ADURA®Max Installation Guidelines

GENERAL INFORMATION

These installation specifications are for ADURA®Max. All recommendations are based on the most recent available information. All instructions and recommendations must be followed for a satisfactory installation. You may also visit our website at Mannington.com for recent updates or helpful videos and installation.

- ADURA®Max is a completely waterproof product.
- Considerations for under structure or indoor room quality and environment should be given. Mannington will not be responsible any problems related to mold or mildew due to excess moisture.
- Acclimating ADURA®Max flooring is to be considered best work practice, the room and flooring should be allowed to adjust in constant temperatures between 55°F and 90°F for 48 hrs. prior to and during installation. Temperature of the room should not go below 55°F.
- ADURA®Max does not need to be acclimated if HVAC is up and operating and material is within 15°F difference from storage to install.
- ADURA®Max should not be exposed to temperatures greater than 140°F.
- To allow for structure movement for ADURA®Max to float freely, a 1/4 inch expansion is recommended with no pinch points.
- Open room area not to exceed 50 linear ft. in either direction or total of 2500 sq. ft.
- Install ADURA®Max only after the jobsite has been cleaned and cleared of other trade apparatus that may damage a finished installation.
- Mix and install product from several different cartons to achieve maximum variation.
- All subfloor / underlayment patching must be done with a non-shrinking, water-resistant, high-quality Portland cement patching compound.
- Never install ADURA®Max products over residual asphalt-type (cut back) adhesive. Residual asphalt-type adhesive must be completely removed and covered with underlayment plywood or high quality latex underlayment.
- Do not install under permanent structures such as cabinets.
- ADURA®Max locking system is designed to be installed as an angle/angle install only.
- Never install ADURA®Max products over residual asphalt-type (cut back) adhesive. Residual asphalt-type adhesive must be completely removed and covered with underlayment plywood or high-quality latex underlayment.

SUBFLOOR INFORMATION

Careful and correct preparation of the subfloor is a major part of a satisfactory installation. Although ADURA®Max is installed as a "floating" floor, correct preparation of the subfloor is still a major part of a successful 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. All subfloors should be flat to within 3/16" in 10'.

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 subfloors directly on concrete or installed over sleeper construction are not satisfactory for installation.
- ADURA®Max can be installed over many wood substrates that are not suitable for fully adhered products, providing they are smooth, flat, structurally sound and free of deflection – including particleboard, chipboard, flakeboard and OSB. Caution: Many times wood panel subfloors are damaged during construction – the suitability of these floors are the responsibility of the installer.
  - If the surface of the wood subfloor is not smooth, a ¼" underlayment panel should be installed over the subfloor. Any panels selected as an underlayment must meet the following criteria:
  - Be dimensionally stable
  - Have a smooth, fully sanded face so the graining or texturing will not show through
  - Be resistant to both static and impact indentation

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- Be free of any surface components that may cause staining such as plastic fillers, marking inks, sealers, etc.
- Be of uniform density, porosity and thickness
- Have a written warranty for suitability and performance from the panel manufacturer or have a history of proven performance

Concrete Subfloors

- Concrete subfloors should meet requirements prescribed in ASTM F710 "Standard Practice for preparing concrete floors to receive Resilient Flooring."

- Concrete subfloor should meet requirements prescribed in ASTM F710 standard practice for preparing concrete floors. Concrete subfloors must be dry, smooth, and free from dust, solvent, 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 slab should be flat to within 3/16" in 10'.
- The final responsibility for determining if the concrete is dry enough for installation of the flooring lies with the floor covering installer. Due to environment and indoor quality, Adura®Max should not be installed where excessive moisture emissions may exist. In accordance with ASTM1869-04, moisture emission from subfloor should not exceed 8 lbs. per 1,000 sq. ft. per 24 hours as measured with the calcium chloride test. If using ASTM 2170 In Situ Relative Humidity Test, relative humidity should not to exceed 85%. Mannington will not assume responsibility for floor covering failure due to hydrostatic pressure or moisture vapor emission. New concrete slabs should be thoroughly dry (at least six weeks) and completely cured. Although Adura®Max planks are 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 flooding, leaking plumbing or appliances, water entering through sliding glass doors or similar conditions.
- Holes, grooves, control joints/saw kerfs and other depressions must be filled with a high-quality patching & leveling compound, troweled smooth and feathered even with the surrounding surface.

- Concrete floors with a hydronic radiant heating system are satisfactory, provided the temperature of the floor does not exceed 85°F at any point. Before installing the flooring, the heating system should be turned on to eliminate residual moisture. Mannington does not recommend heated floor mats for ADURA®Max.

WARNING: Do not sand, dry scrape, beadblast 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 mannington.com or go to rfci.com.

Existing Floor Coverings

ADURA®Max can also be installed over most existing hard surface floor coverings provided that the existing floor surface can be made smooth.

- Ceramic tile should be made smooth by applying a cementitious overlay such as patching or leveling compound (filling grout lines not required).
- Existing grout lines can be laid over.
- Existing floors should non-cushioned, fully adhered and not exceed one layer in thickness.
- Do not install over carpet.
- Floor should be flat, smooth, dimensionally sound and free from deflection.

INSTALLATION

ADURA®Max is designed to be installed as a "floating" floor. Do not secure the planks to the subfloor. Always undercut wood door

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jambs. Check local building code for metal doorjamb. If jamb cannot be cut then expansion must be maintained around the doorjamb. Do not install cabinets or kitchen islands on top of ADURA®Max. Use care when installing wall moldings and transition strips to not fasten through the product. ADURA®Max is an angle/angle installation which provides supreme joint strength.

Plank Layout

- It is 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 half a plank width or very short length 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 centerline, adjust this established line to accommodate a balanced layout and then transpose this line to a comfortable width away from the starting wall (approximately 2' to 3' wide). Determine if the starter row will need to be cut. If the first row of planks does not need to be trimmed in width, it may be necessary to cut off the unsupported tongue so a clean, solid edge is toward the wall.
- Position the first plank so that both the head and side seam groove are exposed. NOTE: The groove is the longer of the locking profile approximately 1/4". This requires installing the product from left to right in the room. Occasionally, it may be necessary to install backwards. This may be done by sliding the grooves under the tongues and working them right to left, but this is more difficult.
- Install the second plank in the row by angling the end tongue into the end groove of the first plank. Be careful not to bend the corner of the plank. It is important to know that all structures expand and contract, as well as hardwood and laminate product. For this reason, it is recommended to maintain an expansion gap of approximately 1/4" from the wall. Then, cut a plank to length to start the second row. Stagger the end seam at least 6" to 8" from the first plank.
- Install the first plank in the second row by inserting the long side tongue into the groove of the plank in the first row. This is best done with a low angle of the plank. Do not flat install ADURA®Max planks.
- Install the second plank in the second row by inserting the short end tongue tightly into the previously installed plank end groove. Align the plank so the long side tongue tip is positioned just over the groove lip of the plank in the first row. Working from the end seam, with a low angle, slide the long tongue into the groove of the adjoining plank. Finesse and slight pressure is required to seat the tongue into the groove. You will feel the tongue lock into the groove.
- Work across the length of the room installing planks along the wall in the first row and then aligning the planks in the second row. It is critical to keep these two rows straight and square, as they are the "foundation" for the rest of the installation. Check squareness and straightness often.
- Cut the last plank in the first row to fit approximately 1/4" short of the end wall. Planks may be cut with a saw or guillotine type cutter such as Bullet Tools Mega shears. Often times the remainder of this plank may be used to start the third row.
- Continue installing planks, being certain to maintain a random appearance and offset end seams by at least 6" to 8". Maintain a 1/4" expansion space at all fixed vertical surfaces. Check to be certain all planks are fully engaged. If slight gapping is noticed, the gap can be tapped closed by using a scrap of flooring and a tapping block. It is always a best work practice to use a Mannington laminate tapping block to lightly tap rows as you install to fully seat the locking system, assuring they are fully engaged. Tapping blocks can be ordered as a single block (SKU#265309) or a case of 25 blocks (SKU#153275).
- When fitting under door casings, toe kick etc. plank must be modified using a small block plane. Remove a thin layer from the groove to allow tongue and groove to be flat fitted while keeping the integrity of the tongue and groove. After checking the fit, apply a thin bead of MSS 20 seam sealer on the groove then slide planks together to seal the joint tight. Wipe any excess sealer off the surface. If necessary, a flat pull bar may be used to assist in adjoining the modified planks. When fitting around obstacles or into irregular spaces, ADURA®Max can be cut easily and cleanly using a multi-tool or jigsaw. It is often beneficial to make a cardboard template of the area and transfer this pattern to the plank. The modularity of ADURA®Max allows for interesting and decorative combinations of tiles and planks. When determining proper layout for this custom installation, it is important to consider the dimensions of the modular "design unit" and then balance the design unit in the work area. Careful and precise measurements must be taken to ensure success with a combination design. Note: Due to thickness variations, you cannot mix ADURA®Max products together.

FINISHING THE JOB

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Protect all exposed edges of ADURA®Max by installing wall molding and/or transition strips. Use caution to prevent the fasteners from securing the planks to the subfloor – do not allow floor to become pinched. Caulk along tubs, toilet bowls, etc. Consideration for transitions should be made at substrate changes, room to room environment changes, complicated layouts, subfloor elevation, or room size over 50 ft. length or width.

Available matching transitions for ADURA®Max:

T-molding – used to finish flooring adjoining same level

Reducer – used to finish flooring when two level surfaces meet

Flush Stairnose – used to finish landing or step

End Cap – used to finish flooring at a vertical obstruction such as sliding door, bathtub, and carpet

Quarter Round – molding is nailed directly to the baseboard

After 48 hours, damp mop to remove residual surface dirt. Follow appropriate maintenance schedule using Mannington Ultra Clean.

Like with all floor coverings, protect the finished ADURA®Max installation from exposure to direct sunlight. Close your curtains or blinds where extreme sunlight hits the floor. A combination of heat and sunlight can cause fading, discoloration or thermal expansion in most home furnishings. Avoid exposure to direct sunlight for prolonged periods. Prolonged direct sunlight can result in discoloration and excessive temperatures may cause floor expansion (which may cause buckling) or delaminating. See Cautions & Miscellaneous for details.

REPAIRS

ADURA®Max is tough and durable; however, if a floor becomes damaged it can be replaced.

If the damaged plank or tile is along the perimeter of the room, the easiest technique is to just disconnect the planks until the damaged plank is removed. Replace the material and reassemble the planks.

If it's impractical to just disconnect and reassemble the flooring the following procedure should be used:

- Using a circular saw and or a multi-tool saw, cut out and remove the center of the damaged piece, leaving approximately a 1" strip attached to the surrounding material.
- Carefully cut back from the corners of the plank or tile to the inside edge.
- Remove the edges by wiggling the cut plank out from the tongue and groove of the surrounding pieces.
- Prepare the replacement plank by removing the leading edge of the tongue profile on the long side and the end of the plank being careful not to damage the decorative surface. Also remove the bottom of the groove on the short end side by cutting on an angle. Once the plank is prepared, install the groove into tongue to test the fit. Once you check the fit, you are now ready to fully install.
- Position the replacement piece by engaging the groove into the tongue of the adjoining material. "Hinge" the prepared replacement plank into position.
- Slightly lift prepared side of plank and apply a thin application of Mannington MSS 20 Seam Sealer onto the three exposed seams. Carefully position plank into place and wipe excess application from surface.
- Use a hand roller to assist in aligning the edges into position.
- Weigh down the replaced plank for at least 15 minutes until the sealer secures the material.

CAUTIONS AND MISCELLANEOUS

- Furniture should be moved onto the newly installed floor using an appliance hand truck over hardboard runways.
- Heavy furniture should be equipped with suitable non-staining, wide-bearing casters or protectors. Non-staining felt protectors are recommended for table and chair legs to help prevent scratching.
- Close your curtains or blinds were extreme sunlight hits the floor. Like with all floor coverings, protect the finished ADURA®Max installation from exposure to direct sunlight. A combination of heat and sunlight can cause fading, discoloration or thermal expansion in most home furnishings. Avoid exposure to direct sunlight for prolonged periods. During peak sunlight hours, the use of blinds or drapes is recommended. Prolonged direct sunlight can result in discoloration and excessive temperatures may cause floor expansion, which may cause buckling or delamination.
- 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.
- Use mats labeled "non-staining."
- If extreme direct sunlight over 140 degree temperature is a concern, an Adura glue option may be preferred.

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

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