

## JOHNSON HARDWOOD

### HIGH PERFORMANCE PLANK FLOORING - INSTALLATION GUIDELINES

**ALWAYS CHECK [www.johnsonhardwood.com](http://www.johnsonhardwood.com) FOR THE LATEST INSTALLATION, WARRANTY AND MAINTENANCE INSTRUCTIONS. IT IS THE RESPONSIBILITY OF THE INSTALLER TO ENSURE THAT THE MOST CURRENT DOCUMENTS ARE USED DURING INSTALLATION OF JOHNSON HARDWOOD FLOORING PRODUCTS.**

**Product Quality:** The contractor/installer/end-user assumes all responsibility for final inspection of product quality. The flooring **MUST** be inspected at time of delivery and prior to installation. Carefully examine the flooring color, finish quality or any damage during transit **before** installing it. The installer should use reasonable selectivity to cull out or cut off unacceptable pieces. If the flooring material is considered unacceptable, **“STOP DO NOT INSTALL THE FLOOR”**, but contact the Johnson Premium Hardwood dealer immediately. **Once the flooring is installed, there is no question as to its acceptability.**

#### **JOB SITE REQUIREMENTS:**

1. The space where flooring is to be installed shall be fully enclosed and the permanent HVAC system shall be operational at 65° - 78° Fahrenheit for 5 days prior to installation, during installation and for the life of the installation. **Note:** Maintaining a temperature within the stated range and relative humidity of 35% – 65% is required to create/maintain optimal dimensional stability of the flooring. **Please note that Johnson Hardwood High Performance Plank Flooring is NOT recommended for 3-Season Room application.**
2. Flooring should be one of the last items installed in any new construction or remodel project.
3. **Note:** *Failure to properly acclimate High Performance Plank Flooring can result in buckling, gapping, end-joint peaking, cupping, ledging, side and end-joint failure and/or difficulty engaging the tongue and grooves inner locking mechanism.*

**STORAGE:** Do **not** store Johnson Hardwood High Performance Plank Flooring in garages, under patio covers, driveways, storage containers, vehicles or in an uncontrolled environment, such as the structure itself. Deliver flooring material to the jobsite only when the required ambient conditions have been achieved for a minimum period of 5-days.

#### **QUICK TIPS:**

1. Calculate the room surface prior to installation and plan for an extra 10% of flooring for waste.
2. After receiving the flooring lay cartons on a flat surface in the rooms in which the flooring will be installed. **NEVER** stack the flooring in a standing position as this can damage the interlocking tongue and groove mechanism, as well as cause the planks to take on a bowed effect.
3. Do **not** tap on the tongue and grooves interlocking mechanism as this can/will result in breakage of the tongue and grooves interlocking mechanism which **will** result in the planks not interlocking properly, resulting in gapping and/or ledging at the seams.
4. Do not apply tape (of any kind) to the floors surface as this could result in irreversible damage to the floors surface. **Note:** If/when protective paper (i.e., red rosin paper, Ram Board and/or any form of protective type paper) is placed over the floor, **NEVER** apply tape directly to the floors surface but rather to the seams of the paper where the rows of paper meet (i.e., side and end-joints).

5. Keep your working environment clean. Set up saws outside whenever possible to protect the floor from dings, dents, and scratches. In addition, be sure to have walk-on/walk-off mats at all doorways leading inside the home so as not to track in dirt, grime and/or sand particulates, which can/will damage the floors surface.
6. **Note: Do not place an additional underlayment pad beneath the floor, as the floor comes with a 1.5 mm thick pad attached to the bottom of each plank. Note: Placing an additional pad beneath the floor will create additional vertical movement (when walking on the floor), which could result in breaking of the floors interlocking mechanism, resulting in ledging, which is a condition when one planks edge is raised above the adjacent planks edge at the point of damage to the interlocking mechanism.**

**PRE-INSTALLATION REQUIREMENTS:**

1. Verify that the delivered materials item # and color match the information contained on the sales order. **Note:** Installation of the material constitutes acceptance of the flooring.
2. **Johnson Hardwood** recommends acclimation of our High Performance Flooring for 48 hours prior to installation to ensure the product is at equilibrium with the installation environment.
3. Doorways and archways **6 feet** or less in width must have a suitable T-molding installed over the control joint to allow for normal product movement between rooms. In addition, rooms greater than 50 feet in length or width require a T-mold break. **Note:** Allow for a 5/16" gap on either side of the installed T-mold "post" so as not to create a pinch point which could result in buckling.
4. Plan your layout to allow for a **1/2"** expansion space from all vertical obstructions.
5. Dry lay several cartons of flooring to get a feel for color variations and to make sure the floor meets the end user's satisfaction. **Note: Once the flooring has been installed there is no question as to its acceptability.**
6. This product **cannot** be installed with full spread adhesives.
7. "IMPORTANT" follow the below installation guidelines/illustration guides which are located on the last page of these guidelines.
8. **Johnson Hardwood** High Performance Flooring is designed to be installed as a "floating" floor. Do not secure individual planks to the subfloor with mechanical fasteners or adhesives. Always undercut doorjamb. **Do not install cabinets or kitchen islands on top of High Performance Plank Flooring as this WILL void all applicable warranties offered by Johnson Hardwood.**
9. Use of a small soft bristle brush to clean the joints prior to engaging the Vilange G5 Dry inter-locking mechanism (tongue and groove) will ensure there is no debris trapped between the tongue and groove. Failure to remove milling debris can result in joint impingement, which can/will prevent proper engagement of the locking mechanism, separation and/or ledging.
10. Use care when installing wall moldings and transition strips to not fasten through flooring planks, as this can cause impingement of the floor, which can/will cause the floor to buckle and/or separate. In addition, do not apply caulking between the bottom of the base board and/or shoe trim molding and the surface of the floor, as this can result in buckling and/or separating of the planks due to a buildup of compression, and/or contraction related stresses.
11. The flooring planks are best cut in the following ways: a jig saw with a fine-tooth wood cutting blade; a 12" power miter saw (aka a chop saw) with a shallow or negative kerf blade, similar or equal to a plastic cutting blade. As for rip cutting, use a table saw with a cutting blade diameter of 10 to 12". **Note:** The cutting teeth of the blade should be comprised of carbide and should have a minimum of 90 cutting teeth.

- 12. Crawl Space:** The soil within the crawl space **MUST** be covered with “black” 6-mil polyethylene sheeting overlapping the seams a minimum of 12” followed by taping the seams the entire length of the over-laps with 3’ wide clear packing tape. **Note:** Per industry standards to foster proper airflow there **MUST** be at least 1 ½ vents for every 100 sq. ft. of crawl space area. In addition, the distance between the surface of the soil and the bottom of the sub floor must have a clearance of 18 to 24 inches.

### **SUB-FLOOR PREPARATION**

#### **Wood Subfloors:**

1. Subfloor must be dry and must not exceed 12% mc.
2. Subfloors must be clean and free from debris such as drywall mud and/or anything that may be stuck to the subfloors surface thereby creating a bump.
3. **Note: Rubber, textured or cushioned backed resilient flooring and/or “sleeper” floor systems are not approved substrates.**
4. Subfloor must be flat to within 3/16” in 10’ in all directions. For areas that exceed 3/16” in height, sanding and/or grinding will be required to bring those areas into the required flatness specification. For low spots that exceed 3/16” use a Portland base cementitious patching material to fill in the low spots to bring those areas into the required flatness specification. **Note: It is the flooring installer’s responsibility that when sanding and/or grinding that the sanding and/or grinding equipment be connected to a vacuum. In addition, when the subfloor is comprised of Oriented Strand Board (OSB) the installer MUST first check with the manufacturer of the cementitious patching/self-leveling material as OSB often contains wax which could act as a bond breaker between the surface of the OSB and the base of the patching/self-leveling material.**
5. Make sure there are no screws and/or nails protruding from the subfloors surface.
6. **Wood subfloors installed directly on concrete slabs or installed over sleeper type systems are NOT suitable.**
7. Plywood, OSB, chip/flake board, and/or particle board are suitable subfloor panels provided they are smooth, structurally sound, and free of deflection.

#### **Concrete Subfloor:**

1. The concrete slab must be dry, smooth, and free from contamination.
2. The concrete slab must be flat to within 3/16” in 10’ in all directions. For areas that exceed 3/16” in height, grinding will be required to bring those areas into the required flatness specification. For low spots that exceed 3/16” use a Portland base cementitious patching/self-leveling material to fill in the low spots to bring those areas into the required flatness specification. **Note: It is the flooring installer’s responsibility that when grinding that the grinding equipment be connected to a vacuum.**
3. Fill pock holes, cracks and feather out cracks with ledging using a Portland cement based patching material.
4. The newly poured concrete slab usually takes 1-month per 1” of slab thickness for the batch water to work its way out of the slab. That means that a 4” thick slab will take approximate 4-months to dry to a moisture content level suitable for the installation of **Johnson Hardwood** High Performance Plank Flooring.

**Existing Floors:**

1. Marble, ceramic, granite and/or porcelain are suitable flooring surfaces that can be installed over as long as they can be made flat applying a cement-based embossing leveler/patch. **Note:** Check with the patch manufacturer as to what product they suggest for such type applications.
2. Resilient type floors must be firmly bonded to the subfloor. **Note:** Cushion-backed vinyl and floating vinyl floors are NOT suitable substrates.
3. **Existing wood floors (i.e., solid and/or engineered) are Not suitable substrates.**

**BEFORE INSTALLING YOUR FLOOR:**

1. Plan your layout to allow for a **1/2"** expansion space from all vertical obstructions
2. Dry lay several cartons of flooring to get a feel for color and surface variations and to make sure the floor meets the end user's satisfaction. Claims for color, surface appearance, and grain variations cannot be accepted once the floor is installed.
3. If color coordinated molding is to be used, first select flooring planks that best match the intended molding and make sure the selected planks are installed adjacent to the molding.

**FLOOR INSTALLATION OVER CONCRETE:**

**Note: Do not nail, staple, or glue planks to the sub-floor.**

1. Place a layer of 6-mil poly sheeting over the surface of the concrete slab, overlapping the seams approximately 12", followed by sealing the seams using 3" wide "clear" packing tape.
2. Work from 3 to 5 cartons as this will produce a random color tone throughout the installation.
3. Snap a chalk line away from the starting wall the width of a plank plus add an additional **1/2"** for expansion.
4. For the first row remove the tongue on all long side joints, along with the narrow side of the first plank only. Next, starting from the top left corner of the room, align the plank edge onto the chalk line with the tongue side (which you just removed) facing the wall leaving a **1/2"** expansion space. **Next, refer to the step-by-step 5G installation instructions for laminate, which are located below.**
5. **Note:** As a rule, the use of tapping blocks and pull bars are not recommended as they can damage the G5 Dry tongue and groove inner locking mechanism. In addition, do not tap on the edge of the planks as this can/will damage the inner locking mechanism preventing the planks seams from full and complete engagement.
6. For the remaining rows repeat the steps used to install the second row making sure that you continually check that your rows are straight with no gaps between the side and end-joints and that you maintain a minimum of **1/2"** expansion around all vertical obstructions.
7. The last row may need to be cut lengthwise which can be achieved by use of a table saw.
8. Install base moldings and doorway transition strips last.
9. If you have any questions before or while installing the floor, call Johnson Hardwood Technical Service Department @ 800-910-3047.

**REQUIRED TOOLS:**

- Tape measure
- Black Sharpie pen
- Chalk line
- Razor knife
- Small bristle brush for cleaning debris from locking mechanism
- Miter saw/table saw/jig saw
- 1/2" wall spacers

**RADIANT HEAT:** Johnson Hardwood High Performance Plank Flooring is approved for installations over “hydronic” radiant heat type systems only. The following guidelines apply:

**Note:** Our High-Performance Plank Flooring is designed to have increased resistance to moisture and is much more dimensionally stable compared to solid and/or engineered wood flooring products. However, since we incorporate the use of wood fiber into our High-Performance Plank Flooring, the flooring is considered to be of a “hygroscopic” nature which simply means it can/will absorb and/or release moisture due to the following influences: Changes in temperature and relative humidity outside the specified range for optimal dimensional stability, improper maintenance, lack of or insufficient moisture mitigation system(s), and/or installing the flooring over a wet substrate/subfloor are likely sources of unwanted moisture which can be absorbed into the flooring thereby resulting in expansion of the individual planks (the floor as a whole), which can result in cupping and/or buckling of the floor which if were to occur, would not be covered under Johnson’s limited warranty program.

**In-Floor Radiant Heat:** Flooring can be installed over ½” embedded (hydronic type) radiant heat type system. **Note:** Surface applied heating mats are not an acceptable form of radiant heat. Maximum surface temperature of the High Performance Flooring **CANNOT** exceed 85 F. Use of an in-floor temperature sensor is recommended to avoid overheating which can/will result in perminate damage to the floor.

### **3-SEASON ROOMS:**

**Johnson Hardwood High Performance Flooring cannot be installed in 3-Season Rooms.**

### **MAINTAINING AND PROTECTING YOUR FLOOR:**

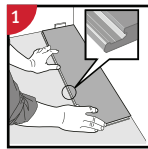
1. As with any fine floor covering, care should be taken when moving heavy furniture or appliances back into the room. Use wood panels to protect the floor when rolling heavy appliances back into place.
2. Proper floor protectors **must** be used under any furniture which is regularly moved, or which is heavy and may dent the floor. **Note: Felt and/or indoor-outdoor carpet type protectors can be purchased at your local big box store or can be purchased online.**
3. Non staining, non-rubber backed protective mats must be used under rolling office chairs, and any rolling furniture and/or carts need to have wide, flat wheels.
4. Area rugs **cannot** include rubber backing and/or a rough textured backing, as the chemistry in some rubber backing can bleed into the surface of the protective coating leaving a stain that is impossible to remove. As for rough textured backing, it can/will scratch the floors surface. **Note: We recommend [rugpadusa.com](http://rugpadusa.com) as your source for rug pads that are compatible with laminate type floors.**
5. Protective walk off mats should be used at all exterior doors.
6. Oil and petroleum-based driveways can stain the surface of the floor. **Do not** track petroleum-based products onto the floor.
7. Sweep or vacuum the floor regularly to remove dirt/grit. **Do not** use a vacuum with a revolving beater bar, floor scrubbers, steam cleaners, jet mops, buffers, or like type products. **Note: We recommend using a canister type vacuum with a China bristle attachment such as a Miele canister vacuum as the firm rubber wheels will not mar the floors surface.**
8. Protect the floor from direct sunlight by using appropriate window coverings and/or UV tinted film. **Note: Before applying UV tinted film to double and/or triple pain windows, consult with the window manufacturer for guidance and/or approval.**
9. **Johnson Hardwood** High Performance Plank Flooring should be vacuumed once a week (or as needed), dust mop once or twice a week (or as needed), wet clean up to once a week or less **using distilled water only (sprayed onto a microfiber cleaning mop)** as most tap water contains hardwater deposits that will adhere to the surface of the floor and overtime will make the floor look dull and dingy. **Note: Damage resulting from the use of non-recommended flooring cleaners, excessively wet maintenance or from using detergents, abrasive cleaners, soaps of any kind, waxes or polish are not covered by the products limited warranty.**

### INSTALLATION INSTRUCTIONS FOR LAMINATE:

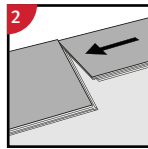
#### Important Information

- The flooring must be acclimated a minimum of 24 to 48 hours prior to installation in the room where the installation will take place
- In rooms larger than 50 ft x 50 ft (2500 sqft), the flooring must be installed in smaller sections with expansion joints
- Never install very heavy pieces of furniture such as kitchen islands/cabinets on top of the flooring.
- Always follow the floor manufacturers requirements and specifications regarding subfloor preparation.

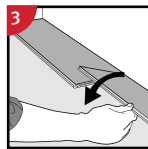
#### General installation instructions



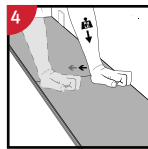
**1 First plank, first row.**  
Place a spacer with predicted thickness to the left and position the panel against the wall.  
Later, after 3 rows, you can easily position the flooring against the front wall with predicted spacers.



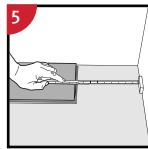
**2 Second plank, first row.**  
Place this panel gently close to the short end of the first one.



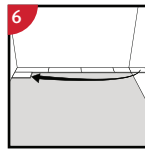
**3** When folding down it is important to start from the corner closest to the previous row, folding down towards the center, and continue towards the opposite long side. During the fold down, make sure the panels are close to each other.



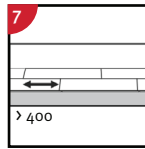
**4** Afterwards press slightly along the short end just installed.



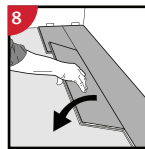
**5** At the end of the first row, put a spacer to the wall and measure the length of the last panel to fit.



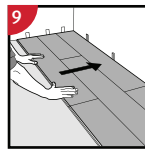
**6 Second row**  
First panel min length > 15.75 inches.  
Put a spacer against the left wall.



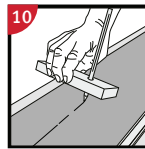
**7** Staggered joint distance i.e. minimum distance between short ends of panels in parallel rows shall not be less than the given length.



**8 Second plank second row.**  
Place the panel gently and close to the short end of the previous panel and fold it down in a single action movement.

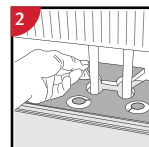
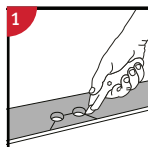


**9 After 2-3 rows.**  
Adjust the distance to the front wall by placing spacers.



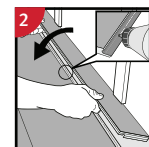
**10 Last row (and perhaps also first row).**  
Minimum width 2 inches. Place a spacer to the wall before measuring. Make a simple drawing tool (piece of wood with a hole) and mark the panel along the wall. Cut the panels lengthwise including the flexible tongues.

#### Installation around radiator/heating pipes



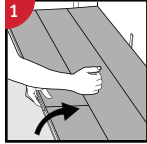
**1** Drill holes two times larger than the diameter of the pipes. Remove a piece of the panel with a utility knife. Put the panel on one side of the pipes and the removed piece on the other side.

#### When angling is not possible



**2** Remove the vertical locking part of the strip with a chisel, put applicable glue on the strip and push the panels horizontally together. Place some spacers between last board and the wall.

### Dismantling panels



Separate the whole row by carefully lifting up and release the whole row.

Fold up the row and release the whole long side.



Disassemble the panels by sliding the short ends horizontally.

Never fold up a panel, as this damage the profile.

**These Instruction Guidelines are for use with the Olde Tavern Series and Bella Vista Series High Performance Plank Flooring from Johnson Hardwood.**

The JOHNSON HARDWOOD - HIGH PERFORMANCE PLANK FLOORING warranty information is available on our web site at [johnsonhardwood.com](http://johnsonhardwood.com).



## FLOOR MUFFLER VS 6 MIL POLY SHEETING AS A CLASS 1 VAPOR DIFFUSION RETARDER

Dear Customers:

Many of you have asked whether you can substitute Floor Muffler as a stand-alone CLASS 1 Vapor Barrier (aka Vapor Diffusion Retarder) over the surface of a concrete slab in lieu of 6 mil poly sheeting which is what we currently require as a stand-alone CLASS 1 Vapor Barrier (aka Vapor Diffusion Retarder) beneath Johnson's Luxury Vinyl Plank Flooring and/or Johnson's High Performance Laminate Flooring? My response to this question is usually No, as 6 mil poly sheeting has a lower PERM rating than Floor Muffler. **Please see below for further information pertaining to this question:**

After speaking with Ricardo Gonzelez (COO) of Diversified Industries, makers of the Floor Muffler product line, here is what he had to say regarding the placement of Floor Muffler products beneath our LVP/SPC and/or laminate type of flooring products (**Note: The following answers are in direct response to customers who want to use Floor Muffler underlayment either as an additional cushion beneath the floor or use Floor Muffler underlayment as a vapor barrier, in lieu of 6 mil poly sheeting when said type of flooring is being installed over the surface of a concrete slab**):

**LVP/SPC / HPF:** Taking into consideration that Johnson's LVP/SPC / HPF flooring comes with an attached 1.5 mm (thick) underlayment pad; if/when a customer wants to incorporate the use of an additional underlayment pad beneath said flooring types, Diversified Industries limits the choice of pads to their Encore product, which consists of closed cell high density foam that measures 1.1 mm (thick) which qualifies as a CLASS 1 Vapor Barrier (aka Vapor Diffusion Retarder) at 0.108 PERMS, which is based on the Water Vapor Transmission Rate (WVTR) as per ASTM E96 (**Note:** Diversified Industries placed a limit as to the maximum amount of Moisture Vapor Emission Rate (MVER) rate of 6 lbs. / 1,000 / 24 hrs. based on ASTM F1869-22 for their Encore underlayment pad).

**Note:** According to Diversified Industries, they don't recommend the use of a thicker pad (i.e., 2 mm thick) with flooring that already has an attached pad as the combined thickness can result in compression stress damage to the locking mechanism, which can/will result in failure of the locking system, which can/will result in fractures, cracking, splitting, and/or edge joint ledging due to breakage.

**Note:** When installing over the surface of a concrete slab, the use of 6 mil poly sheeting as a vapor barrier (aka Vapor Diffusion Retarder) is required, as it offers better protection against Moisture Vapors transmitting through the surface of a concrete slab (PERM rating of 6 mil poly sheeting is 0.06 whereas Floor Muffler Encor has a PERM rating of 0.108). Bottom line is, the lower the PERM rating the better protection against Moisture Vapor Transmission; therefore, 6 mil poly sheeting should always be placed over the surface of a concrete slab (prior to the placement of Floor Muffler Encor product) and should always be considered the primary defense against Moisture Vapor Transmission.

**Note:** For moisture transmission related claims where it's discovered that 6 mil poly sheeting was Not utilized as required in combination with Floor Muffler Encor, and it is determined that Floor Muffler Encor was used as a stand-alone vapor barrier, Johnson's Claim Dept. will direct the claimant to Diversified Industries who handles claims involving their specific brand of products.

Steve Marley  
Technical Director  
Johnson Premium Hardwood