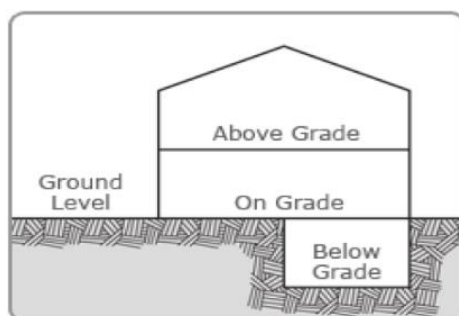


# ENGINEERED WOOD FLOORING INSTRUCTIONS



Save time and avoid costly mistakes by reading these instructions before starting the installation. For optimum success ensure that the job-site environment and sub-surfaces meet the requirements as set forth in this installation guide.

This engineered wood flooring is constructed using a real hardwood veneer top-layer of various species bonded to a plywood core creating a very stable floor, a great choice for any level of the home that is climate controlled.

## APPLICATIONS

Depending on the application, this product can be installed in one of the following ways.

**Nail-Staple-Down:** Installed over approved wood substrates using specifically designed pneumatic flooring staplers or cleat nailing machines.

**Glue-Down:** Directly-glued over approved, properly prepared wood and concrete subfloors. Follow the glue manufactures labeling instructions regarding correct trowel size, removal of surface sealers, contaminates and use of moisture barriers.

**Edge-glue-float:** The tongues and grooves are glued together using a flexible/elastomeric PVA carpenter's wood glue. The product is then "floated" over an approved high-quality pad underlayment. This application is often used when a subfloor has imperfections or cannot be attached (nailed or glued), examples are; gypcrete, old tile, Masonite, particle board, etc.

**Please see details in these instructions for each "above mentioned" method.**

**NOTE:** Engineered Click floating and Engineered Lumber core products have separate sets of instructions not outlined in this document.

## USER / OWNER / INSTALLER RESPONSIBILITIES

- It is the **users** responsibility to make sure the proper jobsite conditions and indoor environment is maintained before, during and after installation. Failure to do so can result in, among other things, gapping, squeaking, buckling, or cupping, finish issues.
- Product use constitutes acceptance. It is the **users** responsibility to visually inspect the product and determine acceptability before installation. Claims will not be accepted regarding visual defects after flooring has been installed. If any planks are unacceptable due to color, finish, milling or any other reason, it is your responsibility to determine to use them, hide them in areas like closets, trim off the imperfection, or not install them at all.
- Our floors are manufactured in accordance with accepted industry standards; waste and defects should not to exceed 5% of the total sq. ft. of purchase. A reasonable amount of installed flooring (up to 25% or 100 sq. ft. whichever is less) is enough to determine acceptance of quality. However, waste may be higher based on room layout, product description and or product grade.
- Unless otherwise stated, "Odd-lots" and "Deals" are sold "as is" without a warranty.
- If milling or quality issues are suspected stop the installation and call your local store or CUSTOMER CARE at 800-366-4204 immediately.

## JOBSITE CONDITIONS

- Before installation the installer must determine if the environment and subfloor conditions meet or exceed all applicable standards and are within the tolerances set forth in these installation guidelines.
- The building should be enclosed, with all doors and windows in place.
- All gutters should be in place and functioning properly. Yard grading should be sloped to run water away from the home.
- The crawl space or basement must be dry. Crawlspace must be a minimum 18" from the bottom of the floor joist to the ground and should have adequate cross ventilation. The crawlspace must have a minimum 6 mil thick polyethylene film covering the earth.
- Basements, crawlspaces and living areas over garages need to be dry and well ventilated.
- All wet trades (plumbing, drywall finishes, painting, tilework etc.) must be completed and allowed to dry prior to delivery & install.
- For best performance, finished flooring should be one of the last items installed. (HVAC) Heating, Ventilation and Air conditioning systems should be fully operating and running with temperature between 60°F and 80°F, with humidity between 30% and 50% at least 5 days before delivery. All construction activity should be done before installation.
- The manufacture and Lumber Liquidators declines any responsibility for failures caused by improper job site and subfloor conditions

## ACCLIMATION and STORAGE

- Acclimate the flooring while in the boxes in the areas to be installed to the expected environment that the floor will service for a minimum of 48 hours prior to installation, additional acclimation may be required in very dry or humid climates.  
**See Moisture Testing recommendations.**
- For best performance maintain the temperature in the home between 60°F and 80° and relative humidity between 30% to 50% before, during, and after installation for the life of the flooring.
- Flooring should be delivered and stored horizontally/flat on a dry surface away from exterior walls, direct sunlight, heat or AC vents by at least 3 feet during the acclimation process.
- If products are packaged in plastic, remove the plastic wrapping from the outside of the boxes to expedite the acclimation process.
- If storing on concrete place a layer of heavy plastic down over concrete to protect material from moisture.
- During transit protect product from the "elements" (e.g., rain or moisture, hot and cold conditions, etc.).
- Do not store in unclimatized buildings, sheds, garages or damp basements.
- Improper storage and acclimation can result in, among other things, warping, and damage to product and it may prevent proper assembly of this product.

## GENERAL INFORMATION

- Engineered flooring is a product of nature and will have some variations in grain, patterns, shade and color from box to box, and is to be expected.
- It is recommended that you add a 5% - 10% waste factor for cutting waste above the actual square footage of the areas to be installed to allow for cutting and grading allowances. For diagonal installs add 15% for waste.
- **Do not install under fixed cabinets or islands of any type when installed as a floating floor.** Cabinets may be installed on top of this product only when it is glued or fastened down directly to the substrate. • Do not install in full bathrooms or areas with steam showers or saunas.
- Do not install in boats, or other moving vehicles. Do not install over carpet, carpet padding or existing floating floor.
- Not recommended for "floating applications" where heavy rolling loads such as and not limited to; power wheel chairs, heavy carts, etc., will be in use
- The customer is advised to be home during the installation for consultation/direction. Customer and installer should discuss installation and layout to maximize satisfaction.
- If the room has electric baseboard heaters, leave a minimum of 1/2" between the surface of the flooring and the bottom of the heaters, allowing heat to circulate properly.
- It is advisable to keep an extra box and label for future repairs or reference as needed.
- Once product is unpackaged, the flooring should be installed promptly.
- Not all engineered flooring products are suitable for applications over radiant heat.

## INSTALLATION TOOLS (basics)

- Engineered Floor Stapler or nailer • Floor fasteners • Table saw • Miter saw (60 tooth Carbide-tipped circular saw blades) • Jig saw
- Jamb saw • Drill/ Drill bits • Chalk line • 6' level or 10' level • Tape measure • Pencil • 16 oz. Hammer • Nail set • 6d finish nails
- Air Compressor with regulator w/Air hose • Moisture meter (wood) • Calcium chloride moisture test (concrete) • PVA wood glue
- Blue painters tape (2080) • Safety glasses • Dust mask • Broom • Eye protection • Ear protection • Gloves • Cloth rags
- Approved adhesive remover • Niosh Dust Mask • Gloves • Hygrometer (to monitor in-home humidity) • moisture meter

## SUBFLOORS: CLEAN - FLAT – DRY - STABLE

- All substrates must be structurally sound and free from movement or deflection.
- Subfloors must be flat within 1/8" over a 6' span, and 3/16" over a 10' span.
- Differences in floor flatness must either be sanded or ground down or built-up with a suitable floor leveling material.
- Improper substrate or flatness can result in, among other things, gaps, squeaks and poor fitting planks during assembly.

## WOOD SUBFLOOR:

- Wood subfloors must be constructed according to local building codes, be structurally sound and deflection free.
- Screw down loose or squeaky sections of plywood and replace areas that are damaged.
- Wood subfloors should be moisture tested with an appropriate wood moisture meter, and the results must be no more than 12% on average. Test the subfloor moisture in several locations. Higher readings indicate a moisture concern that needs to be corrected before installation can begin.
- Allow wood subfloors to breathe, never apply sheet plastic over wood subfloors.
- 30 lb. roofing felt, roofing shingles or "firm" vinyl tile can be used (in layers) to build up low areas.
- Do not use liquid (cement, gypsum, etc.) based patches on wood subfloors.

## CONCRETE SUBFLOOR:

- New concrete must be cured for a minimum of 60 days prior to installation.
- Grind down high spots and fill in low spots with an appropriate Portland cement based patching compound (allow to cure fully).
- A moisture barrier is required over all concrete subfloors.
- A moisture test is strongly recommended. Acceptable tests are ASTM F1869 Calcium Chloride test, or ASTM F2170 using in situ probes, to test the humidity of the slab. Slabs with moisture levels exceeding 3lbs per 1000sqft using the Calcium Chloride test, or over 75% when using the RH test, must have an appropriate moisture barrier installed between the concrete and flooring.
- Moisture protection for floating floor installations should be a minimum 6mil virgin polyethylene. Seams should be OVERLAPPED 8" and taped using a waterproof adhesive tape (duct tape). This vapor barrier should be installed up the wall at least 1".
- Slabs on or below grade must be free of hydrostatic pressure.
- Moisture intrusions from concrete hydrostatic pressure, flooding, or plumbing leaks, along with high levels of alkalinity, can affect floor coverings over time. Moisture can be trapped below the flooring and create mildew and mold.
- The installer – not the manufacturer or Lumber Liquidators – is responsible for making sure that the site conditions and the application methods are appropriate prior to the installation of any flooring materials.

## EXISTING FLOOR COVERINGS

- All carpeting and padding must be removed before installation.
- Do not install over cushioned vinyl flooring, or any existing floating floor products.
- Existing wood floors glued to concrete substrates must be removed prior to installation of this flooring.
- Existing sheet vinyl, VCT, LVT, ceramic tile, and terrazzo installed must meet flatness requirements.
- This flooring can only be glued down to existing flooring that is properly prepared and approved by the adhesive manufacturer.
- This flooring can be floated over existing clean, flat, dry, and well bonded secured tile flooring, vinyl flooring.

## UNDERLAYMENT

- Underlayment padding is not required for the installation of this product except in "floating" applications. Underlayment can be used to help smooth out minor subfloor imperfections, while offering insulating and sound control properties.

**Please call Tech support at 1-800-366-4204 or contact your local store for underlayment recommendations.**

## MOISTURE TESTING wood subfloor and new floor

**[CAUTION]** Most wood flooring failures result from jobsite moisture. Do not unpack or deliver flooring to the jobsite until moisture problems are corrected. The **goal** of moisture testing is two-fold. (1) To determine when the installation can begin and (2) to verify that proper moisture balance between the new floor boards and that of the existing subfloor has been achieved. Verify by using a moisture meter that will have individual species settings (pic1). Pin or probe meters that have adjustable species settings are most accurate. Contact the meter manufacturer directly for your alternate or substitute species settings. Meter examples; ([Tramex](#), [Ligno-DX/C](#), or [Delmhorst](#)).



(pic1)

**Test the subfloor.** Set the meter to the type of subfloor. Obtain an average by meter testing the subfloor (10 locations per every 500sqft). Test around exterior doorways, near plumbing and foundation walls and in the center of the room. On average, the subfloor moisture range must not exceed **12%**.

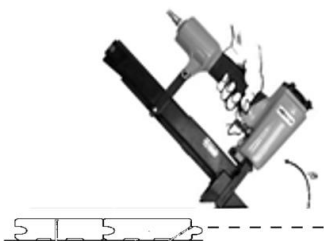
**Note:** When installation is over concrete; test the base boards and door casings for comparative readings (**concrete moisture content readings are not compatible with wood moisture content %**)

**Test the new flooring.** Set the meter to the proper wood species. Obtain an average reading by testing (20 boards out of every 500 sq.ft.) of new flooring. This flooring can have acceptable moisture range between 4%-6%, with no more than 5% variance up to 10%. After thoroughly testing both the subfloor and the flooring, be sure that the moisture content of both doesn't differ by more than 4% for strip flooring (boards 2 ¼" or less) and 2% for plank flooring (3" or wider). If high moisture readings are found in either the new floor or subfloor identify the moisture source and correct. Extend acclimation time. Postpone the installation until the proper conditions have been met. It is recommended to document moisture test results with notes should future questions arise; a record of the customer's name, the order number and digital pictures showing the meter actually used, including the time and date.

## PREP- ALL INSTALLATION METHODS

Use a manual or electric jamb saw to undercut all door jambs/casing to allow enough clearance for the wood flooring to easily slide underneath. A credit card thickness clearance between the top of the new wood floor and bottom of the door jamb is recommended. Sand down high areas of the subfloor. Correct low areas (See subfloor prep). Sweep or vacuum the subfloor clean of dust and debris. Determine the starting wall, usually the longest or outside foundation wall. Check walls interior/exterior walls for straightness.

- Install flooring in normal proper lighting.
- Inspect subfloor for flatness, squeaks, and moisture.
- Use breathable materials like paper when protecting a newly installed floor.
- Inspect flooring during installation, select out boards have milling and finish defects.
- Jobsite subfloors can be dry today and wet tomorrow the use of moisture barriers is highly recommended.
- Flooring should be installed from several cartons at the same time to ensure good color, shade and appearance.
- Avoid board size grouping, boards lengths should be intermingled throughout the installation.
- It is helpful to save the item number found on the packaging box ends for future references.
- An expansion space must be left around the perimeter and at all vertical obstructions. This space is normally the same as the thickness of the new flooring. For example; 1/2" flooring requires 1/2" expansion.



## NAILING TIPS

- Engineered wood flooring is typically installed using specially designed engineered wood pneumatic flooring staplers or cleat nailers, both types work well. Ensure the use of correct sized fasteners and adaptors.
- Install moisture retardant underlayment, and staple it down to prevent movement/sliding.
- Place fasteners on tongue side that runs the length of the planks not into the groove. If the staples do not go in far enough adjust the compressor regulator slightly and re-test until staples sit flush into the wood above the tongue.
- If the staples go in too deep lower air pressure until staples sit flush above the tongue. Some floor staplers have the ability to adjust the depth of the fastener. This may need to be adjusted for the staples to seat correctly.
- Tongue fractures can be reduced by lowering the compressor's PSI and using the recommended floor stapler. Dimples can be reduced by seating the floor staplers correctly on the board or using thinner gauge fasteners like 20 gauge staples.
- Test by nailing into sacrificial board and pull up to check for fastener holding strength and discard. Make sure the staples are sitting flush in the wood or dimples can occur. Adjusting the depth of the stapler to seat fasteners a bit deeper can help minimize dimples.
- Only use pneumatic nail guns designed for engineered wood flooring. Norge 4 n 1 floor stapler, Stanley Bostich, Powernail, and similar engineered flooring staplers are acceptable.
- Check for squeaks after nailing. Squeaks can occur due to tongue fracture, uneven subfloor, improper fasteners, or improper fastener spacing. Squeaks can be corrected or minimized by adding a PVA floating floor wood glue to the tongue and groove of the plank before nailing.
- If stapler will not shoot staples, check for air leaks, jammed staples, staple size, and compressor air pressure.
- Its best to pre-drill and hand nail the first row using a 3/32" drill bit and 6d finish nail. This will help prevent finish chipping due to pneumatic finish or brad nailers. If dimpling still occurs switch to a floating or glue down installation.
- The use of water based adhesives is not recommended.

## ENGINEERED WOOD RECOMMENDED FASTENER SELECTION

Board thickness 1/2" - 9/16"	18 or 20 gauge engineered flooring staples or cleats	1-1/4" or 1 -1/2" long
Board thickness 3/8"	18 or 20 gauge engineered flooring staples or cleats	1" or 1-1/4" long

### FASTENER SPACING

Place fasteners **4"- 6"** apart within 1 - 2" from each end with at least two fasteners per plank.

**Important:** Set air compressor to 70-80 PSI. Test and adjust air pressure to ensure proper setting of fasteners. Make sure that the fastening machine is fully adjustable, is in good working condition, is at the appropriate angle and seats properly against the tongue of the board to prevent top edge and surface dimple damage.



**Note:** Only use floor staplers that are fully adjustable and engage the top profile over the tongue at the appropriate angle. Make sure that the stapler is in good working condition and seats properly against the board to prevent top edge and surface dimple damage.

## STAPLE/NAILDOWN INSTRUCTIONS

**[CAUTION]:** Install flooring in good lighting. After nailing 100 sq. ft., stop and inspect the installed floor for any defects or damages. Stop at 20 sq. ft. for installation under 100sqft. Make adjustments as needed. If satisfied, continue with the installation. When top nailing pre-finished flooring (the first and last rows, stair treads, and risers) it is recommended to pre-drill and hand nail using a 3/32" drill bit and 6d finish nails. Pneumatic 16ga. finish nail or 18ga. brad nail guns can be used to secure the first and last rows, but improper use can easily damage the board or finishes. When installing over crawl spaces, basements, or garages use 15 lb. black felt paper, black asphalt saturated kraft paper, or white Silicon Vapor Shield® as a minimum to provide protection against moisture vapors.

**Engineered Wood floor orientation** when fastening down to wood substrates:

- Fasten flooring perpendicular to the floor joist.
- Fastening wood flooring parallel to the floor joist is an option using a combination of plywood, OSB, Advantech or similar approved subfloors.
  - Floor joist (16" to 19.2 o.c.) The total subfloor thickness minimum must be 1-1/4"
  - Floor joist (19.2 to 24"o.c.) The total subfloor thickness minimum must be 1-1/16"
- When nailing over existing solid wood tongue and groove flooring, install over an additional 3/8" plywood or run the new floor perpendicular or at a 45 degree angle to the direction of the existing flooring.

### STEP 1: THE FIRST THREE ROWS

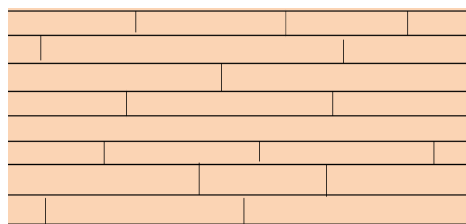
Determine the starting wall, usually the longest or outside foundation wall. At the two opposite ends of this wall, measure out the width of the board including the tongue, plus the expansion space, and place a mark. An expansion gap must be left, snap a chalk line connecting the two marks. Align the tongue side of the first row of boards on the chalk line with the groove side towards the starting wall, maintain the expansion space.

Install the flooring with the tongue side facing away from the starting wall (Use long straight planks for first two rows). Pre-drill and top nail the first row of boards using a 3/32" drill bit and 6d finishing nails about 1" from the back edge. Pneumatic finish nail guns or brad nail guns may also be used (test first to assure damage does not occur to the plank-face). If hand nailing countersink the finish nail using a nail punch and fill with close matching wood filler. Blind nail the 2<sup>nd</sup> and 3<sup>rd</sup> rows using the flooring stapler, and seat the staples slightly above the tongue.

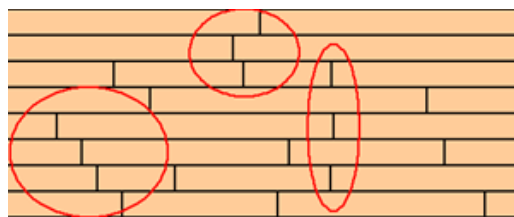


### STEP 2: LOOSE LAY (Rack) THE FLOORING

After installation of the first three rows, loose lay about 100sqft of flooring about 4" or 5" away from the last secured row. Pull from several boxes to mix board color and sizes to create a random look. Visually inspect flooring for defects while racking. Stagger boards randomly as possible, avoid creating patterns. See picture for proper layout guidance.



Example of correct board placement or stagger



Incorrect board stagger

### STEP 3: INSTALLATION CONTINUED

After racking or laying out 100sqft of flooring begin nailing the floor. Visually inspect boards for defects while nailing. Use proper fastener spacing (See fastener spacing). Continue nailing until you get to the last one or two rows. The last one or two rows will have to be top nailed. Again pre-drill using a 3/32" drill bit and 6d finishing nails is recommended.

The last rows can be pulled tightly together using a floor Jack or pry bar. Protect base boards before using these tools.

The last row may have to be ripped down in width to fit. If the last row is less than 1" in width use carpenters wood glue to join the last piece to the previous row.

### STEP 4: FINISHING UP

Fill in nail holes and minor gaps with close matching wood filler.

Install any base board molding and shoe molding

Install transition moldings

Sweep the floor

Clean floor with approved cleaner (contact you're flooring retailer for approved cleaner).

Use felt pads under furniture legs. Protect floor before moving appliances and heavy furniture.

## GLUE-DOWN INSTRUCTIONS

**Recommended Adhesives:** Use Bostik or Mapei adhesives designed for use with engineered wood floors. Note that flooring adhesives may have special requirements and limitations of use. Follow closely the adhesive labeling instructions and adhesive Technical Data Sheet related to moisture testing procedures, moisture barriers, and trowel size recommendations. Depending on the selection and floor application, you may be required to use moisture barriers. Adhesive Technical Data Sheets can be found on the adhesive manufacturer's website. When in doubt about an adhesive application or requirement call the adhesive manufacturer.



**Technical Services (USA) 1-800- 992-6273,  
1-800-876-2734, (Canada) 1-800-361- 9309**  
[www.mapei.com](http://www.mapei.com)

**Technical Services 1-800-523-6530  
1-800-726-7845 1-888-592-8558**  
[www.bostik-us.com](http://www.bostik-us.com)

**\*NOTE:** *Cured adhesive may cloud, chemically damage or etch the floor's finish.*

Clean wet adhesive from the surface of the floor frequently using the manufacturers recommended remover. Use clean towels, changing frequently to prevent haze and residue. Contact the adhesive manufacturer for adhesive removal remedies.

**Expansion Space:** A minimum 1/2" expansion space is required around all fixed objects and walls. T-molding expansion breaks are not required with glue down installation methods, but can be helpful in minimizing overall floor movement due to seasonal humidity changes inside the home.

**Glue down Install:** Start the installation parallel to the longest exterior wall in the room. Spread out only enough adhesive to install the first row of flooring leaving a min. 1/2" expansion gap at all walls. A laser level or string line can be used to make sure the first row is straight. Allow the first row to set up before installing additional rows. This helps prevent the first row from moving as the next rows are installed. Spread out enough adhesive to install 4 rows at a time. Planks must be wet laid into the adhesive. Discard badly bowed or warped planks. Periodically lift up a plank to verify proper adhesive coverage to the subfloor and bottom of the plank. After laying 4 rows clean up any glue that gets on the finish right away using the adhesive manufactures recommended adhesive remover. Use #2080 blue painters tape to hold planks together if needed until the adhesive cures. Don't leave tape on for more than 24hrs. Wait 24hrs before placing furniture back onto the flooring. Glue down tips can be found on the Flooring 101 section of Lumber Liquidators website. [www.lumberliquidators.com](http://www.lumberliquidators.com)

## DOUBLE STICK INSTALLATION

Flooring directly glued over an approved underlayment that is also directly glued to the subfloor. Allow the underlayment adhesive to fully cure before gluing wood flooring to the underlayment. Contact Tech support @ 1-800-366-4204 for appropriate products and applications.

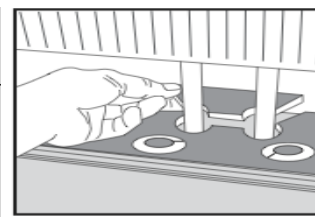
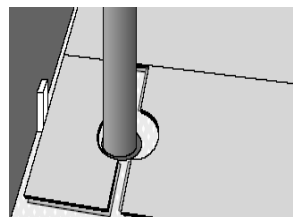
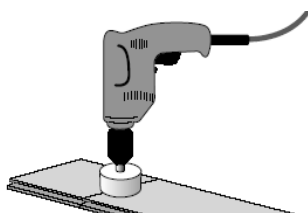
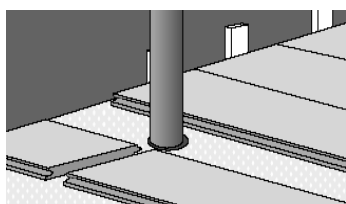
## EDGE-GLUE-FLOAT INSTRUCTIONS

During installation, Carpenters PVA Elastomeric glue for Floating wood floors should be applied to each groove on the short and long sides of the planks to ensure bond with the other planks. Two separate continuous beads of glue should be applied: one continuous bead applied inside the groove, and one continuous bead applied to the top part of the tongue at all seams to ensure a secure bond with the top and bottom of the tongue. This double-gluing helps to minimize squeaks, board gaps, or separation. Note that seasonal gapping is normal in wood flooring and does not constitute a product failure. Seasonal gapping can be minimized by keeping the indoor humidity above 30% and below 50%.

- Contact your local store for approved underlayment recommendations for this application.
- Floating installations: this flooring cannot be glued, nailed, screwed or otherwise fixed or attached (e.g. door stopper, closet track) to the subfloor in any way. It must have room to expand and contract freely.
- A 1/2" expansion gap is required at all walls and any vertical obstructions.
- T-Moldings are required for large spaces or connected areas greater than 30 feet in any one direction, typically these "breaks" are placed at doorways or hallway entrances.
- For floating applications up-to 30' in any one direction the minimum expansion must be 1/2". Areas greater than 30' and up-to 40' maximum; the minimum expansion space must be increased to 3/4".

## Installation

- Determine the starting wall, usually the longest or outside foundation wall. At the two opposite ends of this wall, measure out the width of the board, and place a mark. (Do not include the tongue of the board when measuring). An Expansion gap or space must be left around the perimeter and at all vertical obstructions.
- The flooring should be installed from left to right, tongue side towards the wall, with the groove side facing out from the wall.
- Install the first row up against the wall spacers, end to end until the entire row is complete. Be sure to use PVA carpenters wood glue on all plank butt ends.
- When edge-gluing, ensure that the glue is still wet when the planks are joined. Special attention should be paid to ensure that there is no excess glue dripping to the subfloor as this could bond the plank to the underlayment and hamper floor movement. A lightly water dampened rag can also be used to remove any PVA glue.
- Next, install the second row of planks, installing left to right. Each plank should be installed long side first into the previous row. Make sure carpenters PVA wood glue is applied to all tongue and groove seams. Insert a spacer at the wall, then install the long side of the plank into the previous row. Once the tongue is inserted into the groove fold the plank down onto the subfloor. The butt ends may be lightly tapped over from right to left to close the end seams. Be sure to keep a minimum stagger of 6" between end seams from row to row. Use a pry bar to close the end seam of the last plank installed in each row.
- Every few rows secure planks together with #2080 blue painters tape stretched across the planks perpendicular to the rows to hold planks together until the adhesive cures. Don't leave tape on for more than 24hrs. **NOTE: incorrect tape can damage the finish!**
- Continue installing the flooring until you reach the opposite wall in the room. The last row of flooring by the wall may need to be ripped down to fit. Make sure you have proper expansion space between the last installed row and the wall.
- **To pass obstacles through the floor covering (pipes, radiator mounts)**, use a pencil to trace the center position for drilling. Use a big enough drill bit to leave a 1/2" expansion around the pipe. A jig saw may be needed for bigger rounded cuts. Next, cut the strip in two so that the saw mark goes through the center of the drilled hole, so that the strip can be glued and reassembled around the pipe.



## Post-installation

- After installation, allow glue to fully cure for 24 hrs. before replacing furniture and heavy foot traffic.
- Protect flooring before moving any heavy furniture or appliances. (damages from furniture and appliances are not covered)
- Fill in minor gaps with close matching wood filler
- Check for adhesive on floor finish and remove with appropriate adhesive manufacture remover.

## Radiant Heat Systems

Engineered wood flooring is generally recommended over most radiant heat systems; however contact CUSTOMER CARE at 1-800-366-4204 for a listing of approved products for installation over radiant heat or visit our website under Flooring 101.

Follow the radiant heat manufacturer's installation and operational instructions.

Hydronic radiant heating systems must have been tested and in operation for a few weeks prior to floor installation to dissipate moisture. After the flooring is installed, gradually increase temperature in increments of 10° per day to avoid "shock" to the flooring to the preferred comfort level. The radiant heat system must be controlled and the surface temperature of the flooring must never exceed 85°F.

For best floor performance, proper relative humidity must be maintained within your home at all times during the year. To minimize seasonal gaps keep the indoor humidity between 30% - 50% RH. In arid parts of the country it is especially imperative to use a humidification system to maintain indoor moisture. Wood, oil or forced air heating systems can produce over-dry heat so use of a Relative Humidity meter (Hygrometer) is recommended and can assist at maintaining the indoor relative humidity above 30% and below 50%.

Even when these guidelines are followed wood flooring can experience some squeaks, surface cracks, and seasonal movement, shrinking or gapping between planks and is not a product defect. Problems arising from radiant heat installations or operations are site related, under the control of the homeowner and therefore not covered by product warranty

## MOLDINGS & TRANSITIONS

Install transition moldings directly to the subflooring. Pre-drill and hand nail transitions moldings to wood subfloors using 6d finishing nails, pneumatic finish nailers, or pneumatic brad nailers. Use a wood urethane tube adhesive to bond wood transitions to concrete.

Cut moldings using an electric miter saw using a 60 tooth or 80 tooth fine finish carbide tipped blade makes the best cuts.

Attach base or quarter round moldings to the wall, never into the floor. Mitered cuts hide better when joining moldings.

- Base Board – for hiding imperfections and adding a custom finish along any wall.
- Quarter-Round - for covering the expansion left at walls and other fixed surfaces.

- Reducer Moldings - used to transition to lower floors.
- Stair Nosing - for finishing the exposed edges of stairs and landings.
- T-Expansion - for joining two areas of flooring of similar heights.
- Threshold/End Cap - for transitioning to carpet, finishing at sliding glass doors, raised hearths, etc.

## Routine Care/Protection

### Care

- Use the Bellwood Cleaner to keep the floor clean. We do not endorse or test any other cleaners.
- Apply mineral spirits on a cloth to help remove oil, paint, markers, lipstick, ink, or tar. Then buff with dry cloth.
- Only use vacuums designed for hard surface floors.
- Do not use wet mops, steam cleaners, oils, polishes, waxes on the floor.
- Do not use buffing or polishing machines.
- Remove hardened candle wax and chewing gum with ice, then gently scrape with a plastic scraper, such as a credit card.
- Repair white scratches with stain markers. Dents and chips can be concealed with wood putty, wax crayons, or wood epoxy sticks.
- Maintain home climate between 60°F and 80°F with humidity between 30% and 50% year round.
- UV light can cause wood and bamboo to lighten or darken overtime. Periodically rearranging your area rugs and furniture will allow the floor to antique or age evenly.

### Protection

- Use mats at entrance doors to collect dirt, grit, and wet shoes
- Only use breathable rugs and rug pads that are safe for hardwood floors. Verify with rug manufacture. Do not use PVC, petroleum or solvent based backings.
- Use floor protectors and wide-load bearing leg bases for heavy object like fish tanks, pool tables, and pianos.
- Do not walk on your floor with stiletto heels, shoes with sports cleats or exposed metal parts.
- Keep pet nails trimmed to prevent scratching the floor.
- Use protection when moving heavy furniture or appliances. Never try to slide or roll heavy objects across the floor.
- Felt pads should be used under chair legs. Use soft rubber castors or felt castors on office chairs.
- When moving furniture, appliances, heavy equipment, etc., use luan board, plywood, or other similar covering to protect the floor.



This engineered flooring is constructed using a real hardwood veneer top-layer of various species bonded to a layered plywood core creating a very stable floor, a great choice for any level of the home that is climate controlled. **NOTE:** Engineered Click floating and Engineered Lumber core products have separate sets of instructions not outlined in this document.



**WARNING:** Drilling, sawing, sanding, or machining wood products can expose you to wood dust, a substance known to the State of California to cause cancer. Avoid inhaling wood dust, or use a dust mask or other safeguards for personal protection. For more information go to [www.P85Warnings.ca.gov/wood](http://www.P85Warnings.ca.gov/wood).  
**CAUTION:** Do not sand any surfaces containing lead based paints, finishes, or asbestos.  
 For buildings built in 1978 and earlier, contact the EPA for lead based testing prior to any sanding ([www.epa.gov](http://www.epa.gov)).

Precautionary Measures: Cut flooring outside. Equip power tools with a dust collector. If high dust levels are encountered; use an appropriate NIOSH-designated dust mask. Avoid dust contact with eye and skin, USE EYE AND EAR PROTECTION.  
 First Aid Measures in case of irritation: flush/rinse eyes or skin with water for at least 15 minutes