

ADURA® PRO Rigid Installation Guidelines

GENERAL INFORMATION

These installation instructions are for ADURA® PRO Rigid. All recommendations are based on the most recent available information. All instructions and recommendations must be followed for satisfactory installation. You may also visit Mannington.com for recent updates.

- Although acclimation is not specifically required, best installation practice recommends that the product be installed close to intended occupied service temperature, generally a target of 70° F (21°C), but at least between 55°F (13°C) and 100°F (38°C). Acclimation of 24 hours is required when transporting from extreme environments plus or minus 20°F (6°C).
- ADURA® PRO Rigid is recommended for three season rooms and seasonal homes over concrete substrate. Installer must provide at least 5/8" (16mm) expansion.
- ADURA® PRO Rigid is not recommended where the floor might experience temperature extremes beyond -20°F (-29°C) or greater than 150°F (65°C). Occupied use temperature range is assumed to be between 55°F (13°C) and 100°F (38°C).
- ADURA® PRO Rigid can be installed up to 50' x 50' (15.2 m X 15.2 m) or total of 2500 sq. ft. (232.3 sq m) with a ¼" (6.4mm) expansion. Larger areas must provide a 3/8" (16mm) expansion up to 100' x 100' (30.4 m X 30.4 m).
- Install ADURA® PRO Rigid only after the job-site 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 desirable plank variation.
- All subfloor/underlayment patching must be done with a non-shrinking, water resistant, high quality Portland cement patching or leveling compound.
- Structural subfloor requirements must meet local building codes as well as Mannington criteria. For concrete subfloors, conformance to ASTM F 710 and for panel underlayment's conformance to ASTM F 1482.
- ADURA® PRO Rigid is designed to be installed as an angle/angle install only.

SUBFLOOR INFORMATION

- Careful and correct preparation of the subfloor is a major part of a satisfactory installation. ADURA® PRO Rigid is designed using a "floating floor" installation method. Although ADURA® PRO Rigid will bridge minor floor imperfections and gaps; heavy roughness or unevenness in the subfloor may telegraph through the new floor covering.
- All subfloors should be flat to within 3/16" (4.8 mm) in 10' (3048 mm) and 1/32" (0.8 mm) in 12" (305 mm).
- Never install ADURA® PRO Rigid products over residual asphalt-type (cut back) adhesive. Residual cut back adhesive should be completely removed and covered with high quality latex underlayment.
- Subfloor must be clean, flat, smooth, dry and structurally sound.
- ADURA® PRO Rigid has an attached underlayment, no additional pad is recommended.

Wood Subfloors

- All wood floors must be suspended at least 18" (457.2 mm) above the ground. It is important to provide adequate cross-ventilation. Cover the ground surface of a crawl space with a suitable vapor barrier. Wood substrates directly on concrete or installed over sleeper construction are not satisfactory for installation.
- ADURA® PRO Rigid can be installed over many wood substrates that are not suitable for fully adhered products, if they are smooth, flat, structurally sound and free of deflection, including particleboard, chipboard, flake board, OSB.

CAUTION: Damage may occur on wood panel subfloors during construction. The suitability of these floors is the responsibility of the installer.

- If the surface of the wood subfloor is not smooth, a 1/4" (6.4mm) 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
 - 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 prove performance.
- Structural subfloor requirements must meet local building codes as well as Mannington criteria. For concrete subfloors, conformance to ASTM F 710 and for panel underlayment's conformance to ASTM F 1482.
- ADURA®PRO Rigid is designed to be installed as an angle/angle install only.

Concrete Subfloors

- 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 slab should be flat to within 3/16" (4.8 mm) in 10' (3048 mm) and 1/32" (0.8 mm) in 12" (305 mm).
- New concrete slabs must be thoroughly dry (at least six weeks) and completely cured.
- All concrete subfloor systems must meet or exceed local building code specifications. For concrete slabs that are on or below grade it is required that they be constructed so that ground water vapor cannot penetrate.
- 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 Rigid must never be installed where excessive moisture emissions may exist. In accordance with ASTM F1869 moisture emission from subfloor cannot exceed 8 lbs MVER (moisture vapor emission rate) per 1,000 sq. ft. per 24 hours as measured with the calcium chloride test or ASTM F 2170 In Situ Relative Humidity Test not to exceed 85%. Mannington will not assume responsibility for floor covering failure due to hydrostatic pressure or excessive moisture vapor emission. New concrete slabs must be thoroughly dry (at least six weeks) and completely cured. Although the planks are not susceptible to damage from moisture, excessive subfloor moisture can be a breeding ground for mold, mildew and fungus. All of which can contribute to an unhealthy indoor environment. The Limited Warranties do not cover issues arising from flooding, leaking plumbing or appliances, water entering through sliding glass doors, presence of mold, discoloration from mold or fungi or similar conditions.
- Mannington does not recommend the use of 6 mil poly directly under ADURA® floating products.
 - On and below grade concrete subfloors must have a suitable vapor retarder properly installed directly beneath the slab. Always follow manufacturer's written recommendations for the use and installation of their appropriate surface preparation materials. Consequently, Visqueen (6 mil polyethylene) on top of the slab is NOT a recommended solution for controlling moisture emissions above specified limits. Poor indoor environmental conditions can take place under the polyethylene and up the walls. If MVER is over 8lbs or RH of the slab is over 85% additional drying time must be allowed or use of a moisture mitigation system is required. Use a proven system that meets ASTM F3010 standard practice for two-component resin-based membrane-forming moisture mitigation systems for use under resilient floor coverings from a reputable manufacturer such as Ardex, Mapei, Schonox etc... Follow the manufacturer's installation guidelines.
- Holes, grooves, expansion joints and other depressions must be filled with a high quality cementitious patching & leveling compound, troweled smooth and feathered even with the surrounding surface.

- Radiant Heat - Concrete floor with Hydronic radiant heating systems are the preferred system under flooring, with a minimum ½” over topping to insure proper heat dispersion throughout the product. The surface temperature must not exceed 85°F. Electric and mat radiant heating systems can be used under Mannington Floating SPC and WPC products provided they are specifically recommended and warranted by the radiant heat equipment manufacturer for that application. Heating system must not exceed 80°F and must provide a flat, smooth installation surface for the Resilient flooring product. Mannington warranties do not cover problems caused by inadequate radiant heating systems. Always check such systems as to their suitability, warranted coverage and use under SPC/WPC floating 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

- ADURA®PRO Rigid can also be installed over most existing hard-surface floor coverings provided that the existing floor is well bonded and the surface is flat and smooth.
- Ceramic tile unevenness should be made smooth by applying an overlay such as cementitious patching or leveling compound.
- Existing floors should not be cushioned and not exceed one layer in thickness.
- Do not install over carpet.
- Caution installing over existing floors on or below grade concrete. High moisture vapor emissions can build up under WPC & SPC floating floors.
- Floor should be flat, smooth, dry, clean and structurally sound.

INSTALLATION

- ADURA®PRO Rigid is designed to be installed as a “floating” floor. Do not secure the planks to the subfloor.
- Always undercut wood door jambs. Check local building code for metal door jambs. If they cannot be cut, then proper expansion must be maintained around door jamb. Fill expansion gap with 100% silicone caulking. For metal door jambs in room to room applications, we recommend using transitions.
- Do not install cabinets or kitchen islands on top of ADURA®PRO Rigid. Use care when installing wall moldings and transition strips to not fasten through the product or bond to the substrate with adhesive. ADURA®PRO Rigid is an angle/ angle installation which provides superior joint strength.

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' (609.6 mm) to 3' (914.4 mm) 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 3/16" (4.8 mm). This requires installing the product tongue into groove. Occasionally, it may be necessary to install "backwards". This may be done by sliding the long side grooves under the tongues but still working the head seam tongue into the groove, however, this is more difficult.
- Install the second plank in the row by angling the end tongue with a **low angle** 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 with temperature and humidity changes. A minimum expansion gap of approximately 1/4" (6.4 mm) from the wall is recommended. Then cut a plank to length to start the second row. Stagger the end seam at least 6" (152.4 mm) 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 the low angle of the plank. Do not install ADURA®PRO Rigid planks flat.
- 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. Use of 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 a minimum 1/4" (6.4 mm) short of the end wall. Planks may be cut using utility knife, power saw or guillotine type cutter such as Bullet Tools Mega Shear. Often 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" (152.4 mm). Maintain a 1/4" (6.4 mm) 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 best work practice to use a Mannington Universal Tapping Block (SAP#171968) to lightly tap rows as you install to fully seat the locking system assuring they are fully engaged.
- When fitting under door casings, toe kick etc. plank must be modified using a small block plane or sharp chisel. 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 (Order Code: 832202) 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®PRO Rigid 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.

Finishing the Job

- Protect all exposed edges of ADURA®PRO Rigid by installing wall base, quarter round and/ or ADURA®PRO Rigid matching moldings. Use caution to prevent the fasteners from securing the planks to the subfloor. Do not allow the floor to become pinched. Considerations for transitions should be made for substrate changes, room to room environment changes, complicated layouts, and subfloor elevation. Caulk along tubs, toilet flange, etc. All caulking must be done with 100% silicone.
- After 24 hours, damp mop to remove residual surface dirt. Follow appropriate maintenance schedule using Mannington Ultraclean or a quality rinse free cleaner.

REPAIRING ADURA®PRO Rigid

- ADURA®PRO Rigid is tough and durable, however, if a plank becomes damaged it can be replaced.
- If the damaged plank 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. Be careful not to damage the surrounding flooring. Remove the damaged tile or plank from the floor. See the ADURA®Max plank replacement video on the Mannington YouTube channel for reference.
- If it is impractical to just disconnect the flooring, single/multiple plank replacements can be preformed. Follow this procedure:
 - o Using a circular saw and or a multi tool saw, cut out and remove the center of the damaged piece, leaving approximately a 1" (25.4mm) 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. Careful not to damage the decorative surface. Also remove the bottom of the groove on the short end side by cutting on an angle to remove. Once the plank is prepared, install groove into tongue to test the fit. Once you check the fit is correct you are now ready to complete the 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 MSS 20 (Order Code: 832202) onto the three exposed seams and carefully position plank into place. Avoid excess sealer on the surface.
- Use a hand roller to assist in aligning the edges into position.
- Weight 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.
 - Rolling chairs and wheelchair pivot points require a rigid chair protective mat.
 - Like with all floor coverings, it is best to protect ADURA®PRO Rigid installation from exposure to direct sunlight. A combination of heat and sunlight can cause most home furnishings to fade and discolor. Avoid exposure to direct sunlight for prolonged periods. During peak sunlight hours, the use of blinds or drapes is recommended.
 - Oil or petroleum-based products can result in surface staining. Do not track asphalt-driveway sealer or automobile oil drips onto the ADURA®PRO Rigid.
 - Use rugs or mats labeled "non-staining" that provide a manufacturer warranty.
 - Inspect all flooring prior to installation. If you have any questions or concerns, please contact Mannington's Customer Care team at 800-356-6787. Claims will not be accepted for product that has not been inspected prior to installation.
- 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
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\$100 and for proper warranty coverage.**