



SOLID INSTALLATION INSTRUCTIONS

Installer/Owner Responsibility

It is the responsibility of the owner/installer to inspect the flooring. It is also the owner/installer's responsibility to ensure the jobsite conditions, plus the jobsite sub floors are environmentally and structurally acceptable prior to the beginning of installation.

Prior to installation, the owner and or installer are responsible for the final inspection of materials and is encouraged to report any deficiencies in grade, manufacture and finish directly to the seller. Should an individual piece be questionable or not meet standards, it should not be used. Materials installed with visible defects will not be covered by the warranty.

The owner and/or installer are responsible for ensuring that the proper installation conditions and appropriate sub floors meet or exceed all NWFA industry standards. Proper installation can be affected by adverse moisture content in the product, humidity at the job site, acclimation of flooring to local site conditions, preparation of job site, preparation of sub floor, and flooring layout. The sub floor must be clean, flat, dry and structurally sound.

We recommend ordering 5% above the actual square footage requirements to allow for cutting and grading of material.

All installation methods to follow NWFA guidelines.

Proper Site Conditions & Handling

1. The building must be complete & enclosed. It is essential that masonry, dry wall, paint and all other 'wet' work to be completed, given time to thoroughly dry as this will affect the moisture content of the job site.
2. The exterior grading should be complete with all gutters, downspouts and drainage directed away from the building. The crawl space must have adequate cross ventilation (equaling 1.5% of the, on grade, total sq ft) and a vapor barrier of 6-8 mil polyethylene film (covering 100% of the crawl space), joints overlapped and taped. There must also be a minimum of 24" from the ground to the underside of the joists.
3. Permanent HVAC systems must be working and in operation 7 days prior to installation to stabilize the interior environment at normal living conditions and to acclimate the Savannah flooring. The HVAC must also be in operation during and after the installation to ensure a stable environment to protect the Savannah hardwood floor. Ideal conditions are a temperature between 60-80 degrees Fahrenheit (15-26 degrees Celsius) and relative humidity between 35-60% at all times during and after installation. The use of a humidifier or dehumidifier may be required to maintain these conditions.

1. Take special care when transporting & unloading Savannah hardwood flooring at the job site. Flooring should be stored in small lots in the rooms where the installation will take place and allowed to properly acclimate/condition to the job environment.
2. Savannah Flooring should be allowed to acclimate for a

minimum of 72 hours or longer until conditions are at normal living conditions and meet minimum installation requirements for moisture content.

3. Moisture content should be checked with the appropriate device to ensure proper installation conditions. Moisture content of wood sub floor should not exceed 11% and the moisture content of the wood should be within 2% of the sub floor.

Ensure exterior landscaping is complete and graded away from the foundation. Gutters and downspouts must be in place directing rain water away. Always store Savannah wood flooring in a controlled environment of 60 - 80° Fahrenheit (15° - 26° Celsius) and 35% - 60% relative humidity.

Sub Floor Types & Requirements

Preferred Plywood Sub Floor: Use 4'x 8' sheets of 5/8 CDX grade Ply- wood underlayment or 23/32" OSB underlayment with joist spacing 16" on center or 19.2 on center or floor truss system. If joists are spaced over 16" on center or floor truss system over 19.2" on center, an additional layer of 1/2" CDX laid diagonal or perpendicular with 1/8" spacing will be required between sheets of underlay. Particle board is not an approved subfloor for nail down or glue down applications.

Minimum Plywood Sub flooring Requirements: 4 'x 8" sheets of 5/8" CDX grade underlayment with a maximum 16" on center joist construction. If joist system is spaced over 16" on center an additional layer of 1/2" CDX Plywood underlayment, laid diagonal or perpendicular, will be required.

** Minimum specified materials at maximum span and spacing may result in movement, gaps, and noises.*

Solid Board Sub flooring: Should be 3/4"x 5 1/2" Group 1 dense soft- woods, No.2 Common, Kiln dried less than 15% MC.

1. Floor should be flat to within 1/4" in 10' or 1/8" in 6'.
2. Substrate should be flattened to tolerance.

Moisture testing for material and wood subfloors:

Using a pin-style meter, test wood for moisture content. Wood should be between 6% - 9% moisture content prior to installation. The subfloor should be within 2% difference of the hardwood, with the moisture content of the subfloor not to exceed 11%.

Crawl spaces must be cross-ventilated (1.5% of the total sq. ft.). 6-8 mil black poly covering 100% of the ground and a minimum of 24" from the ground to the bottom of the joists.

General Rules

1. 3/4" solid wood flooring is intended for installation on or above grade only. For installation below grade, special

precautions must be taken including an assessment of the humidity level, seasonal variations in humidity and moisture testing of the subfloor. Your hardwood flooring dealer can best offer you advice in this area.

2. Understanding the relationship between wood and water is important. This flooring is dried to correspond to a 40% relative humidity environment. Environments over 40% or under 40%, will result in a corresponding gain or loss in the wood's moisture content, which will result in expansion or contraction of the flooring.
3. Moisture content of the subfloor and the hardwood flooring should be measured. If the difference between the two is greater than 2%, installation should NOT proceed until the two are within 2% of each other.
4. Hardwood flooring requires a 1/2 - 3/4" expansion space around the perimeter of the floor and at all vertical obstructions within the room. This space is covered by baseboard and quarter round after installation.
5. Hardwood flooring should be installed at right angles to the floor joists. If this is not possible, subfloor should be built up to a thickness of 1" for proper support and nail holding.
6. High spots on subfloor should be sanded down and re-nailing should be done to eliminate any squeaks or loose boards.
7. Because of the natural variation in hardwood flooring, it is important to work out of 3 or 4 different boxes at a time to ensure a proper blend of shading. Wood should be racked out on the floor before nailing to ensure a pleasing and balanced look. Close attention should be paid to date codes or batches as identified on the carton label, to ensure proper mixing, as it affects layout of the floor.
8. Proper nail spacing is one nail every 8"-10" with at least 2 nails in every board. Every board should be nailed so that there is a nail within the last three inches of both ends of the board.
9. 2" nails should be used for machine nailing of this product. This product cannot be glued down under any circumstances.
10. The following tools are needed: Tape measure, broom, chalkline, hammer, nail set, pry bar, circular saw, miter saw or table saw, power nailer and mallet, matching putty, touch up stain.

Additional Sub Floor Notes

Sub floor surface must be clean, level, structurally sound, and dry. Manufacturer will not be responsible for any product failure due to poor sub floor conditions or materials. Unsound or damaged sections should be repaired or replaced.

Sub floor surface should be scraped or sanded clean and made flat prior to installation. The surface must also be free of any wax, dirt, paint, oil, grease, sealers, curing compounds and other debris. Sand or grind high spots and fill low spots with an approved floor patch compound.

When is very important to nail or screw any area of loose or moving sub floor that will cause squeaks. Manufacturer recommends the use of nails or screws with panels fastened every 12 inches along the joists or intermediate supports to ensure soundness of floor when complete.

Sub Floor Inspection and Room Preparation

Sub floor must be completely dry.

Sub floor must be free of any paint, oil, greases, dirt, sealers, curing agents, dust and other residues.

If installing on any wood sub floor, the moisture content difference between Savannah engineered wood floor and wood sub flooring should not be more than 2%.

If installing over existing vinyl floor, make sure vinyl is free of waxes, polishes, and is secured to the sub floor and that the underlying sub floor meets sub floor conditions.

Screw down all creaking and loose sub flooring. Remove doors and existing baseboards, quarter rounds and thresholds.

Door frames and other wooden obstacles should be sawed off at the bottom to allow enough room for the underlayment and planks to slide under.

Solid Nail Installation Requirements

All wet trades such as tiling, drywall, painting etc. must be completed before hardwood is installed or delivered to the site.

1. Ensure subfloor is clean with no high spots or loose boards.
2. From the starting wall, measure out a distance at each corner equal to the width of the board plus 3/4". Snap a chalk-line between the two points as a guide for the first row.
3. Lay the first row with the tongue pointing out into the room. Pre-drill and face nail this first row 3/4" from the edge closest to the wall, along the chalk-line, maintaining the 3/4" expansion space. Pre-drill along the tongue and edge nail the boards at a 45 degree angle through the tongue along this first row. Sink the nails with a nail set. Fill holes not covered by mouldings with matching putty.
4. Subsequent rows can now be placed and nailed using the 45 degree nailing through the tongue only. The power nailer can be used as soon as space from the wall allows. Typically, the first few rows will need to be done by hand. Also, the last few rows will need to be hand nailed.
5. Ensure that the end joints between rows are staggered in a random fashion and maintain a minimum 8" between these joints.
6. When fitting the last row, be sure to rip the boards if necessary to maintain the 1/2"-3/4" expansion space.

Never strike the floor with a hammer or mallet as this may damage the finish. In glue down applications, do not use ratchet straps to secure the floor.

Note: Minor occasional noise (such as squeaking) within the flooring is inherent to all staple and nail down applications and can occur as environmental conditions change.

Completing the Job

1. Fill visible joints and gaps with a non silicon based filler that blends with the floor color. Helpful hint: Test filler on spare piece of plank.

Note: The use of fillers/putty and stain is a recommended and acceptable industry practice. Full plank replacements are also acceptable forms of repair and do not affect the integrity of Savannah flooring when done correctly

1. Install molding and trim making sure not to nail into the hardwood flooring.
2. Sweep and/or vacuum floor then clean with hardwood flooring cleaner.

Note: You must stay off floor for at least 12 hours when using glue down methods.

Upon completion, cover the floor with a breathable wrapping to protect the finish if necessary.

Asbestos Warning

Do not sand existing resilient tile, sheet flooring, backing, or felt linings as these products may contain asbestos fibers that are not easily identified. The inhalation of asbestos dust can cause asbestosis or other serious bodily harm. Check with local, provincial, and federal laws for handling hazardous material prior to attempting the removal of these floors.

Wood Dust

Sawing, sanding and/or machining wood products can produce wood dust, which can cause a flammable or explosive hazard. Wood dust may also lead to lung, upper respiratory tract, eye, and or skin irritation, and some species of wood may cause dermatitis and or allergic respiratory effects. The International Agency for Research on Cancer (IARC) has classified wood dust as a nasal carcinogen in humans. The National Toxicology Program (NTP) has also classified wood dust as a known human carcinogen.

1. Avoid dust contact with ignition source.
2. Sweep or vacuum dust for recovery or disposal.
3. Avoid prolonged or repeated breathing wood dust in air.
4. Approved respirators may be needed depending upon dust conditions.
5. Avoid dust contact with eyes and skin. Wear Gloves and safety glasses when handling and machining the product.
6. First Aid: If inhaled, remove to fresh air. If irritation persists, contact a physician.

Tools & Accessories

Broom/Vacuum	Tape Measure
Saws and jamb saw	Hard Wood Cleaner
Hammer	Dust Mask
Ear Plugs and Glasses	Chalk line Pencil
Franklin Tightbond II or other Rubber Mallet	Vapor Retarder Moisture Meter (wood)
Tapping Block	Galvanized finish nails
Underlayment	
Proper Trowel	
Pencil	