SHAW RESIDENTIAL STRETCH-IN INSTALLATION

Notice: *For best results review the following guidelines prior to installation. Shaw will not be responsible for improper installation and failure to follow these guidelines may result in limiting warranty coverage.*

These installation procedures are intended to assist in the installation of stretching broadloom carpet over cushion under most job conditions. See Shaw Industries and CRI 104 / 105 Broadloom Installation Guidelines for specific questions regarding installation not covered within or refer to **Shaw Technical Support at 1.800.471.7429**. Any variance from these procedures will become the responsibility of the installer and not the manufacturer.

Carpet with a synthetic secondary backing can be installed by stretching and fastening onto a tackless strip. It must be stretched 1% to 1-1/2% in both the width and length directions with use of a power stretcher. Knee kickers should only be used to move and position carpet. Shaw Industries does not recommend the use of a stretcher hook, stinger, or spike.

1. CONDITION YOUR SITE AND TEST

A proper installation depends on the proper site conditions. The following conditions **must be maintained for 24 hours prior to, during and permanently after installation.** (moisture / pH testing for commercial applications)

- **HVAC System:** Must be operational maintaining the following conditions.
- **Temperature:** The installation site, carpet, underlayment and adhesive must be between 65˚F and 95˚F. The adhesive will not function properly when applied over an extremely cold surface. Do not begin the installation if the subfloor temperature is below 50˚F.
- **Humidity:** The installation site's ambient humidity must not exceed 65%.
- **Moisture:** Conduct relative humidity testing. Results must be below 85% (ASTM F-2170), or the Anhydrous Calcium Chloride test must not exceed 5.0 lbs. per 1000 SF per 24 hours (ASTM F-1869 test). Shaw recognizes RH as the qualifying standard.
- **pH:** Conduct pH testing on the floor in several locations. A reading below 5.0 or above 9.0 (ASTM F-710) requires corrective measures.

Do not begin the installation if an unacceptable moisture level is detected. Contact Shaw Technical Support for additional recommendations. If excessive moisture is present, the general contractor or building owner must be advised and a decision made if the installation is to begin. Shaw Industries will not be responsible for any moisture related installation failures if these guidelines are not strictly followed.

2. PREPARE THE FLOOR

The substrate must be structurally sound, clean, level and dry. The substrate must be free of dust, dirt, oil, grease, paint, curing agents, concrete sealers, loosely bonded toppings, loose particles and any other substance or condition that may prevent or reduce adhesion.

NOTE: Do not sand or scrape Vinyl Asbestos Tile (VAT) without proper attention to abatement procedures and precautions in accordance with all state and local codes. Shaw Industries makes no claims as to the acceptability of this procedure as a mitigation method in lieu of asbestos removal; and accepts no responsibility if any loose asbestos-containing floors are affected upon removal of a Shaw Industries products.
Any Indentations or projections in the subfloor which could telegraph through the cushion should be repaired. Missing boards or other damage to wood subfloors should be repaired or replaced. A minimum of 18" of ventilated air space is needed between the floor joists and the ground.

Existent resilient tile or sheet vinyl, should be fastened securely to the floor.

Any loose ceramic, terrazzo and marble tiles should be re-adhered. Broken or missing tiles should be replaced or filled with patching compound and grout lines should be leveled.

Fill depressions or cracks with a cementitious patching / leveling compound that meet or exceed Shaw Industries 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. You may use wax-based (green) sweeping compounds if you sweep and remove them immediately.

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3. TACKLESS STRIP

It is required that tack-strips be a minimum of 1 inch (25 mm) wide and 1/4 inch (6 mm) thick.

Architectural strips (1 ¾ inches in width (50mm) with 3 rows of pins), **or 2 conventional strips** (with 2 rows of pins each), **are required for stretching carpet**.

To prevent possible injury to occupants, it is required that the pins on tack-strips not protrude through the carpet.(Use of J Pin tack strip would be recommended).

Additional tack-strip installation specifications include:

- Securely fasten tack-strips to maintain the tension provided by power stretching. Nailed or stapled tack-strips are required to have a minimum of 2 fasteners per piece.
- Place tack-strips with the pins angled toward the vertical abutment.
- The gully, or distance between the tack-strips and vertical abutments, is required to be slightly less than the thickness of the carpet but not exceed 3/8 inch (9 mm).
- Avoid installing tack-strips across door openings and/or sills. Cut tack-strips to follow the contour of door casings and other irregularly shaped abutments.
- Do not staple carpet to tack-strips.
- On radiant-heated floors, use manufacturer's approved adhesive to secure tack-strips. To prevent damage to the heating system, do not use nails or screws.

Areas over 30 feet in length or width are difficult to obtain sufficient stretch and can potentially wrinkle. We suggest alternate installation methods in these areas.

Radiant heating systems require special attention in order to avoid puncturing the buried hot water pipes in the concrete. To determine the exact location of the pipes, turn off the heat, wet mop the entire floor, and then turn the heat back on. The areas over the hot water pipes will dry quickly and should be marked. Tackless strips can be nailed in if there is no danger of puncturing the pipes. If the concrete will not hold nails or if there is a possibility of puncturing the pipes, then the strips can be glued down.

4. CUSHION

Choose a cushion which is appropriate for the particular end use. An improper selection of cushion may result in buckling and wrinkling.

- Residential Applications - minimum density of 6 lbs. not to exceed 7/16" thickness (exception St.Jude Courage 1/2" or equivalent) *****
- Commercial Applications - minimum density 8 lbs. not to exceed 3/8" thickness

*** For Class 1 Carpet the minimum recommended requirement is 5lb rebound pad as defined in the Use of Materials Bulletin 72a - HUD Building Project Standards and Certification Program for Carpet Cushion.**

Cushion seams should be installed at right angles to carpet seams or staggered at least six inches from carpet seams. The longest possible lengths of cushion should be used. When many smaller pieces are used, the cushion may slip or lift at the edges and create resistance during the positioning and stretching of the carpet.

Carpet cushion should be glued to concrete flooring with use of a good quality cushion adhesive. Apply the adhesive using a 15" - 18" zig-zag line around the perimeter of the tackless strip, along the seams, and in the center of the cushion throughout.

Staples can be used to fasten the cushion to wood floors. Place the staples no more than 6-8 inches apart around the perimeter. Stagger the staples along the seams to prevent depressed lines. With each method the cushion should be secured after all wrinkles are eliminated. Cushion seams should be taped using 2" wide duct tape.

5. CARPET LAYOUT / CUTTING

Carefully cut the carpet into sufficient lengths to cover the area using the seaming diagram or roll sequencing. Roll sequencing will minimize the normal variations encountered when pattern matching and any bow, skew or pattern elongation between the rolls. Sequence numbers are provided on the bill of lading and invoice; they are located after the dye lot number. If this information is not available, the date and time is backstamped (in military time) on the carpet to assist in sequencing. Allow enough material to properly

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match patterned carpeting. Examine each pattern for the size of the repeat before beginning the installation. Please call **Shaw Technical Support** for more information regarding patterned products.

Loop and cut pile carpet with a synthetic backing can be **row cut** from the face on both seam edges with use of a cushion back cutter. It may be necessary to stretch and stay nail (careful if radiant heated floor) for pattern match correction and to eliminate any fullness or gaps in the seam.

6. CUTTING CROSS SEAMS

Cross seams should be kept to a minimum. Best seam quality can be obtained by row cutting both seam edges as described for length seams. If the rows do not run straight or if you are unable to find / separate the row, use of straight edge on the backing can be used as an alternative cutting method.

7. SEAMING

After the edges are trimmed, an acrylic, thermoplastic, or universal seam sealer, must be applied to both edges between the primary and secondary backings. The wet seam sealers can be smoothed with your fingertips to allow quicker drying time and to avoid transfer to the face yarn and seaming iron. Edge raveling can occur if the seams are not properly sealed.

A seaming tape pre-coated with a thermoplastic adhesive is centered beneath the seam. Tape is heated by a seaming device which melts the adhesive, laminating the carpet backing to the tape. Seams should be made over a hard, flat surface (i.e. seaming board). A carpet seam roller is recommended to achieve proper penetration of adhesive into the carpet backing from the seaming tape.

NOTE:

- Use of a premium 3", 4" or 6" tape with a low melting point or use of a sinch iron / tape is recommended. Six- inch-wide seaming tape will provide the best results when peaking seams are a concern. Back-rolling the seam edges and pre-stretching the carpet along the seam area will help minimize seam peaking.
- EcoWorx (non-performance) Broadloom / LifeGuard products – Use of low profile seaming tape such as XU90.
- LifeGuard - The seaming iron should be set at approximately 3.0 - 3.5 and moved at a speed which will completely melt the thermoplastic adhesive.
- Rollers with star or spike design are not recommended for use on hot melt seams, especially, cut or cut-loop constructions.

When using a seaming iron, a grooved iron is recommended for better penetration of the adhesive. Proper iron temperature is essential to avoid secondary backing distortion. Temperature settings will vary according to iron and tape manufacturers.

Always run the iron in the direction of the pile. A heat shield is required.
A non-heat-conductive seam weight should be used to weight the seam rather than using a metal weight, which will trap heat and moisture.

Provide adequate ventilation to dissipate any fumes from the seaming process.

Patterned carpets may require one side of the seam to be stretched to obtain proper pattern match. Start by setting both edges of the seam into the tackless strip at either the beginning or the end of the seam. Use a power stretcher and / or knee kicker to stretch the shorter patterned side of the seam to proper match. Stay nails may be helpful.

8. POST INSTALLATION CARE AND PROTECTION

- Place plywood over the carpet when heavy objects are moved.
- Use protective chair mats under chairs with casters. This will prevent excessive wear to the face of the carpet.

Place a non-staining building material paper over the carpet to protect it when additional construction activity is to take place. Do not use plastic sheeting as it will trap moisture

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