Vanier

INSTALLATION INSTRUCTIONS

GLUE DOWN APPLICATION INSTRUCTIONS

Thank you for choosing Vanier Hardwood Flooring.

Protect your investment. Review and adhere to the flooring installation instructions. Please note that these are instructions for the experienced hardwood flooring installer. For more detailed information on the basics of installing hardwood flooring, please contact the National Wood Flooring Association (NWFA) at 1-800-422-4556 or visit www.nwfa.org.

Installer/Owner Responsibility

Hardwood flooring is a natural product. Therefore, defects in the flooring can occur in the manufacturing process, or naturally as a characteristic of the wood. Vanier Flooring is manufactured within accepted industry standards, allowing for up to 5% defective product based on the original hardwood flooring purchase order. Order an additional 5% of flooring product above actual square footage requirements to allow for cutting and grading of material. The installer must hold out or cut off defective flooring material during installation. Filler or putty stick may be used to correct minor flooring defects during installation and is considered a normal procedure.

Prior to installation, the installer assumes all responsibility for final inspection and quality of the product

Flooring should be carefully examined for finish and quality. Do not install hardwood flooring that is unacceptable. Should there be problems, contact the seller immediately. BuildDirect will not, in any case, be liable for installer's lack of judgment, quality of installation, labor, installation, and associated cost.

The installer must determine that the jobsite environment and sub-floor surfaces meet applicable construction and material industry standards

BuildDirect declines any responsibility for job failure resulting from deficiencies associated with sub-floor or job-site environment. The installer is commissioned and contracted by the owner. The owner should choose the installer carefully by checking references and previous job experience, etc. The cheapest is not always the best. Installing hardwood flooring is a highly skilled operation. The contract to install is between the owner and the installer. BuildDirect is in no way responsible for the owner's choice of installer or any failure by the installer to satisfy the owner.

Installation Applications

Refer to proper application for the installation of the flooring you plan to install. There are several types of products that require different installation applications. Flooring products can be installed using a nail-down, glue-down, or floating application. Also, there are several different flooring profiles that are only suited for one or two applications.

- **¾" and 7/16" solid products can be installed using the nail-down application only.**
- **5/16" solid products can be installed using the nail-down or glue-down applications only.**
- **5/16" engineered products (multle ply) can be installed using glue-down and floating applications.**
- **All other engineered products can be installed using the glue-down, staple-down or floating applications.**
- **ONLY USE THE INSTALLATION APPLICATION THAT IS SUITABLE FOR YOUR PRODUCT.**

Basic Tools and Accessories needed for Installation

- Rubber mallet
- Pencil
- Jamb saw or hand saw
- Chalk line
- Hammer
- Tape measure
- Table saw or band saw
- Broom
- Leading brand of hardwood flooring cleaner
- Quality moisture meter with manufacturer's relevant exotic species calibration figures
- Drill with 1/16" drill bit
- 4d-6d flooring nails
- nail set

Additional Tools and Adhesive for Glue-Down Installation

• Trowel (Correct trowel as required by the glue manufacturer for the designated flooring type.
• Urethane Adhesive Cleaner
- Many of the leading glue manufacturers offer their own adhesive cleaner. Please use them. If none is available, a light application of mineral spirits to a terry cloth will help.
• 3-M Blue Tape - (Orange Cardboard Middle)

Recommended Adhesive and Applications for Glue-Down Installation

Warranted Moisture Sealer Products

The following are sealer and glue systems that offer a warranty from their manufacturers for sub-floor moisture intrusion. It is highly recommended that the installer uses these products when gluing down the hardwood flooring to concrete slabs, where moisture tests indicate moisture contents and emissions beyond recommended levels.

• Franklin Titebond 531 Epoxy Moisture Control System used to seal the sub-floor along with the use of a Franklin Moisture Cured Urethane Adhesive. See website www.franklinflooring.com for details. • Bostik MVP MVP4 (Moisture Vapor Protection) used to seal the sub-floor along with the use of a Bostik Moisture Cured Urethane Adhesive. See website www.bostik-us.com for details. • Sika Primer used to seal the sub-floor along with the use of Sika T55 Adhesive. See website www.sikausa.com for details. • Dri Tac - MCS 7000 Concrete Moisture Control used to seal the sub-floor along with the use of a DriTac 7600, DriTac 7500 Eco- Urethane or Easy Spread DriTac 7400. See website www.dritac.com for details.

There are many leading brands of concrete sealer and glue systems that offer moisture vapor protection and warranties. Always check with the manufacturer of the sealer system to investigate what protection and warranties are offered. Remember your moisture protection warranty comes from the sealer manufacturer.

CAUTION: All products require the use of Moisture-cured urethane adhesive, Do not use water based adhesives with glue-down products.

Step 1: Pre-Installation

Prior to installing hardwood floors, the building must be structurally complete and enclosed, including installation of exterior doors and windows. Concrete, masonry, drywall, and paint must also be complete, allowing adequate drying time as to not the raise moisture content within the building.

HVAC systems must be fully operational at least 14 days prior to flooring installation, maintaining a consistent room temperature between 60-75 degrees Fahrenheit and relative humidity between 35-55%.This not only stabilizes the building's interior environment, but also is essential when acclimating hardwood flooring to the job-site.

Exterior grading, directing drainage away from the structure, as well as gutters and down-spouts should also be completed. Floors can only be installed on or above grade level and are not recommended in full bathrooms.

In extreme dry climates, it may be necessary to use humidifiers to assure relativity humidity levels meet or exceed the 35% minimum. Also, dehumidifiers may be necessary to control the humidity level above the 55% level. All hardwood flooring manufacturers require these levels and no warranty for wood flooring products covers extreme dryness or high humidity.

It is essential that basements and crawl spaces are dry. Crawl spaces must be a minimum of 24" from the ground to underside of joists. A vapor barrier must be established in crawl spaces using 6 mil polyethylene (poly) film with joints overlapped and taped.

During the final pre-installation inspection, sub-floors must be checked for moisture content using the appropriate metering device for wood and/or concrete. This is covered for each type of installation application (Nail-Down, Glue-Down, and Floating)

Step 2: Equalizing Hardwood Flooring

Wood is a porous material with a natural cellular structure that expands and contracts depending on the amount of relative humidity present in the surrounding atmosphere.

Equalizing moisture content to the job-site equilibrium point before installation is paramount to stabilizing movement after installation.

Handle and unload hardwood flooring with care and store within the environmentally controlled site in which it is expected to perform. Flooring should be elevated at least four inches to allow air circulation under car tons. Hardwood flooring must acclimate for as long as necessary to meet minimum installation requirements for moisture content. It may be necessary to fully open cartons to expedite equilibrium.

Using the equilibrium moisture content chart below, determine the proper moisture content for the installation. Always use a moisture meter to determine where the flooring and present job-site conditions are in relation to the projected final equilibrium point taking into account seasonal changes. If the wood is neither gaining nor loosing moisture, an equilibrium condition has been reached.

Equilibrium Moisture Content Chart

Temp, Relative Humidity, Percent.

	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	98
30° F	1.4	2.6	3.7	4.6	5.5	6.3	7.1	7.9	8.7	9.5	10.4	11.3	12.4	13.5	14.9	16.5	18.5	21.0	24.3	26.9
40° F	1.4	2.6	3.7	4.6	5.5	6.3	7.1	7.9	8.7	9.5	10.4	11.3	12.4	13.5	14.9	16.5	18.5	21.0	24.3	26.9
50° F	1.4	2.6	3.6	4.6	5.5	6.3	7.1	7.9	8.7	9.5	10.3	11.2	12.3	13.4	14.8	16.4	18.4	20.9	24.3	26.9
60° F	1.3	2.5	3.6	4.6	5.4	6.2	7.0	7.8	8.6	9.4	10.2	11.1	12.1	13.3	14.6	16.2	18.2	20.7	24.1	26.8
70° F	1.3	2.5	3.5	4.5	5.4	6.2	6.9	7.7	8.5	9.2	10.1	11.0	12.0	13.1	14.4	16.0	17.9	20.5	23.9	26.6
80° F	1.3	2.4	3.5	4.4	5.3	6.1	6.8	7.6	8.3	9.1	9.9	10.8	11.7	12.9	14.2	15.7	17.7	20.2	23.9	26.0
90° F	1.2	2.3	3.4	4.3	5.1	5.9	6.7	7.4	8.1	8.9	9.7	10.5	11.5	12.6	13.9	15.4	17.3	19.8	23.3	26.0
100° F	1.2	2.3	3.3	4.2	5.0	5.8	6.5	7.2	7.9	8.7	9.5	10.3	11.2	12.3	13.6	15.1	17.0	19.5	22.9	25.6

From the U.S. Dept of Agriculture "Wood Handbook – Wood as an Engineering Material"

NOTE: Equilibrium points vary dramatically throughout the country, from the dry desert areas of the Southwest to moist areas along the Gulf of Mexico. In addition, a wide range of relative humidity can be experienced between individual job-sites within the same basic locale. Different heating/air conditioning systems can also dramatically alter on-site relative humidity. As a result, there is no fixed moisture content that is right for all situations. It is up to the individual installer to establish the proper moisture content for each installation.

Step 3: Recommended Sub-Floor

- **Preferred** - 3/4'' (19MM) CDX Grade Plywood or ¾" (23/32) OSB P52 Rated Underlayment with a minimum 40 lbs. density.
- **Minimum** – 5/8" CDX Grade Plywood with a minimum 40 lbs. density.
- **DO NOT NAIL OVER PARTICLE BOARD OR SIMILAR PRODUCTS, INCLUDING GYPCRETE.**
- **PRODUCTS CANNOT BE INSTALLED OVER RADIANT HEAT.**

Step 4: Sub-Floor Preparation

- Sub-floors must be dry and free of wax, paint, oil, and debris. Replace any water-damaged or delaminated sub-flooring or underlayment. Scrape smooth and sweep prior to installation.
- Sub-floor should be level/flat within 3/16" over 10' or 1/8" over 6'.
- If sub-floor is plywood or equivalent, high areas or joints can be sanded flat. Low spots can be lifted to flat using shims or layers of builders felt between wood and sub-flooring during installation.
- Plywood or equivalent, sub-floor must be structurally sound prior to installation. Sub-floor must be properly secured with nails or screws every 6 inches along joists to reduce the possibility of squeaking.
- Appropriate moisture tests must be performed as outlined in Step 5: Testing for Moisture.

Minimum thickness sub-floor material recommendations are satisfactory for 16" on Center joist spacing. Thicker sub-floor recommendations will allow up to 19.2" joist spacing. When joist spacing is greater than 19.2" on Center, flooring will exhibit minimum performance. Minimum performance may result in movement, gaps, and /or noises. A second layer of sub-floor material (bringing the overall thickness to 1 to 1-1/8", will provide optimum results when joist spacing exceeds 19.2" on center. Sub-Floor panels should be spaced 1/8" apart to allow for expansion.

Hardwood flooring should, whenever possible, be installed perpendicular to flooring joists. Do not install hardwood flooring over existing gluedown wood floors or over wood floors that exceed 3-1/4" face size. In these applications, or when installing flooring parallel to existing wood floors, first install an additional ¼" layer of plywood to assist stabilization.

Step 5: Check for Moisture

Using a quality moisture meter, measure the moisture content of both the sub-floor and the hardwood flooring. Sub-floors must not exceed 12% moisture content and the difference between sub-floor and hardwood flooring cannot exceed 4%. If sub-floors exceed this amount, an effort must be made to locate and eliminate the source of moisture before installation. If there is a concern that the moisture is in the high range, a moisture barrier is recommended

Step 7: Installing the Floor

- Remove flooring from several different cartons to maximize color and shade mixture.
- Stagger the ends of the boards at leat 6" in adjacent rows.
- Installation parallel to the longest wall provides the best visual effect.
- Before you begin installing the flooring, cover sub-floor area with 15 lb. asphalt felt.

Undercut or notch-out door casings 1/16" higher than the thickness of the flooring being installed to avoid difficult scribe cuts during installation. Also, remove existing base and shoe molding as well as doorway thresholds; each can be replaced after installation is complete.

An exterior wall is usually the straightest and best reference line to start the installation. The direction of wood flooring should be at right angles to the floor joists whenever possible. Establish a starting line by leaving a minimum ½" expansion gap around all vertical obstructions. In large spans, more spacing may be needed depending on geographical area, interior climate control, and time of the year. Measure this distance from the starting wall (in at least two places) close to the starting wall's opposite corners. Mark these points and snap a working chalk line parallel to the starting wall allowing the required expansion space between the starting wall and the edge of the first row of flooring.

To ensure proper alignment of flooring, make sure the flooring along the working chalk line is straight. Allowing for a ½" minimum expansion gap is critical. Wood expands and contracts with changes in humidity. Wood will buckle and/or cup if an adequate expansion space is not provided. Always allow for expansion when making end or side cuts around vertical objects.

Apply recommended urethane adhesive with the manufacturer's recommended trowel over an area nest to the wall that will allow the installer time to engage the boards into the adhesive in the open time of the adhesive. This is essential so as to allow proper transfer of the adhesive to the sub-floor and the backs of each piece. Spacers next to the starting wall will allow the installer to push the first few rows together without moving rows off the control line. Many installers will use tape to hold the first few rows together avoiding board movement. The first row of boards should be laid with the tongues closest to the starting wall which will allow each row to be installed tongue into grove to avoid excessive adhesive from being pushed up off the sub-floor.

Continue across the room until finished; remember to provide adequate spacing for expansion gap. Once completed, install molding and trim. Thoroughly clean, sweep, and vacuum installed floor before further use.

If floor is to be covered, use a breathable material such as cardboard or rosin paper. Do not cover with plastic.

Step 8: Common Sense Care

It is important to keep your hardwood floors free from dirt, water, food, grease, and other spills which can damage the floor or finish.

Periodically clean floors using a leading brand of cleaner made for prefinished hardwood floors (follow directions on bottle). Do not use ammonia or oil-based wax, polish, abrasive cleaners, or furniture cleaners. Make sure to install floor protectors under furniture, chairs or other items that may sit directly on your hardwood floor to help prevent scratches, scarring, and dents. Regularly, sweep, dust mop and/or vacuum to keep dirt and grit from dulling the shine and scratching the finish. Wipe up all spills promptly with a soft, dry, cloth. Avoid walking on floors with sharp, stiletto high heel shoes or shoes with soles in need of repair.

Select a starter wall (it is recommended to start the installation along an exterior wall). Check to make sure the chalk line is straight and square to the room. Measure the line from the starting wall as well as to the opposite wall to be sure the rows will line up correctly. As mentioned prior, the flooring should be laid perpendicular to the floor joists. If the flooring must be laid in the same direction as the support joists, it will require the installation of an additional layer of 3/8” plywood. It may be necessary to scribe the row closest to the wall to allow for slight irregularities in the starter wall. By having a control line to work from, the installer will be assured of all rows of flooring running true to the width of the room.

Step 9: Finish

BuildDirect Moldings (Stair-nose, Quarter-round, T-Mold, Thresh-hold, and Reducer) are available to cover all expansion spaces around the parameter of the flooring. This will give your installation a clean and professional look. Remove any tape, debris, and dirt from the flooring. Putty all face nailed boards or other flaws with a non-shrinking putty of the same color of the floor.

CONGRATULATIONS on your new Hardwood Floor!

If you have further questions or comments regarding Brazilian Hardwood Flooring, please contact our Customer Service Department at www.builddirect.com.