be adequately lighted during all phases of the installation process.
d. Floors shall be smooth, permanently dry, clean and free of all foreign material such as dust, wax, solvents, paint, grease, oils, old adhesive residue, curing and hardening compounds, and sealers.

3. MATERIAL STORAGE AND HANDLING

a. Condition StaTite prior to installation: StaTite must be stored at room temperature of at least 65 degrees Fahrenheit, for 24 to 48 hours before installation. Spread the cartons out but do not open. Stack StaTite cartons no more than three high with at least 4” of airflow around the cartons. Do not stack cartons next to heating or cooling ducts or in direct sunlight.
b. The room temperature and the subfloor temperature must be between 65° and 85 ° Fahrenheit. Maintain proper temperature for 48 hours before, during and after installation. The building’s heating and air-conditioning system should be turned on at least one week before installation.

Failure to follow these guidelines may result in an installation failure (i.e. flooring may expand or contract, resulting in gapping). StaTite is an interior product and must be installed in a temperature- controlled environment, maintained between 65 and 85 degrees F. Please keep in mind a concrete floor can be up to ten degrees colder than the actual room temperature.

4. SUBSTRATES

All substrates to receive resilient flooring shall be dry, clean, smooth, and structurally sound. They shall be free of dust, solvent, paint, wax, oil, grease, residual adhesive, adhesive removers, curing, sealing, hardening, or parting compounds, alkaline salts, excessive carbonation or laitance, mold, mildew, and other foreign materials that might prevent adhesive bond.

WOOD SUBSTRATES

a. Double-layered APA rated plywood subfloors should be a minimum 1" total thickness, with at least 18” well ventilated air space beneath. Insulate and protect crawl spaces with a vapor barrier.
b. Do not install over sleeper construction subfloors or wood subfloors applied directly over concrete.
c. Underlayment panels can only correct minor deficiencies in the sub-floor while providing a smooth, sound surface on which to adhere the resilient flooring.

d. Any failures in the performance of the underlayment panel rests with the panel manufacturer and not with Shaw Industries, Inc..
e. 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.
f. Always follow the underlayment manufacturer's installation instructions.

CONCRETE

a. New or existing concrete subfloors must meet the guidelines of the latest edition of ACI 302 and ASTM F 710, "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring".
b. On or below-grade slabs must have an effective vapor retarder directly under the slab.
c. Wet curing 7 days is the preferred method for curing new concrete.
d. Curing compounds (DO NOT USE). If present they can interfere with the bond of the adhesive to the concrete.
e. Remove curing compounds 28 days after placement, so concrete can begin drying.
f. Concrete floors shall be flat 3/16" in 10 ft.
g. F-Number System: Overall values of FF 36/ FL 20 may be appropriate for resilient floor coverings.

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.

a. Lightweight aggregate concretes having densities greater than 90 lbs. per cubic foot may be acceptable under resilient flooring.
b. Concrete slabs with heavy static and/or dynamic loads should be designed with higher strengths and densities to accommodate such loads.
c. Surface must be permanently dry, clean, smooth, and free of all dust and structurally sound.

WARNING! DO NOT SAND, DRY SWEEP, DRY SCRAPE, DRILL, SAW, BEADBLAST OR MECHANICALLY CHIP OR PULVERIZE EXISTING RESILIENT FLOORING, BACKING, LINING FELT, ASPHALTIC "CUTBACK" ADHESIVES OR OTHER ADHESIVES.
These products may contain either asbestos fibers and/or crystalline 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

RESILIENT FLOOR COVERING

a. Must be single layered, non-cushion backed, fully adhered, and smooth.
b. Show no signs of moisture or alkaline.
c. Cuts, cracks, gouges, dents and other irregularities in the existing floor covering must be repaired or replaced.

Note: The responsibility of determining if the existing flooring is suitable to be installed over 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.

POURED FLOORS (Epoxy, Polymeric, Seamless)

a. Must be totally cured and well bonded to the concrete.
b. Must be free of any residual solvents and petroleum derivatives.
c. Waxes, polishes, grease, and grime must be removed.
d. Cuts, cracks, gouges, dents and other irregularities in the existing floor covering must be repaired or replaced.
e. Texture must be smooth.
f. Show no signs of moisture or alkaline.

OLD ADHESIVE RESIDUE

a. If the adhesive residue is asphalt-based (cut-back) or any other type of adhesive is present, it must be dealt with in one of two ways:
   - It may be mechanically removed such as: bead blasting or scarifying;
   - A self – leveling Portland based underlayment may be applied over it. Check with the underlayment manufacturer for suitability, application instructions and warranties.

b. Never use solvents or citrus adhesive removers to remove old adhesive residue. Solvent residue left in and on the sub-floor may affect the new adhesive and the new floor covering.

WARNING!

Warning regarding complete adhesive removal: some solvent based 'cut-back' asphalt-based adhesives may contain asbestos fibers that are not readily identifiable. Do not use power devices, which can create asbestos dust in removing these adhesives. The inhalation of asbestos dust may cause asbestosis or other serious bodily harm.

5. Installing StaTite Plank and Tile:

Tools needed: Utility knife & straight edge, hand roller, 100 lb roller.

Before starting an installation two planks should be joined and then rolled and pulled apart. A bond should be observed throughout the whole strip. Adhesive legs and/or transfer from one side to the other should be seen. This will confirm the material is acclimated and the temperature of material is correct for installation. When each plank is joined, use a hand roller directly on the joined seam to create the proper bond between strip A and strip B. This is a **mandatory** part of the installation procedure! Upon completion roll the entire floor in both directions with a 100 lb roller. **Not rolling will void warranty!**

StaTite is designed to be a floating floor. **Under no circumstances should the product be stapled or directly glued to the subfloor**.

When installing StaTite be sure to keep dust, dirt or foreign particles away from the StaTite strip. The cleaner the StaTite strip remains, the better the bond between planks. A protective sheet of paper has been placed between each plank insuring the StaTite strip remains clean and ready to use. When installing StaTite you should work out of a minimum of three boxes and mix planks or tiles when installing.

Before laying out the floor, check the wall you are starting from and make sure it is square to the opposite wall (planks should run lengthwise against the longest wall, and if possible, parallel to incoming sunlight). Simply measure the room from opposite ends of the wall to the far wall. If the measurements are different you can make adjustments on the first row of StaTite by scribing the plank on the over edge. As with all plank products it is best to start along the longest exterior wall.

The width of the first row of planks should be approximately the same width as the last row. This may require cutting the first row plank to a shorter width. Measure across the room (inches) and divide by the width of a plank to see how many full width planks will be used and what size width will be needed for the last row. The last row should never be less than 2" in width.

1. Lay a row of loose planks without securing them to each other first to determine if you need to adjust the length of the first plank to avoid a small piece of less than 6" on the opposite wall from where you started.
2. Installation should start in a corner and proceed from the wall with the under- edge facing out away from the wall (Figure 1). Use 1/4" spacers to maintain the proper expansion gap around the entire perimeter of the floor. Quarter Round molding will cover this expansion gap. IMPORTANT: this 1/4" gap must be maintained around cabinets, pipes, toilet flanges and any other obstacles in floor. **Do not net fit to wall or any vertical structure**.
3. Trim off the top over-edge facing the starting wall (Figure 2).

Figure 1

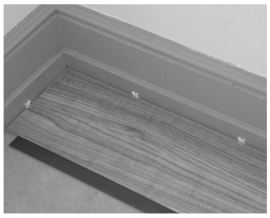

Figure 2

4. When securing two planks together, you should use a low-level angle to secure the second plank into the corresponding edge. The over-edge is always placed on top of the under-edge. Use one hand to hold the plank and the other hand to guide the edge into place for a tight fit by hand rolling the plank as you go. Be careful to keep the seams tight. You can push the plank slightly against the adjoining plank to create a tight seam, if necessary, after the connection has been made.
5. One of the great attributes of StaTite, it's forgiving. If your seam appears not to be tight, you can immediately pull apart the planks and reapply it. Slowly lift the top plank away from the bottom plank and simply reapply them. Please use "instant glues" (i.e. Crazy Glue, Super Glue, or model glue) to re-enforce the bond after pulling apart.
6. When installing the plank, it is required to stagger the rows so that the end joint seams are a minimum 6" apart and the seams are not in a straight uniform line. We recommend the staggered random method (Figure 3).

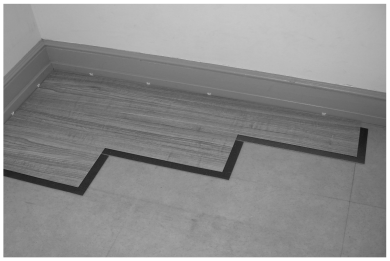

Figure 3

7. Start the second row with the random plank cut. Simply measure and mark the plank, then using a straight edge and utility knife, simply score the plank and snap.
8. The over-edge butts up to the first row. Again, get one corner of the plank started tightly against the other and use a low-level angle and roll the plank tightly into place. The remaining cut piece can be used on the far wall, if the layout of the room permits.
9. When cutting StaTite for length, be sure to always cut the short side of the plank with the over edge, the remaining piece can then be used on the opposite side of the room, at the end of that row (Figure 4).

Figure 4

10. Start the third row with the balance plank cut. Again the remaining piece can be used at the opposite end of the row, if the layout of the room permits. Ensure the plank size is greater than 6".
11. Continue this pattern for the remainder of the rows to be installed. Always place the cut end of the first plank against the wall (Figure 5).

Figure 5

12. Fitting around irregular objects, simply make a pattern out of heavy paper to fit around pipes or irregular objects. Place the pattern upon the plank and trace. Cut along trace lines using a utility knife or heavy duty scissors and lay plank.

When each plank is installed, a hand roller with direct pressure to the seams must be used! After completion, a 100 lb roller should be used across all seams. Not rolling will void warranty!

Plank replacement - Be sure to keep some spare StaTite planks in case there is an unforeseen need for replacement. Make sure replacement planks are acclimated properly. If you need to replace a plank of StaTite, use a heat gun and heat up the outside of the damaged plank, along the "under lip" StaTite strip on the long and butt end of the plank. You can determine the "under lip" StaTite strip by finding the installation starting wall. It is on the right side and top of the plank when facing plank and starting wall is on your left from the second row on. Hold the head gun at least 6" away and be careful not to the burn surface of plank. This will soften the adhesive enough for you to then make an incision with your utility knife along the seam, cutting through the whole plank. MAKE SURE YOU HAVE A VERY SHARP BLADE IN YOUR UTILITY KNIFE!! (Figure 6)

Figure 6

Cut a slot around 6 inches from the long side you just cut. Then, using a flathead screw driver or putty knife, pry up the damaged plank; use the heat gun to help release the plank. Once you can grip the plank pull it away from the "under lip" StaTite strip from the adjoining plank; be careful not to rip or damage strip. (Figure 7 and 8)

Figure 7

Figure 8

If strip is damaged then please replace using alternate method below.
On "over lip" StaTite strip on adjoining plank use heat gun to soften adhesive and peel back original "under lip" StaTite strip on side and butt end of plank (Figure 9)

Figure 9

If possible, fold a piece of wax paper enclosed in StaTite cartons and wrap around each edge. Lift adjoining planks and slide replacement plank into place. The wax paper will help keep the plank from sticking to adjoining plank when sliding in plank. Remove the wax paper. Use a hand roller on all four seams of plank.

Alternate method:
Use a heat gun, being careful not to burn plank surface. This will soften the adhesive enough for you to then make an incision with your utility knife along the seam cutting through both the "over lip" and "under lip" StaTite strip. Do this on all four sides. MAKE SURE YOU HAVE A VERY SHARP BLADE IN YOUR UTILITY KNIFE!! Cut a slot in the center of the plank to be removed. Then using a flathead screw driver or putty knife, pry up the damaged plank. If the edges of plank that is removed do not cut out cleanly, you may need to go back with your SHARP utility knife and with a straight edge "clean up" the edges so that perfect rectangle is left with no StaTite strip remaining from the adjoining planks—just a perfect rectangle remains (See Figure 10)

Figure 10

When installing the replacement plank, first cut off the "under lip" StaTite strip from one side and simply "attach it" to the "over lip" on the opposite side. Do this for both the long and short sides.
Take one-sided tape (i.e. polyurethane tape, acrylic tape) and cut four pieces to be placed all around the plank perimeter. Lift adjoining planks and slide tape (halfway) into position leaving at least 1 inch of tape exposed all around plank. (Figure 11)

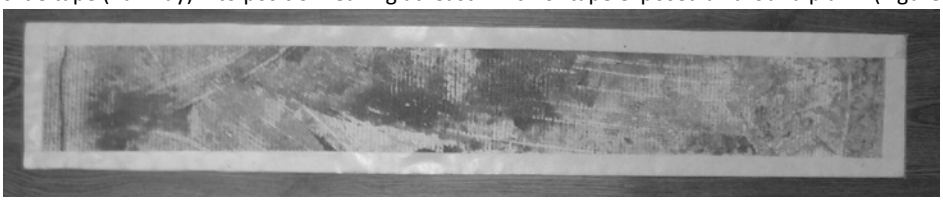

Figure 11

IMPORTANT: Roll floor!! Hand-Rolling is required with direct pressure to the seams as product is being installed. This must be followed with a 100 lb roller in both directions.

Troubleshooting for Plank and Tile:
Edges not sticking: The StaTite adhesive can be reactivated as long as the strip is not contaminated with dirt and dust. You can reheat with heat gun to loosen plank completely and then use instant glues to reinforce bond. In the winter time the adhesive is freeze-thaw stable so if areas of the StaTite strip are dull and not sticky, then reactivate with a heat gun.

StaTite butt end over edge is bending down when taking out of box: Because of StaTite's flexibility the edges sometime bend in carton because of shipping. Just pull back the edge straight, put together and roll with hand roller. If this is not done the front edge will stick, and a hump in the material will be seen that rolling may not take out.

For complete warranty and maintenance information, please call – Shaw Information Center: 1 800.441.7429