

MAINTENANCE

Columbia Solid Hardwood Floors are very easily maintained. No wax, no mess. Use Columbia's Hardwood Floor Cleaner and specialty terry cloth flooring mop available from flooring retailers.

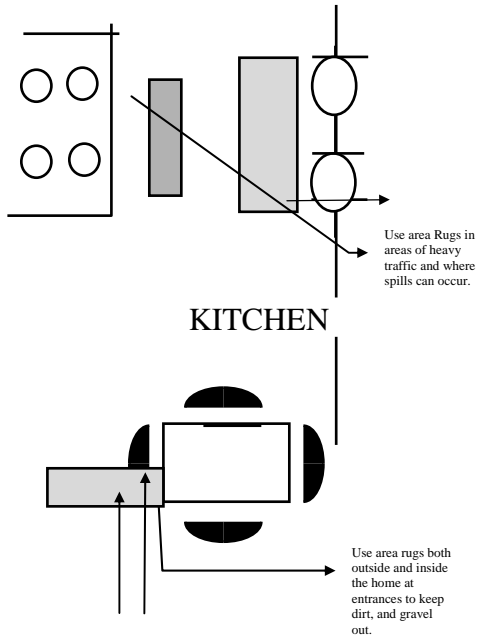
STEP ONE: Vacuum or sweep your floor to remove any particles that could scratch your floor.

Warning: Vacuums with a beater bar or power rotary brush head can damage a wood floor and never should be used.

STEP TWO: Apply the cleaner directly to the terry cloth flooring mop, **not** to the floor!

STEP THREE: Use a back and forth motion with the mop. When the terry cloth cover becomes soiled, simply replace it with a clean one. Cleaning the floor with a soiled cover could cause streaking. The covers are reusable so simply throw the cover in the wash and dry it, as you would any towel.

FLOOR CARE DIAGRAM



Remember to use felt pads under chairs and tables!



Available at your local retailer

13 easy steps to ensure satisfaction with your New Century Hardwood Floor

- Vacuum or sweep regularly.
- Remove spills promptly using Century Floor Cleaner and a clean white cloth.
- Use felt protectors under heavy pieces of furniture and chairs.
- Use protective mats at all exterior entrances. (Do not use black rubber back mats.)
- Spiked heels or shoes in need of repair can severely damage your floor.
- Never wet or damp mop your wood floors. Water can cause damage to wood flooring.
- Never use oil soaps, wax, liquid or other household products to clean your floor.
- Columbia Flooring recommends the Columbia Flooring Cleaner specifically made for our floors.
- The sun's UV rays can change the color of your floor. Rearrange furniture and rugs periodically so that your floor will age evenly.
- Keep animal nails trimmed.
- Protect your floor by using a dolly for moving furniture or appliances. **Never slide or roll heavy furniture or appliances across the floor.**
- Never use steam cleaners on your wood floors. This will force moisture into the wood and can cause damage to your flooring.
- Use Columbia Performance Molding.

columbia

FLOORING ORIGINALS™

SOLID HARDWOOD FLOORS Staple & Nail Down Installation Install Above and On-Grade Only

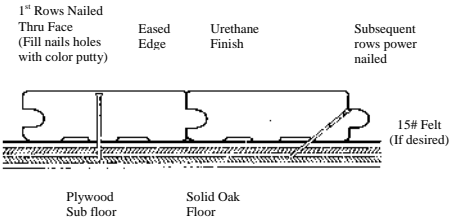
ATTENTION: INSTALLER-OWNER

READ ALL INSTRUCTIONS CAREFULLY BEFORE STARTING

The patterns and color variations created in a living tree are, like all of nature, never repeated. Remember that your newly installed floor will vary from samples or pictures shown. One should not expect uniformity from hardwood. Expect instead a beautiful and natural variation.

This product is manufactured in accordance with industry standards which permit a defect tolerance not to exceed 5%. The defects may be of any type, whether manufactured or natural.

- Prior to installation, the installer must determine that job site conditions meet or exceed standards set forth by the industry as necessary for a proper installation. Columbia Flooring will decline responsibility for situations associated with improper installation or job site conditions.
- **The installer and owner should work together as final inspector of grade, manufacture, and factory finish.** Pieces you consider imperfect should be used in hidden areas or closets, should be cut off, or held out of the floor. Any doubtful piece should not be used. Please note the Columbia Flooring warranty does not cover labor for defects visible prior to installation.



The use of putty, stain or filler for the enhancement of the floor should be accepted as normal.

Tongue & Groove Construction

WOOD DUST

Sawing, sanding or machining wood products can produce wood dust, which can cause a flammable or explosive hazard. Wood dust may cause lung, upper respiratory tract, and eye and skin irritation. Some wood species 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.

- Avoid dust contact with ignition source.
- Sweep or vacuum dust for recovery or disposal.
- Avoid prolonged or repeated breathing wood dust in air.
- Approved respirators may be needed depending upon dust conditions.
- Avoid dust contact with eyes and skin. Wear gloves and safety glasses when handling and machining the product.
- **FIRST AID:** If inhaled, remove to fresh air. If irritation persists, contact a physician.

JOBSITE CONDITIONS

Century Hardwood flooring is designed to perform in an environmentally controlled structure. It is the responsibility of the installer/owner to determine if the job site subfloor and job site conditions are environmentally and structurally acceptable for wood floor installation at "normal living conditions".

The manufacturer declines any responsibility for wood failure resulting from or connected with subfloor, subsurface, job site damage or deficiencies after hardwood flooring has been installed. All substrates must be **clean, dry, structurally sound and flat.**

HUMIDITY

"Normal living conditions" are defined as having the relative humidity (air) being monitored and maintained at 35% to 55%, and the moisture content of the flooring at 6% to 9%, with a tolerance of +/- 1%. The proper use of a humidifier/de-humidifier is

recommended. Wood that is too dry may "crack" or "check". Wood that is too damp will increase in width, causing "cupping" or "crowning". A moisture content that is too high may also lead to mildew in extreme conditions. These situations are job site related and not considered a manufacturing defect.

IMPORTANT: On wider width flooring, Installer-Owner must ensure that moisture levels meet and remain consistent with all manufacturers' recommendations to avoid cupping/crowning as shown above.

SUBFLOOR PREPARATION AND RECOMMENDATIONS FOR ALL INSTALLATIONS

Concrete Subfloors

New concrete slabs require a minimum of 60 days drying time before covering them with a wood floor. (Must be fully cured)

Lightweight concrete

Lightweight concrete that has a dry density of 100 pounds or less per cubic foot is not suitable for solid wood floors. Many products have been developed as self-leveling toppings or floor underlayments. These include cellular concrete, resin-reinforced cement underlayments, and gypsum-based materials. Although some of these products may have the necessary qualifications of underlayment for wood flooring installations, others do not.

To test for lightweight concrete, scrape a coin or key across the surface of the subfloor. If the surface powders easily or has a dry density of 100 pounds or less per cubic foot, do not install this Engineered Wood floor.

Concrete subfloors must be dry, smooth (level within 3/16" in a 10 foot. 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. Grinding high spots in concrete is recommended over using filling compounds. However if a filling/leveling compound is used, it must be of a Portland base compound (min. 3,000 p.s.i.) with a high compressive strength. Concrete must be free of paint, oil, existing adhesives, wax, grease, dirt, sealers, and curing compounds. These may be removed chemically or 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. Columbia solid hardwood flooring may be installed on grade & above grade only.

To ensure a long lasting bond, make sure that the perimeter of the foundation has adequate drainage and vapor barrier.

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 (meaning subfloors without loose boards, vinyl or tile). The moisture should be between 6%-9% prior to installation. If the sub-floor is single layer, less than 3/4" thick, add a single cross layer for strength and stability (minimum 3/4" thick). This is to reduce the possibility of squeaking. Wood sub-floors must be free of paint, oil, existing adhesives, wax, grease, dirt and urethane, varnish etc. Underlayment grade OSB (performance rated) is also a suitable subfloor. **Particleboard is not an acceptable subfloor for staple or nail down installation**, 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.

Subfloor moisture check

The recommended wood flooring adhesive 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:

- Less than 3lbs./1000 sq. ft./24 hrs. on a calcium chloride test.
- No greater than a reading of 5 on a Traxem Concrete Moisture Encounter (moisture meter).
- Wood Substrates must have a moisture reading of less than 14% when using a moisture meter.

To correct any subfloor problems concerning moisture, either wait until the subfloor dries to meet specifications or use an appropriate moisture barrier. For more information concerning moisture conditions, contact Columbia's technical service department.

Subfloors other than wood or concrete

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

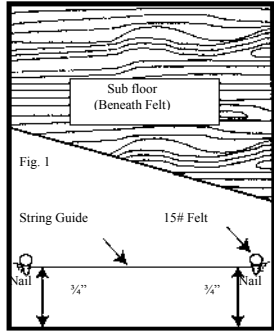
Terrazzo, tile and any other hard surfaces that are dry, structurally sound and level, as described above, are suitable as a subfloor for this Engineered hardwood flooring installation. As above, the surface must be sound, tight and free of paint, oil, existing adhesives, wax, grease and dirt. Terrazzo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

WARNING! Do not sand existing resilient tile, sheet flooring, 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.

Radiant Heated Subfloors

Before installing over a radiant heated floor turn off heat and wait until the floor has reached room temperature (70°F-75°F). After installing the floor, gradually return the heat to the previous setting.

Note: When radiant heat is installed in concrete, mortar beds, or gypsum cement, it is very important to operate the heating system until these are completely dry before you install your wood flooring on top.



(This can take several weeks. Be patient.) Operate the heating system until the humidity in the structure stabilizes to the average level expected for the area in which the wood floor will be installed. Then allow wood to acclimate to this humidity level before installation. This will minimize dimensional changes due to moisture.

For more information on Radiant Heated Subfloors go to www.NOEMA.org

Caution: The subfloor surface must never exceed 85° F. in temperature.

PREPARATION

Remove all moldings and wall-base and undercut all door casings with a hand or power jam saw using a scrap piece of flooring as a guide.

“Racking the Floor”

Whether you choose to install the floor with glue, nails, or staples start by using random length planks from the carton by cutting four to five planks in random lengths, differing by at least 6”. As you continue working across the floor be sure to maintain the 6” minimum between end joints on all adjacent rows. (See Figures 1A & 1B). Never waste material; use the left over pieces from the fill cuts to start the next row or to complete a row.

Figure 1A

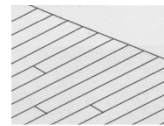
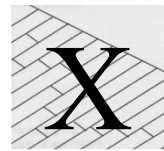


Figure 2A



Note: When installing a pre-finished wood floor be sure to blend the wood from several cartons to ensure a good grain and shading mixture throughout the installation.

Installing 6 mil Polyethylene

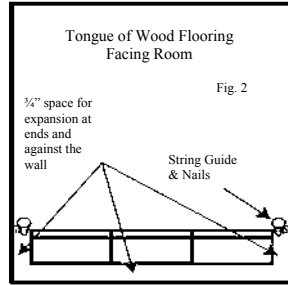
Install the polyethylene parallel to the direction of the flooring and allow a 3” over run at the perimeter. Make sure each run of polyethylene overlaps the previous run by 6” or more. **Do not overlap the felt if it is used.**

Layout the job

Measure out from the ends of your starting wall, 2 3/4” when installing 2 1/4” strip flooring, 3 1/2” when installing 3” planks 5 1/2” when installing 5” planks and mark both ends. Where possible, lay the flooring at 90° angles to the floor joists. Make a chalk line along the starting wall using the marks you made (See Figure 7).

PLEASE NOTE: While this set of instructions is for installation of solid 3/4” flooring, there may be some regional differences used by your installer that may be correct, yet vary slightly from these instructions. i.e. use of felt.

PRE-INSTALLATION:



1. STORING AND HANDLING

- Material should be on the job at least 72 hours before being installed. Open the cartons, but do not remove the product from the cartons. Make sure the heating/cooling is set within the normal temperature range. The flooring is acclimated and ready for installation when it has reached a moisture level consistent with the job site and normal living conditions.
- On wider width flooring, Installer-Owner must ensure that moisture levels meet and remain consistent with all manufacturers’ recommendations to avoid cupping/crowning as shown above.

2. GENERAL INSPECTION

- All work involving water, such as pouring basement concrete floors, drywall and plaster work, plumbing, etc. should be completed well in advance to floor delivery.
- We recommend 3 types of sub floor—plywood, solid wood planks (1 x 6 inch or larger), or sleepers (2 x 4 inch). Each sub floor has separate installation instructions below.
- PLYWOOD/OSB** Plywood should be 3/4 inch (preferred) or 5/8 inch (minimum) thickness. If plywood is being laid on joists, place it at right angles to the joists and be certain to leave at least a 1/8” to 1/4” gap between each sheet to allow for expansion. OSB must be 3/4” and Performance Rated. As with plywood, leave a 1/8” to 1/4” gap between each sheet to allow for expansion. With plywood and OSB, follow the manufacturer’s directions regarding the 1/8” to 1/4” gap on sides and ends.
- SOLID WOOD SUBFLOOR** Solid planks should be nailed diagonally across the joists with a 1/4 inch gap between the boards.

CONCRETE

- There are several methods of installing strip flooring on concrete. One method is to use 5/8” or 3/4” plywood. It is recommended that a vapor barrier be used prior to installation of the floor; preferably, a 4-6 mil Polyethylene film with enough excess to be placed under the baseboards. Fasten the plywood to the concrete using appropriate fasteners. Another way of laying the plywood on concrete is to cut the plywood in 4 x 4 foot squares and lay it in mastic. A moisture barrier should also be used with this method.

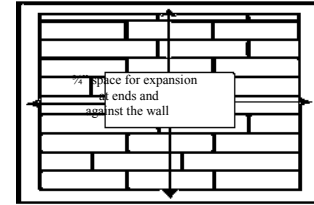
Another alternative would be to use “sleepers.” This method uses treated, kiln-dried 2 x 4’s laid flat in asphalt mastic every 12 inches at right angles to the direction of the finished floor. Overlap or stagger the sleepers by at least 4 inches and make sure each one is securely imbedded in mastic. A polyethylene vapor barrier is then laid over the sleepers. Be certain that you do not puncture or bunch up the polyethylene, or it will not create an effective vapor barrier. Nail the flooring through the plastic into the sleepers.

- Sub floors should be level within 1/4” in each 10’. High areas should be sanded flat. Low areas should be filled with latex leveling compound.

3. PRE-INSTALLATION PREPARATION

TOOLS NEEDED/SUPPLIES NEEDED

| | |
|---|----------------|
| Tape Measure | 10D Nails |
| Chalk line or String | Saw |
| Small Drill Bit (smaller than Hammer nails) | Fry Bar |
| Nail Set | Drill |
| Footage of floor | Dust Mas k |
| Color Matching Wood Putty | Broom |
| Mechanical Nailer/Stapler | Mallet |
| 2” Barbed Flooring Cleat or | Safety Glasses |
| 2” (15 gauges) staples with 1/2” crown | |



- Have trim moldings on the job and use flooring pieces next to them that will assure a good match.
- Remove existing base, shoe mold or thresholds. These pieces will be reinstalled after installation to cover the 3/4” “expansion gap” left at the edge of the room.
- Sub floors should be cleaned prior to floor installation.
- Make sure the sub floor is dry to 12% or less moisture content, and will stay that way.
- Undercut doors and casings using a hand saw laying flat on a scrap piece of flooring. This will eliminate difficult scribe cuts.
- Sweep the area to remove all dust and debris.

4. INSTALLATION

STEP 1 – LAYOUT

Measure and mark *3 1/4” (see fig 1) from the wall at two spots near each end of the room. Drive a nail at each spot. Stretch string and tie each end of string around nail so the nails become post. Use the string as your flooring guide.
* This dimension should be 4 1/4” when installing 3 1/4” wide flooring.

STEP 2 - INSTALL FIRST ROW

Using the string as a straight edge lay the first row of flooring in place with the tongue facing the center of the room. **Leaving a 3/4” (See Figure 2) gap at the wall,** pre-drill and face nail 10D (type) nails the entire length of the room 6 to 8” apart.

Leave 3/4” (See Figure 2) expansion at each end. Set nails (fill holes with wood putty), then remove the string and guide nails.

STEP 3 - INSTALL REMAINING ROWS

Continue installation (using a mechanical nailer/stapler) with several rows at a time, fastening each board with at least two fasteners, 8-10” apart and 2 – 2 1/2” from the ends, making sure to nail to each floor joist.

Helpful Hint - Use flooring lengths that offset (or stagger) the ends 6” or so for a more professional look.

Carefully cut the last row to leave a 3/4” expansion space. (See Figure 3).

Replace trim moldings.

Make sure power cleats are approved for use in OSB if plywood is not used as a substrate.

Do not mix lot numbers without checking for color match.

Lay out several cartons to make sure of quality and grading and “rack” or stagger them in random lengths.

Leave 3/4” at the edges for expansion. Cover the space with trim molding. (See Figure 3)

Pre-drill, nail with 10D nails, then use wood putty to fill the holes Power Cleats for power

Some rows that are hand nailed may be drilled at an angle through the top of tongue to hide the nail head.

Lay flooring perpendicular to the direction of floor joists.

Occasionally, a piece may be slightly bowed. Nail one end first, then use a pry bar to push the other end in place, nailing as you go.

The last few rows may need to be face nailed because the mechanical nailer/stapler can no longer be used safely. Simply repeat the procedure used on the first few rows.

Using shorter pieces at undercut door jams will help when fitting flooring into place.

5. COMPLETING THE JOB

- Countersink and fill all nail holes.
- Clean the floor with a recommended hardwood floor cleaner.
- Reinstall all moldings and transition pieces, nailing into the wall or sub floor and not the flooring.
- Use felt tips on the bottom of all furniture.

Congratulations!

You’ve just finished a beautiful room!!! Inst 2/07

Other Helpful Hints:

Do not install this product below ground level-use AT or ABOVE ground level.