



# SOLID HARDWOOD FLOORING INSTALLATION GUIDELINES

(Revised October 04th, 2018)

**IMPORTANT INSTALLATION GUIDELINES ARE INCLUDED IN THIS MATERIAL. PLEASE READ CAREFULLY BEFORE PROCEEDING WITH INSTALLATION**

## INSTALLER/OWNER RESPONSIBILITY

It is the owner/installer's responsibility to carefully inspect the flooring for visible defects PRIOR TO INSTALLATION. Contact your seller if you have doubts about the grade, factory finish or other quality aspects. If the owner/installer is not satisfied with an individual plank, that piece should not be installed. Once installed, the plank is considered accepted by the owner/installer.

Warranties do not cover visible defects once they are installed. Industry standard allows natural imperfections up to 5%

Review the received flooring and compare with the sample board based on which the floor was selected before installation. As sample board can only present a relatively small area and may not reveal all possible features/color variations of the floorings, it is important that the owner approve the received floors prior to installation. If owner is unsatisfied with the floors, do not start installation and do not open any additional cartons. Contact your local retailer immediately.

Color variations, mineral streaks, and knots are considered part of the natural character and beauty of wood flooring and are not considered manufacturing defects

It is the owner/installer's responsibility to determine that the job-site environment and sub-floor meet all applicable standards. The owner/installer is responsible for insuring that the purchased product is at the proper moisture content for the region. Do not deliver the flooring to job-site if appropriate temperature and humidity conditions cannot be met. All sub-floors must be flat, dry, clean and structurally sound.

## PRE-INSTALLATION

### **Storage and Handling**

Wood flooring should be stored in the environment in which it is expected to be installed. Do not deliver the materials until the environment is in a controlled environment. The wood

subflooring materials should not exceed 12% moisture content. The moisture content of both subfloor and wood flooring should be measured and documented to determine proper moisture content with a reliable wood moisture meter. The difference between the moisture content of the wood subfloor and the wood flooring must not exceed 3%.

Acclimate the wood flooring as long as necessary to meet the job site moisture conditions. Store in a dry place being sure to provide at least a four-inch air space under cartons, which are stored upon "on-grade" concrete floors. Flooring should not be delivered until the building has been closed in with windows and doors in place and until cement work, plastering and all other "wet" work is completed and dry.

### **Job Site Condition**

Wood flooring should be one of the last jobs completed in a construction project. Prior to installing wood floors, the building must be structurally complete and enclosed, including installation of exterior doors and windows. All finished wall coverings and painting should be completed. Concrete, masonry, drywall, and paint must also be complete, allowing adequate drying time as to not raise moisture content within the building.

A week prior to flooring installation, the job-site must maintain a consistent room temperature between 60-75 degrees and relative humidity between 35-50%. This condition is considered as normal living condition and must be maintained year-round. Failure to maintain the temperature and relative humidity requirements voids the product warranties.

It is essential that basements and crawl spaces are dry. Crawl spaces must be a minimum of 18" from the ground to underside of joists. A vapor barrier must be established in crawl spaces using 6 mil black polyethylene film with joints overlapped and taped.

During the final pre-installation inspection, sub-floors must be checked for moisture content using the appropriate metering device for wood and/or concrete. Hardwood flooring must acclimate for as long as necessary to meet minimum installation requirements for moisture content. Always use a moisture meter to monitor the flooring and job-site conditions as they acclimate, until the wood is neither gaining nor losing moisture.

### **Subfloor Condition**

**CLEAN:** Subfloor must be free of wax, paint, oil, sealers, adhesives and other debris. Sweep and vacuum all debris from the subfloor. Debris on the subfloor may cause uneven surfaces in the finished floor, poor fit between planks and poor adhesive bond in glue-down installations.

**FLAT:** Subfloors must be flat within 3/16" over 10' (5 mm in 3 m) radius and/or 1/8" over 6' (3 mm in 2 m) radius. Sand high areas or joints. If the floor is to be glued down, fill low areas with a latex additive cementitious. When mechanically fastening the floor down, flatten low spots with layers of 15# builders felt, plywood or shims (not leveling compounds). Leveling materials must provide a structurally sound subfloor that does not affect the holding power of the fastener.

**DRY:** Measure the moisture content of both the sub-floor and the hardwood flooring with a pin moisture meter. Sub-floors should not exceed 12% moisture content. The moisture difference between sub-floor and hardwood flooring should not exceed 3%. If sub-floors exceed this amount, an effort should be made to locate and eliminate the source of moisture before further installation.

**STRUCTURELY SOUND:** Wood subfloors must be well fastened. Nail or screw any areas that are loose or squeak. Wood panels should exhibit an adequate fastening pattern, glued/screwed or nailed as system requires using an acceptable nailing pattern. Flatten any swollen edges as necessary. Replace any water-damaged, swollen or delaminated subflooring or underlayment

## **INSTALLATION**

To achieve a uniform color and shade mixture across the entire floor, open and work from several different cartons at a time.

### **Nail Down Method**

Choose a starting wall according to the most aesthetically or architecturally important elements in the room, taking into consideration fireplaces, doors, cabinets and transitions, as well as the squareness of the room. The starting wall will often be the longest unbroken wall in the room.

Measure out from the starting wall the width of one flooring plank plus the appropriate expansion space. Snap a working line parallel to the starting wall, allowing ½ inch expansion space between the starting wall and the edge of the first strip or plank run. As a general rule, a ½ inch expansion space must be left around the perimeter and at all vertical obstructions.

Use edge or blind stapler/nailer with 1-1/2" to 2" fastener for floors of 5/8" to 3/4" thickness or 1-1/4" to 1-1/2" fasteners for floors of 5/16" to 9/16" thickness. Always do a test plank to verify that fasteners are seating properly and not causing dimpling on the surface

Lay one row of strip or plank along the entire length of the working line. Top-nail and blind-nail the first row (hand-nail if necessary), using appropriate fasteners. Denser species may require pre-drilling. Continue

Each succeeding row should be blind-nailed with the nailing machine every 4" to 6" along the tongue and 2" to 3" from each end joint. At the finishing wall and other obstructions, it may be necessary to blind-nail by hand until top nailing is required. Racking rule of thumb: Avoid H patterns (where an end joint is adjacent to another end joint in the second to last row installed). Stagger end joints of boards row to row a minimum of 18 inches. Use cut ends to start the subsequent row, discard any pieces shorter than 12 inches.

Where spacing is required: Use a washer or removable spacer to leave additional space every few rows and/or start in center of

room and work out to both sides. Do not use spacers that may cause damage on factory-finished products.

Trim the last row of floors to maintain the minimum expansion space at the finish wall. Blind-nail, face-nail or use wood floor adhesive, as necessary, to complete the final rows.