LOCKING HARDWOOD WITH LOCK&FOLD™ TECHNOLOGY INSTALLATION INSTRUCTIONS

STORAGE AND HANDLING
- Handle and unload with care. Store in a dry place being sure to provide at least a 4” (10 cm) air space under cartons, which are stored upon “on-grade” concrete floors. Flooring shall not be delivered until the building has been enclosed with windows, doors are in place, and cement work, plastering and all other “wet” work is complete and dry. Concrete should be at least 60 days old. Although it is not necessary to acclimate engineered flooring it is best to store it in the environment in which it is expected to perform prior to installation. Do not open cartons of locking hardwood flooring in advance of installation.
- The installation site should have a consistent room temperature of 60-80°F (16-27°C) and humidity of 30-50% for 14 days prior to and during installation and until occupied.

TOOLS & ACCESSORIES NEEDED
- Broom • Pencil • Safety glasses • Matching filler • Meter width (wood, concrete or both)
- Fasteners and wall moldings as needed • Hand saw or power saw and circular saw or band saw • Premium Underlayment
- Tape measure • Carpenter square • Hammer or rubber mallet • Vinyl/plastic tapping block • Pull-bar • Utility knife
- NOSZH—designated dust mask • Recommended glue • 3M ScotchBlue® 2080 Tape
- Recommended Professional Hardwood flooring cleaner

RECOMMENDED CLEANER: Bruce® Hardwood & Laminate Floor Cleaner

READY TO USE SPECIALTY PRODUCTS
- Recommended Underlayment (Floating installation system only): Premium Underlayment

RECOMMENDED WOOD GLUE (Floating installation if needed): Bruce® EverSeal® Hardwood & Laminate Flooring Adhesive

ATTENTION INSTALLERS

CAUTION: WOOD DUST

SAWING, SANDING AND MACHINING WOOD PRODUCTS CAN PRODUCE WOOD DUST. AIRBORNE WOOD DUST CAN CAUSE RESPIRATORY, SKIN AND EYE IRRITATION. THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) HAS CLASSIFIED WOOD DUST AS A NASAL CARCINOMA IN HUMANS.

Precautionary Measures: If power tools are used, they should be equipped with a dust collection system. If high dust levels are encountered, use an appropriate NIOSH-designated mask. Avoid direct contact with eye and skin.

First Aid Measures in Case of Irritation: Use of ventilation, flushing of skin with water for at least 15 minutes. If you have any technical or installation questions, or to request a Safety Data Sheet, please call 1-866-243-2726 or visit www.hardwoodexpert.com our technical website.

IMPORTANT HEALTH NOTICE FOR MINNESOTA RESIDENTS ONLY:

THESE BUILDING MATERIALS EMIT FORMALDEHYDE. EYE, NOSE, AND THROAT IRRITATION, HEADACHE, AND COLD/SICKNESS CAN BE CONTROLLED BY USING VENTS AND RADIANT HEATING SYSTEMS (or air-conditioning if needed) to maintain indoor temperatures above 72°F (22°C) and relative humidity below 60%. Ventilation or air-conditioning is necessary, either in the building or in a room/area in which wood materials are being used. Avoid subfloors with excessive vertical movement. Optimum performance of hardwood floor covering products occurs when there is little horizontal or vertical movement of the subfloor. If the subfloor has excessive vertical movement (deflection) before the installation of the flooring it is likely it will not do so after installation of the flooring is complete. As flooring manufacturers we are unable to evaluate each engineered space. Spacing and spans, as well as how their engineering methods, are the responsibility of the builder, engineer, architect or consumer, who is better able to evaluate the expected result based on site related performance.

Concrete (Glue-Down and Floating Installations Only)

The flooring can be glued directly to concrete with a minimum compressive strength of 3000 PSI. Do not install over a premium grade, alkali-resistant adhesive and a full spread application system to properly bond the vinyl to the subfloor. Follow the sheet vinyl manufacturer’s instructions for installation procedures. A bond test may be performed to ensure bond has achieved the recommended 35+ lbs. per square foot. Do not lay over carpeting or any underlayment that has been treated with a sealer or paint that can prevent the adhesive from adhering to the subfloor. Do not overlap or but against any other flooring or wall finishes. Store in a dry place being sure to provide at least a 4” (10 cm) air space under cartons, which are stored upon “on-grade” concrete floors. Flooring shall not be delivered until the building has been enclosed with windows, doors are in place, and cement work, plastering and all other “wet” work is complete and dry. Concrete should be at least 60 days old. Although it is not necessary to acclimate engineered flooring it is best to store it in the environment in which it is expected to perform prior to installation. Do not open cartons of locking hardwood flooring in advance of installation.

The installation site should have a consistent room temperature of 60-80°F (16-27°C) and humidity of 30-50% for 14 days prior to and during installation and until occupied.

Concrete Moisture Tests
All concrete subfloors should be tested, and results documented, for moisture content. Visual checks may not be reliable. Test several areas, especially near exterior walls and walls containing plumbing. Acceptable test methods for subfloor moisture content include: 

- Tramex Concrete Moisture Encounter Meter (Figure 2): Moisture readings should not exceed 4.5% on the upper scale. (Figure 2 shows an unacceptable reading of over 4.5) Concrete Moisture Meters give qualitative reading-results not quantitative ones. These results are a quick way to determine if further testing is required.

- RH Levels in Concrete Using In-situ Probes (ASTM F 2710) should not exceed 75%.

“DRY” CONCRETE, AS DEFINED BY THESE TESTS CAN BE WET AT OTHER TIMES OF THE YEAR. THESE TESTS DO NOT GUARANTEE A DRY SLAB.

Moisture Retardant Systems
If excessive moisture is present or anticipated, use Bruce® Summit Select adhesive or Bruce® ProConnect Plus adhesive or inexpensive sheet vinyl must be used to reduce vapor intrusion.

- Bruce® Summit Select® Adhesive: Apply the adhesive using the tool that is listed on every package. Flooring can be installed immediately after applying the adhesive. Bruce® Connect® Plus 90% RH and 10lb CC.

- Bruce® ProConnect® Plus Underlayment: Apply the adhesive using the recommended tool size for moisture barrier applications. Flooring can be installed immediately after applying the adhesive.

- Sheet vinyl: An inexpensive sheet vinyl or “slip-sheet” (felt-backed with vinyl wear layer) may be installed. Use an appropriate NOSH-designated dust mask. Floating floors can be installed over any structurally sound concrete.

A set of Installation Instructions and Installation Tools is included with each order. Please read these before starting the job.

AHF PRODUCTS Inc. 866-243-2726.
required as an adhesion test. Install several small areas (3´ x 3´) (1 m x 1 m) and allow the vinyl to set for 72 hours. Remove the vinyl. If the backing remains attached to the concrete, the subfloor should be acceptable for sheet vinyl installations. Install the sheet vinyl adhesive. Apply the adhesive for 24 hours prior to beginning installation. Deglaze as necessary to create an adequate adhesive bond. Always check for adequate adhesive bond.

Acoustic Concrete
(ProConnect Floating Installations Only)
Acoustic concrete normally contains large quantities of gypsum that may inhibit the adhesive’s capability to properly bond. Acoustic concrete must be primed with the concrete manufacturer’s recommended primer/surface hardener. Test the concrete by scraping the surface with a nail or other sharp object. If the concrete powders or crumbles, it is not sound and suitable for the application of hardwood flooring and may require the use of a floating subfloor. Always check for adequate adhesive bond.

Ceramic, Terrazzo, Slate & Marble
(ProConnect Floating Installations Only)
All grout joints and broken corners that exceed 3/16” (5 mm) must be filled with a cementitious leveling compound patch and underlayment. The surface should be cleaned and abraded to create a good bonding surface for the adhesive. Loose tiles must be re-attached to the subfloor or filled as above. Remove all sealers and surface treatments. Always check for adequate adhesive bond.

Wood Subfloors and Underlayment
(All Installation Methods)
General: The wood subflooring materials must not exceed 13% moisture content. Using a reliable wood moisture meter, measure moisture content of both the subfloor and the hardwood flooring to determine proper moisture content. Moisture content of wood subfloors must not exceed 12% as indicated by a wood moisture meter, and be within 3% moisture content of the product being installed. When installing parallel to the floor joists it may be necessary to adjust the flooring system. If the floor is underlayment over approved wood/wood composite subfloors, the thickness of 3/8” (9.5 mm) approved underlayment is required as an adhesion test. Install several small areas (3´ x 3´) (1 m x 1 m) and allow the vinyl to set for 72 hours. If the floor is underlayment over Approved Wood/wood composite subfloors, if vinyl or tiles are loose, broken, or in poor condition, install a 3/8” (9.5 mm) approved underlayment as a subfloor. For the length of the fastener.

STEP 1: Doorway and Wall Preparation
(All Installations)
• Undercut door casings and jambs. Remove any existing base, shoe mold or doorway thresholds. These items can be replaced after installation. When undercutting door casings the installer should confirm there is the recommended expansion space below. The floor must have 1/6” clearance under the door casing to be able to float freely without vertical restriction.

STEP 2: Plan Your Layout Using the Following Steps
(All Installations)
• Decide the direction of the floor installation in the room. Planks installed parallel to windows accent the floor the best. Floors should be installed perpendicular to the floor joists. If the floor is being installed parallel to the joists based on installation needs, it may be necessary to add an additional underlayment, at least 3/8” (9 mm) thick to ensure the flooring system. Do not install over floors that exceed one layer, as the thickness of the flooring materials will prevent an adequate adhesive bond.

STEP 3: Laying the Underlayment
(Floating Installations Only)
• Install the underlayment in the same direction that the hardwood flooring is to be installed.
• Extend the underlayment a few inches up the wall. Trim excess prior to installing trim or moldings.
• The floating floor underlayment already has double-sided tape for ease of taping the pre-cut overlapping seams. If a non-adhesive underlayment is used, tape all seams with the included tape.

STEP 4: Installing First Floor
(Floating Installations Only)
• Select a board to begin installation of the first row using the longest boards available.
• Align the piece by overlapping the end of the first board so that the joint is tight when the board lays flat. Some slight adjustment of the board may be necessary to assure a tight fit.
• Align the next piece by overlapping the end of the first board so that the joint is tight when the board lays flat. Some slight adjustment of the board may be necessary to assure a tight fit.
• Again, place wedges or 1/2˝ (13 mm) scrap as necessary to restrain movement and maintain expansion zone.
• Continue in this manner until the first row is complete.
• Cut the final board to leave a 3/8” (9.5 mm) expansion zone.
• Place wedges to restrain movement and maintain expansion zone.
• A 1/2” expansion zone is required throughout the installation. Do not attach or pivot the flooring to the subfloor at any point of the installation until gluing, nailing, or by any other methods.
• If the wall is not straight, scribe the first board as necessary to maintain alignment.
• Continue to Step 7.

STEP 5: Spread the Adhesive
(ProConnect Floating Installations Only)
• Spread sufficient amounts of the recommended adhesive with the recommended tool in an area that can be covered in 60 minutes (see adhesive information).
• If necessary, nail a sacrificial row with 1” (2.5 cm) nails on the dry side of your chalk line to help hold the first row in place.

With Adhesive installed on the surface of the flooring. If necessary, distribute weight using a kneeler board.

STEP 4: Installing the Floor
(ProConnect Floating Installations Only)
• Select a board to begin installation of the first row using the longest boards available.
• Start Installation with the tongue facing the wall, carefully place the first board in place. Use wedges or 1/4” (6 mm) scrap along the wall to hold plank in place while allowing the required expansion space. Use wedges or 1/2” (13 mm) scrap as necessary to restrain movement and maintain expansion zone. This will help ensure a more favorable overall appearance of the floor.

• Do not sand any resilient products. They may contain asbestos fibers, which may be harmful.
• Cork floors must have all sealers and surface treatments removed before installation begins. Always check for adequate adhesive bond.

Mechanically Fastened/Staple-Down Installations
• Install over floors that exceed one layer, as the thickness of the flooring materials will prevent an adequate mechanical bond.

Installing the Floor Before you Start
• Before installing the planks, central heat or air conditioning should be operating for 14 days.
• Adjust the indoor temperature about 10-15°F (5-8°C) above the comfort level for the room being installed. Subfloor designs for materials with higher resistance to heat transfer, such as carpet, will damage the floor. Installations that include multiple floor covering products on a single heating circuit must be adjusted for the flooring product with the highest heat transfer or lowest temperature requirement.
NOTE: Clean adhesive from the surface of the floor frequently, using the recommended adhesive cleaner. Urethane adhesives become extremely difficult to remove when cured. Do not use 3M Scotch-Brite® 2080 Tape before adhesive is removed from the surface. Use clean towels, changed frequently, to prevent haze and damage the floor. Be sure not to spread adhesive too far for your work area.

STEP 3 (Staple Down Installations)

• Select a board to begin installation of the first row using the longest boards available. Start from the LEFT with the tongue facing the wall, carefully place the first board in place. Use wedges 1/4” (6 mm) scrap along the wall to hold planks in place while allowing the required expansion space.

• Align the next piece by overlapping the end of the first board so that the joint is tight when the board lays flat. Some slight adjustment of the board may be necessary to ensure a tight fit.

• Set compressor at 70 PSI. If groove damage occurs, lower air pressure.

STEP 4: Installing the Floor (Mechanically Fastened/Staple Down Installations)

• Always use the recommended staple for the specific product being installed (see “Installation Applications”). Use a minimum 1” (2.5 cm) staple recommended by the stapler manufacturer. 1”-2” (2.5-5 cm) from each end at 3”-4” (8-10 cm) intervals.

• Pressurized air is recommended. If two rows are being fastened together, stagger the staples within each row. Use countersink nails or use a staple gun with a narrow width staple to ensure flush engagement of groove with the following row(s).

• Be sure not to spread adhesive too far for your work area.

STEP 5: Installing Remaining Rows (All Installations)

• Begin the second row with the cut piece from the first row. If the cut piece is shorter than 8” (20 cm) do not use it. Instead, begin with a new board that exceeds 8” (20 cm) in length and allows 6” (15 cm) spacing between the end joints.

• Place the first board in place by angling it up slightly, pushing forward and interlocking the side tongue. Slide the board to the LEFT as necessary to align the edges of the end joint.

• Carefully push the board down until tongue and groove lock together on the side and ends. A slight tap with a tapping block may be necessary to complete the interlock.

• Restrain the movement of the board by installing a staple in the expansion zone.

• Use a 2” (5 cm) spacing between end joints after the first four rows for best appearance.

STEP 6: Installing Final Row (All Installations)

• The last row may need to be cut lengthwise (ripped).

• Place the row of planks to be fit on top of the last row of installed planks. Use a piece of plank as a scribe to trace the contour of the wall. Mark where the board will be cut. If the fit of the wall is simple and straight, just measure for the correct fit and cut.

• After the last row is cut, use the pull bar to tighten the joint.

STEP 7: Installing Under a Door Jamb (All Installations)

• Installations of locking engineered floors under moldings, such as a door jamb, may require that the top lip of the groove on the end be reduced in size.

• Using a small plane or knife plane, shave off the ledge off the groove.

• After the groove edge has been trimmed, place the board into place and tighten with a pull bar to test for fit. The installer must be certain that the proper expansion space is maintained and the flooring is not pinched.

• If fit is incorrect, trim as necessary.

• Place a bead of recommended wood glue on the bottom lip of the groove.

• Reintert the tongue into the groove and tighten the board with a pull bar. Hold the board in place with painter’s tape (3M Scotch-Brite® 2080 Tape) until the glue is dry. Do not use masking tape or duct tape, as the finish may be damaged.

STEP 8: Completing the Installation (All Installations)

• Remove all wedges and tape if used.

• Clean floor with the recommended hardwood flooring cleaner.

• Trim all underlayment and install, or re-install, all base and/or quarter round moldings. Nail moldings into the wall, not the floor. Inspect the floor, filling all minor gaps with the appropriate blended filler.

• Leave warranty and floor care information with the owner. Advise them of the product name and code number of the flooring they purchased.

• To prevent surface damage, avoid rolling heavy furniture and appliances on the floor. Use plywood, hardboard or appliance lifts if necessary. Use protective casitors/caster cups or felt pads on the legs of furniture to prevent damage to the floor.

INSTALLERS – ADVISE YOUR CUSTOMER OF THE FOLLOWING

Seasons: Heating and Non-heating

Recognizing that hardwood floor dimensions will be slightly affected by varying levels of humidity within your building, care should be taken to control humidity levels within the 30-50% range. To protect your investment and to assure that your floors provide lasting satisfaction, we have provided our recommendations below.

• Heating Season (Dry): A humidifier is recommended to prevent excessive shrinkage in hardwood floors due to low humidity levels. Wood stoves and electric heat tend to create very dry conditions.

• Non-Heating Season (Humid, Wet): Proper humidity levels can be maintained by use of an air conditioner, dehumidifier, or by turning on your heating system periodically during the summer months. Avoid excessive exposure to water from tracking during periods of inclement weather. Do not obstruct in any way the expansion joint around the perimeter of your floor.

Damage caused by failing to maintain the proper humidity levels is not manufacturing related and will void the floor’s warranty.

NOTE: Final inspection by the end-user should occur from a standing position.

FLOOR REPAIR

• Minor damage can be repaired with a Bruce® touch-up kit or acrylic wood filler. Major damage will require board replacement, which can be done by a professional floor installer.

• Instructions for the board replacement can be found at www.hardwoodexpert.com, our technical website.

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