

There Are Two Methods of Installation Suitable for Flexible Vinyl Flooring

The recommended installation method depends upon the overall floor dimensions and the expected daily use of the flooring once installed.

1. Releasable Full Spread Installation Method using Mohawk V-One.
2. Permanent Full Spread Installation Method, required for new construction, cold crack warranty jobs, or installations to accommodate special needs.

NOTE: If you elect to permanently install your Mohawk residential flooring using the Permanent Full Spread Installation Method, as opposed to the releasable method with Mohawk V-One Adhesive, labor rates exceeding residential releasable removal and underlayment will not be covered.

LMF/Flexible LVT Flooring Releasable Full Spread Installation Method Using Mohawk V-One Materials Required for Installation

- Mohawk V-One Multi-Function Adhesive
- Hand seam roller/wallpaper roller
- 3/8-inch nap paint roller
- Sharp utility knife/extra blades
- Straight edge
- Chalk line
- Mohawk X123R Prime Coat Adhesive Primer (*if priming deemed necessary*)

Permanent Full Spread Installation Method Using Mohawk V-One Materials Required for Installation

- Mohawk V-One Multi-Function Adhesive
- New 1/16 x 1/32 x 1/32-inch U notch trowel
- Acrylic double-face tape for vinyl floors
- Sharp utility knife/extra blades
- Straight edge
- 100 lb. roller
- Push broom
- Mohawk X123R Prime Coat Adhesive Primer (*if priming the floor is necessary*)

NOTE: Mohawk will not be held responsible for problems that may arise from alternative adhesives. Please contact the adhesive manufacturer with issues.

NOTE: We recommend placing a single order for all cartons required for larger installations and commercial flooring projects.

Asbestos Warning

Warning! DO NOT MECHANICALLY CHIP OR PULVERIZE EXISTING PREVIOUSLY INSTALLED RESILIENT FLOORING, BACKING, LINING FELT, ASPHALTIC "CUTBACK" ADHESIVES OR OTHER ADHESIVES. Previously installed resilient floor covering products and the asphaltic or cutback adhesives used to install them may contain either **asbestos fibers** and/or **crystalline silica**. Avoid creating dust. Inhalation of asbestos or crystalline dust is a cancer and respiratory track hazard. Smoking by individuals exposed to asbestos fibers greatly increases the risk of seriously bodily harm. Unless you are positive that installed 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 and may govern the removal and disposal of material. See current edition of the Resilient Floor Covering Institute (RFCI) publication "Recommended Work Practices for Removal of Resilient Floor Coverings" for detailed information and instructions on removing all resilient covering structures.

Underlayments

Mohawk's flexible vinyl flooring products can be installed directly over most existing floor coverings, EXCLUDING carpet (*including needle felt*), floating laminate, floating floor systems, luan, cushioned vinyl flooring, and soft foam padding or underlayments.

Flexible vinyl flooring may be installed directly over existing ceramic tile (*well bonded with a skim coat*), PVC, VCT (*well bonded, on and above grade*), or terrazzo (*well bonded*), provided the existing flooring was installed over a wooden subfloor. Any resilient tile installed below grade must be removed, along with any residual adhesive, prior to installing your new floor.

NOTE: Do not use chemical adhesive removers to remove existing adhesive.

Wood Underlayments

Wood subfloor systems require a double-layer construction. The top layer must be underlayment grade, as specified and warranted by the manufacturer. Always fasten underlayment in accordance with the manufacturer's recommendations. Any failure of the Mohawk flooring because of the underlayment is NOT the responsibility of Mohawk.

- A moisture test is required using a pin-type moisture meter. The moisture content must not exceed 14%.
- Wood subfloors must be structurally sound and in compliance with local building codes.
- Double-layered, APA-rated wood subfloors should be a minimum 1-inch total thickness, with a least 18 inches well-ventilated air space beneath.

- Insulate and protect crawl space with a 6-mil vapor barrier.
- It is recommended that your chosen APA underlayment be designed for installation under resilient flooring and carry a written warranty.
- Underlayment can only correct minor deficiencies in the subfloor while providing a smooth, sound surface on which to adhere the resilient flooring.
- Always follow the underlayment manufacturer's installation instructions.
- Wood subfloors directly fastened to concrete, or sleeper construction, are not recommended.
- APA-rated Sturd-I-Floor panels are designed as combination underlayment/subfloor and are designed for carpet only. Installing this resilient flooring over Sturd-I-Floor panels would require installation of a minimum 1/4-inch underlayment on top of the Sturd-I-Floor subfloor.
- Mohawk flooring is not recommended directly over fire-retardant treated plywood or preservative treated plywood. The materials used to treat the plywood may cause problems with adhesive bonding. An additional layer of APA-rated 1/4-inch-thick underlayment should be installed over top any treated subfloor.

OSB

- OSB panels and joints must be fastened and reinforced according to manufacturer's instructions.
- Completely sand OSB subfloor with a floor sander until smooth and flat.
- Some chips in OSB structure can stain vinyl flooring and may require repeated primer to eliminate the staining potential. To avoid staining, the sanded OSB surface must be thoroughly primed using a Mohawk acrylic latex primer.

NOTE: The chips in OSB overlap. Without sanding properly, OSB has high and low spots throughout the floor that could telegraph through the vinyl.

Particle board

- Particle board underlayment panels must be underlayment grade, as specified and warranted by the manufacturer.
- Surface must be primed using Mohawk acrylic latex primer.

NOTE: Perform moisture tests using a reliable moisture meter in multiple locations. Moisture readings should never exceed 14% for plywood, OSB, particle board, chipboard, or solid hardwood subfloors. If moisture readings exceed 14%, conditions must be corrected at the job site before installing the Mohawk flooring.

Resilient Floor Covering as an Underlayment

- Must be single layered, non-cushioned backed, fully adhered, and smooth.
- Show no signs of moisture or alkalinity.
- Wax, polish, grease and grime must be removed.
- Cuts, cracks, gouges, dents and other irregularities in the existing floor covering must be repaired or replaced.

NOTE: The responsibility of determining if the existing flooring is suitable to be installed over rests solely with the installer/flooring contractor on site. If there is any doubt as to suitability, the existing flooring should be removed, or an acceptable underlayment installed over it. Installations over existing resilient flooring may be more susceptible to indentation.

Concrete

New and existing concrete subfloors should meet the guidelines of the latest edition of ACI 302 and ASTM F 710, "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring" available from the American Society for Testing and Materials.

Moisture levels of concrete slabs before, during and after installation must be 8 lbs. or less per 1000 square feet per 24 hours using an anhydrous calcium chloride test according to ASTM F1869 and pH must be between 5.0 and 9.0; or, if using ASTM F2170 InSitu Probes, should be less than 90% RH (*relative humidity*). Three tests should be conducted for areas up to 1,000 Sq. Ft. One additional test, for each additional 1,000 Sq. Ft. Always measure, record and keep your testing results.

Mohawk highly recommends a minimum 6-mil polyethylene vapor barrier with a density of 0.92 lbs/cubic foot be used for all floating floor installations. The 6-mil polyethylene vapor barrier should have an overlap of 8 inches and taped at the seams. The 6-mil polyethylene vapor barrier should not be used in lieu of moisture issues, the moisture must be mitigated by other means. Claims related to cupping and/or peaking without a 6-mil polyethylene vapor barrier could be denied.

The final responsibility for determining if the concrete is dry enough for installation of the flooring lies with the floor covering installer.

- Never use liquid adhesive remover or solvent cleaners for removing old adhesive residue or other substances on the substrate; their use will cause future failures in the new flooring.
- On or below-grade slabs must have an effective vapor retarder directly under the slab.
- Concrete floors shall be flat and smooth within 3/16 inch over a 10-foot span.
- F-Number System: Overall values of FF36/ FL20 may be appropriate for resilient floor coverings.
- Glossy or waxed floors may require a higher value FF75/ FL50 to prevent telegraphing issues.

Old Adhesive Residue

If the adhesive is asphalt-based (*cut-back*) or any other type of adhesive is present, it must be dealt with in one of two ways:

1. It may be mechanically removed using methods such as bead blasting or scarifying, using a licensed professional contractor (*See Asbestos Warning above*).

2. A Portland-based self-leveling underlayment may be applied over it. Check with the underlayment manufacturer for suitability, application instructions, and warranties.

Other approved underlayments

- Self-leveling and patching compounds (*latex fortified Portland cement based only*).
- Radiant heat floors (*not exceeding 85°F (29°C) and approved by the manufacturer for the use of their product with resilient vinyl flooring applications*).
- Gypcrete can be utilized when necessary due to radiant heat and in high rise buildings. Gypcrete must be sealed using a Mohawk PrimeCoat acrylic floor primer to stabilize the surface. All issues with gypcrete cracking, crumbling, powdering and resulting in the release of adhesive bond are NOT warranted by Mohawk.

Storage and Handling

- It is important that flooring products maintain proper temperature before, during and after installation in order to minimize dimensional changes. The subfloor, all flooring material, and the adhesive must be conditioned at a constant temperature between 65°F (19°C) and 85°F (29°C) for 48 hours prior to, during and 48 hours after installation. Thereafter, maintain a room temperature between 55°F (13°C) and 85°F (29°C).
- Always store and transport flexible vinyl flooring on a flat surface in neat stacks to prevent warping. Never store the cartons upright or in moist, dusty rooms or in places with extreme temperatures. Cartons should be evenly stacked and away from any heating/cooling ducts or direct sunlight.

Subfloor and Wall/Door Preparation

- Floor must be clean, smooth, flat and dry. Remove all foreign substances such as wax, grease, dirt, construction markings and contaminants, and any substance or chemical that would interfere with a good bond. Fill all holes and cracks with a latex-fortified, Portland cement-based patching compound. Sand high spots to eliminate the possibility of telegraphing. Prime floor if needed with Mohawk X123R Prime Coat to prevent over absorption of adhesives, dust containment, and to ensure a better bond of the adhesive to the subfloor.
- Any unevenness of more than 3/16 inch over a 10-foot span (*5 mm over a length of 3 m*) must be leveled out. Remove bumps in the subfloor by sanding or scraping.
- Fill any low spots in the subfloor with a Portland cement based leveling compound.
- Ceramic tile and embossed flooring exceeding the above requirements will require skim coating with a Portland cement-based patch to avoid bottom-up pattern telegraphing.
- Remove any existing floor molding. Removal of wall baseboards is optional providing quarter round is installed to cover the required expansion gap.
- Undercut doorjamb allowing the rigid luxury vinyl flooring to slip under doorjamb/case molding.
- Sweep the subfloor clean. The floor must also be free of all contaminants.

Job Site Conditions

- It is recommended that resilient floor covering installation shall not begin until all other trades are completed.
- Areas to receive flooring shall be clean and fully enclosed. Temperature range of 55°F (13°C) and 85°F (29°C) should be maintained during, before and after the installation.
- Adhesive working and open times vary based on job conditions, substrate, temperature and humidity.

Temperature - Ambient

- Controlled environments are critical for testing and installation. Fully operational HVAC systems are the best way to ensure temperature and humidity control.
- Do not install resilient flooring products until the work area can be temperature controlled between 55°F (13°C) and 85°F (29°C) with humidity below 65% for 48 hours before, during and 48 hours after installation.

NOTE: Do not install flooring if subfloor moisture test results exceed recommended limits.

Temperature - Radiant Heat

- Radiant heated substrates must never exceed 85°F(29°C) surface temperature.
- Several days prior to installing resilient products over newly constructed radiant heated systems, make sure the radiant system has been on and operating at maximum temperature to reduce residual moisture within the concrete.
- Three days prior to installation, lower the temperature to 65°F(18°C), and 24-hours after installation, gradually increase the temperature in increments of 5°F.
- After continuous operation of the radiant system, ensure the surface of the floor does not exceed 85°F (29°C).

Releasable Full Spread Installation Instructions

- Prepare the substrate in accordance with the substrate preparation instructions above.
- Porous surfaces require priming, using Mohawk 123R Prime Coat Adhesive Primer.
- Measure the room and determine starting point. Measure tile width and determine if last tile in row will measure less than half a tile width. If so, trim the starting tile by the amount needed to result in a final tile of half width or greater.

- On the starting wall, set a chalk line to ensure a square installation.
- Using a 3/8-inch nap paint roller, apply Mohawk V-One adhesive after fully saturating the roller. Always apply an even and heavy coat with an orange peel texture. Before laying the LMF/Flexible LVT flooring, wait for the adhesive to become dry to the touch, ensuring no adhesive transfers to your finger or hand when touched.
- Place the flexible vinyl flooring on the adhesive and smooth the surface, rolling the joints with a vinyl seam roller.
- Once installation is complete, do not wet mop the floor for 72 hours.

Permanent Full Spread Installation Instructions

- Prepare the substrate in accordance with the substrate preparation instructions above.
- Porous surfaces require priming, using the Mohawk 123R Prime Coat Adhesive Primer.
- Measure the room and determine starting point. Measure tile width and determine if last tile in row will measure less than half the tile width. If so, trim the starting tile by the amount needed to result in a final tile of half width or greater.
- On the starting wall, set a chalk line to ensure a square installation.
- Using a new 1/16 x 1/32 x 1/32 U-notch trowel, apply Mohawk V-One adhesive. The application should be uniform. Before laying flexible vinyl flooring, wait for the adhesive to become dry to the touch, ensuring no adhesive transfers to your finger or hand when touched.
- Place the flexible vinyl flooring on the adhesive and smooth the surface, rolling the joints with a vinyl seam roller.
- Once installation is complete, roll entire floor with a 100 lb roller.
- Do not wet mop the floor for 72 hours.

NOTE: It is the sole responsibility of the contractor or installer to determine the porosity of the subfloor, apply the proper amount of adhesive, and ensure that all instructions, procedures, and practices are strictly followed.

NOTE: With a push broom, work out air bubbles by pushing broom towards outer walls.

NOTE: Drying time will vary depending on substrate porosity and ambient temperature and humidity.

NOTE: DO NOT wash or scrub the new flooring for at least five days after the installation. This will allow planks/tiles to properly seat in the adhesive and prevent excess moisture from interfering with the adhesive bond.

CAUTION: Planks/tiles may be walked on immediately; however, the floor should be protected with plywood when moving heavy furniture and appliances back into the room.

Care & Maintenance

To help protect and keep your floor clean, follow these proper care and maintenance guidelines:

Preventative Maintenance

- Prevent indentations and scratches by using non-staining floor protectors on the legs of chairs, appliances and all heavy furniture. Floor protectors should be at least 1-inch in diameter.
- Do not flood the floor or subject it to standing water.
- Protect your floor from tracked-in dirt by using mats at all outside entrances. Mats should have a non-rubberized backing and be marked as non-staining.
- Avoid tracking in tar or asphalt from driveways.
- Avoid high heel shoes on your floor, as they can cause permanent indentations.
- Protect your floors against burns. Burns from cigarettes, matches or other extremely hot items can cause permanent damage.
- Avoid exposure to direct sunlight for prolonged periods, as this can cause discoloration.

Cleaning & Maintenance

- Sweep the floor regularly with a soft-bristle broom to remove loose dirt.
- Wash the floor with non-abrasive, neutral PH floor cleaner.
- For everyday maintenance, a mop moistened with warm water will suffice.
- Spills should be cleaned up immediately.

DO NOT use the following on your vinyl floor:

- Soap-based detergents
- Floor wax
- Abrasive or mop-and-shine products
- Vacuum cleaners with a rotating beater bar
- Ammonia
- Bleach solution greater than 3%

NOTE: Always read the cautionary information on all cleaners prior to use.

NOTE: Never push, pull or drag furniture, appliances or other items across the floor. When moving furniture or heavy items, always lift and carry the items. To minimize the risks of scratches and gouges when moving heavy objects, place plywood underlayment between the flooring and the object to be moved.

How To Treat Stains, Spills & Scuffs

Follow the remedies in order. Unless instructed otherwise, use a clean, white cloth or towel with products recommended for the manufacturer's LVT flooring. Always rinse the affected area with clean water after treatment.

Stain or Spill:

Acids, alkalis, blood, ketchup, mustard, food, fruit, fruit juices, candy, cleaners, strong soaps, dye, dye markings, urine and feces, grass, iodine, mercurochrome and rust.

Remedy

- First, remove as much solid material as possible.
- Scrub the area with cleaner at full strength.
- Rub the area with isopropyl alcohol.
- If rust stain does not respond, use lemon juice or a cream of tartar solution.

Paint and Solvent Spills:

Dry cleaning fluids, lacquer and latex paint, nail polish, solvents, oil-based paints, wood stains and varnish.

Remedy

- If substance is dry, gently peel it from the floor. Avoid sharp instruments that could scratch floor.
- Scrub the area with non-abrasive cleaner.
- Rub lightly with odorless mineral spirits or paint thinner.

NOTE: DO NOT USE ACETONE OR NAIL POLISH REMOVER!

Substances that Won't Wipe Up:

Adhesives, chewing gum, oil, grease, candle wax and tar.

Remedy

- First, remove as much solid material as possible.
- Carefully remove excess with a spoon or fingernail.
- Scrub the area with non-abrasive cleaner.
- Rub lightly with odorless mineral spirits, isopropyl alcohol or lighter fluids.

Scuffs & Smudges:

Rubber heel marks, shoe polish, scuffs and smudges.

Remedy

- Rub the scuff with fingertip, rubber will come right off. The friction from the rubbing will remove rubber.
- Scrub the area with non-abrasive cleaner.
- Rub lightly with isopropyl alcohol or lighter fluid.

CAUTION! Isopropyl alcohol, lighter fluid, odorless mineral spirits and paint thinner are flammable solvents. Carefully read and follow cautionary information on their respective labels. Keep traffic off treated area for 30 minutes.