

Solid Hardwood Flooring Installation Instructions

Thanks for choosing AAYERS Flooring.

Installation methods: Staple-down or Nail-down

It is IMPORTANT that you read and understand this information completely prior to starting, since improper installation can void the warranties.

Installer/Owner Responsibility

Inspection must be performed before installation including careful examination of the flooring for style, grade, color, finish, dimension and quality, job-site and environmental conditions. Materials installed with visible defects are not covered under warranty. All others, including the owner/installers, assume all risks of every kind respecting examination of flooring, job-site and environmental conditions as well as the installation.

Note:

Wood is a natural product that can vary in color, grain, and contains natural characteristics that varies from plank to plank and is to be expected. We do not warrant against these natural variations from plank to plank or variations from sample to plank. Our floors are manufactured in accordance with accepted industry standards which permit a defect tolerance not to exceed 5% (domestic species) or 10% (exotic species), of a manufacturing or natural type.

The use of stain, filler, or putty stick for the correction of minor defects during installation should be accepted as normal procedure.

8-12% cutting allowance, depending on layout, must be added to the actual square footage amount needed. (Diagonal, herringbone, or bordered installations will require a higher percentage)

Don't use a rubber mallet to engage the tongue and groove system. Use a tapping block instead. A rubber mallet hitting any finished surface will cause abrasive marks (dull spots) and chipped edges

AAYERS FLOORING does not accept responsibility for any costs incurred when plank(s) with visible defects have been permanently installed.

CAUTION: WOOD DUST

Sawing, sanding and machining wood products can produce wood dust. Airborne wood dust can cause respiratory, skin and eye irritation. The International Agency for Research on Cancer (IARC) has classified wood dust as a nasal carcinogen in humans.

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

In case of irritations: Flush eyes and skin with water for at least 15 minutes

In cases of severe irritation; seek immediate medical attention.

Jobsite Conditions

It is the responsibility of the installers/owner to determine if the job site subfloor and job site conditions are environmentally and structurally acceptable for wood floor installation. The manufacturer declines any responsibility for wood failure resulting from or connected with subfloors, subsurface, job site damage or deficiencies after hardwood flooring has been installed.

The room temperature should be 60 - 80° F, with relative humidity of 35 - 60%. These environmental conditions are specified as pre-installation requirements and should be maintained for the life of the Solid wood.

AAYERS FLOORING denies any responsibility for problems arising from job site failures, environmental or moisture issues, inappropriate or improperly prepared subfloors, poor installations and improper tool usage.

Job Preparation

Undercut Door Casings - Undercut all door casings 1/16" higher than the thickness of the flooring being installed. To do this, use a scrap piece of flooring as a guide. Lay it on the substrate and cut the casing with a handsaw or use a power jamb saw set at the correct height.

Blending of Cartons- To achieve a uniform appearance across the entire floor, we highly recommend that you open and work from several cartons at a time and dry-lay the flooring, mixing the planks from several cartons. This will allow you to blend the planks for maximum aesthetic appearance. Make certain the room is well lit to ensure color is consistent and that any visual defects can be seen and removed.

Match Transition Moldings: For best appearance blend all transitions and moldings to planks that have similar color and graining. Set them aside for use as needed.

Layout of Flooring: "Racking the Floor" is essential to achieve a random appearance. Start by either using random-length planks found in the carton or by cutting four or five planks in random lengths, differing by at least six inches. As you continue working across the floor try to maintain a six-inch minimum between end joints. Randomly install different lengths to avoid a patterned appearance. Never waste materials; the end cuts from starter rows should be used at the opposite side of the room to complete rows or used to start the next row.

Expansion space: Expansion space around the perimeter is required and should be equal to the thickness of the flooring material. For example, 3/4" flooring will require 3/4" expansion.

Equalizing Your Wood Flooring

All solid wood flooring must be properly equalized before installation. Wood is porous material which expands as it picks up moisture in most environments. It is this movement which can cause cracks, separation and warping of your wood floor if not properly equalized before installation.

All wood will eventually acclimate itself to its environment, reaching the "equilibrium point" or equilibrium moisture content. Although it is not necessary to acclimate solid wood flooring, it is best to store the materials in the environment where the flooring will be installed.

SUBFLOOR PREPARATION AND RECOMMENDATIONS FOR ALL INSTALLATIONS

It is the installer/ owners' responsibility to ensure that the jobsite conditions and jobsite subfloor are environmentally and structurally acceptable prior to the installation of any hardwood flooring. The manufacturer declines any responsibility for failures or deficiencies of hardwood flooring resulting from or related to sub-floor, sub-surface, or job-site environmental conditions. All substrates must be clean, flat, dry, and structurally sound.

- ♣ Subfloors must be clean and free of dirt, curing compounds, sealers, drywall mud, paint, wax, grease, urethane, or other materials that may affect the integrity of the flooring material or adhesives used to install the flooring.
- ♣ All subfloors and subfloor systems must be structurally sound and must be installed following their manufacturer's recommendations. Local building codes may only establish minimum requirements of the flooring system and may not provide adequate rigidity and support for proper installation and performance of a hardwood floor. Whenever possible install the planks perpendicular to the floor joists for maximum stability. Our warranties DO NOT cover any problems caused by inadequate substructures or improper installation of said substructures.
- ♣ Test wood sub floors and wood flooring for moisture content using a moisture meter. Take readings of the subfloor – minimum of 20 readings per 1000 sq. ft. and average the results. In most regions, a "dry" subfloor that is ready to work on has a moisture content of 12% or less and the wood should be within 4% to 2% of the subfloor moisture content.
- ♣ The moisture content for concrete subfloors registered after a calcium chloride test should not be greater than 3 pounds per 1000 square feet of area. If it exceeds these limits, DO NOT install the flooring. Before moisture testing begins, the slab must be cured for a minimum of 30 days.
- ♣ Basements and crawl spaces must be dry. Use of a 6 mil black polyethylene is required to cover 100% of the crawl space earth. Crawl space clearance from ground to underside of joist to be no less than 18" and perimeter vent spacing should be equal to 1.5% of the total square footage of the crawl space area to provide cross ventilation. Where necessary, local regulations prevail.
- ♣ The subfloor must be flat, meeting a minimum of 3/16" within 10' or 1/8" in 6'.

Subfloor Moisture Check

Solid hardwood flooring may be used for above, on-, and below grade applications and on all common substrates, on- and below-grade applications are susceptible to moisture and should be tested for moisture prior to installation in several locations within the installation area. Acceptable conditions for above-on-and below grade applications are:

- ♣ Concrete Sub-Floors:
 - Less than 3 lbs. /1000 SF / 24 hrs. on a calcium chloride test. One test must be performed every 250 square feet.
 - Or an acceptable reading on an electronic concrete moisture meter.
- ♣ Wood substrates must have a moisture reading of less than 13% when using an electronic wood moisture meter. The difference between sub-floor and hardwood flooring cannot exceed 4% to 2%. If sub-floors exceed this amount, do not begin or continue the installation until the source of moisture has been located and eliminated.

To correct any subfloor problems concerning moisture, either wait until the subfloor dries to meet specifications or use an appropriate moisture barrier.

Concrete Subfloors

New concrete slabs require a minimum of 60 days drying time before covering them with a wood floor.

Concrete subfloors must be dry, smooth (level within 3/16" in a 10' radius 1/8" in 6') and free of structural defects. Hand scrape or sand with a 20-grit #3-1/2" open face paper to remove loose, flaky concrete. Grind high spots in concrete and fill low spots with a Portland based leveling compound (min. 3,000 psi). Concrete must be free of paint, oil, existing adhesives, wax, grease, dirt and curing compounds. These may be removed mechanically but do not use solvent-based strippers under any circumstances. The use of residual solvents can prohibit the satisfactory bond of flooring adhesives. It is important to ensure a proper bond between the adhesive and the concrete, and planks or strips. Solid hardwood flooring may be installed on-grade, above grade, as well as below grade where moisture conditions are acceptable.

Wood Subfloors

Wood subfloors need to be well nailed or secured with screws. Nails should be ring shanks and screws need to be counter sunk. The wood subfloor needs to be structurally sound and dry. It should not exceed 12% moisture prior to installation. If the subfloor is single layer, less than 3/4" thick, add a single cross layer for strength and stability (minimum 5/16" thick for a total 1" thickness). This is to reduce the possibility of squeaking. Wood sub-floors must be free of paint, oil, existing adhesives, wax, grease, dirt, urethane, varnish, etc. Underlayment grade OSB (not the wax side) is also a suitable sub-floor. Particleboard is not an acceptable sub-floor for staple or nail down installations but can be used as a subfloor in glue-down installations. When installing over existing wood flooring, install at right angles to the existing floor

Other Subfloors

Terrazzo, tile and any other hard surfaces that are dry, structurally sound and level, as described above, are suitable as a subfloor for installation of engineered hardwood flooring. As above, the surface must be sound, tight and free of paint, oil, existing adhesives, wax, grease and dirt. Terrazzo and ceramic tile must be scuffed to assure adhesion.

Resilient tile and resilient sheet vinyl must be full spread and secured to the subfloor. Do not install over perimeter glued floors. Do not install over more than one layer that exceeds 1/8" in thickness.

Note: Perimeter glued resilient vinyl and rubber tiles are unacceptable underlayments and must be removed.

Warning! Do not sand existing resilient tile, sheet flooring, and backing or felt linings. These products may contain asbestos fibers that are not readily identifiable. Inhalation of asbestos dust can cause asbestosis or other serious bodily harm. Check with local state and federal laws for handling hazardous material before attempting the removal of these floors.

If old flooring is unsuitable to install new flooring then overlay with new underlayment. Test to conclude that the staples/ cleats are able to properly penetrate and secure the flooring to the subfloor.

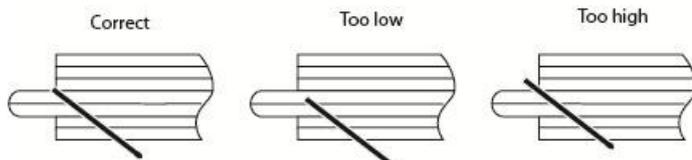
Installation

NOTE: Our products are not warranted against squeaking, popping or crackling when using staple-down or nail-down installation methods. Some squeaking, popping or crackling is normal and possible when using staple-down or nail-down installation methods. These symptoms may be aggravated in arid areas or during dry conditions.

Set Up and Use of Pneumatic Staplers and Nailers

Minor occasional noises within the flooring are inherent to all staple/nail-down installations and can change as environmental changes occur. This is not a manufacturing defect and is therefore not covered under our warranties (see warranty brochure for complete warranty coverage). You can help reduce squeaking, popping, and crackling by being sure that the subfloor is structurally sound, does not have any loose decking or joists, and is swept clean prior to installation. You should also be sure that your stapler or nailer is setting the fastener properly, not damaging the planks, and that you are using the correct nailing schedule.

When used improperly, staples or cleats can damage wood flooring. If the tool is not adjusted properly the staples/ cleats may not be positioned at the proper angle and cause blistering, peaking, squeaking, or crackling of the floor. Some models may require the use of an adapter to adjust for proper thickness. Test the tool on a piece of scrap material first - set the stapler/ nailer flush on the tongue side of the plank and install a staple/ cleat. Should the staple/cleat penetrate too deeply reduce the air pressure; if the staple/ cleat is not deep enough then increase the air pressure using an in-line regulator. The crown of the staple/ cleat should sit flush within the nail pocket to prevent damage to the flooring and to reduce squeaking. The flooring manufacturer is not responsible for damage caused by the mechanical fasteners.



For 3/4" thick products the length of staple/ cleat is 1 1/2" – 2" long. Read and follow the manufacturer's instructions for complete set-up and operation of equipment.

Getting Started

1. After the subfloor has been properly cleaned and prepped cover the subfloor with 15lb. asphalt felt paper. This material will help to keep the floor clean and help to retard moisture from below (there is no complete moisture barrier system for staple or nail-down applications).

2. Select a starter wall. An outside wall is best: it's most likely to be straight and square with the room. Measure out from this wall, at each end, the overall width of the plank (board width + tongue + the space needed (3/4") for expansion).

3. Snap a chalk line from these points, parallel to that wall.

4. 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.

Use a pneumatic finish nailer to face-nail the groove side 1/2" (13 mm) from the edge at 6" (15 cm) intervals and 1"-3" (2.5-7.6 cm) from each end. Then, blind nail using finishing gun held at a 45° angle nail down through the nailing "pocket" on top of the tongue every 6"-8" (15-20 cm).

If using finish nails, pre-drill the nail holes with a 1/32" (1 mm) bit approximately 1/2" (13 mm) from back (groove) edge, 1"-3" (2.5-7.6 cm)

from each end, and at 6" (15 cm) intervals. Pre-drill at the same intervals at a 45° angle down through the nailing "pocket" on top of the tongue. Face-nail the groove side where pre-drilled. When complete blind-nail at a 45° angle through the tongue of the first row. Fasten using 6 or 8d finish nails. Countersink nails to ensure flush engagement of groove. Avoid bruising the wood by using a nail set to countersink the nails.

Continue blind-nailing using this method with following rows until blind nailer can be used.

NOTE: Proper alignment is critical. Misaligned starter rows can cause side and end gaps to appear in proceeding rows of flooring.

Installing the Floor

5. Continue to install the flooring making sure to nail/staple 1"-2" from the ends and every 3" – 4" thereafter. Make certain the tool is adjusted properly to ensure that the fastener is at the proper angle and is flush within the nail pocket. As you continue working across the floor try to maintain a six-inch minimum space between end joints. Randomly install different lengths to avoid a patterned appearance.

6. If needed use a tapping block to help engage the boards together until the tongue-and-groove is flush and tight and no gaps are present between adjacent planks.

NOTE: Never use a rubber mallet or hammer directly on the flooring to engage the tongue-and-groove. This can damage the flooring and/or finish.

7. As you approach the end wall it may be necessary to cut the width of the last row – be sure to allow for the expansion along the end wall. Once the final cuts are made set planks into place.

8. The last 1-2 rows will need to be face-nailed where clearance does not permit blind nailing with stapler or brad nailer. Pre-drill and face-nail on the tongue side following the nailing pattern used for the first row. Rip final row to fit and face-nail. If the final row is less than 1" (2.5 cm) in width, it should first be glued to the previous UNINSTALLED row and the two joined units should be face nailed as one.

After Installation

Sweep or vacuum floor. Clean the floor with proper hardwood floor cleaner. Install transition pieces -i.e. – thresholds, t-moldings, base boards and quarter round. Nail moldings to wall, not the floor.

Inspect final floor for nicks and or minor gaps – fill with appropriate color wood putty.

Unused material should be left with owner and stored in a dry place in case of future repairs are needed.

Use plywood or hardboard when moving heavy appliances or furniture across floor.

Caring for your floor

48 hours after completion of installation, slowly raise temperature of the heating system to its preferred operating level over a period of 5 days. Maintain the surface temperature between 60 and 80 F. Humidity level must be maintained between 35%-60% R.H. Seasonal gapping should be expected.

Surface checking can be expected if the proper humidity level is not properly maintained between 35-60% R. H. or if the floor's surface temperature is not in the range of 60 and 80F.