

Method of Installation Suitable for Flexible Vinyl Flooring

- Permanent Full Spread Installation Method using MVONE, M700 Plus, or ExpressLok™ adhesives. For new construction or installations to accommodate special needs, M700 Plus or ExpressLok are recommended.

Materials Required for Installation

Permanent Full Spread Installation Method using MVONE, M700 Plus, or ExpressLok

• MVONE Multifunctional Adhesive	• Acrylic Double-Faced Tape for Vinyl Floors	• Straight Edge	• Performance Accessories® PrimeCoat Floor Primer (if priming the floor is necessary)	• M700 Plus 3-in-1 Adhesive
• New Trowels per Adhesive Label Instructions	• Utility Knife / Extra Blades	• 100 lb Roller	• Push Broom	• ExpressLock Adhesive

NOTE: The manufacturer cannot be held responsible for problems that may arise from the use of 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 the 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.

Underlays

Mohawk 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 underlays.

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, wax, and finishes prior to installing your new floor.

Wood Underlays

Wood subfloor systems require a double-layer construction. The top layer must be underlayment grade as specified and warranted by the underlayment 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 the manufacturer.

- 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 polyethylene 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

the top of any treated subfloor.

OSB

- OSB panels and joints must be fastened and reinforced according to manufacturer's instructions.
- Be aware that OSB panels, and panel joints, can exhibit high and low spots that may telegraph to the surface of the flooring after installation. It is the installer's responsibility to take measures to correct such undulations and unlevel panel joints that are not covered by any Mohawk warranty.
- Some chips in the OSB structure can stain vinyl flooring and may require repeated primer applications to eliminate the staining potential. To avoid staining, the sanded OSB surface must be thoroughly primed using Performance Accessories PrimeCoat Floor Primer.

NOTE: *It is highly recommended that any sanded areas be sealed with Performance Accessories PrimeCoat Floor Primer before adhesive application.*

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 Performance Accessories PrimeCoat Floor 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 jobsite before installing the Mohawk flooring.*

Resilient Floor Covering as an Underlayment

- Must be single layered, non-cushion 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 F710, "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 pounds or less per 1,000 square feet per 24 hours using an anhydrous calcium chloride test according to ASTM F1869, or if using ASTM F2170 in-situ probes, levels should be less than 99% RH (relative humidity). Three tests should be conducted for areas up to 1,000 square feet, with an additional test for each additional 1,000 square feet. Slab pH must be between 5.0 and 9.0. Always measure, record, and keep your testing results.

The final responsibility for determining if the concrete is suitable for flooring installation 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 with 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 and 1/8 inch over a 6 foot span per ASTM F710.
- 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.

Other Approved Underlays

- Self-leveling and patching compounds (*latex fortified portland cement-based only*).
- Radiant heated 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 with the installation of radiant heat systems and in high-rise buildings. Gypcrete must be sealed using Performance Accessories PrimeCoat Floor Primer to stabilize the surface. All issues with gypcrete cracking, crumbling, powdering, and the loss of adhesive bond are NOT warranted by the manufacturer.

Storage & 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 or dusty rooms or in places with extreme temperatures. Cartons should be evenly stacked and stored away from any heating/cooling ducts or direct sunlight.

Subfloor & 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 might 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 Performance Accessories PrimeCoat Floor Primer to prevent over absorption of adhesive, promote dust containment, and ensure a better bond of the adhesive to the subfloor.
- Any unevenness of more than 3/16 inch over a 10-foot span or 1/8 inch over a 6-foot span 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 doorjambs allowing the luxury vinyl flooring to slip under doorjamb/case molding.
- Sweep the subfloor clean. The floor must also be free of all contaminants.

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 cement-based self-leveling underlayment may be applied over the old adhesive. Check with the underlayment manufacturer for suitability, application instructions, and warranties.

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

Jobsite Conditions

- It is recommended that resilient floor covering installation shall not begin until all other trades are completed.
- Never install cabinets over LVT flooring nor install LVT flooring under affixed vertical objects, as this will restrict movement of the product with changes in temperature and humidity and will void the product warranty. There should be a 1/4-inch expansion gap around all objects.
- Areas to receive flooring shall be clean and fully enclosed.
- 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 and are required for the installation of Mohawk product.
- Acclimation is recommended. If you can not acclimate product, it is best to install in temperatures between 55°F (13°C) and 85°F (29°C) with a RH reading between 35% and 65% for best results.
- If you are taking the product from warehouse storage to installation site, please ensure that there is not more than a 15-degree change greater or less and a RH change greater or less than 10% from storage site.
- It is recommended when HVAC becomes operational to increase/decrease in minimum increments until desired temps are reached.

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

NOTE: *Installer should always follow glue manufacturer's recommendations for installation per instruction on glue carton or glue manufacturer's website before installing.*

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 heating 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).
- 24 hours after installation, gradually increase the temperature in increments of 5 degrees.
- After continuous operation of the radiant heating system, ensure the surface of the floor does not exceed 85°F (29°C).

Permanent Full Spread Installation Instructions

1. Substrate Preparation

- Prepare the substrate according to the instructions above.
- Porous surfaces may require priming using Performance Accessories PrimeCoat Floor Primer.
- Ensure the subfloor is flat, smooth, clean, and dry.

2. Room Layout & Centering

- Determine the center:
 - Mark the midpoint of each end wall and snap a chalk line across the room (*primary center line*).
 - Measure along this line to locate the exact center (*Figure 1*).

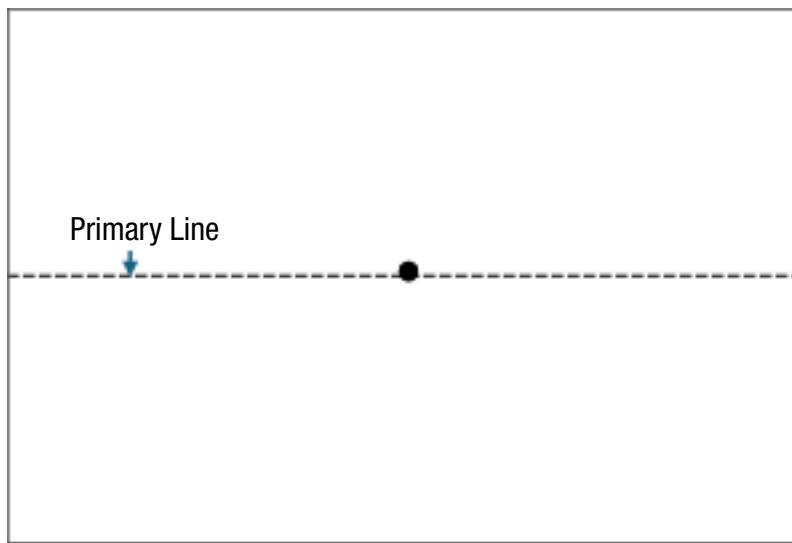


Figure 1

- Create perpendicular lines and determine the starting point:
 - Use a carpenter's square, or the 3-4-5 method (*or scaled 6-8-10 / 9-12-15 for large rooms*), to ensure a perfect 90-degree angle to snap a line forming four quadrants.
- The 3-4-5 Method:
 - Mark exact center on primary line (*Point A*).
 - Mark a 3-foot line from A towards the outside of the room perpendicular to primary line (*Point B*).
 - Measure 4 feet along the primary center line from Point A and mark a line (*Point C*).
 - Mark a 5-foot line from C to intersect with the first line (*Point B*).
 - Snap a line from Point A through the intersection of lines (*Point B*) to get a perfect 90-degree angle (*Figure 2*).

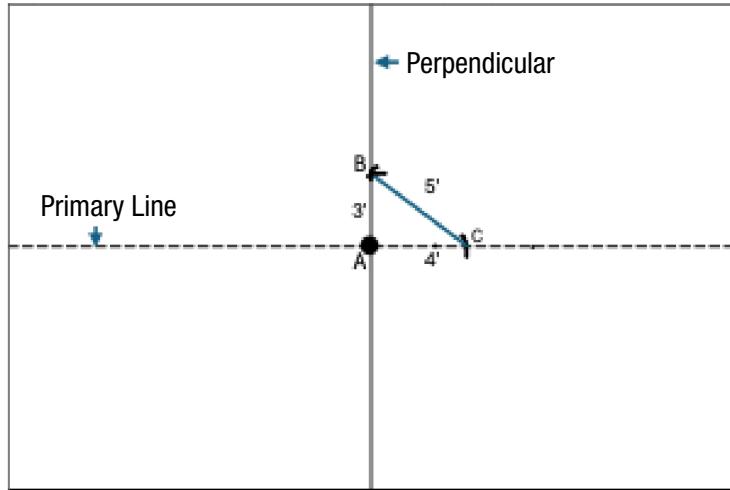


Figure 2

- Determine your starting point by creating additional perpendicular and adjusted primary lines. If starting along a wall, snap a chalk line to account for uneven walls.
- Verify layout:
 - From exact center point on primary line, dry-lay a few rows toward the walls to ensure balanced borders.
 - Account for a 1/4-inch (6 mm) expansion gap around all walls and other objects.
 - Adjust center point to avoid less than half the width of tile/plank boarders or trim the starting tile/plank in row by the amount required so the final tile/plank will be half width or greater.
 - For tile, see Figure 3.

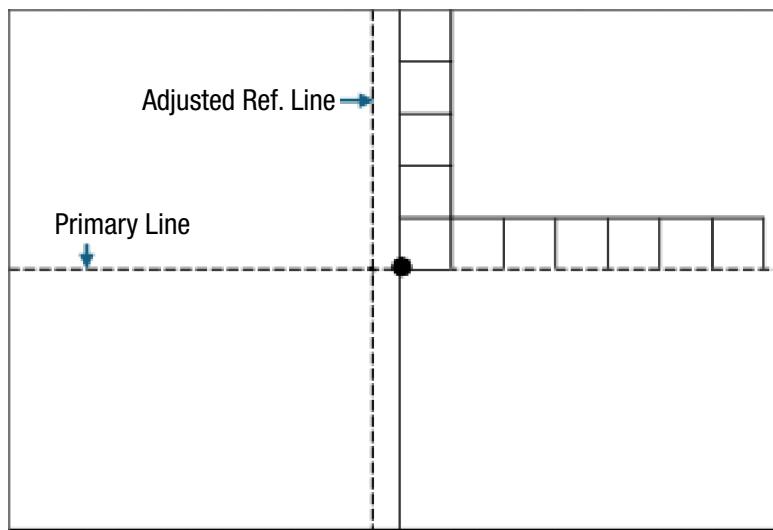


Figure 3

- For plank, see Figure 4.

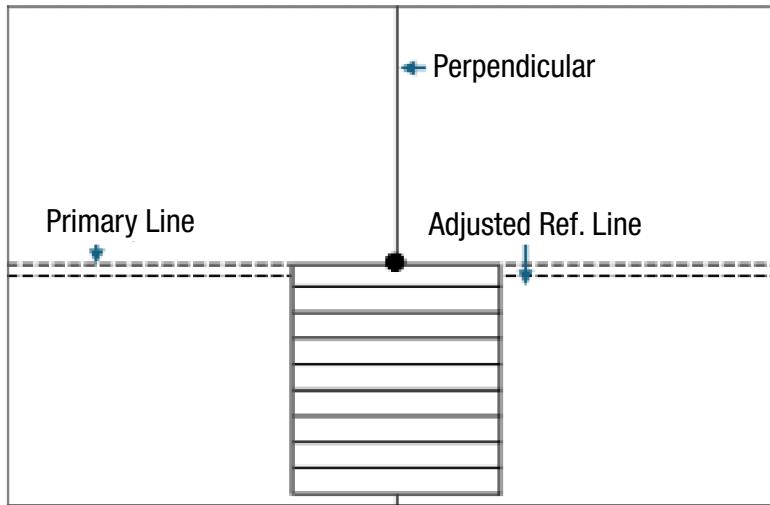


Figure 4

3. Adhesive Application

- Refer to MVONE, M700 Plus, and ExpressLock adhesive labels for trowel size, spread rate, and application.
- Identify substrate type, porous vs. nonporous, and follow label instructions. Before adhesive application, test the subfloor for porosity. Clean the surface, fill a water bottle cap, and gently pour on the surface. If the water is absorbed or spreads within 1 minute, the surface is porous; if it remains on the surface, consider it nonporous.
- Perform a bond test in a discreet location prior to installation based on adhesive label guidelines to assess adhesive compatibility with the substrate, determine the appropriate application rate and working time, and identify any potential bonding issues. Performance Accessories PrimeCoat Floor Primer is recommended to enhance adhesion.
- Spread adhesive at the starting point and cover area that will allow installation within the adhesive working time, per label instructions.

4. Installation

- It is recommended to work from multiple boxes at the same time.
- Flex LVT should be installed following the directional arrows on the back of each panel to maintain uniform orientation, ensuring visual consistency and optimal performance.
- Maintain a 1/4-inch (6 mm) expansion gap around all walls and other objects.
- For tile layout, use straight grid pattern from the starting point over adjusted reference line. See Figure 5.

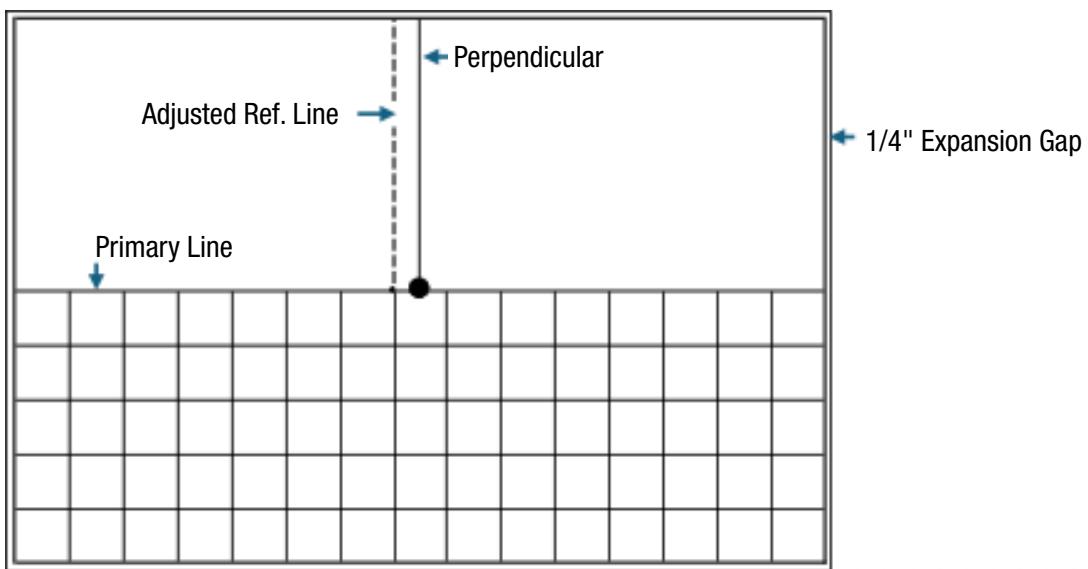


Figure 5

- For plank layout, stagger end joints by at least 6–12 inches for a natural look and avoid aligning ends of adjacent rows. It is recommended that boarders at the ends of rows be 6 inches or longer. See Figure 6.

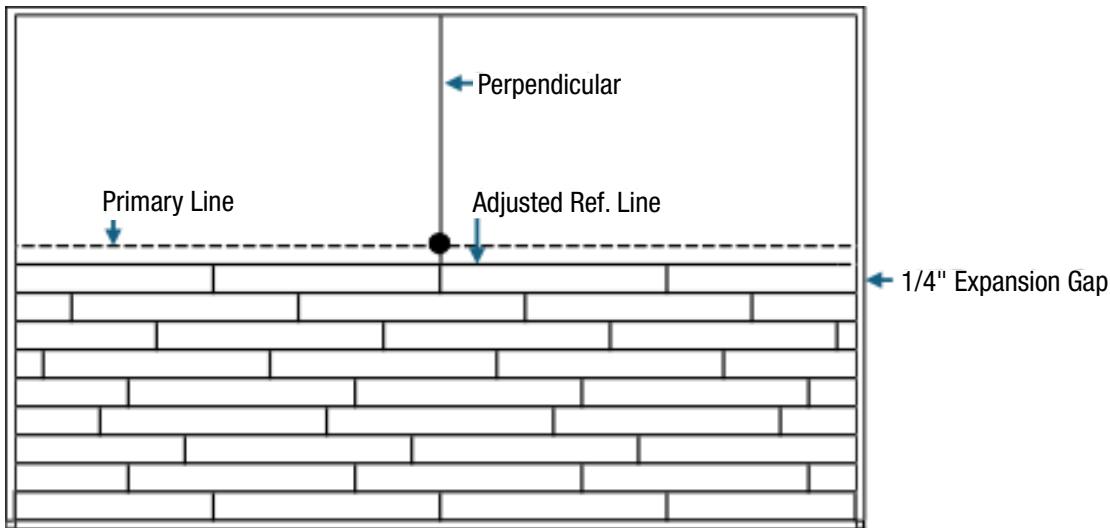


Figure 6

- Optional patterns: Herringbone, chevron, or custom layouts require precise squaring and angle lines.
- Lay tiles or planks at starting point along your reference line, following chosen pattern layout.
- Press each tile/plank firmly into adhesive and smooth the surface, rolling the joints with a vinyl seam roller.
- Check alignment frequently and adjust as needed.
- Use a 100 lb floor roller to ensure full contact and remove air bubbles.
- Trim edge pieces with a utility knife and straightedge. Ensure all cut edges are positioned against the wall.
- Once installation is complete, wait 72 hours to initiate cleaning and maintenance procedures.

NOTE: An application of Performance Accessories Prime Coat Floor Primer is recommended prior to applying adhesive to any substrate to ensure a proper bond to the flooring product.

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: 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.

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 nonstaining 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 nonstaining.
- Avoid tracking in tar or asphalt from driveways.
- Avoid high-heeled 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 nonabrasive, 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	• Abrasive or mop-and-shine products	• Vacuum cleaners with a rotating beater bar	• Ammonia	• Bleach solution greater than 3%
• Floor wax				

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. 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

- Remove as much solid material as possible.
- Scrub the area with full strength cleaner.
- Rub the area with isopropyl alcohol.
- If a 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 using sharp instruments that could scratch the floor.
- Scrub the area with nonabrasive, neutral pH floor 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

- Remove as much solid material as possible.
- Carefully remove excess material with a spoon or fingernail.
- Scrub the area with a nonabrasive, neutral pH floor cleaner.
- Rub lightly with odorless mineral spirits, isopropyl alcohol, or lighter fluid.

Scuffs & Smudges:

Rubber heel marks, shoe polish, scuffs, and smudges.

Remedy

- Rub the scuff with fingertip. The friction from the rubbing will remove rubber.
- Scrub the area with nonabrasive, neutral pH floor 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.