COUNTRY WOOD FLOORING (CWF)
Installation Instructions and Maintenance Guide of Engineered 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 14 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 heating or air conditions should be turned on (as recommended to keep Room temperature of 60-80 'F and humidity range of 35-50%) as needed during the installation. The Floor Material could be delivered/stored to the jobsite only after the above condition is meet. The acclimation is **NOT** needed at this condition. Boxes should not be opened until start installation.
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 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 found on National Wood Flooring Association or visit www.nwfa.org or call 1-800-422-4556

B. Installation Area.

1. Engineered Floors can be installed on or above grade and below grade like basement.
2. The sub floor should be level in general; however, it **MUST** be flat to with-in 3/16” over a 10 foot radius, in any direction for glue down / floating applications.
3. CWF's Engineered flooring can be installed on these kind of sub-floor. All sub-floor must be clean, dry and flat.
   a. Plywood (at least 1/2” thick) or OSB (at least 3/4” thick) or Existing wood floor (Staple-down/ Floating /glue-down)
   b. Underlayment-grade particleboard (floating/glue-down only)
   c. Concrete slab (floating/glue-down only)
   d. Ceramic tile (floating/glue-down only)
   e. Resilient tile & sheet vinyl (floating/glue-down only)

C. Method of Installation---- Staple-down, Glue-down and Floating.

Be noted that all CWF’s Engineered floors could be staple-down or glue-down, but only 5” or wider and 36” or longer Engineered floors could be floating. While the floating method offers some advantages, there are some things of which you should be aware:
(1) The floor may have a hollow sound when walked on. (2) The wood rests on the subfloor with its own weight, which may cause the floor to have slight vertical movement. (3) Must have an underlayment lay under the floor and 3/8” or thicker (like ¼” cork) is highly recommended. **These are not covered by our Warranty.**

D. Installation for Staple-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-Staple the floor. Choose the right Nailer or Staple Gun is very important. Also make sure use the right size of the nails or staples. These are vary base on the size of the paywood and flooring you using. 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 flooring at the proper angle.
When using the floor nailing machine to fasten 3/4" thick strip or plank flooring 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 retarded. In all other applications the 2" cleat is preferred.
Continue installing across the room, ending up on the far wall with the same 1/4" 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 flooring 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.

E. Installation for Glue-Down

Thoroughly clean subfloor: Remove paint, wax, oil, plaster, "sheetrock mud" and other foreign materials, as well as object surface irregularities. #3-1/2 grit open coat paper may need to be used to grind a concrete subfloor. This will loosen any dirt, loose concrete or contaminates. Sweep or vacuum thoroughly. All previous or existing glues or adhesives must be removed before installing new hardwood flooring.

Recommend Glue: Bostik® Best, Franklin® 811, or Franklin 911 and trowel as recommended by adhesive manufacturer. Note: Please read adhesive manufacturer 's instructions for proper set time before beginning installation of flooring.

Getting Started: Location and straight alignment of the first course is important. Place a mark 1/4" plus the width of used flooring on the end wall near a corner of starting wall. Begin installation next to an outside wall. Establish the line by measuring an equal distance from the wall at both ends and snapping a chalk line. You may want to dry-lay a few rows (no glue or nails) before starting installation to confirm your layout decision and working line.

Lay the first row of flooring with groove facing the wall, and continue laying the flooring until adhesive is covered. Always check your working lines to be sure the floor is still aligned. Use tapping block to fit planks together, but be careful not to let installed floor move on the wet adhesive while you are working. When first section is finished, continue to spread adhesive and lay flooring section by section until installation is complete. Use a damp cloth to immediately remove any adhesive that gets on flooring surface. Remember to stagger end joints from row to row. A heavy roller could be used on the installed flooring within the adhesive working time to ensure a solid bond with the adhesive. Flooring planks on perimeter of room may require weight on them until adhesive cures enough to hold them down.

Within 24 hours after Installation: Install any mouldings may be needed. Remove any no used blocks. Do not allow foot traffic or heavy furniture on floor for 24 hours. Remove any dirt or debris.

F. Installation for Floating

Thoroughly clean subfloor: Remove paint, wax, oil, plaster, "sheetrock mud" and other foreign materials, as well as object surface irregularities. #3-1/2 grit open coat paper may need to be used to grind a concrete subfloor. This will loosen any dirt, loose concrete or contaminates. Sweep or vacuum thoroughly. All previous or existing glues or adhesives must be removed before installing new hardwood flooring.
The sub-floor required more level for floating installation. This will reduce the echo sound.
Getting Started: Lay the form underlayment by butting edges, not overlapping. Roll the form underlayment in the same direction that the wood flooring is to be installed. Extend the form underlayment a few inches up the wall. Excess will be trimmed off prior to installing trim or moldings.
Start first row with groove toward wall. Always leave at least a 1/4” expansion space between flooring and all walls and vertical objects. Use wood or plastic spacers during installation to maintain this expansion space.
Start the second row by applying adhesive along the top side of the tongue of row one. If any glue gets on the surface of the flooring, wipe off immediately with a damp cloth. The final row of boards might need to be ripped lengthwise to fit. The cut has to compensate for uneven walls and the expansion clearance or gap necessary between the wall and the flooring. Use an installation bar to pull in the last row and install wedges.
Within 8 hours after Installation: Allow the completed floor to rest undisturbed. Do not allow foot traffic or heavy furniture on floor for minimum of 8 hours before removing the wedges. Install any need mouldings the following day. Clean any dust or glue.

G. 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.