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## Installation Instructions

Before you begin the installation, inspect the flooring material for any obvious defects. Ensure you have the correct color, pattern, quantity, and that all the material is of the same production number. Beginning the installation means that you have accepted the conditions.

It is essential that all subfloors be rigid, smooth, flat, level, permanently dry, and free of all foreign materials. Subfloor preparation should be done with the permanent HVAC set at a minimum of 180C (650F).

### Subfloors:

#### Wood

Wood floors should be double construction with a minimum thickness of 25 mm (1"). The floor must be rigid, free from movement and have at least 46 cm (18") of well-ventilated air space below. Haven should not be installed over wooden subfloors built on sleepers over, on grade, or below grade concrete floors unless specific design has been undertaken to eliminate the chance of failure due to the excessive moisture vapor emissions from the concrete.

Haven is installed as a floating floor and therefore may be installed over wood substrates that are not normally suitable for glue down installations, such as; particle board, OSB board and chipboard. All subfloors must be flat to within 5mm in 3 meters (3/16" in 10').

#### Underlayment

Underlayment panels are used to correct deficiencies in the subfloor and to provide a smooth, sound surface on which to adhere the resilient flooring. APA underlayment grade plywood, minimum 6.3 mm (1/4") thickness, with fully sanded face is the preferred panel. Underlayment panels such as Multiply, Tee-Ply and Ulay are recommended. The underlayment must be free of any foreign material that may cause staining, such as patching compounds, sealers, inks, solvents, etc.

The underlayment should be installed with dispersion type staples placed every 10-15 cm (4-6 inches) in the field and every 5-8 cm (2-3 inches)

along the seams. Sanding is a preferred method for smoothing joints.

The above mentioned is not considered the only procedure for a successful installation. Always install and fasten underlayment panels according to the manufacturers' recommendations.

There are certain types of subfloors and underlayment that through years of experience are known to be prone to failure and are therefore NOT recommended underlayments for resilient floor coverings.

Tempered hardboard and Luan board are not suitable to install Monarch/Sovereign over. In some cases permanent staining has occurred from chemicals used in the construction of Luan board. This is also true when using pressure treated or fire retardant wood. Regardless of which underlayment is used, failures in the performance of Floor covering due to the underlayment and subfloor are not covered by GlobalFloor's warranty.

#### Concrete Floors

Concrete floors should be prepared according to ASTM F-710, Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring.

It is essential that a permanent, effective moisture vapor retarder with a permeance of 0.1y, be installed under all on- or below-grade concrete floors. The water vapor retarder (vapor barrier) should be installed directly below the slab.



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Floors shall be smooth, rigid, flat, level, permanently dry, clean and free of all foreign material such as old adhesive residue. Imperfections such as chips, spalls, cracks and/or corrective leveling shall be repaired with cementitious based patching and/or underlayment materials. The surface of the concrete must be flat to within 5 mm in 3 meters (3/16" in 10').

### Expansion joints, saw cuts, control joints

Expansion joints in the concrete are designed to allow for the expansion and contraction of the concrete. If the floor coverings are fully adhered to the subfloor and installed over the expansion joints, it more than likely will cause gapping or buckling of the flooring material.

Isolation, construction and control (saw cut) joints may be successfully patched once the concrete is thoroughly cured, dry and climatized. If any movement occurs in the concrete it may also cause the patching material to telegraph.

### Patching Materials

There are many brands available but basically there are two types of patching materials for the use of smoothing and patching subfloor irregularities. One type is referred to as calcium sulfate/plaster/gypsum base compounds. This type of patch may harbor and promote mildew growth, have low indentation resistance and poor bond and adhesion strength.

The second type is a cement based compound usually with polymer additive. This type of patch will not promote mildew growth; have much higher psi strength and better adhesion properties to the subfloor. Adore Flooring recommends only the use of cementitious base patching and leveling compounds.

Only use the highest quality materials. Many failures have been directly attributed to the use of gypsum based toppings, leveling and patching compounds because of poor indentation resistance, poor resistance to mold and mildew and separation of the product within itself.

Regardless of which patching or leveling compound is used, any failures in the performance of the compound or Regent flooring due to the compound is the responsibility of the compound manufacturer and installer.

### Old Adhesive Residue

If the residue is asphaltic (cut-back) it must be dealt with in one of two ways:

1. It may be mechanically removed such as: bead blasting or diamond grinding.
2. A self-leveling cementitious underlayment may be applied over it. Check with the underlayment manufacturer for suitability, application instructions and warranties.

## WARNING!

**Warning regarding complete adhesive removal: some solvent based 'cut-back' Asphaltic adhesives may contain asbestos fibers that are not readily identifiable. Do not use power devices, which create asbestos dust in removing these adhesives. The inhalation of asbestos dust may cause asbestosis or other serious bodily harm. Smoking greatly increases the risk of serious bodily harm.**

**Note: Never use solvents or citrus adhesive removers to remove old adhesive residue. Residue of the remover left within the subfloor will affect the new floor covering.**

### Existing Floor Coverings

Haven may be installed over a single layer of resilient flooring such as VAT, VCT, sheet vinyl, epoxy coatings and ceramic tile.



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**Note: The responsibility of determining if the existing flooring or subfloor is suitable to be installed over rests solely with the installer and flooring contractor.**

## WARNING!

Do not sand, dry sweep, dry scrape, saw, bead-blast or mechanically chip or pulverize existing resilient flooring, backing, lining felt or asphaltic 'cut-back' adhesives. These products may contain either asbestos fibers 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. The RFCI'S Recommended work practices for removal of resilient floor coverings are a defined set of instructions which should be followed if you must remove existing resilient floor covering structures.

## Radiant Heated Floors

Haven flooring may be installed over radiant heated floors provided the operating temperature does not exceed 29°C (85°F). The room temperature must be maintained at a minimum of 18°C (65°F) for 48 hours prior to, during and after installation, after which the temperature of the radiant heating system can be

increased. When raising the floor temperature, do so gradually so that the substrate and the flooring material can adapt to the temperature change together. For more information, contact GlobalFloor Technical Services.

## Moisture Testing

It is essential that moisture tests be taken on all concrete floors regardless of age or grade level with a minimum of three tests for the first 1000 square feet. The test should be conducted according to ASTM F1869, Calcium Chloride Moisture Emission Test, and ASTM F2170, In-Situ Relative Humidity of the Concrete. One test should be conducted for every 1000 square feet of flooring. The test should be conducted around the perimeter of the room, near columns and where moisture may be evident. The results of F1869 Calcium Chloride moisture vapor emissions from the concrete shall not exceed 5.0 lbs. per 1000 sq. ft. in 24 hrs. for all installations. For the most accurate results, the weight of the calcium chloride dish should be made on the job site at the start and end of each test. The results of F2170 In-Situ Relative Humidity shall not exceed 85%. A diagram of the area showing the location and results of each test should be submitted to the architect, general contractor or end user. If the test results exceed the limitations, the installation should not proceed until the problem has been corrected.

**Note: It may not be the floor installer's responsibility to conduct the test. It is, however, the floor covering installer's responsibility to make sure these tests have been conducted and that the results are acceptable prior to installing the floor covering.**

When moisture tests are conducted it indicates the conditions only at the time of the test. The flooring contractor cannot be held responsible if moisture appears in the future, causing a failure.



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## Material Handling: \_\_\_\_\_

Flooring shall be stored in a clean, dry environment, protected from the elements. Storage temperature should be between 18oC and 29oC (65°F and 85°F).

Store cartons on a smooth, level surface. Stack cartons squarely. Do not stack more than 10 cartons high. Do not store tiles and planks on their edges. Do not drop cartons. Do not double stack pallets. Storing flooring at high temperatures and on uneven surfaces may cause a permanent distortion of the material.

## Jobsite Conditions: \_\_\_\_\_

All areas must be fully enclosed, weather-tight with the permanent HVAC system in operation. The temperature should be maintained at a minimum of 18oC (65°F) and a maximum of 29oC (85°F) for 48 hours prior to, during, and 48 hours after installation.

Thereafter, maintain a room temperature between 13°C (55°F) and 29°C (85°F). Ambient relative humidity of the room should be maintained at 30-50%.

## Installation: \_\_\_\_\_

Remove baseboard, quarter-round and other wall base material. Under-cut door trims to allow flooring to be installed under trim and move freely.

Proper layout will prevent narrow pieces along the wall. For plank installations lay the long dimension of the plank parallel with the long dimension of the room. Plank ends should be staggered randomly. Keep end joints at least 20 cm (8") apart. Start each row with planks of varying lengths. Usually the left over piece from one row can be used as the starter piece on the next row of planks. Areas of greater than 100 m<sup>2</sup> (1000 sq. ft.) or 10 m (30') in either direction will require additional expansion gaps and transitions at the doorways between rooms.

- Measure the room to determine the center line, adjust that center line in either direction to give a balanced width of plank on each side of the room. Determine the distance from your starting wall where the first row of planks will start and snap a chalk line along the starting wall.
- If the first row is less than the full width of the plank, or if the wall is not straight, cut the first row to the needed size leaving a minimum 10mm (3/8") gap between the tile and the wall and other fixed objects. Use spacers along the walls and objects to ensure that the minimum expansion gap is being maintained.
- Working from your left to right, lay the first row of planks with the 'tongue' side toward the wall and tight against the spacers.
- Haven is an "angle angle" locking system on the long and short edges.
- Angle the end tongue of the second plank into the end groove of the first plank. **The first row must be straight as it is the foundation for the rest of the installation.**



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## Installation Cont...

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- Working from left to right in the room, start the second row with a cut piece of a minimum of 20 cm (8") in order to stagger the end joints. End joints should be staggered a minimum of 20 cm (8").
- Install the first plank of the second row, angle the board up slightly, insert the long tongue side into the long groove side of the first row pulling the plank in tight to ensure there is no gap.
- Install the second plank of the second row by inserting the end joint first and align as close as possible over the long edge groove.
- Align the long edge tongue into the long edge groove, lift plank on a slight angle and pull the plank in tight.
- Use the balance of the last cut from the row as the beginning piece for the next row.

### Protection and care

- The single greatest cause of damage to any flooring or floor finish is abrasion from dirt and grit. Wherever possible, use walk off mats at entrances and doorways, and vacuum mats often.
- Ensure you use non-staining mats on the floor. Rubber-backed and latex-backed mats, tires, and asphalt sealers may stain or damage the surface.
- Use non-staining floor protectors under heavy furniture and equipment.
- Chairs should have clean, smooth, non-staining floor protectors. Ensure there are no nicks or burrs on the protectors. Felt protectors must be cleaned regularly to ensure there is no grit build-up. Floor protectors should be at least 1 inch in diameter and rest flat on the floor.
- When moving heavy furniture and equipment, use strips of plywood or Masonite to roll or slide the furniture or equipment.
- Avoid prolonged exposure to direct sunlight.
- The key to successful maintenance of all flooring types is the removal of dirt and soil. Mopping with a sponge or string mop alone removes very little soil, but rather it dissolves the dirt and spreads it out evenly across the floor creating a dull, dirty film and migration into the tile joints.
- GlobalFloor recommends the use of micro-fiber mops and pads for dust mopping and scrubbing. On larger installations using an automatic scrubber or wet vacuum is the preferred way to remove soiled water and rinse water.
- Do not use vacuum cleaner with rotating brushes or beater bars.