



OUR FAMILY OF BRANDS.

Bruce



Hartco



ROBBINS



Capella



ENGINEERED HARDWOOD 3/8", 7/16", 1/2" & 9/16" (10 MM, 11MM, 13MM & 14 MM) INSTALLATION INSTRUCTIONS

FOR STAPLE-DOWN, MECHANICALLY FASTENED, FLOATING AND GLUE-DOWN APPLICATIONS.

RECOMMENDED ADHESIVES: Bruce® ProConnect™ Plus, Bruce Equalizer Pro, Bruce Summit Select™

RECOMMENDED ADHESIVE REMOVER: Low Odor mineral spirits

RECOMMENDED CLEANER: Bruce Hardwood & Laminate Floor Cleaner

RECOMMENDED UNDERLAYMENT (Floating installation system only): Premium Underlayment

RECOMMENDED WOOD GLUE (Floating installation and joint gluing): Bruce EverSeal™ Adhesive

THANK YOU FOR CHOOSING AHF PRODUCTS FLOORING. If properly installed and cared for your new flooring will be easy to maintain and will look great for years to come. If you have questions or comments, please visit us at www.ahfproducts.com or 1 866-243-2726.

These directions are based on industry standards and best practices. Failure to follow these installation instructions may result in damage to the flooring and void the floor's warranty.

- For complete warranty information call 1-866-243-2726 or go to www.ahfproducts.com.
- For 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.
- For general questions or comments, please visit us at www.ahfproducts.com or call 1-866-243-2726.

NOTE: Do not staple down traditionally finished Pecan, Maple or Hickory Products. All species of textured products (such as hand-scraped, wire-brushed, and rustic/distressed products) can be stapled down with 20 gauge staples (1" minimum length for 3/8" – 1/2" engineered hardwood, for 9/16" hardwood, use 1-1/4" fasteners).

FOR PRODUCTS WIDER THAN 5": In addition to the use of mechanical fasteners, assisted glue applications should be used. The glue should be a premium grade urethane construction adhesive applied in a serpentine pattern to the back of each board. Then follow the recommended fastening pattern.

GENERAL INFORMATION

Owner/Installer Responsibility

Beautiful hardwood floors are a product of nature and therefore, not perfect. Our hardwood floors are manufactured in accordance with accepted industry standards. For optimum performing hardwood flooring, carefully read and follow these installation instructions.

- These hardwood floors were manufactured in accordance with accepted industry standards, which permit grading deficiencies not to exceed 5%. These grading deficiencies may be of a manufacturing or natural type. When flooring is ordered, 5% must be added to the actual square footage needed for cutting and grading allowance (10% for diagonal installations).
- The owner/installer has final inspection responsibility as to grade, manufacture and factory finish. Inspection of all flooring should be done prior to installation. The flooring should also be carefully examined for color, finish and quality before installing it.
- The installer must use reasonable selectivity and not use or cut off pieces with deficiencies, whatever the cause. Should an individual piece be doubtful as to grade, manufacture or factory finish, the installer should not use that piece. If material is not acceptable, do not install it and contact the seller immediately.
- Prior to installation of any hardwood flooring product, the owner/installer must determine that the job-site environment and the sub-surfaces involved meet or exceed all applicable standards. Recommendations of the construction and materials industries, as well as local codes, should be followed. These instructions recommend that the construction and subfloor be clean, dry, stiff, structurally sound and flat. The manufacturer declines any responsibility for job failure resulting from, or associated with, subfloor and substrates or job-site environmental deficiencies.
- Use of stain, filler or putty stick to touch-up and appropriate products for correcting subfloor voids is accepted as part of normal installation procedures.

WARNING: EXISTING IN-PLACE RESILIENT FLOOR COVERING AND ASPHALTIC ADHESIVES. DO NOT SAND, DRY SWEEP, DRY SCRAPE, DRILL, SAW, BEADBLAST, OR MECHANICALLY CHIP OR PULVERIZE EXISTING RESILIENT FLOORING, BACKING, LINING FELT, ASPHALTIC "CUTBACK" ADHESIVE, OR OTHER ADHESIVE.

These existing in-place products may contain asbestos fibers and/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 existing in-place 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 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 instructions on removing all resilient floor covering structures or contact your retailer or AHF Products at 1 866-243-2726.

AHF floor coverings and adhesives do NOT contain asbestos.

II. PREPARATION

STORAGE AND HANDLING

- Handle and unload with care. Store in a dry place being sure to provide at least a four-inch air space under cartons which are stored upon "on-grade" concrete floors. Flooring should 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 completed and dry.
- 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. Check adhesive label for adhesive storage limitations.

JOB-SITE CONDITIONS

- The building should be enclosed with all outside doors and windows in place. All concrete, masonry, framing members, drywall, paint and other "wet" work should be thoroughly dry. The wall coverings should be in place and the painting completed, except for the final coat on the base molding. When possible, delay installation of base molding until flooring installation is complete. Basements and crawl spaces must be dry and well ventilated.
- Exterior grading should be complete with surface drainage, offering a minimum drop of 3" in 10' (7.6 cm in 3.05 m) to direct flow of water away from the structure. All gutters and downspouts should be in place.
- Engineered flooring may be installed below-, on- or above-grade level. Do not install in full bathrooms.
- Crawl spaces must be a minimum of 18" (46 cm) from the ground to the underside of the joists. A ground cover of 6-20 mil black polyethylene film is essential as a vapor barrier with joints lapped 6" (15 cm) and sealed with moisture resistant tape. The crawl space should have perimeter venting equal to a minimum of 1.5% of the crawl space square footage. These vents should be properly located to foster cross ventilation (Figure 1).
- Where necessary, local regulations prevail.
- 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.

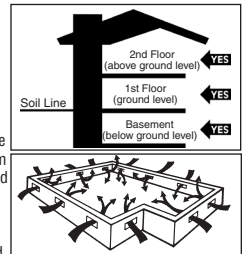


Figure 1

ATTENTION INSTALLERS

⚠ CAUTION: WOOD DUST

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

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

First Aid Measures in Case of Irritation: In case of irritation, flush eyes or 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 our technical website at www.hardwoodexpert.ahfproducts.com.

IMPORTANT HEALTH NOTICE FOR MINNESOTA RESIDENTS ONLY:

THESE BUILDING MATERIALS EMIT FORMALDEHYDE. EYE, NOSE, AND THROAT IRRITATION, HEADACHE, NAUSEA AND A VARIETY OF ASTHMA-LIKE SYMPTOMS, INCLUDING SHORTNESS OF BREATH, HAVE BEEN REPORTED AS A RESULT OF FORMALDEHYDE EXPOSURE. ELDERLY PERSONS AND YOUNG CHILDREN, AS WELL AS ANYONE WITH A HISTORY OF ASTHMA, ALLERGIES, OR LUNG PROBLEMS, MAY BE AT GREATER RISK. RESEARCH IS CONTINUING ON THE POSSIBLE LONG-TERM EFFECTS OF EXPOSURE TO FORMALDEHYDE.

REDUCED VENTILATION MAY ALLOW FORMALDEHYDE AND OTHER CONTAMINANTS TO ACCUMULATE IN THE INDOOR AIR. HIGH INDOOR TEMPERATURES AND HUMIDITY RAISE FORMALDEHYDE LEVELS. WHEN A HOME IS LOCATED IN AREAS SUBJECT TO EXTREME SUMMER TEMPERATURES, AN AIR-CONDITIONING SYSTEM CAN BE USED TO CONTROL INDOOR TEMPERATURE LEVELS. OTHER MEANS OF CONTROLLED MECHANICAL VENTILATION CAN BE USED TO REDUCE LEVELS OF FORMALDEHYDE AND OTHER INDOOR AIR CONTAMINANTS.

IF YOU HAVE ANY QUESTIONS REGARDING THE HEALTH EFFECTS OF FORMALDEHYDE, CONSULT YOUR DOCTOR OR LOCAL HEALTH DEPARTMENT.

SUBFLOOR CONDITIONS

- CLEAN – Subfloor must be free of wax, paint, oil, sealers, adhesives and other debris.
- LEVEL/FLAT – Subfloor must be within 3/16" in 10' (5 mm in 3 m) and/or 1/8" in 6' (3 mm in 2 m). Sand high areas or joints. If the floor is to be glued down, fill low areas with a latex additive cementitious leveling compound of 3,000-PSI minimum compressive strength Patch, Underlayment & Embossing Leveler with Underlayment Additive. Follow the instructions of the leveling compound manufacturer, but make certain the leveling compounds are completely DRY before beginning installation. When mechanically fastening the floor down, flatten low spots with a maximum of 6 layers of 15# builders felt, plywood or shims (not leveling compounds). Leveling materials must provide a structurally sound subfloor that does not affect the holding power of the fastener.
- DRY – Check and document moisture content of the subfloor using the appropriate moisture test. Concrete subfloors must a minimum of 30 days old before testing begins.
- STRUCTURALLY SOUND – Any areas that are loose or squeak, must be nailed or screwed. Wood panels should exhibit an adequate fastening pattern, glued/screwed or nailed as system requires, using an acceptable nailing pattern. Typical: 6" (15 cm) along bearing edges and 12" (31 cm) along intermediate supports. Flatten edge swell as necessary. Replace any water-damaged, swollen or delaminated subflooring or underlayments.
- Subfloors with excessive vertical movement should be avoided. 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 installation of the flooring, it is likely it will do so after installation of the flooring is complete.

SUBFLOORS WITH RADIANT HEAT

- **NOTE:** Always make certain the product selected is recommended for this type application. System must be operational and heated for at least 7 days prior to beginning the installation.
- Use an incremental control strategy that brings the floor through temperature changes gradually which may include an external thermostat.
- Turn off heat and let subfloor cool down to room temperature 3-4 hours prior to starting the job.
- BEFORE installation begins, ascertain that the heating system is designed and controlled for wood flooring and that the circuit does not include other floor covering types. Failure to do so may cause excessive heat damage and shrinkage.
- **NOTE:** Refer to radiant heat system manufacturer's precautions for staple down installation. Beware of stapling through radiant tubing or mesh.
- After installation, turn the heating system back on immediately. The finished floor surface must not exceed 85°F (29°C) throughout the life of the floor.
- Radiant heating systems normally create dry heat that can lower interior humidity levels. It may be necessary to add humidity with humidifiers to maintain the recommended levels (30-50%) and prevent damage to the wood floor.
- The flooring should be end-glued over radiant heat to reduce longitudinal shrinkage. Apply a bead of the recommended wood glue to the groove end then insert the tongue. Wipe excess adhesive away immediately.

TOOLS & ACCESSORIES NEEDED

(All Installation Methods)

- Broom • Tape measure • Hammer • Chalk line & chalk • Hand saw or jamb saw
- Recommended hardwood flooring cleaner • Electric power saw • Eye protection • Recommended wood glue
- Moisture Meter (wood, concrete or both) • Transition and wall moldings • NIOSH-designated dust mask

(Add for Glue-Down Installations)

- Recommended adhesive and adhesive remover • Recommended trowel • Scotch® Delicate Surface Painter's Tape 2080
- Recommended wood glue for floors exceeding 3-1/4" (9.5 cm) in width

(Add for Mechanically Fastened/Staple-Down Installations)

- Hardwood flooring stapler for engineered hardwood
- 1" Staples/fasteners (minimum) for 3/8" – 1/2" products, for 9/16" products, 1-1/4" fastener
- 20 gauge fasteners • Compressor and hose • Nylon/Plastic taping block • In-line regulator
- Recommended wood glue for floors exceeding 3-1/4" (9.5 cm) in width
- *The Flooring Manufacturer does not recommend or endorse any specific brand or type of mechanical fastener.

(Add for Floating Installations)

- Premium underlayment for floating hardwood flooring • Pull bar • Tapping block • Recommended wood glue

III. SUBFLOOR/UNDERLAYMENT REQUIREMENTS

RECOMMENDED SUBFLOOR/UNDERLAYMENT SURFACES

(Glue-Down and Floating Installations Only)

- Concrete • Ceramic Tile, Terrazzo, Slate & Marble • Acoustic cork

(All Installation Methods)

- Wood subfloors • Wood structural panels and underlayment • Fully adhered existing wood floors
- Fully adhered non-cushion vinyl sheet, resilient tile, cork flooring and linoleum

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 concrete sealer or painted concrete. If present, sealer or paint must be removed by grinding or sanding. Do not install over slick, heavily troweled or burnished concrete. The surface must be roughened as necessary by sanding or grinding. Use an appropriate NIOSH-designated dust mask. Floating floors can be installed over any structurally sound concrete.

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 3 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.

NOTE: The following tests are required in residential/commercial applications. Either or both tests are acceptable. If both tests are conducted then both tests must pass.

- **Calcium Chloride Test (ASTM F 1869):** The maximum moisture transfer must not exceed 3 lbs./1000 ft.² in 24 hrs. with this test
- **RH Levels in Concrete Using In-situ Probes (ASTM F 2170)** 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 a Moisture Retardant System, such as Bruce Summit adhesive or inexpensive sheet vinyl must be used to reduce vapor intrusion.

- **Bruce Summit adhesive:** Apply the adhesive using the recommended trowel. Flooring can be installed immediately after applying the adhesive. Flooring can be installed immediately after applying the adhesive.
- **Sheet vinyl:** Sheet vinyl or "slip-sheet" (felt-backed with vinyl wear layer) must be installed. Use 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 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 installation. Install the sheet vinyl and allow the adhesive to cure for 24 hours prior to beginning installation. Degloss as necessary to create an adequate adhesive bond. Always check for adequate adhesive bond.

Acoustic Concrete

(Glue-Down or 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 hardwood flooring should not be directly installed use of floating sub-floor system. Always check for adequate adhesive bond. The concrete must have a minimum compressive strength of 2000 PSI.

Ceramic, Terrazzo, Slate & Marble

(Glue-Down or Floating Installations Only)

All grout joints and broken corners that exceed 3/16" (5 mm) must be filled with a cementitious leveling compound Patch, Underlayment & Embossing Leveler with Underlayment Additive. The surface must be cleaned and abraded to create a good bonding surface for the adhesive. Loose tiles must be re-adhered to the subfloor or filled as above. Remove all sealers and surface treatments must be removed. Always check for adequate adhesive bond.

Acoustic Cork Underlayment

(Glue-Down or Floating Installations Only)

The flooring must be glued or floated directly over full-spread, permanently bonded acoustic cork. The cork must have a density of no less than 11.4 lb./cubic foot. The cork, in general, should be pure cork combined with a polyurethane or resin binder. Install cork in accordance with cork manufacturer's recommendations. Always check for adequate adhesive bond. When floating floors over cork **DO NOT** use foam underlayment.

Wood Subfloors and Underlayment

(All Installation Methods)

General: The wood subflooring materials must not exceed 12% moisture content. Using a reliable wood moisture meter, measure moisture content of both the subfloor and the hardwood flooring to determine proper moisture content. The wood subfloor should be checked at various locations throughout the installation approximately 20 readings or more should be taken and documented. The difference between the moisture content of the wood subfloor and the hardwood flooring must not exceed 3%. When installing parallel to the floor joists it may be necessary to stiffen the subfloor system by installing an additional minimum of 3/8" (9.5 mm) approved underlayment. Applicable standards and recommendations of the construction and materials industries must be met or exceeded.

NOTE: As flooring manufacturers, we are unable to evaluate each engineered system. Spacing and spans, as well as 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 conditions and performance. The general information provided below describes common, non-engineered joist/subfloor systems. Engineered flooring systems may allow for wider

joist spacing and thinner subflooring materials. When wider joist spacing of 19.2" or greater is used at least one of the following options must be used:

Option 1: When wider joist spacing of 19.2" or greater is used, additional plywood subfloor material must be added to reduce movement and deflection.

Option 2: In addition to the use of mechanical fasteners, assisted glue applications must be used. The glue should be a premium grade urethane construction adhesive applied in a serpentine pattern to the back of each board. Then follow the recommended fastening pattern.

Option 3: With wider spacing of 19.2" apply a bead of Bruce EverSeal to the bottom of the end and side groove. This will lock the tongue and groove together eliminating movement that may contribute to noise. Then follow the recommended fastening pattern with a staple or cleat.

NOTE: Following one of these options is also intended to reduce noise associated with a mechanically fastened installation.

Wood Structural Panel Subfloors and Underlayment

(All Installation Methods)

Structural panels/underlayment must be installed sealed side down. When used as a subfloor, allow 1/8" (3 mm) expansion space must be allowed between each panel. If spacing is inadequate, cut in with a circular saw. Do not cut in expansion space on tongue and groove panels.

- **Plywood:** Must be minimum CDX grade (exposure 1) and meet US Voluntary Product Standard PS1 performance standard or Canadian performance standard CAN/CSA 0325-0-92. The preferred thickness is 3/4" (19 mm) as a subfloor [minimum 5/8" (16 mm)] or 3/8" (9.5 mm) as underlayment.
- **Oriented Strand Board (OSB):** Conforming to US Voluntary Product Standard PS2 or Canadian performance standard CAN/CSA 0325-0-92 construction sheathing. Check underside of panel for codes. When used as a subfloor, the panels must be tongue and groove and installed sealed side down. Minimum thickness to be 23/32" (18 mm) thick when used as a subfloor or 3/8" (9.5 mm) as underlayment.
- **Waterboard and Chipboard:** Conforming to US Voluntary Product Standard PS2 or Canadian performance standard CAN/CSA 0325-0-92. Must be 3/4" (19 mm) thick when used as a subfloor and 3/8" (9.5 mm) thick when used as an underlayment.
- **Particleboard:** Must be a minimum 40-lb. density, stamped underlayment grade and 3/4" (19 mm) thick.

Solid Wood Subfloors

(All Installation Methods)

- Minimum 3/4" (19 mm) thick with a maximum width of 6" (15 cm) installed at a 45° angle to the floor joists.
- The subfloor must be Group 1 dense softwood (Pine, Larch, Douglas Fir, etc.) No. 2 common, kiln dried with all board ends bearing on joists.
- For glue down applications a 3/8" (9.5 mm) approved underlayment, must be added.

Existing Wood Flooring

(All Installation Methods)

- Existing engineered flooring must be well bonded/fastened. When gluing over existing wood flooring of any thickness, the finishing materials must be abraded or removed to foster an adequate adhesive bond. When flooring is to be mechanically fastened, the existing engineered wood flooring must be a minimum of 3/8" (9.5 mm) thick installed over approved wood/wood composite underlayment that has been properly fastened. When installing over engineered flooring that is glued to concrete, the minimum thickness of that flooring must be 1/2" (13 mm) to allow for the length of the fastener.
- Existing solid wood flooring that exceeds 6" (15 mm) in width must be covered with 3/8" (9.5 mm) approved underlayment and fastened as required. Do not install over solid flooring attached directly to the concrete.

Vinyl, Resilient Tile, Cork Flooring and Linoleum

(All Installation Methods, see notes below)

(Glue-Down Installations)

- Make certain the floor covering materials are well bonded to the subfloor/underlayment with full spread adhesive and are no more than two layers thick, not to exceed 3/16" (5 mm).
 - With 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 directly over the flooring materials.
 - Clean the flooring materials as necessary to create a good adhesive bond. If a maintenance material is present on the floor covering or a gloss is present, de-gloss with a flooring pad and a commercially available stripper, then rinse completely. Allow ample drying time. (**NOTE:** 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)**
- Do not install over floors that exceed one layer, as the thickness of the flooring materials will prevent an adequate mechanical bond.
 - Make certain that the subflooring materials meet minimum requirements. (See previous sections).
 - Some tile products may be too brittle for staple penetration. Always test an area for breakage before proceeding.

IV. INSTALLING THE FLOOR

General Installation Tips

NOTE: When installing UNFINISHED engineered flooring, allow a minimum of 72 hours adhesive curing time before applying seals, stains and finishes to unfinished flooring. Test the moisture content of the wood in accordance with the stain/finish manufacturer's recommendations.

- All Products may be stapled or mechanically fastened, but products over 5" will require a serpentine bead of Premium construction adhesive applied to the back of the plank.
- Floor should be installed from several cartons at the same time to ensure good color and shade mixture.
- When possible, preselect and set aside boards that blend best with all horizontally mounted moldings used to assure a uniform final appearance. Install these boards adjoining the moldings.
- Be attentive to staggering the ends of the boards at least 4"-6" (10-15 cm) when possible, in adjacent rows (Figure 3). This will help ensure a more favorable overall appearance of the floor.
- When installing engineered products of uniform length, begin the rows with starter boards cut to various lengths. Avoid staggering the rows uniformly to prevent stair-stepping. Boards cut from the opposite end of the row may be used for the next starter boards.
- Always allow a minimum 1/4" (6 mm) expansion around all vertical obstructions. Allow 1/2" (13 mm) for floating floors.

NOTE: For Glue-Down Installation: When installing products wider than 3-1/4" (8 cm), apply a bead of recommended wood glue to all of the end grooves prior to installing into the adhesive. For Staple-Down Installation: When installing products wider than 3-1/4" (8 cm) but not to exceed 5" (13 cm), apply a bead of recommended wood glue to all of the end grooves prior to stapling down.



Figure 2

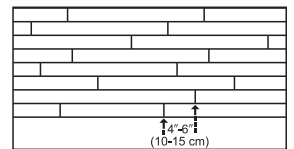


Figure 3
Preferred Alignment

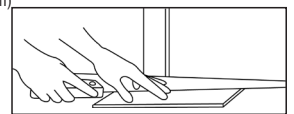


Figure 4

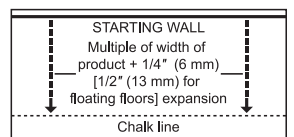


Figure 5

STEP 1: Doorway and Wall Preparation
(All Installation Methods)

- Undercut door casings and jambs. Remove any existing base, shoe molding or doorway thresholds. These items can be replaced after installation. All door casings and jambs should be undercut to avoid difficult scribe cuts (Figure 4).

STEP 2: Establish a Starting Point
(All Installation Methods)

- Installation parallel to the longest wall is recommended for best visual effects, however, the floor should be installed perpendicular to the flooring joists unless the subfloor has been reinforced to reduce subfloor sagging.
- When possible, begin the layout or installation from the straightest wall, generally an outside wall.
- In at least two places, at least 18" (46 cm) from the corner, measure out equal distance from the starting wall (Figure 5) and snap a chalk line. The measurement must be the sum of the width of the flooring plus an additional 3/8" (9.5 mm) to allow for 1/4" (6 mm) expansion space and the width of the tongue. Allow 1/2" (13 mm) expansion when installing floating floors.

STEP 3: Installing First & Second Rows
(Mechanically Fastened/Staple-Down Installations)

- Use the longest, straightest boards available for the first two rows. For random and alternate width products, use the widest plank for the first row. Align tongue of first row on chalk line. The groove should be facing the starting wall. Pre-drill 1/2" (13 mm) from back (groove) edge, 1"-2" (2.5-5 cm) from each end, and at 6" (15 cm) intervals when possible (Figure 6). Fasten using 4 or 6d finishing nails or 1" (2.5 cm) pneumatic finish nails/brads. Countersink the nails.
- Pre-drill and blind-nail at a 45° angle through the tongue of the first row every 1'-2" (2.5-5 cm) from the ends and spaced in 3'-4" (7.6-10 cm) intervals. Countersink nails to ensure flush engagement of groove with the following row(s). Continue blind nailing using this method with following rows until stapler can be used. Alternatively use a pneumatic finish nailer and install nails/brads at the same intervals with a minimum length of 1" (2.5 cm).
- End-joints of adjacent rows should be staggered a minimum of 4'-6" (10-15 cm) when possible, to ensure a more favorable overall appearance (Figure 3).
- If the Engineered Hardwood Flooring plank is wider than 5" it must be installed applying a 1/4" serpentine bead of Premium construction adhesive to the back of each board. (Figure 7).

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

- Always use the correct stapler for the specific product being installed (see "Installation Applications"). Use a minimum 1" (2.5 cm) staple recommended by the stapler manufacturer for 3/8" to 1/2" products and a minimum 1-1/4" fastener for 9/16" products, 1"-2" (2.5-5 cm) from the ends spaced at 3'-4" (8-10 cm) intervals. Continue to Step 5.
- Set compressor at 70 PSI. If tongue damage occurs, lower air pressure (Figure 8).
- Fasten several sacrificial boards to the floor. At least two boards, stapled side by side, must be used to indicate proper machine adjustments.
- Check for surface damage, air pressure setting, tongue damage, edge blistering, etc. before proceeding. Make all adjustments and corrections before installation begins. Once proper adjustments have been made, remove and destroy the boards.
- Install the remainder of the floor working from several cartons.
- The last 1-2 rows will need to be face-nailed when clearance does not permit blind nailing with a stapler or a brad nailer. Pre-drill and face-nail or pneumatically nail on the tongue side, following the nailing pattern used for the first row.

General Information for Glue-Down Installations

- Maximum adhesive working times: Bruce Equalizer Pro adhesive - 60 minutes; Bruce ProConnect™ Plus Hardwood Flooring Adhesive - 60 minutes, Bruce Summit Select - 50 minutes.
 - When not in use, keep the adhesive container tightly closed to prevent thickening. Thickening will cause difficulty in spreading the adhesive.
 - Open times and curing times of ALL adhesives vary dependent upon subfloor porosity, air movement, humidity and room temperature. Urethane adhesive has a shortened working time in high humidity environments, whereas the working time for ProConnect™ and polymeric resin adhesives will be lengthened. In areas of low humidity, open time will be longer with urethane adhesives and shorter with ProConnect™. Adjust the amount of adhesive spread on the subfloor accordingly. The adhesive should not be applied if subfloor or room temperature is below 60°F (16°C). WORKING TIME WILL VARY DEPENDING ON JOB SITE CONDITIONS.
 - Hold trowel at a minimum 45° angle (Figure 9) firmly against the subfloor to obtain a 50-60 ft.² (4-5.5 m²) per gallon spread rate (20-30 ft.² per gallon for Bruce® Summit Select or Bruce® ProConnect Plus spread with listed trowels). The trowel will leave ridges of adhesive and very little adhesive between the ridges. This method will allow you to still see the chalk lines between the ridges and provide the recommended spread rate.
 - For additional application instructions, follow the recommendations on the adhesive container.
 - Proper ventilation within the room to mitigate fumes. An electric fan is helpful.
 - Rolling is not required, but if desired, do not do so until the adhesive has cured for two hours.
- NOTE: DO NOT INSTALL FLOORING USING RUBBER MALLETS. STRIKING THE SURFACE WITH A RUBBER Mallet MAY "BURN" THE FINISH CAUSING IRREPAIRABLE DAMAGE.**

STEP 3: Spread the Adhesive
(Glue-Down Installations)

- Spread sufficient amounts of the recommended adhesive with the recommended trowel 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.
- NOTE:** Avoid installing on the surface of the flooring. If necessary, distribute weight using a kneeler board.

STEP 4: Installing the Floor
(Glue-Down Installations)

- Use the longest, straightest boards available for the first two rows. For random and alternate width products, use the widest plank for the first row. The first row of planks should be installed with the edge of the groove lined up on the chalk line. The tongue should be facing the starting wall. The first row must be aligned and seated in the adhesive, as all additional rows will be pushed back to this original row. Remove tongue to allow for expansion space, if necessary, on the row adjoining the wall. Continue to Step 5.

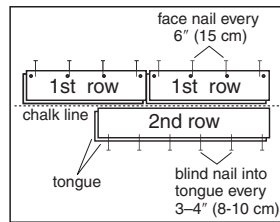


Figure 6

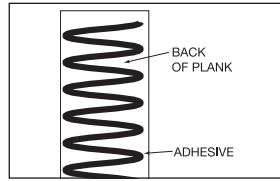


Figure 7

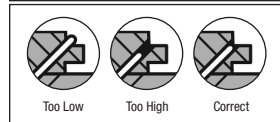
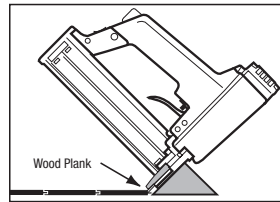


Figure 8

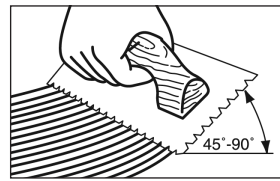


Figure 9

- When installing products wider than 3-1/4" (8 cm), apply a bead of recommended wood glue to all of the end grooves prior to installing into the adhesive.
- When installing pieces, engage the end-joint first, as close to the side (long) tongue and groove as possible, then slide together tightly to engage the side (long) joint tongue and groove. To avoid adhesive bleed-through and memory pull-back, avoid, as much as possible, sliding pieces through the adhesive when placing them in position.
- During the installation occasionally remove a piece of flooring from the subfloor and inspect the back for proper adhesive transfer. Adequate adhesive transfer is necessary to ensure sufficient holding strength.
- If the adhesive skins over and fails to transfer, remove and spread new adhesive to achieve proper bonding.

- 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 Scotch® Delicate Surface Painter's Tape 2080 before adhesive is removed from the surface. Use clean towels, changed frequently, to prevent haze and adhesive residue.
- Check for a tight fit between all edges and ends of each plank. End-joints of adjacent rows should be staggered 4"-6" (10-15 cm) when possible, to ensure a more favorable overall appearance (Figure 3).
 - It may be necessary to align the product with a cut-off piece of scrap as shown (Figure 11 - Keep scrap angle low to avoid edge damage).
 - To eliminate minor shifting or gapping of product during installation, use Scotch® Delicate Surface Painter's Tape 2080 to hold the planks together. After installation is complete, remove all of the Scotch® Delicate Surface Painter's Tape 2080 from the surface of the newly installed flooring. Do not let the tape remain on the flooring longer than 24 hours. Avoid the use of masking or duct tape, which leaves an adhesive residue and may damage the finish.
 - If necessary, use weights to flatten boards with bows until adhesive cures, in order to prevent hollow spots. Boards that cannot be flattened should be cut in length to reduce the bow, or should be not used.
 - Be sure not to spread adhesive too far ahead of your work area (Figure 10d).
 - Complete the installation using this same technique for the remainder of the floor.
 - Avoid heavy foot traffic on the floor for at least 24 hours. Lift the furniture or fixtures back into place after 24 hours.

General Information for Floating Floors

- Floating floors can be installed over any structurally sound surface that meets or exceeds local building codes. Any width of flooring can be installed in this manner but wider widths are preferred.
- Plan the floor layout (in width) to avoid having to rip the last row narrower than 1" (2.5 cm). This may require ripping the first row to assure the last row is at least the minimum width.
- Allow 1/2" (13 mm) expansion around all vertical obstructions.

STEP 3: Installing the Underlayment
(Floating Installations Only)

- Install the underlayment in the same direction 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 precut overlapping seams (Figure 12). If a non-adhesive underlayment is used, tape all seams with the included tape.

STEP 4: Installing the Floor
(Floating Installations Only)

- The first row can be installed using one of two methods after the layout has been completed (Step 2). Allow 1/2" (13 mm) expansion.
- If the wall is not straight, scribe the first board (Figure 13) as necessary to maintain alignment with the chalk line.
- Install a sacrificial board (with a straight edge) using the appropriate fasteners for the subfloor. If a board is used for the starter row make certain the groove faces the wall.
- Align the first row with the wall using wedges to maintain a 1/2" (13 mm) expansion in place and to stabilize the product. If the wall is not straight, scribe the first board (Figure 13) as necessary to maintain alignment with the chalk line.
- Select the first board. All installations should begin with the groove side against the wall using the longest boards available. Apply a continuous 1/8" (3 mm) glue bead to the inside bottom of the groove on the end of the board. Do not apply glue to the groove side at this time (Item C, Figure 14). Products with the end tongue on the left should be installed right to left, opposite tongues should be left to right. (Item D, Figure 14). If a sacrificial board was used remove it DO NOT glue the first row to it.
- Complete the first row. Cut the last board allowing for 1/2" (13 mm) clearance between the wall and the floor. (Use the remaining end of the cut board as a starter board for any row following row three). Install a wedge on the end of the board between the hardwood flooring and the wall, allowing 1/2" (13 mm) expansion space. Avoid installation of any boards shorter than 16" (40.6 cm) in the first four rows. (Item F, Figure 14).
- Use a pull bar to pull the last board into place from the opposite end. Install wedges into the gap and tighten (Item B, Figure 14).
- If any glue gets on the surface of the flooring, wipe off immediately with a clean damp cloth.
- Cut or use a shorter board for the first board of the second row. Start the second row by applying a 1/8" (3 mm) bead along the inside bottom of the end and side groove of the new board. Install the first board of row two. Apply a bead of glue to the inside bottom of the end and side groove of the next board and install. When installing boards together, use a tapping block against the tongue, not the groove (Item G, Figure 14). Tap the boards into place by tapping with a hammer on the tapping block. DO NOT tap on the edge directly with the hammer. Complete the second through fourth rows using this technique. Insert wedges on the ends, as necessary, to restrain the movement of the floor.
- In the remaining rows, stagger joints 4"-6" (10-15 cm) apart. Install the rest of the floor. Be sure all joints are tight. Use spacers on the long and butt walls. Use a tapping bar to tighten the joints from the ends.

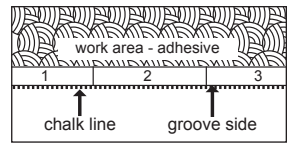


Figure 10b

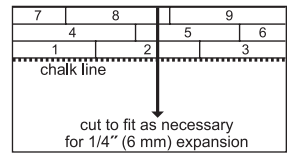


Figure 10c

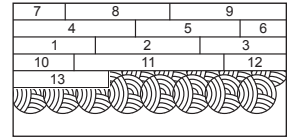


Figure 10d

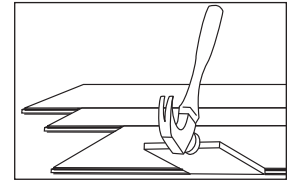


Figure 11

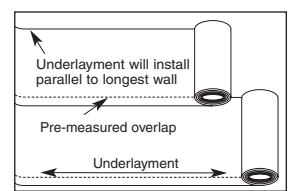


Figure 12

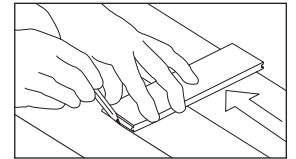


Figure 13

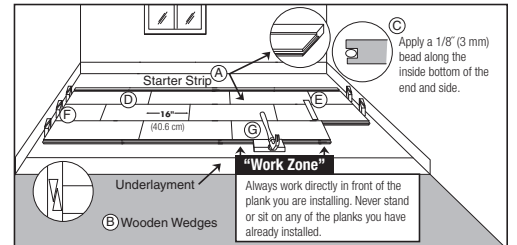


Figure 14

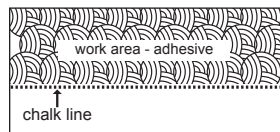


Figure 10a

STEP 5: Complete the Installation

(All Installation Methods)

- Remove all tape and clean the floor with the recommended hardwood flooring cleaner.
- Trim all underlayment (floating only) and install or re-install any transition pieces, reducer strips, T-moldings, thresholds, bases and/or quarter round moldings that may be needed. These products are available pre-finished to blend with your flooring (see below). Nail moldings into the wall, not the floor.
- Inspect the floor, filling all minor gaps with the appropriate blended filler.
- If the floor is to be covered, use a breathable material such as cardboard. Do not cover with plastic.
- Installers: 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 casters/caster cups or felt pads on the legs of furniture to prevent damage to the flooring.

V. TRANSITION AND WALL MOLDINGS



Reducer Strip Threshold Stair Nosing Quarter Round T-Molding

- **Reducer Strip:** A teardrop shaped molding used around fireplaces, doorways, as a room divider, or as a transition between hardwood flooring and adjacent thinner floor coverings. Fasten down with adhesive, small nails or double-faced tape.
- **Threshold:** A molding undercut for use against sliding door tracks, fireplaces, carpet, ceramic tile, or existing thresholds to allow for expansion space and to provide a smooth transition in height difference. Fasten to subfloor with adhesive and/or nails through the heel. Pre-drill nail holes to prevent splitting.
- **Stair Nosing:** A molding undercut for use as a stair landings trim, elevated floor perimeters, and stair steps. Fasten down firmly with adhesive and nails or screws. Pre-drill nail holes to prevent splitting.
- **Quarter Round:** A molding used to cover expansion space next to baseboards, case goods, and stair steps. Pre-drill and nail to the vertical surface, not into the floor.
- **Combination Base and Shoe:** A molding used when a base is desired. Used to cover expansion space between the floor and the wall. Pre-drill and nail into the wall, not the floor.
- **T-Molding:** A molding used as a transition piece from one rigid flooring to another of similar height or to gain expansion spaces. Fasten at the heel in the center of the molding. Additional rigid support may need to be added to the heel of the molding dependent upon the thickness of the goods covered. Do not use this molding as a transition to carpet.

CARE: 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 the structure, care should be taken to control humidity levels and maintain them in the 30-50% range. To protect the flooring and provide lasting satisfaction, the manufacturer's recommendations are 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. Major damage will require board replacement, which can be done by a professional floor installer. Instructions for the board replacement can be found at ahfproducts.com.



OUR FAMILY OF BRANDS.



MADERA DURA PROCESADA DE 3/8", 7/16", 1/2" Y 9/16" (10 MM, 11 MM, 13 MM Y 14 MM) INSTRUCCIONES DE INSTALACIÓN

PARA APLICACIONES CON GRAPAS, FIJADAS MECÁNICAMENTE, FLOTANTES Y CON PEGAMENTO

ADHESIVOS RECOMENDADOS: Bruce® ProConnect™ Plus, Bruce Equalizer Pro, Bruce Summit Select™
REMOVEDOR DE ADHESIVO RECOMENDADO: Alcoholes minerales de poco olor

LIMPIADOR RECOMENDADO: Limpiador para pisos laminados y de madera dura de Bruce
BASE DE PISO RECOMENDADA (Solo para sistemas de instalación flotante): Base de piso de primera calidad
PEGAMENTO RECOMENDADO PARA MADERA (Pegamento para instalación flotante y juntas): Adhesivo EverSeal™ de Bruce

GRACIAS POR ELEGIR EL REVESTIMIENTO DE PISO DE AHF PRODUCTS.
Cuando su revestimiento de piso nuevo se instala y cuida adecuadamente este será fácil de mantener y lucirá estupendo por años. Si tiene dudas o preguntas, visítenos en www.ahfproducts.com o llámenos al 1 866-243-2726.
Estas instrucciones se basan en las normas y mejores prácticas de la industria. No observar estas instrucciones de instalación puede derivar en daño al revestimiento de piso e invalidar la garantía del piso.
• Para la información completa sobre la garantía, llame al 1-866-243-2726 o visite www.ahfproducts.com.
• Si tiene preguntas de índole técnica o sobre la instalación, o para solicitar una copia de la Hoja de datos de seguridad, llame al 1-866-243-2726 o visite www.floorexpert.com, nuestro sitio web técnico.
• Si tiene preguntas o comentarios generales, visítenos en www.ahfproducts.com o llámenos al 1-866-243-2726.

NOTA: No engrape los productos de nuez, arce o nogal con acabado tradicional. Todas las especies de productos texturizados (como los productos raspados a mano, cepillados con alambre y productos rústicos/envejecidos) se pueden engrapar con grapas de calibre 20 (longitud mínima de 1" para madera dura de ingeniería de 3/8" - 1/2", para madera dura de ingeniería de 9/16" madera dura, use sujetadores de 1-1/4").

PARA PRODUCTOS DE MÁS DE 5" (12.6 CM) DE ANCHO: Además del uso de sujetadores mecánicos, se deben usar aplicaciones con pegamento. El pegamento debe ser un adhesivo de uretano para construcción de clasificación de primera calidad aplicado en forma de serpiente en el dorso de la madera dura. Luego siga el patrón de fijación recomendado.

INFORMACIÓN GENERAL

Responsabilidad del propietario/instalador

Los hermosos pisos de madera dura son un producto de la naturaleza y, por lo tanto, no son perfectos. Nuestros pisos de madera dura son fabricados de acuerdo con normas aceptadas por la industria. Para un óptimo desempeño del revestimiento de piso de madera dura, lea atentamente y siga estas instrucciones de instalación.
• Estos pisos de madera dura se fabrican de acuerdo con las normas aceptadas por la industria, las cuales permiten que las deficiencias en la clasificación no excedan de 5%. Estas deficiencias de la clasificación pueden ser de tipo natural o de fabricación. Cuando se efectúe el pedido del revestimiento de piso, se deberá añadir 5% al área real que necesite en pies cuadrados (m²) para la tolerancia de los cortes y la clasificación (10% para instalaciones diagonales).
• El propietario/instalador tiene la responsabilidad de la inspección final en cuanto a la clasificación, la fabricación y el acabado de fábrica. Se debe inspeccionar todo el material de revestimiento de piso antes de la instalación. El revestimiento de piso debe ser examinado cuidadosamente en relación con el color, el acabado y la calidad antes de la instalación.
• El instalador deberá ejercer una selectividad razonable y apartar o cortar las piezas que tengan deficiencias por cualquier motivo. Si se presenta alguna duda con respecto a una pieza en particular por la clasificación, la fabricación o el acabado de fábrica, el instalador no debe usar esa pieza. Si el material no es aceptable, no lo instale y comuníquese de inmediato con el vendedor.
• Antes de la instalación de cualquier producto de revestimiento de piso de madera dura, el propietario/instalador deberá determinar que el ambiente y el subsuelo del lugar de la obra implicado cumplan o excedan todas las normas pertinentes. Se debe cumplir con las recomendaciones de las industrias de la construcción y de los materiales, así como con los códigos normativos locales. Estas instrucciones recomiendan que el área de la construcción y el contrapiso estén limpios, secos, rígidos, estructuralmente en buen estado y planos. El fabricante declina cualquier responsabilidad por fallas de la obra que resulten o estén relacionadas con el contrapiso y los sustratos o con las deficiencias ambientales del lugar de la obra.
• Se considera aceptable como parte de los procedimientos de una instalación normal el uso de tinte, compuesto de relleno o masilla para retocar y los productos adecuados para corregir imperfecciones del contrapiso.

ADVERTENCIA: REVESTIMIENTO DE PISO FLEXIBLE EXISTENTE INSTALADO Y ADHESIVOS ASFÁLTICOS. NO LIJE, BARRA EN SECO, RASPE EN SECO, TALADRE, ASIERRE, LIMPIE CON PARTICULAS DE CRISTAL A PRESIÓN, NI DESPORTILLE O PULVERICE MECÁNICAMENTE EL REVESTIMIENTO DE PISO FLEXIBLE EXISTENTE, EL RESPALDO, EL FIELTRO DE FORRO, EL ADHESIVO ASFÁLTICO "DE REDUCCIÓN" NI NINGÚN OTRO TIPO DE ADHESIVO.
Estos productos existentes en el lugar pueden contener fibras de asbesto y/o sílice cristalino. Evite generar polvo. La inhalación de ese polvo constituye riesgo de cáncer y es peligroso para el sistema respiratorio. Los fumadores expuestos a las fibras de asbesto presentan mayores riesgos de padecer graves daños corporales. A menos que esté positivamente seguro de que el producto existente instalado sea un material que no contiene asbesto, debe presumir que lo contiene. Las regulaciones pueden requerir que se pruebe el material para determinar el contenido de asbesto y pueden regir la remoción y el desecho del material.
Consulte la edición actual de la publicación Recommended Work Practices for Removal of Resilient Floor Coverings (Prácticas de trabajo recomendadas para la remoción de recubrimientos de pisos flexibles) del Instituto de revestimientos de pisos flexibles (Resilient Floor Covering Institute, RFCI) para las instrucciones sobre cómo retirar todas las estructuras de recubrimientos de pisos flexibles o contacte su distribuidor o a AHF Products al 1 866-243-2726. Los revestimientos de piso y adhesivos de AHF NO contienen asbesto.

II. PREPARACIÓN ALMACENAJE Y MANIPULACIÓN

• Manipule y descargue con cuidado. Almacene en un lugar seco, asegúrese de proporcionar al menos un espacio de circulación de aire de 4" (10 cm) debajo de las cajas de cartón que estén almacenadas sobre pisos de concreto "a nivel del suelo". El revestimiento de piso no debe entregarse hasta que el edificio haya sido cerrado con las puertas y ventanas en su lugar, y hasta que se haya concluido y secado todo el trabajo que involucre cemento, enlucido y otros trabajos "húmedos".
• Aunque no es necesario aclimatar el revestimiento de piso procesado, es mejor almacenarlo en el ambiente donde se espera colocarlo antes de la instalación. Revise la etiqueta del adhesivo para conocer las limitaciones sobre el almacenamiento del adhesivo.

CONDICIONES DEL LUGAR DE LA OBRA

• El edificio debe estar cerrado con todas las puertas y ventanas hacia el exterior en su lugar. Todo el trabajo de concreto, mampostería, armazón, paneles de yeso, pintura y otros trabajos "húmedos" deben estar completamente secos. Los revestimientos de pared deben estar en su lugar y el trabajo de pintura terminado, excepto la capa final del zócalo. Cuando sea posible, retarde la instalación del zócalo hasta que se haya concluido la instalación del revestimiento de piso. Los sótanos y los entrepisos bajos deben estar secos y bien ventilados.
• El nivel exterior deberá estar terminado junto con el desague de la superficie, proporcionando un descenso mínimo de 3" en 10' (7.6 cm en 3.05 m) para mantener el flujo de agua alejado de la estructura. Todas las canaletas y los bajantes pluviales deberán estar en su lugar.
• Los revestimientos de pisos procesados se pueden instalar por debajo, sobre o por encima del nivel del suelo. No instale en baños completos.
• Los espacios de servicio deben tener un mínimo de 18" (46 cm) del suelo al lado inferior de las vigas. Es necesario cubrir el suelo con una película de polietileno negro de 6-20 mil que actuará como barrera de vapor y con las juntas espaciadas a 6" (15 cm) y selladas con cinta adhesiva resistente a la humedad. El espacio de servicio de altura limitada deberá tener una ventilación de perímetro igual a un mínimo de 1.5% del área en pies² (m²) del espacio de servicio de altura limitada. Estas aberturas de ventilación deberán estar debidamente ubicadas para promover la ventilación cruzada (Figura 1).
• Donde sea necesario, las normas locales prevalecerán.
• El lugar de la instalación deberá tener una temperatura ambiente constante de 60-80°F (16-27°C) y una humedad del 30-50% durante 14 días antes, durante y hasta que el lugar se haya ocupado.

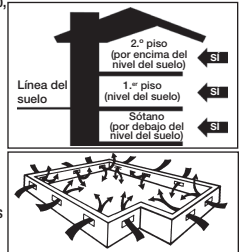


Figura 1

ATENCIÓN INSTALADORES

PRECAUCIÓN: POLVO DE MADERA

AL ASERRAR, LIJAR O LABRAR PRODUCTOS DE MADERA, SE PUEDE PRODUCIR POLVO DE MADERA (ASERRÍN), EL POLVO DE MADERA SUSPENDIDO EN EL AIRE PUEDE PROVOCAR IRRITACIÓN EN EL SISTEMA RESPIRATORIO, LOS OJOS Y LA PIEL. LA AGENCIA INTERNACIONAL DE INVESTIGACIONES SOBRE EL CÁNCER (INTERNATIONAL AGENCY FOR RESEARCH ON CANCER, IARC) HA CLASIFICADO EL POLVO DE MADERA COMO UN CANCERIGENO NASAL EN LOS SERES HUMANOS.

Medidas de precaución: Si se usan herramientas eléctricas, estas deberán estar equipadas con un colector de polvo. Si se encuentran altos niveles de polvo, se deberá usar una máscara adecuada contra el polvo designada por el Instituto Nacional de Seguridad y Salud Ocupacional (National Institute for Occupational Safety and Health, NIOSH). Evite el contacto del polvo con los ojos y la piel.

Medidas de primeros auxilios en caso de irritación: En caso de irritación, enjuague con agua los ojos o la piel durante 15 minutos como mínimo.

Si tiene preguntas técnicas o sobre instalación o para solicitar una Hoja de Datos de Seguridad, llame al 1-866-243-2726 o visite nuestro sitio web técnico en www.hardwoodexpert.ahfproducts.com.

IMPORTANTE AVISO SOBRE SALUD PARA LOS RESIDENTES DE MINNESOTA SOLAMENTE:

ESTOS MATERIALES DE CONSTRUCCIÓN EMITEN FORMALDEHÍDO. SE HA INFORMADO SOBRE LA IRRITACIÓN DE LOS OJOS, LA NARIZ Y LA GARGANTA, DOLOR DE CABEZA, NÁUSEAS Y UNA DIVERSIDAD DE SÍNTOMAS SIMILARES AL ASMA, INCLUYENDO DISNEA, COMO RESULTADO DE LA EXPOSICIÓN AL FORMALDEHÍDO. LAS PERSONAS MAYORES Y LOS NIÑOS PEQUEÑOS, ASÍ COMO CUALQUIER PERSONA CON UNA HISTORIA DE ASMA, ALERGIAS O PROBLEMAS PULMONARES, PUEDEN TENER MAYOR RIESGO. SE CONTINUA INVESTIGANDO SOBRE LOS POSIBLES EFECTOS DE LA EXPOSICIÓN AL FORMALDEHÍDO A LARGO PLAZO.

LA VENTILACIÓN INSUFICIENTE PUEDE HACER QUE EL FORMALDEHÍDO Y OTROS CONTAMINANTES SE ACUMULEN EN EL AIRE INTERIOR. LAS ALTAS TEMPERATURAS Y LA HUMEDAD EN INTERIORES ELEVAN LOS NIVELES DE FORMALDEHÍDO. CUANDO UNA VIVIENDA ESTÉ UBICADA EN ÁREAS SUJETAS A TEMPERATURAS EXTREMAS DE VERANO, SE PUEDE UTILIZAR UN SISTEMA DE AIRE ACONDICIONADO PARA CONTROLAR LOS NIVELES DE TEMPERATURA. SE PUEDEN UTILIZAR OTROS MEDIOS DE VENTILACIÓN MECÁNICA CONTROLADA PARA DISMINUIR LOS NIVELES DE FORMALDEHÍDO Y OTROS CONTAMINANTES DEL AIRE INTERIOR.

SI TIENE PREGUNTAS RELACIONADAS CON LOS EFECTOS DEL FORMALDEHÍDO SOBRE LA SALUD, CONSULTE CON SU MÉDICO O CON EL DEPARTAMENTO DE SALUD DE SU LOCALIDAD.

CONDICIONES DEL CONTRAPISO

• LIMPIOS – Los contrapisos deben estar libres de cera, pintura, aceite, selladores, adhesivos y otros residuos.
• NIVELADO/PLANO – El contrapiso debe estar entre 3/16" en 10' (5 mm en 3 m) y/o 1/8" en 6' (3 mm en 2 m). Lije las áreas o juntas altas. Si el piso se va a colocar con pegamento, llene las áreas bajas con un compuesto cementoso nivelador de aditivo de látex de 3,000-PSI mínimo de resistencia a la compresión con nivelador de base de piso y parche con aditivo para base de piso. Siga las instrucciones del fabricante del compuesto nivelador, pero cerciórese de que los compuestos estén completamente SECOS antes de comenzar la instalación. Cuando fije el piso mecánicamente, aplane los puntos bajos con un máximo de 6 capas de fieltro para constructores n.º 15, contrachapado o cuñas (no utilice compuestos de nivelación). Los materiales de nivelación deben proporcionar un contrapiso en buen estado estructural que no afecte el poder de sujeción del sujetador.
• SECO – Revise y documente el contenido de humedad del contrapiso utilizando la prueba de humedad que sea adecuada. Los contrapisos de concreto deberán tener un mínimo de 30 días de vaciados antes de que las pruebas comiencen.
• EN BUEN ESTADO ESTRUCTURAL – Cualesquier áreas que no esté firme o haga ruido debe ser clavada o atornillada. Los paneles de madera deben mostrar un adecuado patrón de sujeción, pegado/atornillado o clavado según lo requiera el sistema, utilizando un patrón de clavado aceptable. Típicamente: 6" (15 cm) a lo largo de los bordes que soportan peso y 12" (31 cm) para los soportes intermedios. Aplane los bordes abultados según sea necesario. Reemplace cualquier contrapiso o bases de piso que presente daños ocasionados por el agua, abultamiento o delaminado.
• Se deben evitar los contrapisos con movimiento vertical excesivo. El desempeño óptimo de los productos de revestimiento de piso de madera dura se logra cuando existe poco movimiento horizontal o vertical en el contrapiso. Si este tiene movimiento vertical excesivo (desviación) antes de la instalación del piso, es probable que también lo tenga después de la instalación.

CONTRAPISOS CON CALEFACCIÓN RADIANTE

• **NOTA:** Siempre asegúrese de que el producto seleccionado sea el recomendado para este tipo de aplicación. El sistema deberá estar operativo y en funcionamiento durante al menos los 7 días previos al comienzo de la instalación.
• Utilice una estrategia de control en aumento que exponga el piso a cambios de temperatura graduales la cual podría incluir un termostato externo.
• Apague el calor y deje que el contrapiso se enfríe a la temperatura ambiente por 3-4 horas antes de comenzar el trabajo.
• ANTES de comenzar la instalación, compruebe que el sistema de calefacción esté diseñado y controlado para pisos de madera y que el circuito no incluya otros tipos de recubrimiento para piso. No hacerlo podría causar excesivo daño por calor y contracción. **NOTA:** Refiérase a las precauciones del fabricante de los sistemas de calor radiante para instalación con grapas. Tenga cuidado de no engrapar a través de la tubería o la malla radiante.
• Después de la instalación, active nuevamente el sistema de calefacción de inmediato. La superficie terminada del piso no deberá exceder de 85°F (29°C) durante la vida del piso.

- Alinee la primera hilera con la pared utilizando cuñas para mantener una expansión de 1/2" (13 mm) en su lugar y para estabilizar el producto. Si la pared no está recta, marque el primer tablero (Figura 13) según sea necesario para conservar la alineación con el cordel entizado.

- Elija el primer tablero. Todas las instalaciones deben comenzar con el lado de la ranura contra la pared utilizando los tableros más largos disponibles. Aplique un cordón de pegamento continuo de 1/8" (3 mm) a la parte inferior interna de la ranura en el extremo del tablero. No aplique pegamento en el lado de la ranura en este momento (Artículo C, Figura 14). Los productos con la lengüeta terminal en la izquierda se deben instalar de derecha a izquierda, y las lengüetas opuestas deben ir de izquierda a derecha. (Artículo D, Figura 14) Si se utilizó un tablero provisional NO pegue la primera hilera a esta.

- Finalice la primera hilera. Corte el último tablero dejando un espacio de 1/2" (13 mm) entre la pared y el piso. (Utilice el extremo restante del tablero cortado como pieza de inicio para cualquier hilera que siga a la tercera hilera). Coloque una cuña en el extremo del tablero entre el revestimiento de piso de madera dura y la pared, permitiendo un espacio de expansión de 1/2" (13 mm). Evite la instalación de tableros con menos de 16" (40.6 cm) en las primeras cuatro hileras. (Artículo F, Figura 14)

- Utilice una barra de tracción para halar el último tablero en su lugar desde el extremo opuesto. Coloque cuñas en la separación y ajuste (Artículo B, Figura 14).

- Si algo de pegamento cae sobre la superficie del revestimiento de piso, límpielo inmediatamente con una tela limpia humedecida.

- Corte o use una pieza más corta para el primer tablero de la segunda hilera. Comience la segunda hilera aplicando un cordón de 1/8" (3 mm) por la parte inferior interna del extremo y el lado de la ranura del tablero nuevo. Coloque el primer tablero de la segunda hilera. Aplique un cordón de pegamento en la parte inferior interna del extremo y el costado la ranura del tablero siguiente e instale. Cuando instale los tableros juntos, use un bloque de impacto contra la lengüeta, no contra la ranura (Artículo G, Figura 14). Golpee ligeramente los tableros en su lugar con un martillo sobre el bloque de impacto. NO golpee en el borde directamente con el martillo. Finalice de la segunda a la cuarta hileras utilizando esta técnica. Inserte cuñas en los extremos según sea necesario, para restringir el movimiento del piso.

- En las hileras restantes, alterne las juntas, separándolas de 4"-6" (10-15 cm). Instale el resto del piso. Compruebe que todas las uniones estén ajustadas. Utilice espaciadores en las paredes largas y de empalme. Utilice una barra de impacto para ajustar las juntas desde los extremos.

PASO 5: Finalización de la instalación

(Para todos los métodos de instalación)

- Retire toda la cinta adhesiva y limpie el piso con el limpiador de revestimiento de piso de madera dura recomendado.
- Remate toda la base de piso (solo flotante) e instale o reinstale cualesquiera piezas de transición, bandas reductoras, molduras en T, umbrales, bases y/o molduras de cuarto de círculo que sean necesarias. Estos productos están disponible preacabados para combinar con su revestimiento de piso (consulte a continuación). Clave las molduras en la pared, no en el piso.
- Inspeccione el piso, y rellene todas las separaciones menores con el relleno apropiado mezclado.
- Si se tiene planeado cubrir el piso, use un material que respire como el cartón. No lo cubra con plástico.
- Instaladores: Deje la garantía y la información sobre el cuidado del piso con el propietario. Indíquele el nombre del producto y el número de código del piso que adquirió.
- Para no dañar la superficie, evite rodar muebles o artefactos pesados sobre el piso. Utilice madera contrachapada, tablero duro o dispositivos para elevar electrodomésticos si fuese necesario. Utilice soportes protectores con ruedas o almohadillas de fieltro en las patas de los muebles para evitar dañar el revestimiento de piso.

V. MOLDURAS DE TRANSICIÓN Y DE PARED



Banda reductora Umbral Nariz de escalera Cuarto de círculo Moldura en T

- **Banda reductora:** Una moldura en forma de lágrima que se usa alrededor de las chimeneas, las entradas, para dividir habitaciones, o como transición entre pisos de madera y revestimientos de pisos contiguos más delgados. Sujétela con adhesivo, clavos pequeños o con cinta adhesiva doble faz.
- **Umbral:** Una moldura rebajada que se utiliza contra los rieles de puertas corredizas, chimeneas, alfombras, baldosas de cerámica o umbrales existentes a objeto de dejar un espacio de expansión y proporcionar una transición sin obstáculos en lugares con alturas diferentes. Sujétela al contrapiso con adhesivo y/o clavos a través del "tación". Pretaladre los orificios de los clavos para evitar particiones.
- **Nariz de escalera:** Una moldura rebajada que se utiliza como elemento de acabado en los descansos de las escaleras, los perímetros de pisos elevados y los escalones. Sujétela firmemente con adhesivo y clavos o tornillos. Perfore los orificios de los clavos de antemano para no rajarlo.
- **Cuarto de círculo:** Una moldura que se usa para cubrir espacios de expansión cerca de zócalos, bienes empotrados y escalones. Pretaladre y clave la moldura a la superficie vertical, no al piso.
- **Combinación de base y zócalo:** Una moldura que se usa cuando se desea una base. Se usa para cubrir el espacio de expansión entre el piso y la pared. Pretaladre y clave la moldura a la pared, no al piso.
- **Moldura en T:** Una moldura que se usa como pieza de transición de un piso al otro de similar altura, o para obtener espacios de expansión. Fije al "tación" en el centro de la moldura. Es posible que necesite añadir mayor apoyo para imprimir rigidez al "tación" de la moldura, dependiendo del espesor de los bienes empotrados que se cubran. No utilice esta moldura como transición hacia la alfombra.

CUIDADO: INSTALADORES - ADVIERTAN A SUS CLIENTES DE LO SIGUIENTE

Estaciones: Cuando se usa y cuando no se usa calefacción

En vista de que las dimensiones de los revestimientos de piso de madera dura se verán afectadas ligeramente por las variaciones de los niveles de humedad dentro de la edificación, se debe tener la precaución de conservar los niveles de humedad dentro del rango de 30-50%. Para proteger el revestimiento de piso y proporcionar satisfacción duradera, a continuación se indican las recomendaciones del fabricante.

- **Estación de uso de calefacción (seca):** Se recomienda un humidificador para evitar la contracción de los pisos de madera dura debido a los niveles bajos de humedad. Las estufas de leña y la calefacción eléctrica tienden a crear condiciones muy secas.

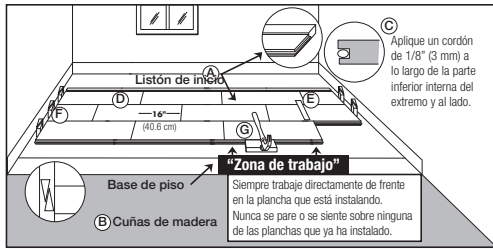


Figura 14

- **Estación cuando no se usa la calefacción (húmeda, mojada):** Se pueden conservar niveles adecuados de humedad utilizando un acondicionador de aire, deshumidificador o activando periódicamente el sistema de calefacción durante los meses de verano. Evite la exposición excesiva al agua que arrastra en los zapatos durante los períodos de clima inclemente. No obstruya en forma alguna la junta de expansión alrededor del perímetro de su piso.

- **Los daños causados por no mantener la humedad a niveles adecuados no están relacionados con la fabricación y anulará la garantía del piso.**

NOTA: La inspección final del usuario se debe realizar desde una posición de pie.

REPARACIÓN DEL PISO

Los daños menores pueden repararse con un kit de retoque o relleno de Bruce. Los daños de mayor cuantía requerirán el reemplazo del tablero, lo cual puede hacerlo un instalador profesional de pisos. Las instrucciones para el reemplazo del tablero se pueden encontrar en nuestro sitio web en ahfproducts.com