

CROSSWEAVE® & CrossCushion™ INSTALLATION & FLOOR PREPARATION INSTRUCTIONS

General Notes

These installation instructions are general and are not intended to be applicable for all sub-floor conditions. If you have any questions concerning the proper installation (or use) of any Tandus products, please contact Tandus' Installation Services at 800-241-4902, ext 2129, 2023, or 2670. All products should be inspected for dye lot, style, color, size, quality and shipping damage prior to installation and should not be installed if any irregularities are observed. Except for any differences as noted herein, all Tandus woven carpet is to be installed in accordance with the minimum standards set forth in CRI 104 Standard for Installation of Commercial Carpet. Copies are available at www.carpet-rug.org. **It is solely the responsibility of the installation contractor to insure that the sub-floor is properly prepared prior to installation.**

Installer Certification

Tandus does not require installers to be certified prior to performing the installation of woven products on actual jobsites; however, Installation Contractors who do not have a practical working knowledge of pattern carpet installation including pattern matching, straightening pattern lines, and the techniques of stretching and stay nailing should not attempt installing. Pattern carpet installation will require more time and skill than non-patterned styles.

Site Requirements

Tandus woven products are intended for indoor installations on dry, properly prepared sub-floors. The product is not intended for installation on walls, ramps, outdoors, or on wet surfaces. **Tandus is not responsible for product failure of any kind if these floor preparation and installation instructions are not adhered to. Only installation materials approved by Tandus should be used. Be certain to read and adhere to the shelf life and freeze-thaw stability information that is printed on the label of the installation materials.**

Moisture & pH

Excessive moisture and/or high pH on any sub-floor, especially concrete, can cause product failure. For all Tandus woven products, the maximum allowable moisture emission rate (MVER) from the sub-floor is 5.0 pounds, as tested according to ASTM F-1869-04 (*Std. Test method for measuring Moisture Emission Rate of Concrete*). The required pH range must not exceed 9.0 as tested according to ASTM F-710-05. The In-Situ/RH (relative humidity) requirement on concrete is not to exceed 75% as tested according to ASTM F-2170-02 (*Std. Test method for measuring Relative Humidity in Concrete*). This provides two measures of potential moisture issues. Industry standards require 3 MVER or In-Situ RH test be performed on the initial 1,000 square feet of each project. In addition, a minimum of one test per 1,000 square feet of either MVER or RH, in any combination, is required for the balance of the project. **Refer to our Technical Services Bulletin "Moisture and pH Testing of Tandus Products" for specific instructions on test methods, ambient conditions, and other requirements.**

Note that moisture vapor emission testing, relative humidity, and pH testing indicate the moisture level and pH of the concrete sub-floor at the time of installation. These tests do not provide static results and both moisture and pH can increase over time. Tandus is not responsible for product failure as a result of changes to sub floor conditions, including increases in moisture and pH levels, post installation. Experience has shown that more accurate and representative MVER, RH and pH testing results can be achieved when the HVAC systems is functioning 24/7 for two weeks prior to installation and the indoor air quality has acclimated to occupancy conditions. In cases where the flooring substrate is light weight concrete, or is a Gypsum based leveling compound used as a topcoat over existing concrete, MVER results are not an accurate means of evaluating the conditions of the flooring substrate; therefore, RH will be the only recognized moisture test method.

pH Testing

Preparing the surface of a concrete slab for pH testing requires the following attention to detail. Make sure the concrete surface is adequately cleaned of any adhesives, primers, curing compounds, surface contaminants, etc. Exercise care not to over clean the surface of the concrete removing the thin layer of carbonation. This can result in higher, non-responsive pH readings. Slightly wet the concrete sub floor surface with a small amount of distilled water and allow the water to stand for one minute. Apply pH test paper to the wet concrete surface and allow the pH test paper to remain in contact with the wet area for one minute. The pH test paper will change color depending on the pH of the wetted surface and a color scale is provided with the pH test papers for comparison. Note: pH test paper commonly supplied in MVER test kits only measures up to a pH of 12 accurately.

Installation of Tandus products on sub-floor conditions that exceed the specifications and limitations provided in this document will void the applicable limited warranties. Tandus does not represent or make any express or implied warranties that Tandus floor covering products will or will not affect, prevent or cure any other moisture or alkalinity-related issues that may arise because of the moisture and alkalinity levels found in the concrete. Tandus expressly disclaims such express or implied representations or warranties.

Temperature & Humidity

The temperature of the interior environment, including the sub floor should be no lower than 65°F and no higher than 90°F at least 72 hours prior to, during and after the installation. All Tandus products and installation materials should be stored between 65°F and 90°F for at least 48 hours prior to installation. Relative humidity should not exceed 65% as it will retard primer and adhesive set times.

Floor Inspection

The sub-floor must be structurally sound and dry prior to installation. Any curing chemicals, sealers, finishers or other chemical treatments used on sub floors must be chemically and physically compatible with the Tandus backing and adhesive systems, or they must be removed or skim coated with a Portland cement based product. **Chemically abated floors or the use of chemical adhesive removers prior to the application of Tandus backing and adhesive systems can result in product or installation failures and are not recommended nor warranted.** For additional information, please refer to the CRI 2009 104 Commercial Installation Standard. If you have questions concerning the compatibility of specific chemicals with Tandus backing and adhesive systems please contact the Tandus Field Technical Service Department at 800-241-4902 ext 2129.

Floor Debris Cleaning

Clean the sub-floor of all excess concrete spots, solid debris or paint spots using suitable scraping methods. Completely remove all wax, dirt, grease, paints or old adhesives (especially cutback or emulsion). **DO NOT** use solvents or any other chemical adhesive removers to clean the sub-floor. **DO NOT** use an oil-based or silicone based sweeping compound. Contact Tandus for specific floor preparation guidelines including installation over cutback or information on general purpose adhesive.

Floor Patching and Leveling

All sub-floors should be level. Concrete sub-floors should be troweled smooth and should conform to the standard specifications as recommended by the Portland Cement Association. The floor should be flat to within 1/8" in 10 feet. Cracks, holes and depressions can be filled using Portland Cement/Latex fortified patching material. Do not install over loose tile (VAT, VCT or other loose existing flooring substrates).

Floor Cleaning

Sweep and vacuum the floor after patching and debris removal. Do not use an oil, wax, or silicone based sweeping compound. Make sure all perimeter areas are clean. Smooth, nonporous floors should be damp mopped prior to product installation. Where existing, non-asbestos containing cutback adhesive is present, remove the old cutback to the substrate. A licensed asbestos contractor in accordance with state and federal requirements should perform removal of asbestos containing cut back adhesive.

Installation Methods

Direct glue is the recommended method of installation for Tandus woven products. Double glue and stretch in methods are allowed but result in the loss of warranty coverage for delamination and edge ravel. Bubbles in the installation are not covered by the manufacturer warranty. Look for pile-lay (nap) indicators and always run the pile-lay (nap) in the same direction. Do not fold Crossweave carpet rolls. This can result in wrinkles in the face that are difficult to remove. Cuts on the face are a serious issue with Crossweave loop styles; therefore, never trim directly on the face. Use a loop pile cutter for edge trim and inspect the roll for flaws. Claims are not honored on installed material with visible flaws. **Use only Tandus adhesive and seam sealer on Tandus broadloom for warranty protection.**

Planning and Layout

A comprehensive seaming diagram should be prepared and approved by the purchaser before beginning the installation. Seam placement should run parallel with the main flow of traffic. Run the carpet lengthwise down corridors whenever possible. Follow the manufacturers suggested Laying Sequence and preplan where dye lot changes will fall. Always dry lay ahead, watching for irregularities in the pattern.

Seams

Crossweave woven carpet can be cut in both length and width without cutting through the surface loops. Before cutting, fold the carpet back to expose the row of backing. For 100% loop constructions, cut lengthwise between the rows from the face using a loop pile cutter. For alternating loop and cut, cut in the center of the cut pile row. For some high loop constructions it will be difficult to open the length row on the face. For these styles the alternate method is to follow the backing row from the back with a straight knife. Follow the row precisely; avoid cutting the back loops of pile yarn and use shallow penetration of the knife to avoid cutting face loops.

Seam Requirements

Either Tandus B-71 or C-XL Seam sealer is *required* for all Tandus woven styles. The sealer must be properly placed to lock in the yarn bundle on both sides and be of sufficient quantity to form a strong bond. **Note:** Cross Cushion may require a larger bead to ensure there is sealer at the yarn bundle and not just the base of the foam. Where heat bond tape is used in double glue and stretch in installation, apply white latex seam sealer and let it dry before making the hot melt seam.

Manufacturing Tolerances

Carpet is a textile product subject to a certain amount of distortion during and after manufacturing. While extensive measures are taken by Tandus to assure pattern accuracy, perfect pattern match and perfectly straight lines are not guaranteed. Tandus manufactures woven carpet to tolerances considered workable to achieve satisfactory pattern match and straightness. If the following tolerances are exceeded, stop installation and call for direction 1-800-241-4902, ext 2129, 2023, & 2670.

Tolerances: Bow- $\frac{3}{4}$ " or less across width, skew-1" or less across width, and pattern elongation-1 $\frac{1}{2}$ " or less in 12 feet length of carpet.

Achieving Pattern Match

Dry lay as much of the carpet as possible before spreading adhesive. The roll sequence sheet provided by Tandus is based on measurement of pattern repeat. If it is not available or appears incorrect, double-check the repeats by counting the number of patterns in an exact length of 10 ft. and compare the results from roll to roll. Patterns are to be laid starting with the longest pattern and working to the shortest. The general rules of pattern matching are:

- Start in the center of the drop and stretch toward both ends. An exception would be to concentrate efforts on major walkways and less emphasis for under furniture seams.
- Step back frequently and sight down diagonal pattern lines as well as straight across.
- **Do not mix dye lots** unless approved in writing by Tandus.
- Start with the longest pattern (the least number of patterns in 10 ft). It is easier to stretch patterns than to shrink them. Where necessary to shrink, allow fullness and press down as the glue sets up.

Direct Glue Installation Method

- Prepare the floor as required for a quality installation.
- Following the pattern sequence, dry lay the carpet in the predetermined layout, checking for visible flaws and pattern match.
- Trim the edges in preparation for seaming
- Spread Tandus B-19 carpet adhesive using a 1/8" x 1/8" x 1/8" V notch trowel. **Note: Tandus B-19 is the only adhesive that meets Tandus warranty requirements for broadloom installations.**
- For pattern carpet it will be necessary to drop the carpet into the wet adhesive, as the pattern may need to be worked into place before the adhesive sets.
- With the first drop in the adhesive, apply a 1/8" bead of seam sealer to the carpet edge.
- Fold the 2nd drop into the adhesive.
- Move the drops as required to achieve pattern match, straight pattern lines and tightly closed seams. Use stay nails or other holding methods as required to hold the carpet in place while the adhesive sets.
- Roll the carpet to ensure 100% contact and adhesive transfer. For Cross Cushion backing do not exceed 75 lb roller weight.

The above methods are necessary to complete all required lengthwise, butt, or end seams. For stretch and double glue installations, refer to the CRI 104 Installation Methods.

Terminating the Edge

CRI-104 calls for protective transition strip. All carpet terminations or transitions to other type flooring must have a capped edge molding or protective covering to protect the carpet edge. Edge ravel resulting from failure to protect the edge is not covered by the manufacturer's warranty.

Damaged carpet at termination points is not a material defect.

Other-For installation over substrates not mentioned here, information on exposed edges, air pockets, repairs, more detailed installation instructions, and/or other installation information, please contact Tandus' Installation Services at 800-241-4902, ext. 2129, 2023, or 2670.