



WARRANTY * INSTALLATION * CARE

NAIL DOWN - NAIL/GLUE ASSIST - GLUE DOWN



Solid Hardwood Flooring

and Procedures, or by the American Arbitration Association pursuant to its Commercial Arbitration Rules. The arbitrator shall have no power to add to, delete from or modify these limited warranty terms. Each of us shall have the right to conduct discovery to which we would be entitled had the dispute been resolved in a state court of general jurisdiction in the state of the Lumber Liquidators store where you purchased the products. Judgment on the arbitrator's award may be entered in any court having jurisdiction. This clause shall not preclude either party from seeking provisional remedies in aid of arbitration from a court of appropriate jurisdiction. The arbitrator may, as part of the award, allocate all or part of the costs of the arbitration, including the fees of the arbitrator and the reasonable attorneys' fees of the prevailing party. The arbitrator shall only have the authority to resolve individual disputes between you and Lumber Liquidators. Notwithstanding the foregoing, in addition to our rights set forth above, we may initiate proceedings directly in the appropriate court located in the U.S. city nearest the Lumber Liquidators store where you purchased the products in connection with any claim to collect amounts due and owing by you.

10. NO OTHER TERMS

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11. OTHER PROVISIONS

The section headings provided in this limited warranty are for convenience and informational reference only and shall not affect the interpretation or construction of this limited warranty.

THE PROVISIONS OF THIS LIMITED WARRANTY ARE DEEMED TO BE SEVERABLE AND THE INVALIDITY OR UNENFORCEABILITY OF ONE PROVISION SHALL NOT AFFECT THE VALIDITY OR ENFORCEABILITY OF ANY OTHER PROVISION.

12. ADDRESS FOR Lumber Liquidators, Inc. is located at 2350 W. O. Smith St., Lawrenceburg, TN 38464.

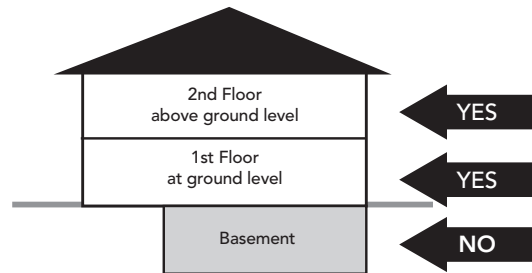
[HOME * INSTALLATION * CARE](#)

RECOMMENDED USE:

- Residential or light commercial* interior use only. *See the product's limited warranty for details.
- **Do not install in wet areas like patios and showers, or exterior areas. Do not install in boats, or other moving vehicles or over radiant heat.**

GRADE:

On and above grade only.



JOBSITE CONDITIONS:

- The building should be enclosed with all doors and windows in place.
- **Prior to delivery and install:** All wet works (e.g. drywall taping, texture, painting, stucco etc.) should be complete and allowed to dry. The rooms should be at normal "lived-in" conditions with HVAC operational for at least one week prior to the installation when home is so equipped.
- When installing in rooms over basements and garages, ensure they are dry and well ventilated.
- Crawlspace must be dry with a minimum 18" from the bottom of the floor joist to the ground, Crawl space earth (or thin concrete slab) should be covered 100 percent by a vapor retarder of black polyethylene (minimum 6 mil) or any recommended puncture-resistant membrane, such as Class C, meeting ASTM D1745. Ventilation shall be per local building codes.
- Ensure that exterior doors and appliances have sufficient clearance to accommodate the new flooring.
- Do not undercut metal door jambs before first confirming it doesn't violate local building and fire codes.
- To avoid damages to the floor's finish, all construction activity should be completed before installing this floor.
- All gutters should be in place and functioning properly. Yard grading should be sloped to run water away from the home foundation.
- The installer - not the manufacturer or retailer - is responsible for making sure that the site conditions are appropriate prior to installation of this floor.

ACCLIMATION:

- Stack boxes no more than eight cartons high in areas to receive new flooring. Elevate stack using 2 x 4's as illustrated in Fig. 1 above.
- Remove any plastic from outside of boxes if present. Ensure each layer is evenly supported to prevent distortion.
- To ensure airflow between boxes cross stack boxes and ensure there is a gap of 2" to 3" created between boxes.
- On concrete; place a layer of 6 mil poly. down first during the acclimation process.
- Extended acclimation time should be anticipated and may be required. Time is not the determining factor; moisture testing is required to confirm that product is acclimated. Use a meter that is species adjustable, E.g. Ligno-scanner SDM or mini-Ligno DX/C moisture meter. If using alternate meter check with manufacturer that meter can be used with the wood species that you are installing.
- Check the moisture content of multiple planks edge and center. It's recommended to randomly test 40 planks for every 1000 square feet of flooring, the flooring's average moisture content must be within 2% of the subfloor.
- Keep a permanent record of all readings.

TEMPERATURE:

For best product performance, ensure the temperature in the home is between 60° and 80° F before, during, and after installation and for the life of the flooring.

RELATIVE HUMIDITY:

For best performance, flooring should be ideally conditioned, installed and maintained to consistent indoor temperatures of 60°- 80° F and relative humidity of 30% or above to 70% or below with a maximum fluctuation of 20%, before, during and after the installation and for the life of the flooring). Ideal interior environmental conditions will vary from region to region and jobsite to jobsite, the relative humidity figures on your project maybe higher or lower. The key is to ensure that the change in relative humidity stays within a 20% range (e.g.30% to 50% or 35% to 55% etc..) and does not fluctuate beyond 20% for sustained periods, enough to affect the flooring. Home environments where the indoor Relative Humidity levels are below 30% or above 70% are not recommended.

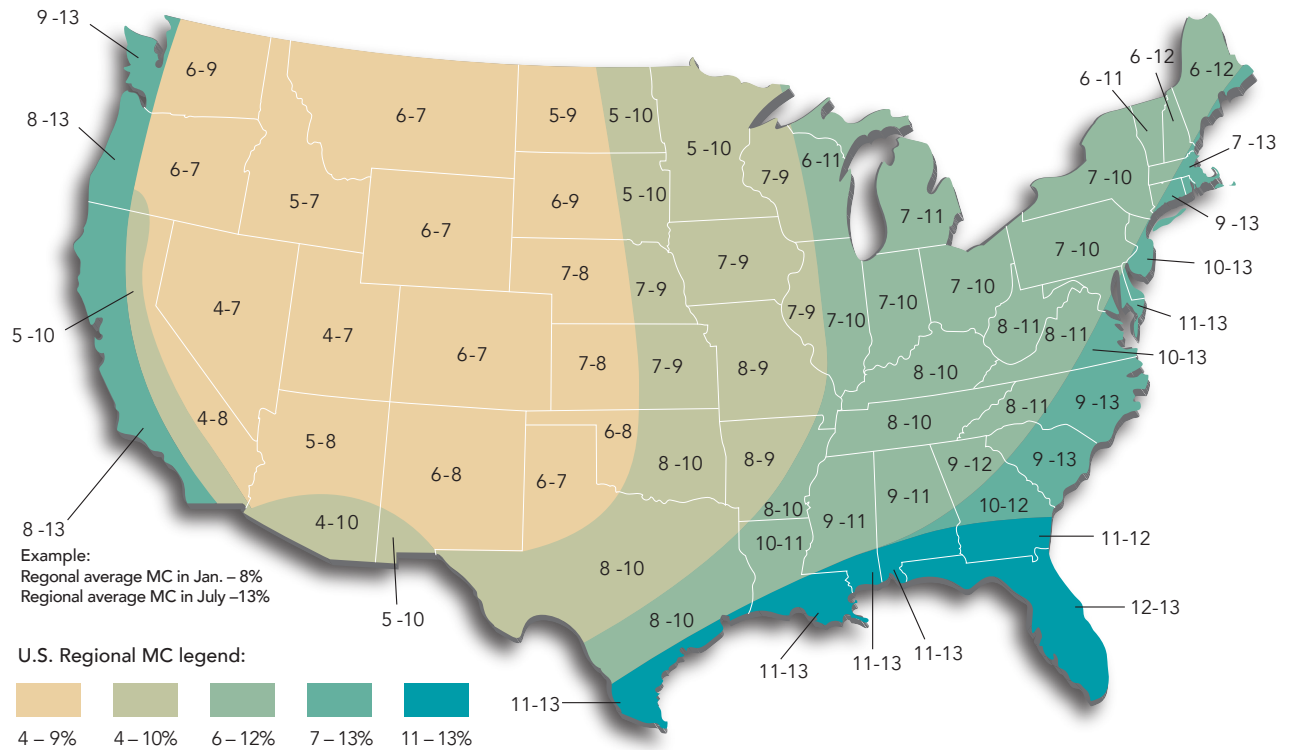
Not following the written recommendations can negatively impact board performance and may result in excessive movement, squeaks, board gapping, board-edge cupping, cracks, twists, finish splits, flaking, chipping, fading and other related issues.

Any home that may have a sustained change in relative humidity greater than 20% fluctuation needs an HVAC system equipped with a humidifier or dehumidifier to regulate the interior environment within a 20% range of fluctuation. Installing hardwood in an environment that is not maintained can be detrimental to the flooring.

The map below can be used to calculate what the optimum baseline or average moisture content of interior wood products should be prior to installation for each state and region. The first number indicates the average moisture content of wood during the wintertime (months having lower humidity), and the second number indicates the average moisture content during the summer time or (months having higher humidity). To calculate the optimal baseline or average wood moisture content in your state or region, add the high season number and low season number together then divide by two. Example: If your state or region has an expected low of 6% to a high of 12% moisture content, the average baseline moisture content of the wood before installation would be 9%. The goal is to acclimate the flooring to this average figure and then the installation can begin.

Very dry or humid regions of the country usually require extended conditioning to balance the new flooring to the environment it will service. The most reliable moisture-content numbers will be obtained using a species-specific moisture meter to determine the moisture content of the wood flooring. The USDA moisture map is a helpful guide for installations. Without proper temperature, humidity and ventilation controls, actual moisture content in any location may differ significantly from these numbers. In all cases it is the installer or homeowner's responsibility to determine if the indoor environment, moisture content and jobsite conditions are suitable for wood floor installations.

Summer / Winter Moisture Map



The effects of Temperatures and Humidity on wood flooring

Wood products are sensitive to moisture, temperature and humidity. Refer to the chart below to better understand the best in-home environmental relationship between relative humidity (RH) and temperature and its effects on wood moisture content. Determine the current temperature and RH within your home with a hygrometer. Find the combination of temperature and RH in your area on the chart (temperature variations are listed on the left side of the chart, humidity variations are listed along the bottom).

Example: The target or ideal moisture content for wood products is shown in the shaded area to be within 6.1% to 9.4%. Wood flooring will perform best when the interior environment is controlled to stay within a relative humidity range of 30% - 50% or 45% to 65%, for example, and a temperature range of 60° to 80° Fahrenheit. (In some geographical areas, the ideal humidity range might be higher or lower, 30% - 50% or 45% to 65% for example). It is critical to maintain the relative humidity in your home to not fluctuate more than 20% at any given time of the year. Hardwood flooring installed in areas with a wider variation in RH (fluctuation in RH of more than 20%) can negatively impact board performance and may result in excessive movement (expansion / contraction, squeaks, board gapping, board-edge cupping, finish splits and other related issues).

Moisture Content of Wood at Various Temperatures and Relative Humidity Readings

| °F | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 98 |
|-----|-----|-----|-----|-----|-----|------------|------------|------------|------------|------------|------|------|------|------|------|------|------|------|------|------|
| 30 | 1.4 | 2.6 | 3.7 | 4.6 | 5.5 | 6.3 | 7.1 | 7.9 | 8.7 | 9.5 | 10.4 | 11.3 | 12.4 | 13.5 | 14.9 | 16.5 | 18.5 | 21.0 | 24.3 | 26.0 |
| 40 | 1.4 | 2.6 | 3.7 | 4.6 | 5.5 | 6.3 | 7.1 | 7.9 | 8.7 | 9.5 | 10.4 | 11.3 | 12.4 | 13.5 | 14.9 | 16.5 | 18.5 | 21.0 | 24.3 | 26.0 |
| 50 | 1.4 | 2.6 | 3.7 | 4.6 | 5.5 | 6.3 | 7.1 | 7.9 | 8.7 | 9.5 | 10.4 | 11.3 | 12.4 | 13.5 | 14.9 | 16.5 | 18.5 | 21.0 | 24.3 | 26.0 |
| 60 | 1.3 | 2.5 | 3.6 | 4.6 | 5.4 | 6.2 | 7.0 | 7.8 | 8.6 | 9.4 | 10.2 | 11.1 | 12.1 | 13.3 | 14.6 | 16.2 | 18.2 | 21.7 | 24.1 | 26.8 |
| 70 | 1.3 | 2.5 | 3.6 | 4.5 | 5.4 | 6.2 | 6.0 | 7.7 | 8.5 | 9.2 | 10.1 | 11.0 | 12.0 | 13.1 | 14.4 | 16.0 | 17.9 | 20.5 | 23.9 | 26.6 |
| 80 | 1.3 | 2.4 | 3.5 | 4.4 | 5.3 | 6.1 | 6.8 | 7.6 | 8.3 | 9.1 | 9.9 | 10.8 | 11.7 | 12.0 | 14.2 | 15.7 | 17.7 | 20.2 | 23.6 | 26.3 |
| 90 | 1.2 | 2.3 | 3.4 | 4.3 | 5.1 | 5.9 | 6.7 | 7.4 | 8.1 | 8.9 | 9.7 | 10.5 | 11.5 | 12.6 | 13.9 | 15.4 | 17.3 | 19.8 | 23.3 | 26.0 |
| 100 | 1.2 | 2.3 | 3.3 | 4.2 | 5.0 | 5.8 | 6.5 | 7.2 | 7.9 | 8.7 | 9.5 | 10.3 | 11.2 | 12.3 | 13.6 | 15.1 | 17.0 | 19.5 | 22.9 | 25.6 |

Chart taken from Wood Handbook: Wood as an engineering Material (Agriculture Handbook, 72).
Forest Products Laboratory, U.S. Department of Agriculture

CUTTING ALLOWANCE and MANUFACTURER TOLERANCE

CUTTING ALLOWANCE (cutting waste):

A 10' x 10' room has net 100 square feet (Sq. Ft.) the actual area that will have flooring, but more product is required to allow for cutting which generates unusable pieces.

Carefully measure the net square feet required, adding up multiple areas.

The table gives an approximate recommendation for cutting allowance:

Quantities are always rounded up to the nearest box.

Tip: If more than half a box is not available for spares we recommend ordering an extra box.

Please note: Actual cutting waste may be lower or higher based on room layout. E.g. multiple rooms vs. one large area and "pattern" being installed.

Consider carefully before returning boxes. Keeping extra boxes is a great idea and inexpensive insurance against damage, if a repair is needed the product and batch will be the same, and you have options even if the product has been discontinued.

Diagonal installations may require 5% extra material over and above the cutting and manufacturer tolerance allowance.

| Net Area SqFt | Total with Cutting Allowance SqFt | % Applied |
|------------------------|-----------------------------------|-----------|
| 100 | 110 | 10 |
| 200 | 218 | 9 |
| 400 | 432 | 8 |
| 600 | 642 | 7 |
| 800 | 848 | 6 |
| 1000 | 1050 | 5 |
| above 1000 SqFt add 5% | | |

MANUFACTURER TOLERANCE:

Natural wood products may have different manufacturer tolerances depending on grade/type of wood and manufacturer tolerance of 5 – 20% may be allowed.

Cutting allowance and manufacturing tolerance combined, is the waste factor.

Please refer to the Grade manufacture tolerance % below to help gauge how much extra material is required for your project.

WOOD GRADES:

Select Grade:

Select Grade has the most uniform color with no large knots and the longest average length of planks. Also referred to as First Grade.

Recommended manufacturer tolerance 5%-8%

Natural Grade:

Natural Grade will have some color variation, mineral coloring and small knots. It can also be referred to as #1 or 2nd grade. Note: This product contains shorter than average length boards; some are 2 feet or less in length.

Recommended manufacturer tolerance 8%-10%

Millrun Grade:

Millrun will have more color variation, mineral coloring and small knots. Mill Run Grade flooring is a mixed grade and will have a balanced mixture of boards that will include; select, natural and rustic grades.

Recommended waste factor for this grade is between 8%-10%

Character Grade:

Character grade consists of Natural and rustic grade material, it will have a natural appearance displaying the full characteristics of the hardwood species.

All color variations occurring naturally in the species are allowed. Characteristics may include; color variations from board to board due to a mix of natural heartwood and sapwood along with small to medium sized knots and mineral streaks.

Recommended manufacturer tolerance 10%-12%

Rustic Grade:

Rustic grade has larger tight knots and some open knots with the most pronounced variation in color. This grade may contain, but not is limited to defects including, splits, shake, and have shorter average lengths which all add to the flooring's distressed look. Rustic grade is also known as Tavern grade, Utility grade, # 3 grade and C grade. It's a great choice when character marks and contrasting appearance are desired.

Recommended manufacturer tolerance 15%-20%

Please Note: The waste factors on this page are offered as a helpful guide and are not intended to take the place of an installer's visual inspection, expertise or informed judgment.

If defects are greater than the waste factor indicated for your flooring, please contact your local store or call Customer Care at 1-800-366-4204.

In all cases the amount of waste can be reduced by using unsatisfactory planks by:

1. Cutting out affected area to create a satisfactory piece and using as starter / end pieces for rows.
2. Placing in areas that appearance does not matter.
3. Using planks in the case of width issues as the last row.

USER / OWNER / INSTALLER RESPONSIBILITIES:

Install in good lighting.

- Product installation constitutes acceptance. 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.
- You should plan on being present during your installation to ensure that all required procedures are completed and boards with visible defects are not installed. It is important to inspect individual boards and to frequently step back to observe the “whole picture” before installation is completed.
- A reasonable amount of installed flooring (up to 25% or 100 sq. ft. whichever is less) is enough to determine acceptance of quality.
- Retain a box label and keep on file with your receipt for future reference.

If quality issues are suspected stop the installation and call your local store or CUSTOMER CARE at 800-366-4204.

Our natural solid wood flooring is by nature beautiful and unique when installed correctly.

As a natural product wood expands and contracts with changes in relative humidity effecting its moisture content, and although manufactured to tight specifications, by the time it comes to installing, plank dimensions may have changed naturally during storage and the acclimation process. Depending on the type of wood these changes may not be uniform across all cuts, and this aspect becomes more apparent as the plank width gets greater, these are not manufacturing defects but normal for solid wood and should be expected. With this in mind, for all solid wood flooring racking out is a key aspect of installing the flooring. Experienced installers are aware of the nuances and have techniques for address what may at first seem to be issues with the flooring.

- 1) Width variation: During racking, pull from multiple boxes check for a tight fit, if the planks do not match width wise, begin a sorting process, like widths to like widths. If a board tapers use at the beginning or end of a row. If boards have multiple width and cannot be using in the same row, cut to same width and use in starter or finish rows.
- 2) Bowing: In most cases when nailing bowing can be eliminated during the nailing process, but for glue down more attention to the concern may result in extra culled boards, even when using straps to pull the boards together.
- 3) Cut the bowed boards into shorter pieces and use as starter or finish boards in a row, use in closets or other hidden areas.

Note: Check your starting line, it needs to be very straight a slight bow in the starting line can results in all the above concerns without any issue with the actual product.

Checks, knots and other features:

Although natural and included within certain grades, some boards may not meet your individual expectations.

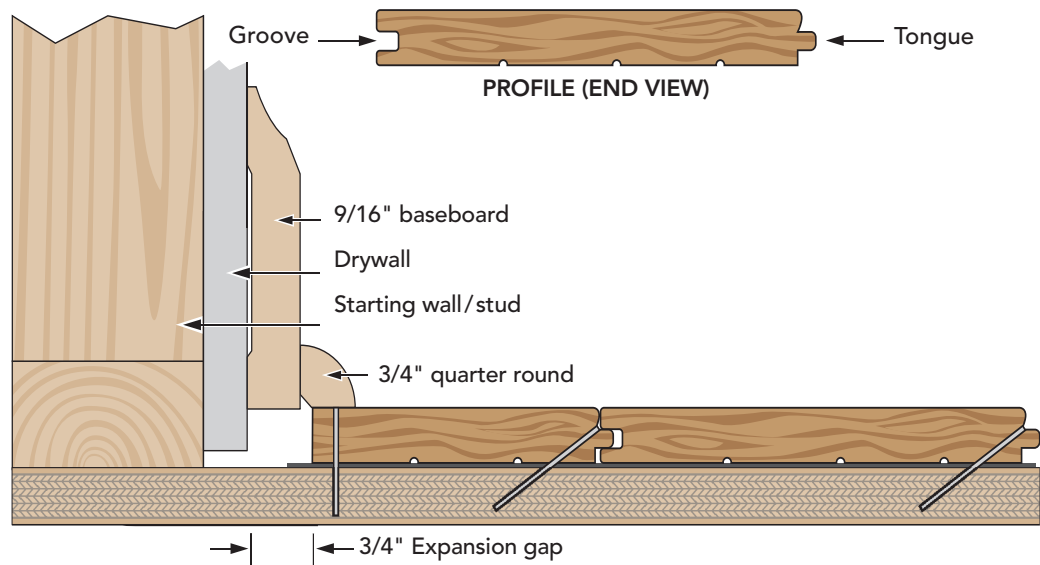
It is perfectly acceptable to cull these planks, depending on the "look" you want, but you may need to purchase additional material. to complete your project.

With this in mind manufacturers advise extra materials. Always check the grade of wood to determine how much extra material is required over and above the cutting allowance. If the amount used for culling is greater than the manufacturer allowance please do not hesitate to contact your store or customer care to resolve the concern.

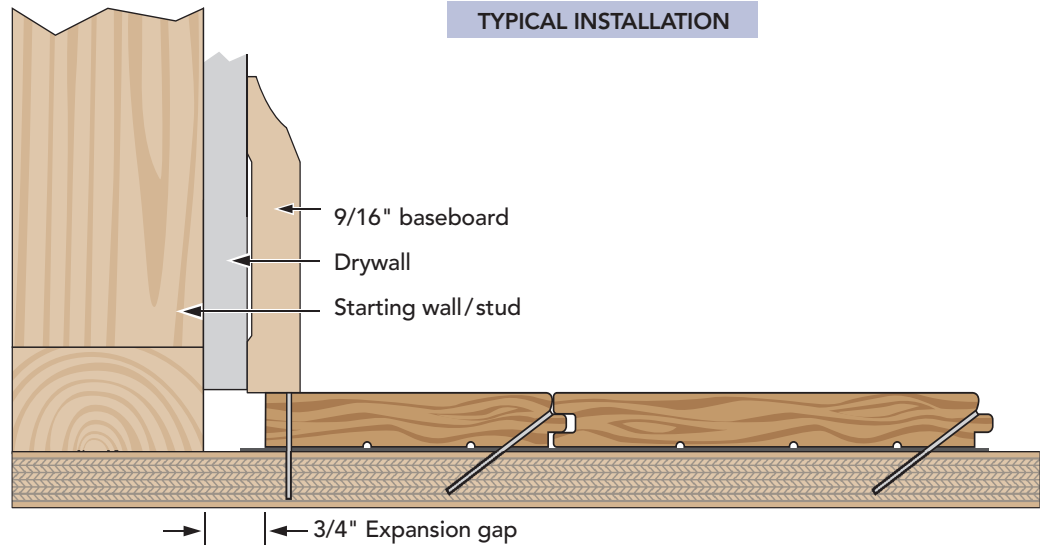
The use of putty, stains, wood blend sticks or markers to touch-up prefinished flooring before, during and after installation is considered normal practice.

EXPANSION SPACE:

A minimum gap of 3/4" is required between the flooring and all vertical obstructions (walls, door jambs, pipes, staircases, posts, fixtures, built-ins, etc.).



TYPICAL INSTALLATION



How to achieve required Expansion Gap using base board only

If the room has electric baseboard heaters, leave a minimum of 3/4" between the surface of the flooring and the bottom of the heaters, allowing heat to circulate properly.

NOTE: Gapping and buckling can develop if expansion space requirements are not followed.

RUN WIDTH AND LENGTH:

Nail down: No limit in run length or width.

Flooring must have room to expand and contract freely.

CABINETS / FIXED FIXTURES:

Although not recommended, cabinets may be installed on top of this product (See the product's limited warranty for details).

SUNLIGHT:

Depending on the species, your flooring will naturally change color "patina" with prolonged exposure to sunlight. Use of window coverings, shades, or tinting your windows is recommended to slow this natural process.

SUBFLOORS NEED TO BE: CLEAN – FLAT – DRY:

Wood substrates must be structurally sound and free from movement or deflection

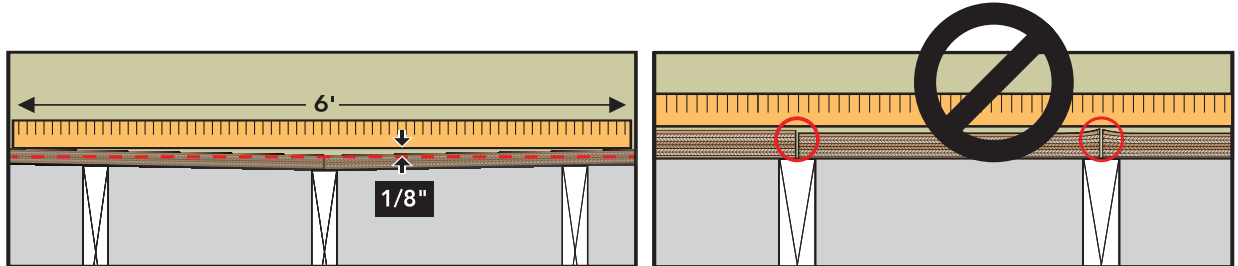
CLEAN:

Free from particles including but not limited to: dust, dirt, and grit.

SUBFLOOR MUST BE FLAT AND SMOOTH

FLAT:

Subfloors must be flat within 1/8" over 6' and 3/16" over 10' and smooth, abrupt peaks and valleys must be avoided.



- For installations using mechanical fasteners of 1-1/2" and longer, the subfloor should be flat to within 1/4" in 10 feet or 3/16" in 6 feet radius.
- For installations using mechanical fasteners of less than 1-1/2", the subfloor should be flat to within 3/16" in 10 feet or 1/8" in 6 feet radius.
- **Improper substrate or flatness can result in gaps, squeaks, premature wear on surface and poor plank fitting during assembly.**

Correct any issues.

DRY:

See Moisture testing requirements below.

Do not install this flooring over plywood underlayment attached to concrete, unless it is known that an appropriate moisture barrier has been installed (all applications).

WOOD SUBFLOOR PREPERATION:

- Screw down loose or squeaky sections of plywood and replace areas that are damaged.
- To address flatness concerns sand or plane high spots and fill the low spots with a material approved for use under wood flooring.
- 15 - 30 lb. roofing felt, vinyl tile or similar can be used (in layers) to build up low areas on wood subfloors to a max. 3/16" provided fastener holding strength is not compromised.
- Installers are responsible to use materials to ensure product performance.
- Substrates that are not level/flat due to structural deficiencies should be repaired by a licensed contractor.
- Never apply plastic sheet over wood subfloors.

STRUCTURAL REQUIREMENTS:

Note that joist spacing determines minimum subfloor thickness.

Joist spacing 16" on center (OC) or less

- Plywood: Minimum of (5/8", 19/32") Oriented Strand Board (OSB): minimum (3/4", 23/32")
Advantech minimum (3/4", 23/32")

Joist spacing 16" up to 19.2" (OC)

- Plywood: Minimum of (3/4", 23/32") Oriented Strand Board (OSB): minimum of (3/4", 23/32")

Joist spacing over 19.2" up to maximum 24" (OC)

- Plywood: Minimum of (7/8") Oriented Strand Board (OSB): Minimum of (1") or two layers of subflooring or brace between truss/joists in accordance with local building codes.

MOISTURE TESTING:

Use a meter that is species / material adjustable. E.g. Ligno-scanner SDM or mini-Ligno DX/C moisture meter.

- If using alternate meter check that meter can be used with the subfloor material in question.
- Test sub-floor in multiple locations, with an appropriate wood moisture meter, take MC readings in a minimum of 20 test locations for up to the first 1,000 square feet, and an additional 4 readings per 100 square feet thereafter, and average the results.
- Testing locations should be representative of the entire project and include a minimum of three tests per room receiving wood. Pay special attention to exterior walls and plumbing.
- The general rule of thumb is to ensure the MC of the wood subfloor is no more than 4% greater than the MC of solid strip (<3" widths) wood flooring, and no more than 2% greater than the MC of solid plank (≥3" widths) wood flooring being installed.
- Moisture readings must not exceed 12%.
- Higher readings indicate a moisture concern that needs to be addressed before installation can begin.
- For future reference, documenting and saving the test results is recommended.

PREPARATION FOR NAIL DOWN - NAIL/GLUE ASSIST over CONCRETE SUBFLOORS:

In some situations, a nail down installation method maybe preferred as an alternative to direct glue to concrete.

In this case a plywood subfloor would need to be installed prior to nailing.

PLYWOOD SUBFLOOR OVER CONCRETE

A Floating Subfloor System over concrete (not attached to the subfloor)

- Concrete should be flat to within 1/8" over 6' or 3/16" over 10'
- Install 6 mil (plastic) poly sheeting completely covering the concrete overlap seams 6" and duct tape.
- Minimum two layers of 1/2" minimum CD Exposure 1 Plywood subfloor panels (CDX) 4' x 8' sheets.
- Square-edged plywood panels should be placed with 1/8" gaps between sheets and a 3/4" minimum expansion space at all vertical obstructions and wall lines.
- Place the first plywood layer with edges parallel to wall, without fastening. Leave 3/4" space between wall and plywood.
- Lay the second layer perpendicular or at 45 degree angle to the first.
- Screw and glue (with urethane or construction adhesive) the second layer to first layer on 12" interior grid pattern (6" on the perimeter). Use fasteners long enough to secure the flooring to the subfloor and not penetrate the (plastic) poly sheeting.

Nail-Down Subfloor System over Concrete (attached to the subfloor)

- Use minimum 3/4" (23/32, 18.3mm) CD Exposure 1 Plywood subfloor panels (CDX), 4' x 8' sheets.
- Concrete compressive strength must equal 3000 psi or better.
- Concrete should be flat to within 1/8" over 6' or 3/16" over 10'.
- Install 6 mil (plastic) poly sheeting completely covering the concrete overlap seams 6" and duct tape.
- **Note:** Fasteners may be powder-driven pins, pneumatic driven nails, or other fasteners suitable for concrete application. Check with fastener manufacturer for specification such as length, drill size, and/or shot load where applicable.
- Stagger panel joints allowing approximately 1/8" expansion space around all panels to prevent edge peaking due to compression caused by panel swell.
- Allow 3/4" minimum expansion space at all vertical obstructions.
- Panels should be mechanically fastened. For powder load or pneumatic pressure information, contact the manufacture.
- Nailing requirements, minimum 32 shots per 4' x 8' panel.
- Areas with higher humidity may require additional fasteners.
- Use 1-1/2" long fasteners when nailing 3/4" flooring to this subfloor.

Glue-Down Subfloor System over Concrete (attached to the subfloor)

- Follow the adhesive manufacturers recommendations for type of adhesive, floor prep, moisture barrier and trowel size
- Concrete compressive strength must equal 3000 psi or better.
- Concrete should be flat to within 1/8" over 6' or 3/16" over 10'.
- Use minimum 3/4" (23/32, 18.3mm) CD Exposure 1 Plywood subfloor panels (CDX), 4' x 8' sheets.
- Cut 4' x 8' sheets into (4) 12"x 8" planks
- Place 12"x 8" planks into wet adhesive, stager joints min 12" allow planks to fully bond/cure before wood installation.

UNDERLAYMENT:

Check LL Floorings product page for cushion recommendations. At a minimum Silicon Vapor Shield® between the flooring and subfloor to minimize squeaking and when installing over crawl spaces, rooms over basements and garages to provide moisture vapor protection. Install underlayment parallel to the new flooring.

HELPFUL TOOLS: (as needed)

- Tape measure • Pencil • Chalk line • 6' level • Miter saw • Table saw • 60 tooth carbide tip saw blades • Jamb saw
- Eye protection • Ear protection • Niosh dust mask • Knee pads • Gloves • Blue painters tape (2080) • PVA wood glue
- Compressor with regulator • Air hose • Floor nailer • Brad / Stapler • Drill • Drill bit set • Hammer • Flat pry bar
- Broom • Hygrometer (to monitor in-home humidity) • Species adjustable moisture meter (wood) • Calcium chloride moisture or (RH) Relative Humidity test (concrete) • Approved adhesive remover • Cloth rags • Color putty) • Stain markers
- Speed square

ADDITIONAL NOTES:

When moving furniture and heavy equipment, use luan board, plywood, or other similar covering to protect the floor.

Each project is unique and different. Installation advice or recommendations are given as a courtesy and not intended to take the place of an installer's visual inspection, expertise or informed judgment, which will override any advice or recommendations given in the Installation Guidelines. The end user / contractor on-site is ultimately responsible for ensuring that selected products are appropriate for local conditions and / or the final use of the product.

INSTRUCTIONS CONTINUE ON NEXT PAGE

NAIL DOWN - NAIL/GLUE ASSIST METHOD SOLID HARDWOOD



FOR WIDE PLANKS 5" or more "NAIL GLUE-ASSIST" method is recommended
(See important details below on page 22)

STEP 1. GETTING STARTED:

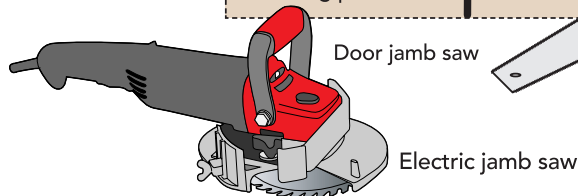
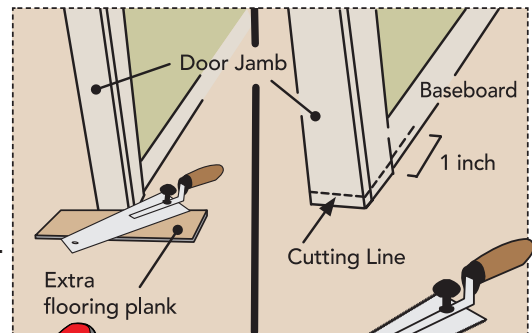
Remove any existing quarter round, shoe moldings, baseboards and doorway transitions.

Remove existing floor covering as required, check floor flatness per details on previous page and address any issues. Check that all doors will swing open with adequate clearance over the new flooring prior to starting any work.

Important: Do not cut metal door frames before first confirming it does not violate local building and fire codes. Any metal doors must be addressed by a specialist to adjust.

Undercut all door casings and jambs with a jamb saw to allow the flooring to slide under the doorjamb. If a baseboard is still in place, extend the undercut about 1" beyond the door frame casing. To find the height to cut the jamb, lay a scrap piece of flooring next to the door frame and lay the saw blade on top. After cut, ensure the floor plus underlayment does not bind, always leave 1/16" clearance under the door jamb / casing for the floor to be able to move freely without vertical restriction.

Check for alarm or other low voltage wiring before cutting. Ensure that appliances have proper clearance to accommodate the new flooring.



STEP 2. LAYOUT:

Determine which direction the planks will be installed. Without subfloor modification the flooring must be laid perpendicular to the subfloor joists.

If the flooring needs to be installed Parallel to the subfloor joists a second layer comprised of 15/32nd panels should be fastened to the subfloor using ring or screw shanked nails or proprietary screws long enough to only penetrate the existing subfloor and not penetrating the subfloor joists. Considerations are fireplaces, doors, cabinets, and transitions. For best appearance, full planks are desirable at the focal point and most cases it is the longest unbroken wall in the room.

Installers: It is advisable to determine the installation layout and direction (North/South vs East/West) with the end user.

IMPORTANT: Mix materials from several cartons to ensure best overall color/shade appearance of the installed floor.

Install recommended underlayment as required, e.g. white Silicon Vapor Shield®.

Preparation of planks for the starting row when needed: To avoid very narrow pieces at finish wall, measure the distance between the starting wall to the finish wall, then divide this number by the width of the flooring planks.

The fraction is the width of the last plank.

E.g. for a 12' room:

Start – Finish = 144" – 1.5" (3/4" expansion x 2) = 142.5"

Width of Plank = 5"

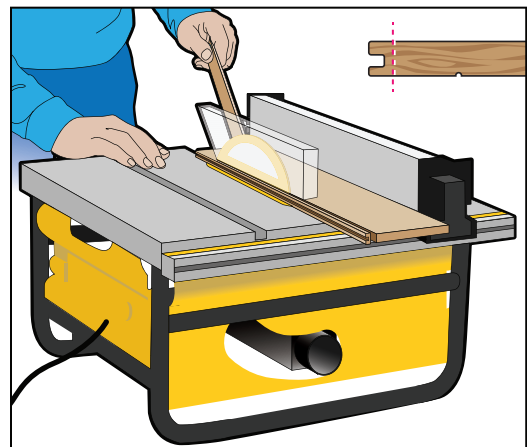
$142.5 \div 5 = 28.5$

28 full planks are required and last will be fraction x plank width

$5" \times 0.5 = 2.5"$

If width of last plank is less than 2.5", balance by cutting (Rip) starting row of planks accordingly.

NOTE: If a narrow strip is unavoidable for the last row, the final two rows can be glued together using PVA tongue and groove adhesive at the long seams to avoid board separation.



CARE AND MAINTENANCE GUIDE

Solid Wood Flooring is designed to bring beautiful wood looks to your environment to fit your flooring needs and style, while also providing a solution with easy maintenance.

Created for residential and light commercial applications, this flooring is tough but still requires care and attention to keep it looking beautiful for years to come.

- For day to day cleaning we recommend the floor to be swept and/or vacuumed. The vacuum head must be a felt brush type. Do not use vacuum with beater bars / very hard bristles. This will eliminate fine particles of dirt and grit that act like sandpaper which will scratch and / or dull the surface of your flooring.
- Reduce the visibility of minor scratches using Bellawood Scratch Away.
- Minimize abrasive material and dirt by placing mats on both sides of exterior doors and by using area rugs in high-traffic areas.
- Use Bellawood Floor Cleaner to deep clean your whole floor and clean spots and soiled areas.
- DO NOT use cleaning agents containing wax, oil or polish. Leftover residue will form a dull film.
- DO NOT use steel wool or scouring pad, as they will scratch the floor.

This flooring can be dented, gouged and scratched, this can be caused by but is not limited to: Dropped objects, damaged shoe heels / soles, pet nails / claws, abrasive particles, etc.

The following steps will help reduce the risk of this kind of damage:

- Floor protectors should always be installed to the bottom of furniture to prevent scratching and marking.
- Minimize abrasive material and dirt by placing mats on both sides of exterior doors and by using area rugs in high-traffic areas.
- We recommend the use of a hard surface (non-studded), non-rubber chair mat to protect your floor from office chairs with casters.
- Light, rolling furniture should be outfitted with broad-surface, non-staining casters that have been engineered for hard surface floors (casters should be a minimum of 1" wide and at least 2" in diameter).
- Never slide or roll heavy furniture or appliances across the floor.
- If flooring will be exposed to rolling traffic or heavy, appliances protect the flooring with plywood or hardboard panels.
- Remove shoes that are damaged exposing sharp metal, have cleats etc. before walking on the floor.

As your floor ages, color change or "patina" can occur.

Whether finished or unfinished, all wood changes color over time due to oxidation and when exposed to UV light. Some species darken in color over time, while others tend to lighten. There is no known set value for "color fastness" of a species, so contractors and or customers should be aware of this normal condition. Certain species, including American cherry, Koa, Brazilian cherry, and many imported species, have this tendency to change in color. Some color change is to be expected for all species and a drastic change can be expected for some. This "Patina" process although normal, can be minimized by limiting exposure to direct sunlight or accelerated by exposure. Periodically moving furniture and rugs will help to equalize overall exposure to UV light. If possible avoid completely covering floors with rugs for the first six months.

You should always promptly remove spills using a soft cloth reducing slip hazards.

We love our pets but occasionally accidents happen.

- Cleaning the affected area should begin immediately upon discovery:
- Use absorbent paper tissue to collect as much of the deposited material as possible and properly dispose of it. Remove any existing residue with a suitable disinfecting cleaner.
- Repeat until all residue is removed. Buff dry. Clean, using Bellawood Floor Cleaner.
- The more time that elapses before removal, the more difficult a stain will be to remove.
- Keep pets' nails trimmed.

We recommend the use of NON-RUBBER backed mats that are labeled "colorfast" by the manufacturer.

Non-staining, vinyl-backed mats or woven rugs should be used at all door entries from outside to avoid discoloration from asphalt driveways, catch dirt, grit, sand, and other debris to help sustain the flooring.

We also recommend using protective mats around sinks and tubs to catch excess water and debris.

[HOME * INSTALLATION](#)

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