

## COMMERCIAL RESILIENT INSTALLATION GUIDELINES

### GENERAL INFORMATION

- All substrates to receive moisture sensitive floor covering require proper moisture testing.
- Use only Portland based patching and leveling compounds. Do not install resilient flooring over gypsum based patching and/or leveling compounds.
- It is recommended that resilient floor covering installation shall not begin until all other trades are completed.
- Material should always be visually inspected prior to installations. Any material installed with visual defects will not be considered a legitimate claim as it pertains to labor cost.
- Perform Bond testing to determine compatibility of adhesive to the substrate. 9050 primer can be utilized to promote adhesion.

### STORAGE AND HANDLING

- Store all rolls standing upright; **do not** lay rolls down for long periods.
- When more than one roll of a color is being installed, all material should be from the same batch and the rolls must be installed in consecutive order. If material from more than one batch is to be used, the job should be laid out so that different batch numbers are not installed side by side.
- Flooring material and adhesive must be acclimated to the installation area for a minimum of 48 hours prior to installation.
- Store cartons of tile or plank products flat and squarely on top of one another. Preferably, locate material in the “center” of the installation area (i.e. away from vents, direct sunlight, etc.) Storing cartons in direct sunlight may affect proper acclimation by inducing thermal expansion/contraction.
- When palletizing on a jobsite vinyl plank or tiles need to be stacked 2 rows high side by side with no airspace between. Then quarter turned for 2 rows side by side, not to exceed 12 boxes high. A 5/8” or thicker plywood must also be placed on the pallet first.
- Do not stack pallet’s 2 high unless utilizing a 1” thick plywood in between pallets.

### SITE CONDITIONS

- Areas to receive flooring should be adequately lighted during all phases of the installation process.
- 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.
  - The permanent HVAC system must be operational and functional and set to a minimum of 65°F (20°C) or a maximum of 85°F, for a minimum of 7 days prior to, during, and after installation. Once the installation is complete the temperature should not exceed 85°F.

### SUBFLOOR INFORMATION

**Note:** 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/parting compounds, alkaline salts, excessive carbonation/laitance, mold, mildew, and other foreign materials that might prevent the adhesive from bonding.

### WOOD SUBFLOORS

Wood subfloors must be structurally sound and in compliance with local building codes.

- 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.
- 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 retarder covering the ground.
- Particleboard, chipboard, flakeboard, OSB, hardboard or similar are not recommended subfloor materials and require the additional layer of a ¼" underlayment grade panel.
- **DO NOT** install over sleeper construction subfloors or wood subfloors applied directly over concrete.
- Underlayment panels can only correct minor deficiencies in the sub-floor while providing a smooth, sound surface on which to adhere the resilient flooring.

- Any failures in the performance of the underlayment panel rest with the panel manufacturer and not with Shaw Industries, Inc.
- 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.
- Always follow the underlayment manufacturer's installation instructions.

#### STRIP – PLANK WOOD FLOORING:

- Due to expansion/contraction of individual boards during seasonal changes a 1/4" or thicker APA rated underlayment panels must be installed over these types of subfloors.

#### 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](http://www.astm.org).

- All concrete substrates should be tested for IRH (Internal Relative Humidity) according to ASTM F 2170.
- Substrates shall be smooth, structurally sound, 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.
- On or below-grade slabs must have an effective vapor retarder directly under the slab.
- Wet curing 7 days is the preferred method for curing new concrete.
- Curing compounds (**DO NOT USE**). If present they can interfere with the bond of the adhesive to the concrete. Seek assistance from a substrate manufacturer if curing agents are detected.
- Remove curing compounds 28 days after placement, so concrete can begin drying.
- Concrete floors shall be flat and smooth within 1/8" in 6 feet or 3/16" in 10 feet. F-Number System: Overall values of FF 36/ FL 20 may be appropriate for resilient floor coverings.
- Expansion and isolation joints in concrete are designed to allow for the expansion and contraction of the concrete. Resilient flooring products should never be installed over expansion joints. Expansion joint covers designed for use with resilient floorings should be used. Control joints (saw cuts) may be patched and covered with resilient once the concrete is thoroughly cured, dry and acclimated.
- ASTM F 2170 IRH (Internal Relative Humidity) are required for the Shaw warranty. Three tests must be conducted for areas up to 1000 SF, and one additional test, for each additional 1000 SF. 4100 Adhesive/ S150 - may not exceed 90% RH.
- Concrete floors must be tested per the latest edition of ASTM F 710.
  - PH reading must not exceed 10.0.
  - Readings below 7.0 and in excess of 10.0 can affect resilient flooring and adhesives negatively.

**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 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 HEAT**

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

- Seven 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.
- 24 hrs. prior to installation lower the temperature to 70°F. and maintain that temperature for 48 hours after installation. After continuous operation of the radiant system, ensure the surface of the floor does not exceed 85°F (29°C)
- Use of an in-floor temperature sensor is recommended to avoid overheating.

**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](http://www.rfci.com)

**EXISTING FLOORCOVERINGS****RESILIENT FLOOR COVERING:**

- Must be single layered, non-cushion backed, fully adhered, and smooth.
- Show no signs of moisture or alkalinity.
- Waxes, polishes, grease, grime, and oil must be removed.
- Cuts, cracks, gouges, dents and other irregularities in the existing floor covering must be repaired or replaced.
- Embossing leveler recommended to aid in proper bonding and to prevent telegraphing.
- Do not install over rubber based substrates.

**NOTE: THE RESPONSIBILITY OF DETERMINING IF THE EXISTING FLOORING IS SUITABLE TO BE INSTALLED OVER TOP OF WITH RESILIENT, 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.**

**Quarry Tile, Terrazzo, Ceramic Tile, Poured Floors (Epoxy, Polymeric, Seamless):**

- Must be totally cured and well bonded to the concrete.
- Must be free of any residual solvents and petroleum derivatives.
- Waxes, polishes, grease, grime, and oil must be removed.
- Show no signs of moisture or alkalinity.
- Cuts, cracks, gouges, dents, and other irregularities in the existing floor covering must be repaired or replaced.
- Fill any low spots, holes, chips and seams that may telegraph through the new flooring.
- Grind any highly polished or irregular/smooth surfaces.
- Quarry tile or Ceramic tile grout joints and textured surfaces must be filled with an embossing leveler or substrate manufacturer approved material.

**OLD ADHESIVE RESIDUE**

- 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:
  1. It may be mechanically removed such as: bead blasting or scarifying
  2. A self-leveling Portland based underlayment may be applied over it. Check with a substrate manufacturer for suitability, application instructions, and warranties.
- Never use solvents or citrus adhesive removers to remove old adhesive residue. Solvent residue left in/on the sub-floor may affect the new adhesive and floor covering.**

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**WARNING:** SKIM COATING OVER OLD ADHESIVE IS NOT RECOMMENDED. THE ADHESIVE MAY BREAK DOWN AND COULD LEAD TO FAILURE. THE OLD ADHESIVE MAY NOT ALLOW THE RESILIENT FLOORING TO RETAIN ITS DIMENSIONAL STABILITY, POSSIBLY LEADING TO UNNECESSARY INDENTATIONS. 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.

## ADHESIVES

### SHAW 4100

Installer friendly, premium high strength (non-staining) acrylic adhesive, designed to permanently install SHAW flooring. May-be used on all grades of concrete: on, above, or below grade in the absence of excess moisture, as well as suspended approved wood floors.

- May-be used for installing over existing, non-cushioned resilient flooring that has been prepared according to Shaw's recommended methods.
- Non-flammable, moisture resistant up to (90% RH), alkali resistant (10PH), and freeze thaw stable (to 10 °F) for 1 cycle.
- Excellent resistance to plasticizer migration and sets to a tough permanent bond. Zero (calculated) VOC's and CRI Green Label plus Approved.
- Must be used to receive exclusive under bed warranty.
- Shelf Life is 1 year when stored at 70°F
- Coverage: 175-225 sq. ft. /gallon.
- Traffic: Wait 24 hours before allowing heavy traffic or rolling loads.

**Note:** To properly apply 4100 snap white chalk lines along areas where adhesive will be spread to ensure an even and straight line of adhesive. Spread adhesive with a 1/16" (wide) x 1/32" (depth) x 1/32" (apart) trowel to cover the chalk line on one side and meet up to it on the other. If glue is spread over the chalk line it will need to be removed. (DO NOT overlap adhesive.) - Troweling new adhesive over an area already spread may result in telegraphing. Be very careful not to leave any adhesive ridges or puddles.

**Porous substrates:** Resilient flooring may be placed into adhesive after 10 –20 minutes open time. Install resilient flooring into adhesive when the spacing in between the adhesive transitions from opaque to clear. Roll with a 100 lb. roller immediately after flooring is placed, ensuring complete contact with the adhesive. **DO NOT** exceed the 2 hours working time.

**Non-porous substrates:** Install resilient flooring into adhesive when it becomes 80% clear (dry to touch, is tacky but no transfer to fingers). This will normally require 30 to 60 minutes of drying time at suggested installation temperature and humidity, **DO NOT** exceed 2 hours working time.

Roll with a 100 lb. roller immediately after flooring is placed, ensuring material has complete contact with adhesive.

**IMPORTANT:** **DO NOT** use Shaw 4100 as a pressure sensitive adhesive. Loss of adhesion can result if the flooring is not installed within the working time of the adhesive. **DO NOT** allow the adhesive to "skin" over or dry. Too much open time will result in an insufficient bond.

Perform Bond testing to determine compatibility of adhesive to the substrate. Shaw 9050 primer can be utilized to promote adhesion if needed.

**Note:** Open time and working times may vary based on temperature, humidity, substrate porosity, trowel size and air flow.

### SHAW S150 - universal aerosol spray adhesive:

- Water-based aerosol adhesive recommended for installations of: vinyl sheet, plank and tiles, vinyl composition tile, or cove base over porous and non-porous substrates. May-be used in occupied buildings and greatly reduces the handling and application requirements associated with conventional adhesives. Demonstrates highly aggressive grab and shear strength.
- Outstanding moisture resistance (90% RH) and plasticizer migration resistance. Spray application eliminates the need for trowels and paint rollers. Zero calculated VOC's/ CRI Green Label Plus Approved.
- Must be used to receive exclusive under bed warranty.
- Store appropriately (65°F to 95°F (18°C to 35°C), out of direct sunlight and away from heat sources or open flames as the contents are under pressure and the can may burst.

- **DO NOT** allow Shaw S150 to freeze.
- Shelf Life: 2 year when stored in original packaging.
- Coverage: 130-150 sq. ft. /gallon.
- Traffic: Wait 24 hours before allowing heavy traffic or rolling loads.

**Application:**

- Shake well before using – contents under pressure. Although Shaw S 150 has good directional control while spraying, care should be taken to protect delicate surfaces and baseboards with either a shield or paper masking.
- Stand in an upright position and tip the can so it is pointed straight towards the floor, then depress the trigger tip mechanism.
- Aim the spray so that the adhesive falls like snow as you slowly walk back and forth. **DO NOT** use sweeping motion as it will not give you the proper spray pattern, avoid overlapping. The substrate should have an even application of adhesive for proper coverage.
- Wait until the adhesive is dry to the touch, and adhesive does not transfer to finger tips, before installing flooring. High humidity and low temperatures will lengthen open time. Keep the adhesive dust-free while it dries.
- Working time should not exceed 4 hours. Install flooring per guidelines.
- Installation: Roll flooring immediately after installation is complete with an appropriate 75 – 100 lbs. 3-section roller. Sheet flooring seams may be heat welded one hour after installation. Normal traffic may be allowed as soon as the installation, finishing and clean-up are complete. Avoid rolling loads for 24 hours.

**Safety and Clean-up:**

Wet adhesive overspray or drips should be cleaned with soap and water on a clean cloth. Sheet Dried adhesive may require the use of a solvent adhesive cleaner. Between uses, clean the spray tip immediately with a clean wet cloth to prevent accumulation of dried adhesive. Empty aluminum spray cans should be relieved of excess pressure and recycled or disposed of in accordance with local requirements.

**IMPORTANT:** Recommended to perform a bond test in order to determine adhesive working time per job site conditions. The strength of the bond test will indicate whether Shaw 9050 floor primer is necessary.

**9050- PH BLOCKER/FLOOR PRIMER:**

9050 is an acrylic solution made to neutralize excess alkali that is also recommend as a primer coat to prevent over absorption of adhesive and to ensure a better bond. Formulated with an antimicrobial agent, it provides protection against bacteria, fungi, and mildew in the wet or dry state. Contains no solvent, alcohol, or other hazardous materials per OSHA 29 CFR 1910.1200. Non-photo chemically reactive per rule #102. Available in 4-gallon pails.

**APPLICATION:**

- Use over porous concrete above, on, or below grade; light weight concrete and over floor patch and other porous surfaces.
- Using a 3/8" nap paint roller, roll the floor in one direction for a coat, and then one coat applied perpendicular to the first.
- For large jobs, 9050 may be applied with a garden sprayer, airless rig, or regular paint spray equipment.
- Allow a minimum of 30 minutes dry time before installing flooring. Primer should be 100% dry prior to installing.
- When using to neutralize excess alkali, test the pH level. If pH remains above 9, apply a second coat and retest pH level.
- Shelf life: One year in unopened container at 70°F.
- Coverage: Approximately 350 sq. ft. /gallon.
- Other features: Freeze/thaw stable to 10 °F.

**RESILIENT SHEET VINYL PRODUCTS****INSTALLING RESILIENT SHEET VINYL PRODUCTS**

- a. Ensure that moisture tests have been conducted and that the results do not exceed 90% In-Situ relative humidity when tested according to ASTM F 2170.
- b. PH of concrete sub-floor surface must be between 7&10.
- c. The permanent HVAC system turned on and set to a minimum of 65°F (20°C) or a maximum of 85°F, for a minimum of 7 days prior to, during and after installation. After the installation, the temperature should not exceed 85°F.

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- d. Flooring material and adhesive must be acclimated to the installation area for a minimum of 48 hours prior to installation.
- e. Use only Shaw approved flooring adhesives.
- f. Use a 1/16" wide x 1/32" deep x 1/32" apart (U) notch trowel only, unless using S150 Spray Adhesive.
- g. Material should always be visually inspected prior to installations. Any material installed with visual defects will not be considered a legitimate claim as it pertains to labor cost.
- h. Shaw's sheet products are dimensionally stable. They will not shrink or compress. It is recommended to allow material 24 hours unrolled and lying flat on the job site prior to installation.
- i. Install all cuts and rolls in consecutive sequence.
- j. Naturelife™ - DO NOT reverse sheets for seaming.
- k. Biolife™ - Reverse sheets for seaming
- l. ChromaTones-DO NOT reverse sheets for seaming, BassTones-reverse sheets for seaming.
- m. Constant & Change – direction is dependent upon the actual layout. Refer to the layout for proper direction
- n. Ensure that all recommendations for sub-floor and jobsite conditions are met prior to installation. Once the installation has begun, you have accepted these conditions.

**NOTE:** Recommended to use floor protection after installation. DO NOT use a plastic adhesive based protection system.

#### CUTTING AND FITTING SHEETS:

- a. Measure, identify, and mark your control line for the sheet good installation.
- b. Cut the required length off the roll, including enough to run up the wall 2" at either end.
- c. Push the length of the sheet as close to the starting wall as possible, letting the extra length run up the wall at the far end.
- d. The material should still be aligned on the control line.
- e. Place a straight edge on top of the material along the starting wall, and proceed to cut along the straight edge. This cut technique is a direct scribe. Pattern scribing or three wall scribing is also acceptable.
- f. Push the fitted sheet gently to the starting wall while keeping it aligned.
- g. Free hand knife the opposite wall of the starting wall. Pattern Scribing or direct scribe is also acceptable.
- h. Continue to free hand knife, pattern scribe, or direct scribe material for the remainder of the installation area.
- i. Opening up the sheets in the width/length are acceptable.
- j. **DO NOT** fold as care should be taken not to crease material.
- k. **DO NOT** back roll vinyl backed floorings.
- l. Snap white chalk lines or use pencil along areas where adhesive will be spread to ensure an even and straight line of adhesive.
- m. **DO NOT** use permanent marker.
- n. Carefully place flooring into adhesive, working toward the wall. **DO NOT FLOP MATERIAL IN**—air may be trapped, causing bubbles.
- o. After material has been laid into the adhesive, recess scribe the seams using either the scribe blade or scribe pin.
- p. Hold the knife blade straight up and down to make final cut. **DO NOT UNDERCUT**
- q. Repeat the same procedure for additional seams in the room.
- r. Recommended to massage curl the end joints to help ensure they lay flat. Putting weight on the end joints will help to ensure proper bonding as the adhesive sets up.
- s. Roll the glued areas right away to within 6" of the seam on either side with a 3 section 100 lb. roller. Roll the seam area with a hand-seam roller to bring the seam edges to equal heights. Re-roll the entire glued floor area with the 100 lb. roller within the working time of the adhesive. Continue to roll the floor throughout the working day to ensure a proper bond.
- t. Heat welding Shaw sheet flooring is always recommended.
- u. **Heat weld seams the following day. See heat weld instructions.**
- v. Contact Shaw product support for assistance if not familiar with scribing techniques or heat welding.

**NOTE: TO ENSURE PROPER BONDING OF THE MATERIAL, IT IS RECOMMENDED TO ROLL IN THE MATERIAL NEXT TO THE WALLS WITH A HAND SEAM ROLLER.**

**SEAMING:**

Seams may be cut by either the straight edging/edge trimming one side & recess scribing the second sheet, or the overlap & double cut method.

1. Recess scribe method - On non-patterned material, trim approximately 1/2" off one selvage edge of seam with a straightedge and sharp knife or edge trimmer. Cut second sheet allowing proper extra length. Position the second sheet with a 1/2"-1" overlap over first sheet at the seam. Set recess scribes so that the seam will have a slight gap, about half the thickness of a razor blade. If cut too full, it will result in bubbles or ridges. Recess scribe seam. Repeat for as many sheets as necessary to complete the area.
2. Double cut method-Utilizing a straight edge and a new razor blade hold the knife straight up and down and cut through both pieces in one cut. Cutting through the top layer while scoring half of the bottom layer at the same time, and finishing with a hook blade, is acceptable.

On patterned material, overlap the selvage edges to align the pattern width and length. For wood patterns align the bevel edge of the planks. Place a 4" wide scrap of material under the seam area. Place a straight edge directly over the beveled edge of the plank. Using a new razor blade hold the knife straight up and down to cut through both pieces in one cut. Cutting through the top layer while scoring half of the bottom layer at the same time, and finishing with a hook blade, is acceptable.

**NOTE: SET RECESS SCRIBES SO THAT THE SEAM WILL HAVE A SLIGHT GAP, ABOUT HALF THE THICKNESS OF A RAZOR BLADE. IF CUT TOO FULL, IT WILL RESULT IN BUBBLES OR RIDGES. DO NOT SEAM FACTORY EDGES.**

**HEAT WELDING:**

Heat welding is the recommended procedure for seams, coving, and corner fill pieces.

- a. Professionally heat welded seams provide a strong, watertight, hygienic, monolithic surface.
- b. The welding rod (4 mm) is designed to melt at the same temperature as the sheet flooring, thermally fusing the two together.
- c. Heat welding should be done 24 hours after installation using Shaw 4100. Shaw S150 can be heat welded in 1 hour after completed installation.
- d. Seam edges should be slightly gapped and vertical. Wide gapped or undercut seams will prevent quality welds.
- e. The depth of the groove should be 1/2 to 2/3 the thickness of the material using a 3.5 mm grooving tool. Be careful not to go too deep. The groove must also be centered along the two edges. This is very important to ensure proper strength and bonding of the welding rod.
- f. Clean grooves thoroughly of all foreign contamination, including dust.
- g. Use only professional quality welding equipment that will maintain sufficient temperatures. A narrow preheat 4mm tip is required.
- h. Preheat welding gun prior to welding. Temperature should be set approximately 750°F.
- i. Practice on a scrap piece to fine tune temperature and pace. Long extension cords may affect welding temperature settings.
- j. Determine the correct welding speed by ensuring that the welding rod actually fuses into the groove. On the scrap practice piece try to pull the weld out of the groove. If the rod pulls out of the groove adjust temperature until it will no longer pull out of the groove.
- k. Tip must remain parallel to the finished floor. A small ridge must form on either side of the welding rod, at the vinyl surface. If no ridge forms, you have not heat welded the seam correctly.
- l. While the welding rod is still warm, trim off 1/2 the excess rod with a spatula knife or Mozart skiver and trim plate in one continuous movement.
- m. After the rod has cooled to room temperature, make the final trim pass using a razor sharp spatula knife or Mozart skiver in one continuous movement.

**CHEMICAL WELD:**

- a. Ensure seam is completely clean and dry.
- b. Pour entire contents of sealer into applicator bottle and allow any air bubbles to dissipate.
- c. Insert the tip of the applicator down into the seam. Pull back at a steady pace applying a constant pressure on the bottle, applying enough sealer to seal the edges of the sheet and leaving a small bead (1/8") of sealer on the surface of the seam.
- d. Keep all traffic off the seam for a minimum of 24 hours.



**FLASH COVE INSTALLATION:**

- a. Flash coving is an extension of the sheet flooring up the wall to form a wall base.
- b. Seams in the flash coved areas should be treated the same as seams throughout the rest of the installation.
- c. 4" -- 6" flash coving is common. For all heights in excess of 6" check applicable local building codes.
- d. Use 4100 or S150 adhesive in flash coved areas. Use a brush or roller to apply adhesive to the wall and cove stick area.
- e. Adhesive must be allowed some open time, usually about 10 – 15 minutes.  
After fitting material into adhesive, use a hand roller to assure contact with the adhesive.

**RESILIENT TILE AND PLANK PRODUCTS**

- a. Ensure that moisture tests have been conducted and that the results do not exceed 90% In-Situ relative humidity when tested according to ASTM F 2170. PH of concrete sub-floor needs to be between 7&10.
- b. The permanent HVAC system is turned on and set to a minimum of 65°F (20°C) ) or a maximum of 85°F, for a minimum of 7 days prior to, during and after installation. After the installations, the maximum temperature should not exceed 85°F.
- c. Do not stack more than 5 cartons high.
- d. Flooring material and adhesive must be acclimated to the installation area for a minimum of 48 hours prior to installation.
- e. Use a 1/16" wide x 1/32" deep x 1/32" apart (U) notch trowel only (unless using S150 Spray Adhesive where no trowel is required).
- f. Material should always be visually inspected prior to installation. Any material installed with visual defects will not be considered a legitimate claim as it pertains to labor cost.
- g. Make sure all material is from the same batch number. Install tiles running in same direction (arrows are on back of tile).
- h. Ensure that all recommendations for sub-floor and jobsite conditions are met prior to beginning the installation. Directional designs are optional, however, once the installation is started, you have accepted those conditions.

**LAYOUT AND INSTALLATION:**

- a. Shaw tile and plank - Install using conventional tile and plank installation techniques. Plank products should have a minimum of 6 – 8" seam stagger.
- b. Carefully determine where to begin tile or plank installation.
- c. It is customary to center rooms and hallways so borders are not less than half a tile or plank.
- d. Working out of multiple boxes at a time is recommended.
- e. In hallways and small spaces, it may be simpler to work lengthwise from one end using a center reference line as a guide.
- f. Make sure cut edges are always against the wall.
- g. To properly cut LVT/LVP products score the top side of the material with a utility knife. Bend the product and finish the cut through the backside. This will ensure the cleanest cut. It may be necessary to use a heat gun to cut around vertical obstructions. Allow the heated LVT/LVP to return to room temperature before installation.
- h. Cutting the product into a fine point may lead to delamination. Use an ethyl cyanoacrylate based super glue to help fuse the LVT/LVP point together. Be sure to clean all glue from the top surface immediately. Alcohol based super glues may cause vinyl to swell.
- i. Roll the plank/tile with a 3 section 100 lb. roller Re-roll the entire glued floor area with the 100 lb. roller within the working time of the adhesive. Continue to roll the floor throughout the working day to ensure a proper bond.

**NOTE: Recommended to use floor protection after installation. DO NOT use a plastic adhesive based protection system.**

Shaw does not warrant installers' workmanship. Workmanship errors should be addressed to the contractor who installed the floor. Your Shaw commercial floor should be professionally installed by contractors who have demonstrated expertise in installing commercial floors. For complete warranty information, limitations and terms and conditions please call – Shaw Inforum: 1-877-502-7429.

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