

## Materials Required for Installation

- Tape Measure
- Square Ruler
- Utility Knife/extra blades
- Square
- Saber Saw/Circular Saw
- Chalk Line
- Safety Glasses
- Tile Cutter

**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 LVT/LVP vinyl flooring products can be installed directly over most existing floor coverings, EXCLUDING carpet (*including needle felt*), floating laminate, floating floor systems, Luan and cushioned vinyl flooring. You may install directly over Ceramic (*well bonded with a skim coat and Terrazzo (well bonded)*), solid PVC, VCT (*well bonded, on and above grade*), provided they are installed over a wooden subfloor. Any resilient tile installed below grade must be removed as well as the 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. Any porous wood underlayment must be primed.
- 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 subfloors should be a minimum 1" total thickness, with a least 18" well -ventilated air space beneath.
- Insulate and protect crawl space with a 6-mil vapor barrier.
- It is recommended that your chosen APA underlayment grade panels be designed for installation under resilient flooring and carry a written warranty.
- Underlayment panels can only correct minor deficiencies in the sub-floor 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 planks are designed as combination subfloor/underlayment but designed for carpet and not resilient flooring. Sturd-I-Floor planks would require installation of a ¼" underlayment plank prior to resilient flooring installation.
- Mohawk resilient 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 ¼" thick underlayment should be installed over top of any treated subfloor.
- OSB panels and joints must be fastened and reinforced according to manufacturer's instructions.
- Completely sand the floor with a floor sander, so that the floor is smooth and flat. The chips in OSB overlap. Without sanding properly, OSB has high and low spots throughout the floor that could telegraph through the vinyl.
- Some chips in the OSB structure can stain vinyl flooring and may require repeated primer to eliminate the staining potential.
- For these reasons, the sanded OSB surface must be primed using a Mohawk PrimeCoat acrylic latex primer.

### Particle board

- Particle board underlayment panels must be underlayment grade as specified and warranted by the manufacturer.
- Surface must be primed using a Mohawk PrimeCoat 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 In-Situ 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.

- Never use liquid adhesive remover or solvent cleaners for removing old adhesive residue or other substances on the substrate; their use will cause failure.
- On or below-grade slabs must have an effective vapor retarder directly under the slab.
- Concrete floors shall be flat and smooth within the equivalent of 1/32 inch in 12 inches and 3/16 inch in 10 feet.
- F-Number System: Overall values of FF 36/ FL 20 may be appropriate for resilient floor coverings.
- Glossy or waxed floors may require a higher value FF 75/ FL 50 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.

**NOTE: Never use solvents or citrus adhesive removers to remove old adhesive residue. Solvent residue left in and on the subfloor will affect the bond between the new adhesive and the new floor covering.**

### 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 latex primer to stabilize the surface for adhesive bond. All issues with gypcrete cracking, crumbling, powdering and resulting in the release of adhesive bond are NOT warranted by Mohawk.

## Storage and Handling

Acclimate the flooring and adhesive for a minimum of 24 hours before installation in the area where it will be installed. Conditions between 65°F and 85°F (18°C and 29°C) are required before, during and after installation. Tiles should be stored in a flat horizontal in order to minimize the risk of pressure marks when storing a horizontal position, the should not be stacked one on another.

## 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 PrimeCoat acrylic latex primer 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 in a 10-foot span (*5 mm over a span of 3 m*) must be leveled out. Remove bumps in the subfloor by sanding or scraping. The same applies to unevenness of more than 1/32 inch over a length of 1 foot (*1 mm over a length of 30 cm*).
- Fill any low spots in the subfloor and cracks or gaps 3/16 inch (*4mm*) in width or greater 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 gaps between the flooring and the base board.

- Undercut doorjamb allowing the vinyl flooring to slip under doorjamb/case molding.
- Sweep the subfloor clean. The floor must also be free of all contaminants.

## Job Site Conditions

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- It is recommended that resilient floor covering installation shall not begin until all other trades are completed.
- Areas to receive flooring shall be clean, fully enclosed, with the permanent HVAC set at a uniform temperature range of 65°F(18°C) and 85°F(29°C) and maintained following the installation.
- Adhesive working and open times vary based on job conditions, substrate, temperature and humidity.

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

## Temperature - Radiant Heat

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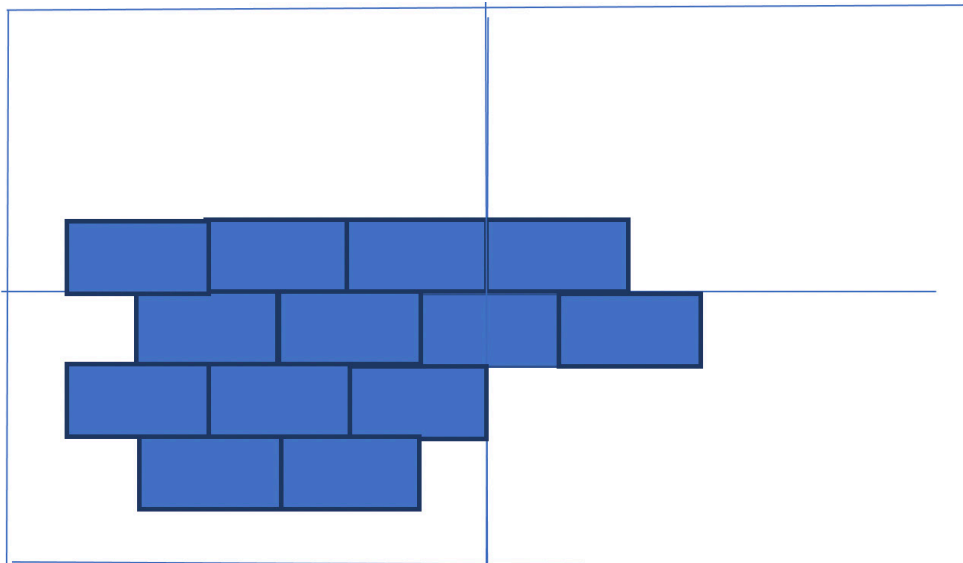
- Radiant heated substrates must never exceed 85°F(29°C) surface temperature.
- Several days prior to installing resilient products over newly constructed radiant heated systems, make sure the radiant system has been on and operating at maximum temperature to reduce residual moisture within the concrete.
- 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.

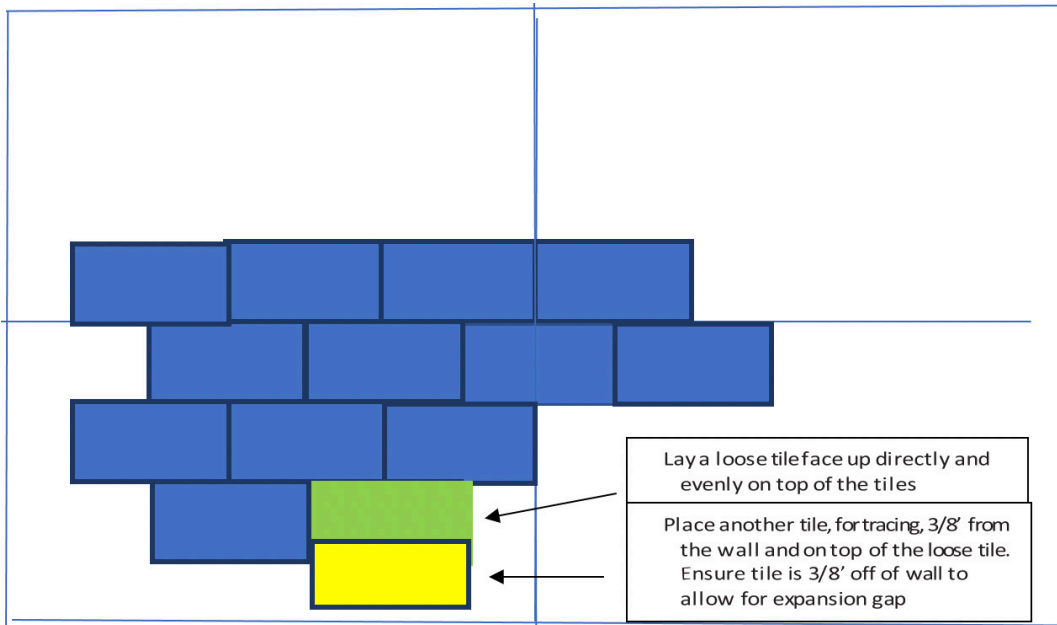
After continuous operation of the radiant system, ensure the surface of the floor does not exceed 85°F(29°C).

## Installation

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- Lay out the Pattern. Measure the floor and mark a line down the middle of its longest dimension and another line across the middle of its shortest dimension. By dividing the room into quadrants, you can start tiling from the center point using your lines as a guide.
- Before you begin sticking down the tiles, do a dry run and lay out enough tiles along your lines to reach the walls in each direction. If the end tiles are very short they may have a poor appearance or will not adequately bond to the subfloor, especially in doorways where there is more foot traffic. Adjust the centerlines so that you end with at least a half-tile at entryways and other high-traffic areas.
- When you're ready to begin installing, line up the tiles with your layout line, remove the backing and press them into position. Tiles that have a directional pattern have an arrow on the back, install your tiles with arrows pointed in the same direction.
- Moving along the chalk line, butt each tile squarely and as tightly as possible. Without going directly against the wall initially, form a pyramid shape as shown below. Do not install tiles to the edges of the room until the main floor area has been covered.
- When you need to cut a tile, measure, mark and cut it from the front with a utility knife and straight edge. To fit planks around irregularly shaped objects, use a contour profile tool or create a paper pattern and place on top of tile.
- To install the final row of tiles, you will usually need to cut them. We recommend the following: lay a loose tile face up directly and evenly on top of the tiles in last installed row, with the directional arrows facing the same way as the field of the installation. Place another tile, for tracing, against the wall and on top of the loose tile. Using the edge of the tracing tile, mark the face of the loose tile. Cut the loose tile on the traced line and install the tile.





**CAUTION:** The tiles protective paper covering is very slippery. To avoid accidents, do not leave the paper on the floor after you've peeled it from the plank!

## Tile Care & Maintenance

To help protect and keep your floor clean, following 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 one inch in diameter.
- Do not flood floor or subject 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 every day maintenance, a mop moistened with warm water will suffice.
- Spills should be cleaned up immediately.

### DO NOT use the following on your Mohawk luxury vinyl floor

- Soap based detergents
- Abrasive or mop and shine products
- Floor wax
- 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 object to be moved.

## How to Treat Stains, Spills & Scuffs

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

### **The 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.

#### **The Remedy:**

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

### **The Stain or Spill**

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

#### **The Remedy:**

- If substance is dry, gently peel it from the floor. Avoid sharp instruments that could scratch floor
- Scrub 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

#### **The Remedy:**

- First, remove as much solid material as possible
- Carefully remove excess with a spoon or fingernail
- Scrub 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

#### **The Remedy:**

- Rub the scuff with fingertip, rubber will come right off. The friction from the rubbing will remove rubber
- Scrub 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.**