



Owner's Guide and Warranty Instructions
Chelsea Plank Flooring®
Restoration Series Plank™
North American Exotic Collection™

$\frac{3}{4}$ " Solid Hardwood Factory Finished Plank Flooring
MADE IN USA

This Owner's Guide is intended to inform and assist the buyers and end users of Chelsea Plank Flooring®, Restoration Series Plank™ and North American Exotic Collection™ hardwood flooring products. Please use it to:

- Clarify your understanding of factory finished, $\frac{3}{4}$ " solid hardwood plank flooring
- Understand the performance of hardwood flooring and hardwood floor finishes in general
- Understand the installation process and manufacturer's installation recommendations
- Understand the recommended maintenance and common issues affecting hardwood floors
- Understand the warranty that is offered.

Basic Hardwood Flooring Facts

Solid hardwood plank flooring has variation in its physical characteristics. The planks are from a large selection of trees. Each plank will vary depending on the angle of the cut made at the sawmill, the amount of light, moisture, seasonal growth, position in the forest and an infinite set of variables. The natural beauty of different grain patterns, blended natural colors and occasional natural character installed randomly on your home's floor are great reasons to select solid hardwood flooring. If properly maintained, solid hardwood flooring is a traditional flooring product that will last the lifetime of the home it is installed in. Solid hardwood flooring can be refinished and the colors changed. There is no limitation to its design or potential to be changed if required.

The factory finish added to hardwood's surface is a coating system that highlights the beauty of grain, color, and species characteristics. It also protects the wood from dirt and surface moisture. The finish will provide a good surface for household traffic as well as retain its ability to move and flex with the seasonal changes in the wood. Any objects or impact that can damage hardwood lumber will also damage finished hardwood flooring. It is not a floor that will be flawless forever. The homeowner's ability to control various forms of wear or abuse will determine the length of time between refinishing projects.

Hardwood is hygroscopic which means it can absorb and give off moisture as the environment around it becomes more humid or less humid. The cells will absorb water just as they did when they

were a part of a living tree. Hardwood flooring is kiln-dried to a moisture content of 6% to 8% before manufacturing. This is a level that has been a standard in the industry for over 100 years. Maintaining your home's indoor relative humidity between 35%-65% through the year with use of air conditioning, dehumidifier and humidifier, will maintain your hardwood flooring's 6% to 8% moisture content and swelling and shrinking will be minimized.

For example, if each plank in your floor absorbs an additional 3% of moisture content, it is possible that each plank would grow 3%-5% in width. Your contractor has left about $\frac{1}{2}$ " on each wall to compensate for this possibility and the flooring itself will compress as it swells under normal seasonal changes. If you begin to hear your floors squeaking randomly after installation, it is very probable that the planks are absorbing additional humidity and beginning to swell up. There is an increased amount of stress from this swelling that is causing your floor to begin to push together and upward at each joint. While this is generally not serious if you catch it soon enough, it does require that you lower the humidity by turning up your whole-house dehumidifier and setting it to "drier". If you notice your flooring starting to lift up on the edges or "cup," and the flooring is no longer completely flat, reduce the indoor humidity to decrease the moisture content in your flooring. This is accomplished with a properly sized dehumidifier.

The gaps that develop during winter are a result of low humidity in a home. Drying out too much will cause the flooring to lose moisture content and shrink. If your floor is shrinking and gaps between the planks or slight cracks are starting, increase the indoor humidity. As the flooring begins to re-absorb moisture, the cells will expand and the gaps will close.

Both swelling and shrinking take place over a period of time. It does not occur suddenly unless you have a plumbing leak. It's a cumulative effect over a period of weeks or months. If you have made a correction by turning up your humidifier or dehumidifier, it will take several weeks for the flooring to respond to the changes in humidity. The very best protection is to have a digital humidity gauge in your home. Digital humidity gauges allow the homeowner to monitor the relative humidity in their home and to make necessary adjustments on humidifiers and dehumidifiers before any noticeable effects on the flooring occur. A digital humidity gauge is available through your local home center and typically costs between \$20-\$30.

Hardwood Floor Finishes

The finish system that is applied to the surface of the hardwood flooring is a layered system that is designed to protect the wood in your flooring from dirt, occasional surface moisture, stains from household items such as food or mild cleaners and normal household foot traffic. The finish system is not designed to withstand standing water, hard furniture legs, pointed or sharp objects, gravel or stones brought in on shoes, high heeled shoes, heavy furniture, appliances, or objects that concentrate weight on specific points. The finish is extremely durable but if enough pressure is applied to the wood flooring, the wood fibers will separate, split or crush, allowing the object(s) to stretch or penetrate the finish.

As hardwood floors age, exposure to light will change the color and give a rich deep natural aged color tone. Floors that have been stained will show this change more slowly. You may notice this as a shadow effect under furniture and area rugs due to less of exposure to light. When exposed to direct sunlight some wood species add deeper richer colors, some species fade to lighter colors.

Discuss this with your dealer. In-store samples may or may not show these changes. These changes are natural and may effect your buying decision.

The finishes used on Frame Hardwoods, Inc.'s flooring products are ultra-violet cured urethanes. Each layer of finish is cured before the next layer is applied. Curing takes place in approximately 5-7 seconds per layer using UV light. Our finishes emit no VOC's or odor. Our facility in Chelsea, Michigan is VOC free. Each plank is inspected by trained factory inspectors for color, surface smoothness, cracks, and milling quality. There are multiple layers of finish applied to Chelsea Plank Flooring®. Each layer is formulated to perform a specific function within the finish system. Certain layers serve as adhesives to assure that the finish will not pull away or delaminate if the flooring is struck, dented or scratched. Other layers are designed to act as abrasion resistant and scratch resistant layers. After all of these layers of finish are applied and cured, they are locked together with intense UV light to create a finish that is bonded to the wood with all the layers bonded together as a single layer.

Chelsea Plank Flooring® is a registered trademark for our main product line containing 27 products. TITANIUM TUFF® SSR-FLEX is a registered trademark for the unique factory applied finish used on Chelsea Plank Flooring®. TITANIUM TUFF® SSR-FLEX is an incredibly durable finish and represents the finish industry's finest product. TITANIUM TUFF® SSR-FLEX was developed exclusively for use on Chelsea Plank Flooring® by Chemcraft International and is not available to any other manufacturer. TITANIUM TUFF® SSR-FLEX is a finish that is able to flex with gradual changes in the moisture content of the flooring. Chemcraft routinely inspects our facility, finish line, and daily quality control data reports on a continual basis to insure that all products and finishes are properly applied and cured.

The finish on Restoration Series Plank™ differs from TITANIUM TUFF® SSR-FLEX finish. Restoration Series Plank™ floors are designed to appear similar in color and general appearance as floors manufactured and used during the late 1700's - early 1900's. Restoration Series Plank finish is a UV cured multiple layered urethane product that is designed to penetrate into the wood surface and to cure with the appearance and feel of a wax finish. It is a specially formulated urethane and does not use wax or paraffin in the finish. Maintenance is the same as any urethane floor. The product is completely free of VOC's or odors. The texture of the wood is left open and the appearance is incredibly authentic. RSP will provide excellent wear and surface protection far superior to any site applied finish.

Hardwood Flooring Installation

As with any home improvement project, due diligence and proper planning are necessary for a satisfactory result. Selection of an installer is an important part of the hardwood flooring project. Choosing a flooring installer that will provide you with the job that you are expecting is very much the same as with any service that you have contracted or will contract to work in your home. While the actual installation of pre-finished floors is a relatively easy concept, inexperienced or incompetent installers can be a source of real frustration for both the homeowner and their flooring dealer.

You, as the customer, should know yourself and understand what level of service that you are paying for. The quality of work performed in your home is generally related to the ability of the installing

contractor rather than the price of the job. As the final consumer, must be aware of price extremes. A high price without good reason is just a high price. A low price may indicate that the contractor doesn't have the experience and knowledge about hardwood installation or that your job is not worthy of their best effort.

Chelsea Plank Flooring® is a plank flooring product that has a custom look that is unique to the high production flooring industry. A flooring contractor that installs our product should be experienced in several areas other than just how to use installation tools.

Communication skills - communicating with the customer before the job starts is extremely important. Issues should be discussed in advance such as jobsite conditions, moisture and humidity control, what you are looking for in an installed floor, what character is acceptable to you and how transitions, baseboards and door jams will look when finished. He must provide you with a contract that describes the work that he will perform and answers any questions and preferences that you have. If it isn't spelled out in a contract, it is up to him to do as he thinks is the best way.

Installation skills - Chelsea Plank Flooring® should be installed by a professional installer that has had experience or is under the supervision of a person that has had experience installing custom hardwood floors.

Completion details and how problems are resolved - You should get at least 3 references from your contractor for people in your area that have had them install hardwood floors. Did the installer show up as promised? Was the workmanship as promised? If there were problems, did the contractor resolve them in a fair and honest manner? Did the contractor clean up after himself and dispose of scrap material? Did the contractor provide a small amount of material to you for future repairs and explain to you how to store this material? Basic guidelines for proper installation are:

- $\frac{3}{4}$ " plywood or OSB subfloor over joists not more than 19.2" on center
- Moisture content of subfloor measured at not more than 10% to 12%
- 72 hours minimum acclimation time for flooring materials
- 15 pound roofing felt or another type of vapor retardant underlayment as moisture retarder must be installed between subfloor and flooring
- Fastened with 2" barbed cleats or 2" leg, $\frac{1}{2}$ " crown flooring staple
- Planks fastened at 8 inch intervals, no closer than 3 inches from end of board
- $\frac{3}{8}$ " expansion space allowed at walls or permanent obstructions

The installer should use a moisture meter to measure the moisture content of the subfloor in several places. The moisture content should not be higher than 12%. If excess moisture is present, dehumidification must continue and installation must be delayed. Installation over a subfloor with excess moisture will result in hardwood flooring that cups. Do not deliver the flooring to the job site until the humidity is controlled between 45%-65%. Once the jobsite conditions are acceptable for installation, the flooring should acclimate in the jobsite environment for at least 72 hours before it is installed.

Hardwood flooring should be installed perpendicular to the floor joists. Installation parallel to the joists may result in deflection or sagging of the subfloor and failure of the flooring fasteners. The floor can be laid diagonally at up to a 45 degree angle to the joists. To run parallel with the joists,

2x6 or 2x8 blocking should be installed every 19.5" between the joists to prevent deflection of the subfloor, or an additional ½" plywood layer can be added to the subfloor to provide additional support.

Before installation, it is important to inspect the flooring material to assure that the correct product has been selected. The installer and homeowner must be present at this time. Open 3-4 boxes of material, lay them out in the proper pattern and lock them together. Character and mill run grade flooring will have knots, mineral streaks and appearance that some people may consider to be less desirable. Some people will expect more character. Before the installation begins, both the installer and homeowner must agree to what is acceptable and what is not when it comes to character.

The installer is responsible for inspection of each board as it is installed. The installer should check for defects such as splits or cracks, finish defects or milling defects. Do not cut or install any planks that are considered unsuitable. If there is a significant problem with rejects (more than 5% of the material) refer to the purchase warranty for instructions.

Manufacturer's Required Maintenance

Frame Hardwoods requires that the following care and maintenance procedures be followed to maintain the flooring and its finish. Failure to follow these instructions may result in loss of appearance and performance characteristics.

Hardwood flooring must be maintained in controlled humidity conditions to minimize expansion or shrinkage.

The level of humidity that is required to minimize expansion or contraction due to humidity is 35% - 65%. The closer these humidity conditions are maintained at, the less movement will be seen in the flooring. Dehumidifiers should be "high capacity" stand-alone units or units that can operate independent of heating or air conditioning functions. Whole house humidifiers installed on the furnace are best for adding humidity. Portable humidifiers are typically not of sufficient size or capacity to effect conditions in your entire home. Excess moisture such as water or snow must be promptly removed from the flooring. Soak up any water with clean terry-cloth towel and avoid circular motions that spread the water out. Excessive moisture will be absorbed into the flooring through spaces between planks, floor registers or along the perimeter, resulting in cupping of the planks. Excessive movement can result in the finish pulling away from the planks as they expand past their manufactured moisture content.

Protect entry areas with walk off mats or rugs that can trap dirt, sand and debris. Clean mats often.

Remove sand, dirt and debris by sweeping the floor whenever it is evident. Use a soft bristle broom with a rubberized dustpan or a dry "Swiffer" type static pad. Avoid vacuums that have spinning brushes or hard wheels. Hardwood flooring must be kept free and clear of any objects or debris that is harder than the finish or the wood. Objects that are hard or have sharp ends or edges may scratch or dent the finish or the wood. Homes where shoes are removed at the door every time will have floor finishes that retain their original look for longer periods.

Direct sunlight or strong indirect light will cause a change in appearance. Windows and door glass on sunny exposures should have efficient UV protection films, sunscreens, drapes or shades to prevent continuous exposure. Flooring that has had color/stain added will change less but will still be affected.

Use cleaners specifically for hardwood flooring. Do not wet mop your hardwood floor. Do not use cleaners with vegetable oil, fruit extracts or oils, butyl, or ammonia for cleaning. Test a small area before using and observe if cleaners leave a residue or film when dry. Cleaners that leave a residue of film will result in a dull and smeared appearance that may also trap fine dirt that will eventually cause premature "wear" areas to show. It is acceptable to damp mop your hardwood floor only if using an absorbent, terry-cloth pad, wrung out well (it cannot be wet) and followed up with a dry towel. A very small amount of dish soap, one-half teaspoon per gallon may be used in the water for cleaning.

Apply felt/polypropylene pads to all furniture legs or hard surfaces that contact flooring. The pads on chairs and tables should be cleaned often and replaced periodically.

Large appliances such as refrigerators can damage hardwood floors when moved. 3/8" plywood or hardboard should be used under refrigerators when moving them. Large cushioned felt pads are available for use under refrigerators, which make them easy to move and protect hardwood floors. Felt pads should be used on the feet of stoves, washers and dryers to prevent damage when moving these items.

High-heeled shoes can dent hardwood floors. Dogs and animals with hard or sharp claws can damage floors and finishes.

Trouble shooting Common Issues With Factory Finished Hardwood Flooring

Dents or embossed lines in the floor where hard objects have been dropped, furniture legs dragged, or a pet has left marks in the finish with their claws. **SOLUTION:** Dents cannot be repaired. The finish is too hard to fill and spot repairs using retail finish show poor results. Make sure all your furniture has clean furniture pads installed on the legs. Avoid dropping hard objects on the floor. Keep active pets with hard/sharp nails or claws from activity on hardwood floors. An experienced flooring installer can replace individual planks without damage to the surrounding planks.

Flooring has developed gaps between the planks. **SOLUTION:** Gaps are a result of lowered moisture content in the hardwood flooring. This can be corrected through introduction of additional humidity or avoided by maintaining humidity. Necessary tools are: 1) Relative humidity gauge to provide advanced warning. 2) Whole house humidifier to provide extra humidity in home. The condition will reverse itself with increased humidity but may require several months of higher humidity. Gaps between boards may be seen near heat registers and over heat duct runs. Gaps are often seen in 2nd homes where seasonal humidity is not monitored or homes that do not have sufficient humidification or if the humidifier is not functioning properly.

Flooring has shadows under furniture or has faded in main areas exposed to sunlight.

SOLUTION: Sunlight is a powerful natural force and will damage, fade, or discolor almost any

surface or product. Windows must have good UV films, curtains, or sheers. Shadow spots under furniture and rugs should be expected. Moving furniture on occasion will allow these areas to catch up to the rest of the flooring. It takes only a few weeks to see years of change blend in.

Flooring has some planks that have cracks developing in wood or the finish. SOLUTION:

Cracks that develop in the planks are due to moisture loss in the wood. If the moisture content is lowered significantly (below 4%) or lowered quickly, the grain may separate in some planks resulting in a crack or split showing. Maintaining a relative humidity level of 35%-65% is the easiest way to avoid this. A split plank can be removed and replaced by an experienced flooring installer. Minor splits and cracks will develop and disappear as the floor ages. It's a natural product and will change and flex over its life cycle in your home.

Planks are lifting on the edges (cupping) and cracks in the finish are showing. SOLUTION:

The lifting edges are a result of the planks absorbing moisture from excessive humidity, a spill, or a water source under the flooring. The bottom of the planks is not finished and will absorb moisture. Check the relative humidity of the room as well as the basement or crawl space below the floor. Also check for water leaks from refrigerators, dishwashers or sinks. You can decrease the relative humidity by adding heat or turning on your dehumidifier. As the moisture content of the planks decrease the cells in the wood dry out and the plank will often return to its original dimension. If the planks have swelled excessively, the hard finish may break off as they swell. These planks may need to be replaced if too much finish has broken away.

PURCHASE WARRANTY

All factory finished flooring manufactured by Frame Hardwoods, Inc. is warranted by the manufacturer to be free of any defects in wood milling and finish application that are visible to the purchaser or the installer before the product is cut, nailed or put into use. Any planks that show visual defects in milling or finish must be returned to the manufacturer before they are cut, nailed, installed, or otherwise placed into use. The manufacturer will replace the material or refund the original purchase cost of any or all planks that show defects in milling or finish if they are returned within 60 days of purchase. Manufacturing defects do not include planks that are cut, scratched, nailed, or dented.

All flooring finishes applied by Frame Hardwoods, Inc are warranted by the manufacturer to remain free of finish that peels or delaminates from the surface of the plank so long as moisture and humidity conditions are maintained between 35%-65% relative humidity and the manufacturer's required maintenance procedures are followed.

This warranty covers the material or the cost of material only.

LABOR COSTS FOR REMOVAL OR REPAIR ARE NOT INCLUDED.

Frame Hardwoods does not offer any warranties that assure the final user of unconditional wear features or characteristics. Solid hardwood flooring is a completely natural product and will wear according to the owner's ability to maintain the conditions described in our maintenance procedures.

There are no warranties that extend beyond the description on the face hereof. These warranties are given in lieu of all other warranties. There is no warranty of merchantability or fitness for any particular purpose except the express warranties on the face of this document. The manufacturer excludes all warranties implied by law or implied by fact that are not expressly set forth on the face of this document. The manufacturer excludes and will not pay any consequential or incidental damages. This warranty is valid only to the original purchasers of the flooring and is not transferable.