



Manufacturer's Guidelines for Installation

For the most beautiful floors in the world...

Only Goodwin...

Before we get started...

The information here is only the beginning of what you need to know about fine wood floors. It is impossible for us to know all of the special situations that you may encounter and that may be unique to your home. New products are being developed and offered all of the time. Due to the vast amount of technical information that is needed for the installation of a wood floor, Goodwin suggests that you consult a flooring specialist. The professionals at Goodwin would be more than happy to find a flooring specialist in your area for you. We believe it's important to work as a team with you, your builder and your installation professionals to insure your satisfaction.

If we can help with additional information needs, we are glad to do so. We appreciate your interest in Goodwin Heart Pine Company and hope to hear from you soon.

In the following pages, you will find much of what you need for the proper installation of your wood floor. **Two points need to be top priority:**

1. The moisture content of the wood floor and the sub-floor need to match the expected indoor temperature and relative humidity once construction is complete.
 - a. *Determine what the moisture content of the wood floor should be at the time of installation from the chart in this packet on pages 21 and 22.*
 - b. The sub floor should be *no more than 2%* higher than the wood floor at installation and should be consistent board to board within 1%. Use air flow and / or heat if you need to dry out the sub-floor or the wood floor.
2. Using enough 'cleats' is the second most important step in a nail down job. Using enough fasteners prevents the floor from moving too much. Please refer to the nail schedule that we provide for you on the bottom of page 11.

The following documents are included in this manual:

1. Essential Tips for a Great Wood Floor(pg. 3-6)
2. Facts to Know About Wood Floors(pg. 7-11)
3. Waterborne Is Not Like Oil-modified Finish(pg. 12-14)
4. Staining, Fillers and Repairs.....(pg. 15-16)
5. Installation Options for Floating Systems, Adhesive Systems, Mechanically Fastened Systems, and Plywood Sub flooring(pg. 17-20)
6. Moisture Content Chart.....(pg. 21)
7. Moisture Map of the U.S.....(pg. 22)

For more information about Goodwin's beautiful wood floors call us at...

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Quick Essential Tips for a Great Solid Wood Floor

How to Prevent Cupping, Too Much Movement and Other Mishaps

Goodwin Heart Pine Company offers the following to help prevent problems such as cupping, cracks or other avoidable conditions. We recommend that you use an experienced flooring professional and that you work closely with resources such as the National Wood Flooring Association.

Site Preparation And Acclimation

Use the charts in this guide to determine the proper moisture content for your wood floor at installation. This is the most important step you will take. You will need a moisture meter (usually \$150 and up) and a hygrometer (\$20 and up). If the site is already at normal living conditions, take measurements morning, noon and night to determine average. If new construction, consult the moisture content charts at the back here.

The sub floor should be *no more than 2%* higher than the moisture content of the wood floor being installed. Check for consistency from board to board in the wood floor and also in the sub floor. **Our experience proves this is essential.** Use the proper vapor retarders between the subfloor and wood floor, such as Aquabar “B”, and vapor barriers depending on your sub floor type and region. Refer to NFWA professional procedures.

Use a 6' level and check that the subfloor is no more than 3/16" out over 6' and no more than 1/4" over 10'. Grind high spots and fill low spots with graduated layers of felt.

Make sure the sub floor is dry *before* you bring the wood floor on site. If not, a number of things can go wrong. The wood floor can take on moisture from the wet site and may later cup or shrink, or your wood floor could become too dry while drying out the sub floor resulting in the need for ‘expansion’ rows during installation.

Air *must* circulate around each board as it acclimates. Each bundle *must* be opened and stacked properly. Lay three or four short boards a few feet apart, then lay several rows of long boards with about 1" between each board, perpendicular to the short boards. Repeat this procedure being sure to align the short boards so that air can circulate through the entire stack.

- *Hot Tip:*
To lower the moisture content of the sub floor or wood floor use fans, heat or dehumidifiers. A/C often will **not** dry wood out sufficiently, even over several months depending on relative humidity. For example, if the RH is 50% it could take air conditioning a full year to dry the site. *(Every 20-degree increase in air temperature doubles the moisture being pulled out of the wood floor.)*

Installation

For your sub floor and equipment guidelines, follow wood floor association procedures. We can provide a copy if you wish. Use the correct nail schedule for the floor width. This is a common mistake many make when first installing wide plank floors.

After installation, allow the floor to sit for a while to allow final acclimation and natural movement. Several days are usually enough; however, your flooring professional has many factors to consider. If you expect a fairly large change in relative humidity once construction is complete, you may want to wait longer.

- *Hot Tips:*

- It actually saves time and the floor looks better if you lay down several rows ahead before nailing. This is called ‘racking’ the floor and helps with layout. The Wood Floor Association allows for up to 5% to be out of grade and the installer is responsible for final inspection before installation.
- Don’t nail right at the end of a board and avoid shooting the fastener too far into the tongue. These can lead to excessive movement of the wood.

Sanding

Heart pine uses more sand paper. For experienced sanders, cloth-backed papers can be helpful as they can be cleaned between uses. Continuous cylinder drum sanders that are in good working order make it easier to get a good flat ‘cut’ or sanding. Consult NWFA and NOFMA for proper equipment and procedures.

Don’t skip more than one grit when sanding. You will always have some invisible grooves from the sanding; however, the proper progression of sandpaper creates a more even surface that allows the sealer to completely seal the wood. This lets the finish rest completely above the sealer and increases finish wear 300-400%.

An edger or spinner used around the edge of the room requires skill to ensure the perimeters match the rest of the floor in appearance after finishing. ‘Screening’ with a buffer and pad can prevent what looks like ‘brush marks’ under the finish.

Vacuum after each sanding step. Before sealing, clean all surfaces well including windowsills and adjacent rooms and tack the floor with a well wrung out Turkish towel or a terry cloth mop. **Seal the wood immediately** after the last sanding to prevent a spill, debris, perspiration, etc. from marring the final finish.

- *Hot Tip:*
Protect painted trim with painters tape. Turn off air and seal off vents before starting to prevent dust or other airborne particles from settling into the finish.

Sealing

Your choice will affect the time required for drying. In our detailed guidelines, you will find some information about oil-modified products as well as waterborne products.

If you stain your floor, this usually takes the place of a sealer. Stains can be complicated and can diminish the wood grain, particularly in heart pine, so we highly recommend you follow the manufacturer’s instructions. See our CEU program and references for more information or page 5 here for tips on staining heart pine.

- *Hot Tip:*
Heart pine will turn a rich, red color over several weeks or months, depending on the light source. Some dark tropical woods will fade rather than deepen.

Finish

There are many choices for finishes. Your decision will be shaped by your lifestyle, desired appearance, environmental concerns, maintenance needs and drying time available. There are many good finish manufacturers. Always consult their guidelines as many finishes have changed dramatically in the past few years.

Before starting, cover up windows if there is strong, direct light and turn off HVAC to prevent dust from getting blown onto wet finish.

TO BE CONTINUED... CALL FOR FULL 22 PAGE SOLID INSTALL GUIDE