



INSTALLATION GUIDELINES

Deltaloc®

GENERAL INFORMATION

Mannington Commercial adheres to basics of the Carpet and Rug Institute's (CRI) Installation Standard, which offers general minimum requirements. In addition to the minimums from CRI, this guide provides specific detail required for Mannington Commercial products. Mannington Commercial requires site and subfloor conditions like those for any carpet type. Site should be fully enclosed with an HVAC system functioning to maintain temperature within a range similar to levels maintained when occupied as explained here. Each of the following steps is essential for a successful installation and is required to maintain full warranty coverage.

All recommendations are based on the most recent available information. The information on this sheet provides general subfloor guidelines. For complete details consult Mannington Commercial's General Installation Guide or visit our website at manningtoncommercial.com. All instructions and recommendations must be followed for a satisfactory installation. Good preparation is essential for a trouble-free installation. Do not install Mannington Commercial flooring until job-site testing and subfloor preparations are finished, and the work of all other trades is complete. Site conditions must comply with relevant building codes and local, state and national regulations.

ESSENTIAL FIRST STEPS

- Check style and color. Mannington Commercial requires the carpet be inspected prior to installation for proper style, color and potential defects.
- No visible defects. No claims will be honored if carpet is installed with visible defects.
- Read instructions. Read all instructions prior to beginning installation.
- Site conditions. Maintain temperature between 60-85°F with ambient humidity between 40-60% for 48-72 hours before, during and after installation. Maintain temperature between 55-90°F for product life.
- Material conditioning. All Deltaloc® carpet must be rolled out and allowed to acclimate



prior to installation.

- **Subfloor testing. For Moisture Testing perform the preferred In-situ Relative Humidity (RH) Test (ASTM F2170) or the acceptable Moisture Vapor Emission Rate (MVER) Test (ASTM F1869). For acceptable moisture limits, please refer to the specifications of the adhesive. Must test surface alkalinity (ASTM F710). The pH limit is 10.**
- Dye lots. Mannington Commercial does not recommend mixing dye lots, especially in open areas that would be highly visible. Mix dye lots only if necessary in natural break areas where dye lot change would be less noticeable. Always get prior approval before mixing any dye lots.
- Random, non-patterned styles. For random or non-patterned styles, rolls should be sequenced according to roll numbers.
- Patterned styles. Stage each roll by pattern length instead of roll number. Implement roll sequence when possible after pattern length.
- Direct glue. Mannington Commercial's Deltaloc backings are to be installed by the direct glue method only. Stretch in over cushion and double glue down installation methods will not be warranted.
- Adhesive. Mannington's M-Guard Ultra adhesive must be applied in a full-spread application using the correctly notched trowel as detailed later in this guide.

Important note: Mannington Commercial adhesives are specifically formulated to be fully compatible with backings chemistry and to maximize the performance of Mannington Commercial products. Using substitutes or failing to use Mannington Commercial adhesives as recommended can cut-short product life, cause installation failure and/or lead to a chemical reaction, such as hydrolysis, which will permanently damage the backing and will void all applicable warranty coverage. For Mannington Commercial's bond warranty, the appropriate adhesive must be used. Mannington Commercial will not be responsible for adhesive bond where other adhesives have been used.

SUBFLOOR PREPARATION

Mannington Commercial cannot be responsible for claims regarding subfloor conditions. Careful subfloor preparation is vital for an excellent floor appearance and good adhesion. The subfloor must be smooth, firm, flat, clean, dry, free from defects and fit for purpose. A suitable smoothing compound should be used to ensure that no irregularities show through to the surface of the finished floor. In all cases, the subfloor must meet the moisture and pH requirements before installation.

For porous subfloors (concrete or wood) that have a high pH and/or need a primer, use Mannington's Universal Primer.

Mannington's Universal Primer is an acrylic latex solution made to neutralize excess alkali and is also recommended as a primer to prevent over absorption of adhesive to ensure a better bond. Gypsum topped or patched areas must receive a full application of Mannington's Universal Floor Primer as well as any subfloor that is porous, gritty, chalky or dusty. Porous subfloors with chemical pH above 10 may require a second application.

Mannington's Universal Primer can be applied by pouring directly on the subfloor and spreading evenly with a broom or paint roller. Primer can also be applied with a garden sprayer, airless rig or similar spray equipment. Allow the primer to dry completely prior to second application or before applying adhesive. Primer is dry if there is no transfer when

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touched. Coverage is approximately 350-400 ft² per gallon. Note: Do not use primer with epoxy or urethane adhesives

CONCRETE FLOORS

Before proceeding with installation on any concrete subfloor, please make sure:

- Levelness and finish meets or exceeds American Concrete Institute standards, ACI 301.
- Moisture and alkalinity levels meet requirements as detailed earlier.
- Curing compounds are mechanically removed. Many concrete curing agents can prevent adhesives or sealers from forming a proper bond, especially those with silicate compounds.
- Chemical agents are avoided for removal of curing compounds or old adhesives.
- Portland cement-based compounds are always used and mixed according to manufacturer's instructions when patching cracks and holes, and when leveling is required.
- Gypsum-based patching compounds are always avoided.
- Mannington's Universal Primer is used on any subfloor that is porous, gritty, chalky or dusty.

OTHER SUBFLOOR TYPES

Any subfloor surface must be smooth, level, clean and secure prior to installing Mannington Commercial floor covering products. To achieve maximum product performance, it is always best to remove existing floor covering and prepare the substrate before installing new products.

- Wood. Wood floors must be smooth and level. If floor is uneven, an approved underlayment may be required. Plywood sheets must be solid and secure. Plywood seams may need to be sanded smooth. Dust must be thoroughly vacuumed. Fire-retardant plywood is not recommended.
- Wooden planks. Wooden plank flooring should be covered with plywood as detailed above as stable, flat and suitable for installation.
- Terrazzo/Marble. Level all grout lines with a latex based Portland cement patching compound. Glossy surfaces must be sanded for adhesive bond considered non-porous.
- VCT. Tiles must be well secured to the floor or removed. Broken, damaged or loose tiles must be replaced. Wax must be removed from VCT before applying adhesive.
- Sheet vinyl. Must be well secured, consist of a single layer, free of contaminants, not foam backed, not perimeter fastened or loose laid and no asphalt-based adhesive.
- Existing carpet. Unsuitable substrate for new installation. Should be removed prior to installation. Any existing adhesive should be addressed as described here.

EXISTING ADHESIVES

As a rule, for any new installation, existing adhesives from previous installations should always be scraped flat and thoroughly encapsulated with a Latex Portland Based Patch or Mannington Assure. Otherwise, an adverse reaction could occur, voiding applicable warranty coverage and leading to installation or product failure.

- Multi-purpose/pressure sensitive. Use one of the following methods to prevent possible reaction between the existing adhesive and the new installation:

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- Scrape adhesive flat and encapsulate with Mannington Assure.
- Thoroughly remove existing adhesive, sand away remaining residue and then skim coat with a Portland cement-based patching compound.
- Cutback. Existing cutback adhesive must be thoroughly removed and fully encapsulated to prevent possibility of irreversible product damage, installation failure and voiding Mannington Commercial's warranty coverage. Wet with a mixture of water and a small amount of liquid soap. Allow to soak for several minutes before scraping away adhesive. Encapsulate any remaining trace of adhesive residue with Mannington Assure.

ADHESIVES

M-Guard Ultra Solvent-Free Premium Carpet Adhesive is a high solid, white latex-based adhesive formulated specifically to provide superior bonding strength for installing Mannington Commercial Deltaloc carpets. M-Guard Ultra Adhesive is the appropriate adhesive for installing Mannington Commercial's Deltaloc products. See Adhesive Spread section for trowel sizes and spread rates.

The moisture limits for Deltaloc carpets installed with M-guard Ultra Adhesive are in-situ relative humidity (maximum RH 90% per ASTM F2170) and/or moisture vapor emissions (maximum 8 lbs./1,000 SF/24 hrs. per ASTM F1869). Concrete must have a pH of 10 or less (ASTM F710). On-grade and below-grade concrete slabs must have an approved vapor retarder (ASTM E1745) which is properly installed (ASTM E1643).

INSTALLATION

Seam Trimming:

All seams should be trimmed by row cutting. To row cut a seam, complete the following:

- Begin by opening a row with a flat blade screwdriver.
- Using a loop pile or cushion back cutter with a sharp blade, follow the opened row with the cutter. Make sure the cutting blade is adjacent to the edge of the carpet that will be kept making the seam.
- Change the cutting blade and row cut the opposite breadth.
- Continue this seam trimming procedure for all side seams. Before starting the carpet installation, ensure the following are satisfactorily completed.

When installing carpets without patterns, alternate seam trimming procedures may be used. However, we recommend row cutting as the superior method of seam trimming, thus minimizing cutting through yarn tufts. Alternate methods of seam trimming include row/trace cutting, row/double cutting with National's #575 seam cutter and straight edging.

Cross Seams:

After trimming, cross seams may develop a slight up curl at the edges. This condition can easily be corrected by hand back curing the edges before placing into adhesives. This will eliminate peaked cross seams.

Adhesive Spread:

- After edges have been trimmed, carefully fold back carpet at seams to one-half of its width, exposing subfloor.

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- Apply Mannington’s Ultra or M-Guard Ultra adhesive with a minimum 1/8” x 1/8 x 1/8” U-notched trowel. The spread rate should be approximately 6-8 yd² per gallon of adhesive on smooth concrete.
- Allow adhesive to remain open long enough to develop tack but remain wet enough to ensure transfer to the backing. Temperature and humidity will affect the amount of tack time needed. Adhesive transfer must be 100%. If a 1/8” U-notched trowel does not provide 100% transfer, a deeper notched trowel must be used.
 - Porosity of the sub-floor and/or carpet backing may require a deeper notched trowel. The installation contractor must ensure that the trowel is notched deep enough to provide 100% adhesive transfer to the carpet backing.
 - When installing these backings, a sufficient open time must be observed. Going into the adhesive “wet “can cause carpet to expand, thus causing bubbles.
- Lay one breadth of the carpet into the adhesive and roll out air bubbles using a 75-100 lb roller.
- Seal the seam edge by applying a 1/8” bead of seam sealer.
- Place opposite breadth into position and work seam with slight compression ensuring seam sealer transfer.
- Roll opposite breadth, forcing air pockets out away from the seam.
- Clean away any excess adhesive that may have wicked-up through seam.
- Continue these techniques throughout remainder of installation.
- Re-roll carpet 3-4 hours after installation to reset backing into adhesive.
- Re-roll or tractor seams only after adhesive has had sufficient time to achieve good bonding strength. NOTE: Do not over roll seams while adhesive is wet.

SEAM SEALER

Mannington Commercial’s Deltaloc requires a 1/8” bead of Mannington’s Edge Guard acrylic latex seam sealer when installed via the direct glue down method. The sealer should be applied so that it encapsulates the base of the yarn tufts, the primary backing and secondary backing.

STAIRWAYS

Deltaloc backing will resist conforming to a tight bend necessary for most applications but can be successfully installed on many stairways with the following techniques:

- Separate cuts. Carpet with Deltaloc backing can be cut to fit each step and riser. Apply adhesive to carpet backing and step/riser.
- Stair nosing. Use an appropriate stair nosing to cap carpet edges.

TRANSITIONS

All carpet products must be properly protected when transitioning to other floor covering or exposed stopping points. The use of a transition molding or protective strip covering the

carpet edge at 1/2" is required. If a transition cannot be utilized the carpet nap must be level or slightly below the adjacent floor. The carpet edge must be fully seam sealed to protect from raveling or damage.

PROJECT INSTALLATION

Ideally, carpet should always be installed last in any construction or renovation project. The completed installation should be protected as finish trades complete the project, during customer move-in or when heavy rolling carts are used.

- Craft paper. Bonded craft paper will protect the completed installation from construction dirt and spills while allowing floor covering primers, sealers or adhesives to cure properly.
- Avoid plastic sheeting. Never use plastic sheeting to protect any installation.
- Avoid sticky coverings. Protective coverings with pre-applied adhesive or tackifiers can leave a sticky residue on the carpet face, cause rapid soiling and should not be used.
- Heavy rolling carts. Masonite or plywood should be used in traffic lanes any time furniture is moved.

HELPFUL TIPS

The following tips are offered to help assure a successful installation:

- Extra manpower. Additional manpower may be necessary to prevent shifting when long drops are folded back and forth for spreading adhesive or making seams.
- Cross seams. Minimize seam peaking by hand back curling cross seam edges before placing carpet into adhesive.
- Tack time. Use blowers to expedite tack time, especially in times of high humidity.
- After install. Avoid rolling traffic including furniture move-in for full 72 hours. Use plywood runners to protect carpet when moving heavy furniture. Limit foot traffic for 24 hours.
- Chair pads. Chair pads are required for warranty purposes on carpets with Deltaloc backing. Chair pads can prevent premature wear and distortion of carpet's face fiber underneath rolling office chairs, even when carpet casters are used. Use only carpet friendly casters. Casters should be the flat round type with a 5/8" to 1" width minimum.

If there are any questions or doubts about performing a successful installation of Mannington Commercial's Deltaloc broadloom carpet or Mannington Commercial's adhesives, please stop immediately and call Technical Services at 800-241-2262, ext. 3