

COUNTRY WOOD FLOORING (CWF)
Installation Instructions and Maintenance Guide of Solid Hardwood Floors

Warning! Please read this instruction carefully before installation. If you need assistance regarding installation or have any questions, contact the dealer who you bought the material from or CWF immediately. Also noted that the warranty will void if this instruction is not properly followed.

Important Notes:

1. Wood Floors, being a natural product, containing natural variations in color, tone, and graining, it will also (1) continue to expand or contract during seasons changing. Some minor separation between boards might occur during the years. (2) change of color, gloss level due to exposure to sunlight or UV rays. These are not covered by CWF's warranty.
2. Installed wood floors must be maintained in a year-round living condition, as room temperature of 60-80 'F and humidity level range of 35-50% is recommended, using air conditioners, humidifiers or dehumidifiers as appropriate. Fail to keep this year-round living condition will void the warranty.
3. Prior to installation, the installer / homeowner should inspect all material of color, grade, size, quality, or any visible defects and determine if it matches the work order. CWF declines any responsibility for materials with visible defects **ONCE THEY ARE INSTALLED. DO NOT INSTALL IT** if you think the material is not acceptable, but contact CWF or its dealer/retailer immediately. Also noted that the installer should use reasonable selectivity to cull out or cut off unacceptable pieces, and the industry standard allows up to 5% of defects.
4. It is the responsibility of the installer and the homeowner to determine if the job site sub-floor and job site conditions are environmentally acceptable for the installation of CWF' Floors. CWF declines any responsibility for failure resulting from or connected with sub-floor, or job site damage, or deficiencies after floors has been installed.
5. CWF makes no warranty or guarantee of the quality of the chosen installer's work or of a particular installation performed by them. CWF disclaims all liability for any errors or improprieties in the installation of its products by an installer.

A. Before Installation

1. CWF's Wood Floors must be kept in cool and dry during shipping and storage.
2. Hardwood floors should be one of the last items installed. All work involving water or moisture (plumbing, acoustical ceilings, dry wall taping, etc.) should be completed prior to install hardwood floors.
3. The building is structurally complete and the jobsite is properly enclosed with all doors and windows installed. Room temperature and humidity of installation area should be consistent for at least of 7 days prior to installation with **normal, year-round living conditions**. Room temperature of 60-80 'F and humidity range of 35-50% is recommended. The floor material could be delivered/stored to the jobsite only after the above condition is meet. Followed proper acclimation must be performed. The boxes (cartons) end should be opened, racked and stacked properly. And the heating or air conditions should be turned on so the floor can acclimate to its environment (turn on as needed to keep Room temperature of 60-80 'F and humidity range of 35-50%). Monitor the flooring and the job-site conditions as they acclimate. If the wood floor is neither gaining nor losing moisture, an equilibrium condition has been reached.
4. Check the moisture content of the wood flooring, sub-floor and the concrete slab. Sub-floors must not exceed 12% moisture content and the difference between sub-floor and hardwood flooring cannot exceed 3%. If sub-floors exceed this amount, an effort should be made to locate and eliminate the source of moisture before further installation. Also, freshly poured concrete slab emits many gallons of moisture as water vapor into the atmosphere of the building. Therefore an adequate curing time (minimum 180 days) should be provided before installation of the flooring, along with performing moisture content test as calcium chloride test is 3.0 to 5.0 pounds per 1,000 sq. ft. of concrete surface per 24 hours at the time of installation. Please follow ASTM standard 1869-4 which is the specific preparation/application instructions for calcium chloride testing.
5. A moisture vapor retarding system is always required over the surface of a concrete/lightweight slab, prior to installing. Bostik MVP is recommended as moisture retarding system.

6. Buildings with **CRAWL SPACE** foundations should include a vapor barrier installed between the ground and the sub-floor. This barrier will minimize the effect of moisture evaporating into the crawl space environment that can migrate through the sub-floor and into the wood floors. The vapor barrier must be 6 mil or over polyethylene sheets laid on the crawlspace floor. Proper air circulation is important to prevent moisture build-up. At least two vents should be left open year round.

7. If you have any questions regarding installation and handling moisture or moisture problems, please contact CWF or its dealer / retailer. Also more information could be found on National Wood Flooring Association or visit www.nwfa.org or call 1-800-422-4556

B. Installation Area.

1. Solid Hardwood Floors can be only installed on or above grade. For below grade, basement or any grade 3" below the outside soil line, do not use solid wood floors. But you can use CWF's Engineered Wood Floors.
2. The sub floor should be level in general; however, it **MUST** be flat to within 1/4" flat over a 10 foot radius, in any direction for nail down applications.
3. Prefer the Sub-floors are built with "performance-rated" 3/4-inch thick oriented strand board (OSB) or CDX Grade Plywood will produce the best performing for installing solid wood floors. Also, 5/8-inch thick plywood may also be used.

C. Installation for Nail-down. (Solid Floors can only be nail-down)

Preparing a plywood sub-floor for a nail down installation, re-nail any loose areas or areas with squeaks. Sand and/or plane any high spots; fill any low areas. Sweep or vacuum the sub-floor thoroughly. After the sub-floor is thoroughly swept and vacuumed, we suggest you cover the sub-floor with 15 lbs. or higher asphalt felt or rosin paper. A moisture barrier (6 mil polyethylene film minimum) may be required in addition to the 15 lbs. asphalt felt. Asphalt felt is not considered a moisture barrier.

Starting to lay the floor. Location and straight alignment of the first course is important. Place a mark 3/4" plus the width of floors (3" for 2 1/4" floors) on the end wall near a corner of starting wall. Place similar mark at opposite corner and insert nails into each mark. Pull string line between nails. Nail the first strip with its leading edge on this line.

The gap between that strip and the wall is needed for expansion space and will be hidden by the shoe mold. If you're working with screeds on slab make the same measurements and stretch a line between nails.

Remove line after you get the starter board in place.

Lay the first strip along the starting string line, tongue out, and drive 6d or 8d floors nails or casing nails (galvanized or screw shank hold best) 1" from the grooved edge. Nails should be driven into the top surface of strips and counter sunk (face nailing). Position nails over supporting joists, and near ends of strips or into each screed crossed. Keep the starter strip aligned with the string line. (Pre-drilling nail holes will prevent splits.)

Rack the floor. Lay out seven or eight rows of floors end to end in a staggered pattern with end joints at least 6" apart. Find or cut pieces to fit within 1/2" of the end wall. Watch your pattern for even distribution of long and short pieces and to avoid clusters of short boards.

Nailing the floor. With plywood on slab construction the face nails should be cut to slightly less than 1 1/2". After the starter run fit each run of successive strips snug, groove-to-tongue. Blind nail through the tongue along the length of the strip apart by 8" to 10". Countersink all nails. After the second or third run is in place you can change from a hammer to a floor nailing machine which drives nails mechanically or pneumatically, and does not require additional countersinking. Various floor nailing machines use either a barbed cleat or staples, fed into the machine in clips. The nailing machine drives fasteners through the tongue of the floors at the proper angle.

When using the floor nailing machine to fasten 3/4" thick strip or plank floors to plywood laid on a slab, be sure to use a 1 1/2" cleat, not the usual 2" cleat which may come out the back of the plywood and prevent nails from countersinking properly and tearing the vapor retarder. In all other applications the 2" cleat is preferred.

Continue installing across the room, ending up on the far wall with the same 3/4" expansion space as on the beginning wall. It may be necessary to rip a strip to fit. Avoid nailing into a sub-floor joint. Position floors strips so that they do not meet over sub-floor joints. Blind nail by hand where the nailing machine can not be used. Face nail the last runs when unable to blind nail by hand. With 2 1/4" strip face-nailing is required the last 2 or 3 runs and in a ripped piece of a strip if one has been used. Use an offset pry bar or lever device to tighten these last face nailed runs all at once before face-nailing.

D. Maintenance.

Important: Do not Wax! No Damp Mop!

Daily Cleaning: Remove loose dirt and grit, use dust mop, broom sweep, electric broom. Footprints and dirt can easily be wiped away with a moist cloth. Wipe up liquid or food spills promptly with dry cloth or paper towels. Remove sticky residue (like jelly) with a slightly dampened cloth. For general cleaning, add 1/4 cup of white vinegar to 1 quart of warm water. Dip a clean cloth or sponge mop and wring nearly dry. Clean floor and wipe dry with a towel as you go. You may use other leader brands of Hard Wood Flooring cleaner applied ONLY for PRE-FINISHED (MANUFACTURER FINISHED) HARDWOOD FLOORING. Do not use ammonia or oil-based wax, polish, abrasive cleaners, or furniture cleaners. Use mats in areas subject to high traffic or regular dirt wear such as kitchen, hallways and entryways. Fit furniture legs with felt tips. Rolling furniture should be fixed with soft rubber chair casters. Periodically rearranging your furniture / area rug and closing the curtains during intense periods of sunlight can help you to reduce color change or fade of wood floor.