

## GENERAL

Mannington 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 products. Mannington requires site and subfloor conditions similar to 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:

## ESSENTIAL FIRST STEPS

Check style, color. Upon receiving carpet, installation contractor should visually confirm all styles and colors are correct for the project.

No claims will be honored if carpet is installed with visible defects.

Read all instructions prior to beginning installation.

Layout all carpet and allow to acclimate prior to adhering to the floor.

Rolls should be installed by roll numbers in consecutive order. For patterned carpet install rolls by pattern size and not by roll numbers.

Do not mix dye lots.

Site conditions. Maintain temperature at 60-85 degrees Fahrenheit with ambient humidity between 40-60 percent for 48-72 hours before, during installation and at least 48-72 hours after installation. Maintain temperature between 55-90 degrees Fahrenheit for product life.

Mannington's latex 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.

Mannington carpets are to be installed by professional installers who have the training, skills, and tools to properly install technically advanced commercial carpets.

Subfloor testing. Concrete subfloors must be tested to determine whether chemical pH and moisture emission levels are suitable. Chemical pH should be between 7-9. Relative Humidity, ASTM-F-2170 (preferred test method) should be 85-percent or less. Calcium Chloride testing, ASTM-F-1869, should be three (5) pounds or less. Test results are not indicative, nor do they predict, how environmental conditions may impact moisture or alkalinity in the future. All tests should be documented and results saved.

Mannington's Ultra adhesive must be applied in a full-spread application using the correctly notched trowel as detailed later in this guide.

High moisture, pH. When testing determines concrete subfloor moisture emission is 90-percent RH or less (8-pounds calcium chloride) with pH of 10 or less, use Mannington's M-Guard Ultra, premium carpet adhesive, as detailed later in this guide.

**IMPORTANT NOTE:** Mannington adhesives are specifically formulated to be fully compatible with backings chemistry and to maximize the performance of Mannington products. Using substitutes or failing to use Mannington 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 tile backing and will void all applicable warranty coverage.

## SUBFLOOR PREPARATION

Mannington cannot be responsible for claims regarding sub-floor conditions. Careful subfloor preparation is vital for an excellent floor appearance and good adhesion. The subfloor must be smooth, firm, flat, clean, dry, and 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 has a high pH and/or needs a primer use **Mannington's Universal Primer**.

**Mannington's Universal Primer** is an acrylic latex solution made to neutralize excess alkali and is also recommend 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 9 may require a second application.

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

## CONCRETE

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, holes and when leveling is required.
- Gypsum-based patching compounds are always avoided.
- Use Mannington's Universal Primer 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 floor covering products.

- Wood floors. Plywood sheets must be solid and secure. Any existing finish must be clean, free of wax. Plywood seams may need to be sanded smooth. Dust must be thoroughly vacuumed. Fire-retardant plywood is not recommended.
- Plank floors. Plank floors should be covered with plywood as detailed above to provide a stable, flat subfloor suitable for installation of Infinity carpet tile.
- Terrazzo/marble. Level all grout lines Portland cement-based patching compound as described above. Glossy finishes may need to be sanded to provide a suitable surface.
- Vinyl composition tile. Individual tiles must be solidly bonded to the subfloor or removed. Broken, damaged, or loose tiles must be replaced. Remove any wax.
- Sheet vinyl. Unsuitable for installation and should be removed.
- Existing carpet. Unsuitable substrate for new installation. Should be removed prior to installation. Any existing adhesives 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 approved sealer. Otherwise, an adverse reaction could occur, voiding applicable warranty coverage, and leading to installation or product failure.

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

1. Scrape adhesive flat and encapsulate with TriSeal (800-367-4583) or equal.
2. Thoroughly remove existing adhesive, sand away remaining residue, and then skim coat with a Portland cement-based patching compound.

Cutback. 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 TriSeal (800-367-4583) or equal. Existing cutback adhesive must be thoroughly removed and fully encapsulated to prevent possibility of irreversible product damage, installation failure and voiding Mannington's warranty coverage.

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## 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.

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.

## ADHESIVES

**ULTRA ADHESIVE** – Ultra Solvent-Free, Premium Carpet Adhesive is a high solid, white latex based adhesive formulated specifically to provide superior bonding strength for installing Mannington latex and polyurethane backed carpets. Ultra Adhesive is freeze thaw stable, and has permanent antimicrobial protection. Ultra Adhesive is the appropriate adhesive for installing Mannington's UltraBac RE products. Ultra Adhesive may be used for installations over concrete subfloors with up to 5 pounds moisture vapor emissions as determined by Calcium Chloride Test (ASTM F 1869), or 85% relative humidity (ASTM F 2170) and pH of 9.

**M-GUARD ULTRA ADHESIVE** - M-Guard Ultra Premium Carpet Adhesive is a solvent-free, very high solids ultra premium commercial carpet adhesive, formulated specifically to provide superior bonding strength for installing Mannington latex and polyurethane backed carpets. M-Guard Ultra is freeze thaw stable and has permanent antimicrobial protection. M-Guard Ultra may be used for installations over concrete subfloors with up to 8 pounds moisture vapor emissions as determined by Calcium Chloride Test (ASTM F 1869), or 90% relative humidity (ASTM F 2170) and pH of 10.

**NOTE:** Ultra or M-Guard Ultra should not be used on concrete slabs where hydrostatic pressure exists. Do not use these adhesive with vinyl backed carpets, sheet vinyl, LVT, VCT, etc.

## ADHESIVE SPREAD

- After edges have been trimmed, carefully fold back seams one-half of their width, exposing sub-floor.
- 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 yards of carpet 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.
- Lay one breadth of the carpet into the adhesive and roll out air bubbles using a 75-100-pound 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.
- 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.
- Re-Roll carpet 3 to 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.

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## SEAM SEALER

Mannington's UltraBac RE requires a 1/8" bead of Mannington's EdgeGuard 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

UltraBac RE carpet can be used for most stair applications.

The industry standard and proper technique for the application of a broadloom carpet going on steps is to use one piece of carpet for each stair, using a continuous piece of carpet from the back of the step (cap) over the lip and down the step (riser) with no breaks/cuts.

The other standard is to install a prefabricated rubber or vinyl step nosing and inserting the carpet on the cap and rise of the step.

Either a commercially available contact adhesive or Mannington's Ultra Adhesive can be used:

1. If using the Mannington Ultra Adhesive, use the same trowel (1/8" x 1/8" x 1/8" U-notch trowel) and apply adhesive to the step and riser, allow the appropriated open time, then install the carpet.
2. When using a contact adhesive, apply two heavy coats of contact adhesive to the carpet and step using a paint roller or brush, allow adhesive to totally dry, then position carpet into palce. Once this stepis complete, use a carpet tractor to help bond the two surfaces together.

## 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.

## PROTECT INSTALLATION

Use Masonite or plywood during furniture move-in. If additional protection is required to prevent damage by other finish trades use bonded craft paper, which will allow adhesives to cure without risk to the new installation. Avoid using plastic sheeting to protect any installation. Coverings with pre-applied adhesive can leave sticky residue, cause rapid soiling, and should not be used to protect the installation.

## TIPS

- Long drops will require extra manpower to avoid shifting the carpet when folding back.
- Placing slight back curl on cross seam edges prior to placing carpet into adhesive will help to minimize seam peaking
- Use blowers to expedite tack time, especially in times of high humidity.
- Minimize foot traffic for 24 hours and no rolling traffic for 72 hours.
- Carpet may be walked on immediately. Use plywood runners to protect carpet when moving heavy furniture.
- Chair pads are recommended for appearance retention for UltraBac RE.
- Chair Pads are recommended for use under chairs with rolling casters and required for full warranty coverage on carpets with UltraBac RE. Chair pads can prevent premature wear even when carpet casters are used. Use only carpet-friendly casters with a minimum of 5/8" to 1" wide.

The procedures listed above are our best recommendations for installing Mannington latex backings. This document and other literature are available upon request. If you have further questions or require additional information, please contact our Technical Services Department at 800-241-2262 Ext. 3.

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