

ADURA® PRO Loose Lay Installation Guidelines

GENERAL INFORMATION

These installation specifications are for fully adhered ADURA® PRO Loose Lay. All recommendations are based on the most recent available information. All instructions and recommendations must be followed for a satisfactory installation.

- Acclimate flooring and the room at a constant temperature between 65°F and 85°F for 24 hrs. prior to and during installation. Temperature of the room should not go below 55°F after 48 hours after installation and anytime thereafter.
- Install only after the jobsite has been cleaned and cleared of other trade apparatus that may damage a finished installation.
- It is imperative to mix and install product from several different cartons to achieve maximum variation and avoid clustering like patterns.
- All subfloor/underlayment patching must be done with a non-shrinking, water-resistant, high-quality portland cement patching or leveler compound.
- Never install ADURA® PRO Loose Lay products over residual asphalt- type (cut back) adhesive. It can bleed through the new flooring. Residual asphalt-type adhesive must be completely removed and covered with underlayment plywood or highquality latex underlayment.
- ADURA® PRO Loose Lay products are adhered with Mannington M-Grip™ or MT-711 adhesive.

SUBFLOOR INFORMATION

- Careful and correct preparation of the subfloor is a major part of a satisfactory installation. Roughness or unevenness of the subfloor may telegraph through the new floor covering, resulting in an unsightly surface and excessive wear on high spots. Subfloor should be flat within 3/16" in 10' and 1/32" in 12".
- CAUTION: Some types of nails, such as common steel nails, cement coated or resin- or rosin-coated nails, may cause a discoloration of the vinyl floor covering. Use only non-staining fasteners with underlayment panels. The procedure of gluing and screwing underlayment panels is not recommended.

Wood Subfloors

- All wood floors must be suspended at least 18" above the ground. Adequate cross-ventilation must be provided, and the ground surface of a crawl space must be covered with a suitable vapor barrier. Wood Substrates cannot exceed 14% moisture content. Wood subfloors directly on concrete or installed over sleeper construction are not satisfactory for installation. Wood subfloors should be covered with a minimum 1/4" or heavier underlayment rated panel to assure successful finished flooring installation. All wood substrates should be smooth, flat, clean, dry, and structurally sound. (meaning no up and down movement).
- Underlayment: Many times, wood panel subfloors are damaged or swelled during the construction process or are not of underlayment grade. These panels should be covered with an approved underlayment. Underlayment panels are intended to provide a smooth surface on which to adhere the finished floor covering. It must be understood that underlayment panels cannot correct structural deficiencies. Particleboard, chipboard, construction-grade plywood, any hardboard or flakeboard are not recommended for underlayment. All have inadequate uniformity, poor dimensional stability, and variable surface porosity. Mannington will not accept responsibility for adhered installation over these subfloors. In all cases, the underlayment manufacturer or underlayment installer is responsible for all underlayment warranties. If the surface of the wood subfloor is not smooth, a 1/4" underlayment panel should be installed over the subfloor. Any panels selected as an underlayment must meet the following criteria:

- o Be dimensionally stable
 - o Have a smooth, fully sanded face so the graining or texturing will not show through
 - o Be resistant to both static and impact indentation
 - o Be free of any surface components that may cause staining such as plastic fillers, marking inks, sealers, etc.
 - o Be of uniform density, porosity and thickness
 - o Have a written warranty for suitability and performance from the panel manufacturer or have a history of prove performance.
- CAUTION: Wood substrates directly fastened to concrete are not satisfactory for the installation of floor coverings. This non-ventilated construction practice will result in deterioration of the wood substrate system and may cause problems such as underlayment joint telegraphing. Mannington will not accept claims regarding performance of our flooring products installed over this subfloor construction.

Concrete Subfloors

- Concrete subfloors should meet requirements prescribed in ASTM F710 "Standard Practice for preparing concrete floors to receive Resilient Flooring."
- Concrete subfloors must have a minimum compressive strength of 3000 psi and dry density of at least 100 pounds per cubic foot.
- Concrete subfloors must be dry, smooth, and free from dust, solvent, paint, wax, grease, oil, asphalt sealing compounds and other extraneous materials. The surface must be hard and dense, and free from powder or flaking. Surface of the subfloor should be flat within 3/16" in 10' and 1/32" in 12".
- New concrete slabs must be thoroughly dry (at least six weeks) and completely cured. Curing agents, surface hardeners and other additives may cause adhesive bonding failure. These should be removed by sanding or grinding.
- All concrete slabs must be checked for moisture before installing material. Details for moisture testing can be found on our website. The final responsibility for determining if the concrete is dry enough for installation of the flooring lies with the floor covering installer. ADURA®PRO Loose Lay must never be installed where excessive moisture emissions may exist. Moisture emission from subfloor cannot exceed 10 lbs. per 1,000 sq. ft. per 24 hours as measured with the calcium chloride test in accordance with ASTM F1869-04 or ASTM F2170 In Situ Relative Humidity not to exceed 95%. Mannington will not assume responsibility for floor covering failure due to hydrostatic pressure or moisture vapor emission. New concrete slabs must be thoroughly dry (at least six weeks) and completely cured. Although the material is not susceptible to damage from moisture, excessive subfloor moisture is an ideal breeding ground for mold, mildew and fungus. All of which can contribute to an unhealthy indoor environment. The Limited Warranties do not cover discoloration from mold or from flooding, leaking plumbing or appliances, water entering through sliding glass doors or similar conditions.
- Holes, grooves, expansion joints and other depressions must be filled with high-quality Portland based Patching & Leveling Compound, troweled smooth, and feathered even with the surrounding surface. Slab should be flat within 3/16" in 10' and 1/32" in 12".
- Concrete floors with a hydronic radiant heating system are satisfactory, provided the temperature of the floor does not exceed 85°F at any point. Additionally, there must be a minimum 1/2" thick topping between the heat source and finished product. Before installing the flooring, new heating systems should be turned on to eliminate residual moisture. Mannington does not recommend heated floor mats for Mannington ADURA®PRO Loose Lay products.

Recommended Work Practices for Removal of Resilient Floor Coverings

WARNING: Do not sand, dry scrape, bead blast or mechanically chip or pulverize existing resilient flooring, backing, lining felt, asphaltic “cutback” adhesive or other adhesive. These products may contain 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. RFCI’s Recommended Work Practices for Removal of Resilient Floor Coverings are a defined set of instructions addressed to the task of removing all resilient floor covering structures. These instructions should be consulted with each installation. The link can be found on our website. See www.mannington.com or go to www.rfci.com.

Existing Floor Coverings

- To achieve maximum product performance of ADURA® PRO Loose Lay, it is always best practice to remove existing floors. However, ADURA® PRO Loose Lay can be installed over most full bonded hard surface flooring. Mannington cannot extend adhesive bond warranty over existing floors.
- Existing floors must be flat, smooth, dry, structurally sound, and well bonded.
- In the rare cases that the removal of the existing resilient floor covering is not an option, the existing flooring must be covered with a high-quality cement based Embossing Leveler. Existing sheet vinyl floors should not be cushioned and consist of only one fully adhered layer.

INSTALLATION

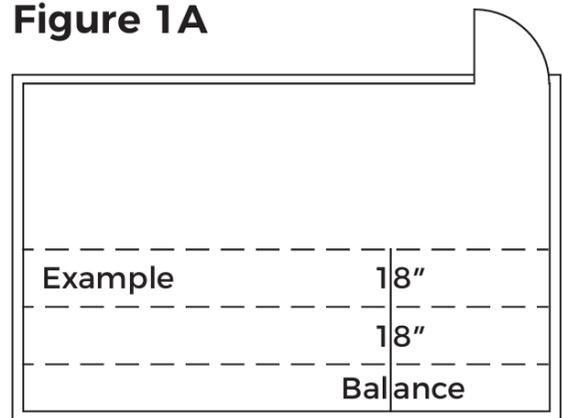
Tile Layout

- As with all tile formats, ADURA® PRO Loose Lay should be “balanced” in the work area. Tiles may be laid squarely or laid out diagonally in the work area. Tiles may also be installed in a normal point to point layout or in an ashlar (staggered, brick) layout. In either case, the room must be accurately measured to square off the area and to determine the center point.
- Accurately measure the room to determine the center line, adjust this established line to accommodate a balanced layout and then transpose this line to the determined layout width away from the starting wall (approximately 2’ to 3’ wide - see Figure 1A). Apply the adhesive in this area and begin installing tiles. Careful and precise measurements must be taken during tile layout. Lay all tiles in the same direction, with all directional arrows imprinted on the back of tiles pointing in the same direction.

Plank Layout

- It is also important to balance the layout of the plank format. Proper planning and layout will prevent narrow plank widths at wall junctures. Determine layout to prevent having less than 1/2 of plank width or very short pieces. As with all plank products, lay the long dimension of the plank parallel to the long dimension of the work area. Accurately measure the room to determine the center line, adjust this established line to accommodate a balanced layout and then transpose this line to the determined layout width away from the starting wall (approximately 2’ to 3’ wide - see Figure 1A). Apply the adhesive in this area and begin installing planks. From an installation perspective, it is important to notice that the planks will be packaged together and that to achieve the realistic visual, it is important to install this collection by blending cartons and paying attention to the pattern details. **DO NOT CLUSTER THE SAME PLANKS TOGETHER.**

Figure 1A



Adhesive Application

Mannington M-Grip™ adhesive is required for adhering ADURA®PRO Loose Lay to all approved substrates. Apply the adhesive with a 1/32" wide, 1/32" deep, and 1/16" apart-notched trowel. Begin applying adhesive at the intersection of the chalk lines; spread the adhesive in the pre-determined area. The M-Grip™ adhesive should be give 10-30 minutes open time (depending on porosity and ambient conditions) so the adhesive becomes tacky. The adhesive must be sufficiently tacky to prevent tile slippage during placement and wet enough to ensure transfer to the back of the plank/tile. M-Grip™ will have approximately 2.5 hours of working time. DO NOT install into totally dry M-Grip™ adhesive without getting some transfer to the back of the plank/tile. ADURA®PRO Loose Lay can also be adhered using a 3/8" nap roller. This method must be used over non porous substrates.

Note: Bond warranty will only be extended with Mannington recommended adhesives.

Tile Installation

After the M-Grip™ has had sufficient tack time, begin laying the tile at the intersection of the working lines. Be certain this tile is installed squarely on the lines. After the first tile is in place, begin laying tiles outward along both guide lines. Press tiles firmly against adjoining tiles and press into the adhesive. Begin setting the tiles into the field area.

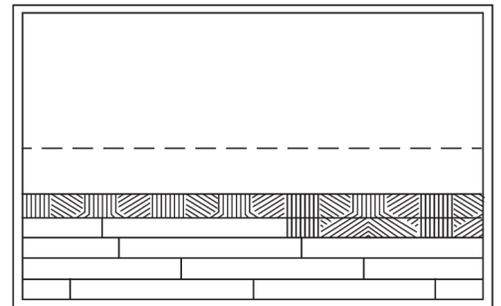
Maintain the squareness of the installation by keeping tiles along guide lines. If the tiles have directional arrows they must be honored. Lay all tiles in the same direction, all directional arrows pointing in the same direction. Ensure that the tiles are firmly bonded to the substrate by rolling the entire installation with a minimum of 75-pound three-section floor roller.

Plank Installation

After the M-Grip™ adhesive has had sufficient tack time, begin laying planks along the designated starting line. Note: If planks have directional arrows on the back they should be installed with arrows facing in one direction. Working back to the starting wall, plank ends should be staggered in a random manner in order to avoid clustering the end joints. Varying the length of the starting plank can assure sufficient stagger of end joints. End joints should be staggered by at least 6".

Always use factory-cut ends for end joints. Pay particular attention to the randomness of the plank layout; avoid establishing a repeating pattern. Continue installing the planks in a random fashion and complete each area before beginning the next – see Figure 2A. If required, use a kneeling board to avoid walking on freshly installed planks. Ensure that the planks are firmly bonded to the subfloor by rolling the entire installation with a minimum of 75-pound three-section floor roller.

Figure 2A



Cutting or Fitting Border Tiles and Planks

ADURA®PRO Loose Lay can be cut with a guillotine cutter or by using a sharp utility knife. Direct or pattern scribe the flooring to fit into complicated, irregular walls or pipes, etc.

Loose Lay / Perimeter Bond

This method should not be used in areas of high traffic, heavy direct sunlight or rolling loads.

Loose Lay: No adhesive in areas 12' x 12' or less.

Perimeter Bond: Requires 6 - 9" band of troweled (1/32" x 1/32" x 1/16" U) or 3/8" nap roller around the entire perimeter and strips of adhesive in intervals of 12', creating a grid pattern.

Grouting ADURA®PRO Loose Lay Tile

ADURA®PRO Loose Lay tile patterns lend themselves to the design option of applying grout between the tiles. Specific installation procedures must be followed when grouting ADURA®PRO Loose Lay. Visit mannington.com for a helpful video.

- Required Tools/Materials:

- o Good quality rubber grouting float
- o Spacers
- o Mannington M-Grip™ adhesive
- o Minimum 1/32" x 1/32" x 1/16" U notch trowel
- o Grouting sponge
- o Water buckets

- Procedure:

The desired grout width must be determined before tile layout begins. It's critical to include grout width measurement to tile size to insure a balanced layout. Grout width should be at least 1/16" wide and no more than 3/16" wide. Ceramic tile spacers may be used to maintain equal grout joint width. Troweled M-Grip™ adhesive (minimum 1/32" x 1/32" x 1/16" U notch) fully troweled is required for grouting ADURA®PRO Loose Lay. Tiles may be grouted after installation. Be certain that the tiles are firmly bonded to the subfloor by re-rolling the entire installation with a minimum of 75 pound three-section floor roller just prior to grouting.

Remove spacers and clean any debris from grout joints. Only ADURA® Grout may be used with ADURA®PRO Loose Lay. This pre-mixed grout has been developed to bond with tiles. It's flexible and durable. Never use cement-based, epoxy grouts.

Apply the grout into the tile joints with the narrow edge of the rubber float. Firmly pack each tile joint in each direction as to leave no voids or skips. As each tile joint is grouted, remove excess grout from tile edges with the stiff edge of the float pulled in a 45° angle across each joint. Grout only in small increments and clean each section as you go. Never apply grout in an area greater than 12 square feet before cleaning. Do not wait more than approximately 8 minutes before starting clean up. To clean, soak sponge in cold clean water. Wring out excess water completely. Use small circular motions to break up grout on the tile and smooth out joint. Soak and wring out sponge clean again. Wipe tiles clean by drawing the sponge diagonally across the tile, flip sponge over and repeat. Avoid excess water in the grout joint. Repeat procedure as necessary. When cleaned properly the grout haze will be minimal and can be removed easily with Mannington Ultra Tile and Grout Cleaner or a neutral household cleaner. Once again, do not use excessive water during clean up. Be certain to wipe diagonally across tile joints to avoid dragging grout from the joint. Rinse this sponge frequently and change the cleanup water frequently. Thoroughly remove all residual grout and grout haze before leaving the job. Dried grout haze is difficult to remove. If a slight grout haze is noticed after 24 hours, it can be removed by using Mannington Tile and Grout cleaner (SAP #429361 / Color Code #803970) per directions.

Thoroughly rinse the area with clean water. Do not use chemical grout cleaners. If skips or voids in the grout joint are discovered after final clean-up, they can be filled by applying new grout directly over the fresh grout.

- Finishing the Job:

ADURA®PRO Loose Lay must be rolled with a minimum 75-pound, three-section floor roller immediately after installation. Roll the flooring in both directions to firmly seat the LVF into the adhesive. Protect all exposed edges by installing wall molding and/or transition strips. Use caution to prevent the fasteners from securing the planks to the subfloor. Caulk along tubs, toilet flanges, exterior doors etc. using 100% silicone caulking. Do not wash the floor for 48 hours after installation. After 48 hours, damp mop to remove residual surface dirt. Follow appropriate maintenance schedule for ADURA®PRO Loose Lay using Mannington Ultra Clean or Mannington Tile and Grout cleaner.

REPAIRING ADURA®PRO Loose Lay

Although the wear surface of ADURA®PRO Loose Lay is durable, it is not bulletproof. Should an accident occur that damages the surface of the product, a simple repair procedure exists. The key to this process is having ample material available to replace the damaged area(s). This should be considered when placing the original order. Extra tiles and planks should be wrapped in their packaging and stored in an interior, climate- controlled location. To remove a tile or plank, gently heat with a hot air blower to allow the material to become more flexible. Insert a thin 2" wide putty knife in the seam and gently lift up. You may find it helpful to cut the damaged product into smaller pieces. Be careful not to damage the surrounding flooring. Remove the damaged tile or plank from the floor.

When removing a tile/plank, pay attention to the orientation of the embossed arrow on the back of the damaged piece so that the new tile can be installed in the same direction. Inspect the subfloor for lumps of residual adhesive, remove and smooth out as necessary. Using a 1/32" notched trowel, apply a thin coating of M-Grip™ or MT-711 to the back of the replacement piece. You must consider the thickness of the residual adhesive layer when determining the appropriate adhesive application to the replacement piece. Too much adhesive will cause the replacement flooring to be higher than the surrounding tile or plank. Provide sufficient open time (typically 15 minutes) and then position the tile or plank into the repair area.

Roll evenly with a hand roller and, if necessary, weight the tile or plank for several hours until the adhesive sets. If the tile was grouted, the grout must be removed and replaced during tile replacement.

Regrouting ADURA®PRO Loose Lay tile: ADURA® Grout can be applied over properly prepared existing grout. Carefully remove old grout at least 1/2 the grout thickness. Clean grout area and apply new grout.

CAUTIONS AND MISCELLANEOUS

- Furniture should be moved onto the newly installed floor using an appliance hand truck over hardboard runways.
- Do not place heavy items on newly installed floor covering for at least 24 hours after completion of the installation. Heavy furniture should be equipped with suitable non- staining, wide-bearing caster or protectors. Non-staining felt protectors are recommended for table and chair legs to help prevent scratching.
- Floor covering subjected to excessive heat and light is subject to thermal degradation. Use appropriate precautions to minimize potential effects on the floor covering.
- Oil or petroleum-based products can result in surface staining. Do not track asphalt-driveway sealer or automobile-oil drips onto the vinyl floor covering.
- Mats used for ADURA®PRO Loose Lay are to be labeled "non-staining". Rubber, cocoa-backed or latex backed mats may discolor ADURA®PRO Loose Lay.

U.S. Patent 6,291,078; U.S. Patent 6,218,001; U.S. Patent 7,384,697 and other patents pending.

**Be sure to register your new floor at
Mannington.com/Register for a chance to win
\$100 and for proper warranty coverage.**