

COMMERCIAL RIGID CORE INLINE LEVEL EDGE DIRECT GLUE INSTALLATION

GENERAL INFORMATION

- All substrates to receive floor covering require proper moisture testing.
- 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.
- For cracks or saw cuts deeper than 1", follow the preparation and application instructions for 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.
- It is recommended that 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.

STORAGE AND HANDLING

- 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 temp. of 70 degrees (21.1°C).
- Post installation temperature range is between 55° - 100°F (13°- 37.7°C).
- Avoid exposure to direct sunlight for prolonged periods, doing so may result in discoloration. During peak sunlight hours, the use of drapes or blinds is recommended. Excess temperature due to direct sunlight can result in thermal expansion and UV fading.
- 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" (15.8 mm) 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 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 55°F (20°C) or a maximum of 85°F (29.4C) ,for a minimum of 7 days prior to, during, and after installation. Once the installation is complete the temperature should not exceed 85°F (29.4).

SUBFLOOR INFORMATION

Note: All substrates to receive 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 conform to guidelines of ASTM F 1482 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, hardboard or similar are not recommended subfloor materials and require the additional layer of an APA ¼" (6.3 mm) underlayment grade panel.
- OSB (Oriented Strand Board) – check with the OSB manufacturer – water resistant sealers may be applied to the OSB that may inhibit the bond of the adhesive to the subfloor. If needed add an additional layer of APA ¼" (6.3 mm) 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 flooring.
- Any failures in the performance of the underlayment panel rest with the panel manufacturer and not with Shaw Industries, Inc.
- SPC Direct glue down 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" (6.3mm) thick underlayment should be installed.
- Always follow the underlayment manufacturer's installation instructions.
- Crumb rubber underlayments are not an acceptable option for use with resilient floor coverings due to performance issues resulting from chemical incompatibilities.

STRIP – PLANK WOOD FLOORING:

- Due to expansion/contraction of individual boards during seasonal changes a 1/4" (6.3mm) or thicker APA rated underlayment panels must be installed over these types of subfloors.
- Wood flooring installed directly over concrete is NOT an approved subfloor.

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).

- 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.
- If the adhesive residue is asphalt-based (cut-back), or any other type of adhesive is present, it must be removed by industry accepted methods such as mechanical removal or wet scraping.
- If a chemical abatement has been performed, use Surface Prep EXT to remove any residual chemicals present. Once Surface Prep EXT has been properly cleaned and removed, apply one coat of 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 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.

- 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" (3.1 mm) in 6 feet (1.82 M) or 3/16" (4.76mm) in 10 feet (3.04 M).
- F-Number System: Overall values of FF 36/ FL 20 may be appropriate for floorcoverings.
- Expansion and isolation joints in concrete are designed to allow for the expansion and contraction of the concrete. Flooring products should never be installed over expansion joints. Expansion joint covers designed for use with floorings should be used. Control joints (saw cuts) may be patched and covered with flooring once the concrete is thoroughly cured, dry

- Concrete slabs must be dry with no visible moisture.
- 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.
- 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.
- pH level of concrete should be between 7-10.
- 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 SPC 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 SPC 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. 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 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 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.

EXISTING FLOORCOVERINGS

RESILIENT FLOOR COVERING:

- Must be single layered, non-cushion backed, fully adhered, and smooth.
- Show no signs of moisture or alkaline.
- Waxes, polishes, grease, and grime must be removed.
- 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 TOP OF WITH SPC, 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 SPC 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 and 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.

ADHESIVES – 200,2200,4200 and 4151 Adhesive, Trowel – 1/16" x 1/16" x 1/16" U Notch is required. The use of Spray type adhesive is NOT approved and may result in loose or hollow spots. *NOTE* For NON-POROUS substrates, MS Resilient adhesive is recommended. Install while adhesive is wet in order to move planks into place before the adhesive sets.

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 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.

SPC TILE AND PLANK PRODUCTS

- **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.**
- **Use a 1/16" wide x 1/16" deep x 1/16" apart (U) notch trowel only.**
- 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.
- 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:

- Shaw tile and plank - Install using conventional tile and plank installation techniques. Plank products should have a minimum of 6 – 8" seam stagger.
- Carefully determine where to begin tile or plank installation.
- It is customary to center rooms and hallways so borders are not less than half a tile or plank.
- Working out of multiple boxes at a time is recommended.
- In hallways and small spaces, it may be simpler to work lengthwise from one end using a center reference line as a guide.
- Make sure cut edges are always against the wall.
- To properly cut SPC 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 SPC to return to room temperature before installation.
- 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.
- Required perimeter expansion spacing 1/4".
- Roll the plank/tile with a 3 section 75-100 lb. roller Re-roll the entire glued floor area with the roller within the working time of the adhesive. Continue to roll the floor throughout the working day to ensure a proper bond.
- **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.