

# SHAW HARDWOOD FLOORING LIMITED WARRANTY



This Shaw Hardwood Floor comes with a:

- Lifetime structural integrity limited warranty
- 15 year, 20 year, 25 year or lifetime limited warranty depending on the selling style purchased

## GENERAL WARRANTY INFORMATION

This product specific limited warranty begins on the date of purchase and is valid for the stated warranty period as long as the original purchaser controls the site where the product is installed. This limited warranty is not transferable.

This warranty is limited to installations where before, during, and after installation, all required site conditions, installation techniques and proper care and maintenance practices are fully achieved and continuously maintained for the life of the floor. It is the installer/owner's responsibility to ensure that the installation site conditions and subfloor are environmentally and structurally acceptable prior to the installation of any hardwood floor. The manufacturer declines any responsibility for failures of hardwood flooring resulting from or related to subfloor or subsurface deficiencies, inadequate installation site environmental conditions or improper care and maintenance.

Hardwood floors are a product of nature and as such will contain variation that is both normal and complimentary to their natural beauty. Our hardwood floors are manufactured in accordance with accepted industry standards which permit grading deficiencies not to exceed 5%. These grading deficiencies may be of a manufacturing or natural type. Additionally, the installed hardwood floors will continue to expand and contract during seasonal and temperature changes. Thus, properly installed hardwood flooring may experience slight separation (gapping) between boards. This slight separation is normal and is not covered by this warranty.

It is the customer's/installer's responsibility for final inspection of the product prior to installation. This product warranty does not cover the installation of visibly defective material.

Additional product-specific requirements can be found in the applicable appendix to this document. Depending upon product category, one of the following appendices which contain installation and care and maintenance information will apply:

- Solid Hardwood Appendix
- Engineered Hardwood Appendix
- Hybrid Hardwood Appendix

## WARRANTY COVERAGE

Finish and Wear Limited Warranty - Shaw Industries Group, Inc. ("Shaw") warrants that the face surface wear layer will not peel off, wear through, or delaminate.

Structural Integrity Limited Warranty - Shaw warrants that these hardwood floors, in their manufactured condition, will be free from defects in material and workmanship including milling, assembly, dimension and grading

## WARRANTY EXCLUSIONS

This limited warranty excludes:

- Installation and/or use of the product for applications contrary to its intended use
- Noise – including but not limited to squeaking, popping and cracking
- Any manufacturing or natural deficiency that totals less than or equal to five percent of the actual square footage purchased.
- Flooring failure where the finished floor has been exposed to moisture from any source
- Naturally occurring wood characteristics accepted within the grade
- Indentation, scratches or subsequent related damage
- Radiant floor heating usage and installations not in accordance with Shaw's recommended installation instructions
- Instances where before, during and/or after installation there is a failure to maintain adequate relative humidity (35% to 65%) and temperature (60°F to 80°F) where the product is installed

# SHAW HARDWOOD FLOORING LIMITED WARRANTY



## WARRANTY EXCLUSIONS (continued)

- Damage resulting from accidents, abuse, misuse or natural disasters
- Improper alteration of original manufactured product
- Changes to product appearance resulting from exposure to light
- Damage resulting from failure to use appropriate protective pads under furniture, fixtures or other similar objects
- Damage resulting from structural failures at the installation site
- Removal or replacement of cabinets, appliances, furniture or other fixtures
- Claims for labor where visible defects are installed
- Damage resulting from pets
- Gloss reduction
- Freight
- Failure to follow guidelines and requirements set forth in associated product Appendix.

## WARRANTY SERVICE PROTOCOL

The original purchaser should notify the authorized Shaw hardwood flooring dealer from whom the original purchase was made of any defect as soon as possible after discovering the defect but within the time period of the applicable limited warranty. In order for a warranty claim to be considered, the original purchaser must present to the authorized Shaw hardwood flooring dealer the following items:

- a valid sales receipt or other documents which establish proof of purchase
- a description of the problem including a photograph and/or sample that clearly shows the issue. If it is not possible to provide a photograph or sample, an explanation must be included.
- Shaw reserves the right to have the installation professionally inspected on behalf of the claim

If Shaw approves a claim under this limited warranty, Shaw may authorize the dealer to repair or replace, at Shaw's option, the affected flooring material with any Shaw product. If professionally installed, Shaw will pay the reasonable labor costs to perform the replacement or repair during the first five (5) years from the date of the original purchase. In the event that the style installed in the home is no longer available, Shaw may authorize the dealer to replace the affected floor with another Shaw style of equal value. This protocol shall serve as the sole course of action for warranty claim resolution.

This limited warranty is valid only in North America. The warranty is not transferable. It extends only to the original purchaser. This limited warranty applies only where the affected area of the Shaw hardwood flooring is visible from a standing position and covers an area greater than 10% of the installation. The flooring must be installed in accordance with Shaw hardwood flooring installation instructions.

Shaw does not grant to any person or entity the authority to create for it any obligation or liability in connection with Shaw. Shaw shall not be liable to the purchaser or any other person for any incidental, special or consequential damages, arising out of breach of this limited warranty or any implied limited warranty (excluding merchantability). All implied warranties are hereby limited to the duration of this warranty. Some states do not allow the exclusion or limitation of implied warranties or the limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to the purchaser. This warranty gives the purchaser specific legal rights, such rights may vary from state to state.

**PRE-FINISHED, 3/4" & 5/16" SOLIDS, STRIP OR PLANK**

**THE FOLLOWING INSTALLATION INSTRUCTIONS AND CARE & MAINTENANCE GUIDELINES ARE AN APPENDIX OF THE SHAW HARDWOODS WARRANTY FOR APPLICABLE PRODUCTS.**

*PLEASE READ AND REVIEW THE ENTIRE INSTALLATION INSTRUCTIONS AND CARE AND MAINTENANCE GUIDELINES BEFORE PROCEEDING WITH THE ACTUAL INSTALLATION. FAILURE TO MEET NECESSARY REQUIREMENTS STATED WITHIN THE INSTRUCTIONS WILL VOID THE SHAW WARRANTY COVERAGE. THESE INSTRUCTIONS AND GUIDELINES ARE INTENDED FOR USE WITH SOLID HARDWOODS ONLY. (Refer to applicable warranty appendix for installation instructions and care & maintenance guidelines when installing engineered hardwoods.)*

**IMPORTANT INFORMATION BEFORE YOU BEGIN**

**OWNER AND INSTALLER RESPONSIBILITIES**

Hardwood flooring is a beautiful and unique product of nature, which is characterized by distinctive variations in grain and color. These natural variations in color and grain are not flaws, but are a part of the natural beauty and uniqueness of hardwood flooring. (These inherent variations should be expected and serve to enhance the natural beauty and enduring charm.) Shaw Hardwood Floors™ are manufactured in accordance with accepted industry standards, which permit a defect tolerance not to exceed 5%. The defects may be of a manufacturing or natural type.

- The installer assumes all responsibility for final inspection of product quality. This inspection of all flooring should be done **before** installation. Carefully examine the flooring for color, fit, finish and quality before installing it. Use reasonable selectivity and hold out or cut off pieces with glaring defects whatever the cause. If material is not acceptable, contact your Shaw Hardwood Flooring™ dealer immediately.
- Before beginning the installation of any hardwood flooring product, the installer must determine that the environment of the job site and the condition and type of the subfloor involved is acceptable, insuring that it meets or exceeds all requirements which are stipulated in the Shaw Hardwood Flooring™ installation instructions which follow. Shaw Industries, Inc. declines any responsibility for job failure resulting from or associated with inappropriate or improperly prepared subfloors or job site environment deficiencies.
- The use of stain, filler, or putty stick for the correction of minor defects during installation should be accepted as normal procedure.
- When Shaw Hardwood Flooring™ is ordered, a 5 - 10% waste factor, depending on layout, must be added to the actual square footage amount needed. (Diagonal, herringboned or bordered installations will require a higher waste percentage.)

**INSTALLATION SITE REQUIREMENTS**

**JOB SITE INSPECTION**

- All areas of the jobsite should be thoroughly evaluated for crawl space conditions, outside water run off control, including downspouts, site drainage field and any potential areas of pooling water.
- All jobsites should be thoroughly evaluated for subfloor conditions including levelness and proper moisture conditions. Wood subfloors should also be evaluated for structural soundness.
- Moisture tests should be completed before and after the hardwood has been acclimated, to insure that the job site conditions meet all requirements.
- HVAC systems should be evaluated to insure they are capable of maintaining the required indoor climate conditions necessary for wood flooring installations. Heating and air systems should be fully operational, and capable of maintaining a consistent room temperature at 60° - 80° F; and relative humidity conditions within the range of 35 to 65 percent.

### **IMPORTANT PRECAUTIONS**

- 3/4" & 5/16" SOLID FLOORING IS APPROVED FOR ON GRADE OR ABOVE GRADE INSTALLATION ONLY!!
- 3/4" & 5/16" SOLID FLOORING **CANNOT** BE INSTALLED OVER RADIANT HEATED SUBFLOOR SYSTEMS.
- DO NOT INSTALL SOLID WOOD FLOORING BELOW GRADE LEVEL!!
- 3/4" SOLID WOOD FLOORING IS NOT CONSIDERED ACCEPTABLE FOR GLUE-DOWN INSTALLATION. (ADHERED)
- 5/16" SOLID WOOD FLOORING IS ACCEPTABLE FOR GLUE-DOWN INSTALLATION. (ADHERED)

### **Application of Moisture Barrier systems over concrete subfloors:**

Follow all manufacturers' instructions for the installation of this type of product. Use only Moisture Protection and Adhesive systems that are designed to be used together.

Some helpful hints include:

- Make certain that the moisture Barrier System chosen is compatible with the adhesive system to be used.
- Apply the moisture barrier as directed by the manufacturer. Do not allow puddles to form and dry.
- Floor products may not be applied on top of this product for at least 24 hours. This time period may be longer for certain products or climate conditions.
- For concrete sub-floor applications it is required and is the responsibility of the installer to test for sub-floor moisture emissions before and after applying this type of product, using the (ASTM 1869-98) calcium chloride test method; to insure that moisture emissions are within the recommended range of the floor-covering manufacturer.

### **ACCLIMATION**

- The installation site should have been consistently maintained at room temperatures of 60° - 80° F and a constant relative humidity level range of 35 - 65 % for a minimum of 5 days prior to the hardwood delivery, and acclimation period required for any Shaw Hardwood Flooring™ product. Solid Hardwood requires a 72 hour minimum acclimation period at the job site, prior to installation.
- Flooring should be at the climate controlled job site a minimum of 72 hours prior to the start of installation.
- During acclimation, do not store flooring products directly upon on grade concrete or next to outside walls. Cartons should be placed in the dry installation area. Stack the cartons flat in stacks 3 or 4 high, away from heat vents, out of direct sun light, as close to the center of the structure as possible. Leave spaces between the stacks to insure proper airflow around the cartons.
- Flooring should not be delivered until the building has been closed in and cement work, plastering, painting and other materials are completely dry. Concrete and plaster should be cured and at least 60 to 90 days old. Check basements and under floor crawl spaces, to be sure that they are dry and well ventilated to avoid damage caused by moisture. Bare ground in crawl space areas, should be covered with overlapped black, 6-8 mil polyethylene plastic sheeting.
- In new construction, Shaw Hardwood Flooring™ 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 wood flooring being installed.
- When installing 2-1/4" to 3-1/4" Shaw Hardwood over wood or wood based subfloors, there should be no more than a 4% difference in moisture content between the subflooring and the Hardwood flooring materials to be installed.
- When installing 3-1/2" or wider Shaw Hardwood over wood or wood based subfloors, there should be no more than a 2% difference in moisture content between the subflooring and the Hardwood flooring materials to be installed.

## SHAW SOLID HARDWOODS SUBFLOORING REQUIREMENTS

### IMPORTANT NOTE

As flooring manufacturers and wholesalers, we are unable to specifically evaluate each type of Engineered Wood Subflooring System. Spacing and span lengths, as well as their engineering methods and expected usage specifications, are the responsibility of the builder, engineer, architect and consumer; who are better able to evaluate their expected results, based on site-related conditions and floor covering performance requirements.

In all cases, the decking material used as subflooring must be rated at or above the expected beam spacing of the system. (i.e.: for an engineered joist system spaced at 24 inches on center with a 26 foot rated span length; the decking material used must also be rated for 24 inches on center with a 26 foot span length.) Engineered subflooring systems may allow for wider spacing of engineered beam support systems; and alternative subfloor decking materials, while also providing equal performance characteristics to the traditional subfloor systems discussed below.

The general information provided below describes common, non-engineered wood joists and subfloor decking systems.

### Approved Joist Constructed Subfloor Types:

1. APA approved **minimum** - 5/8" thickness, 3/4" or thicker exterior grade plywood is preferred, on 16" centered 2"x10" joists.

**NOTE:** When installing and fastening approved plywood subfloor decking, please follow the specific structural panel manufacturer's installation instructions.

2. 3/4" (23/32") OSB on 16" center, 2"x10" floor joists properly nailed. (Remember, when installing hardwood over any joists and/or truss systems that are spaced wider than 16" on center, it may be necessary to add an additional layer of subflooring or use additional cross bracing to stiffen the deck system, reducing excessive deflection if the decking being used is **not** rated for the increased joist spacing.)

### All Subfloors must be:

- **CLEAN** - Scraped or sanded, swept, free of wax, grease, paint, oil and other debris.
- **SMOOTH/FLAT** - Within 1/8" in a 6' span. Sand high areas or fill low areas with cement base leveling compound-no less than 3000 psi rating.
- **STRUCTURALLY SOUND** - Nail or screw any loose areas that squeak or reveal movement. Replace any damaged subflooring or underlayment.
- **DRY** - Moisture content of wood subfloor **must not** exceed 12% prior to installation of wood flooring.
- **MOISTURE CONTENT BALANCED** - Wood based subfloors and the wood flooring to be installed must be within a 4% range of each other's moisture content for strip flooring and a 2% range of each other's moisture content for plank flooring.

**Remember:** Moisture testing results must be verified both before and after, the wood has been acclimated, and all other job site requirements have been met. Test the moisture of the wood substrate using a calibrated (pin type) moisture meter approved for testing wood moisture content.

### Important Notes:

- All subflooring and underlayments should be spaced a minimum 1/8" apart for expansion requirements.
- Hardwood installations should not be parallel to the floor joists, or on joist spacing that exceeds 19 unless the subfloor has been properly stiffened with additional layers of subflooring to eliminate deflection. Always install flooring perpendicular to the floor joists whenever possible.
- Any additional layers of subflooring or underlayments required should be installed overlapping the seam areas of the base subflooring.
- Do not install over nailed floors that exceed 3-1/4 in width. Wide width floors must be overlaid with plywood.
- When installing over existing wood floors parallel with the flooring, install an additional 1/4 layer of plywood to stabilize the flooring, or install the new wood floor perpendicularly to the previous flooring.
- **Remember:** Moisture tests should be completed before and after the hardwood has been acclimated, to insure that the job site conditions meet requirements.

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**Lightweight Aerated Autoclaved Concrete (AAC):**

Do not assume that aerated autoclaved concrete subfloor panels are suitable for Glue-down (adhered), sleeper system, or attached plywood subfloor treatments sometimes used over normal concrete. Always obtain written approval from the Aerated autoclaved concrete manufacturer before installing solid hardwood over this type of subfloor system.

**Acoustic Concrete (Gypcrete):**

Due to large quantities of gypsum, that may hinder the adhesive's ability to properly bond, acoustic concrete must be primed with the concrete manufacturers recommended primer/surface hardener. The concrete must have a minimum compressive strength of 2500 PSI. Always obtain written approval from the concrete manufacturer before installing solid hardwood over this type of subfloor system.

**Acoustic Cork:**

Make sure cork is level and permanently bonded to the sub-floor with the adhesive recommended by the cork manufacturer. The minimum density for cork underlayment is 11.4 lbs/cubic foot, with the maximum density being no more than 13 lbs/cubic ft. Before using cork underlayment, the concrete surface must be sealed using the appropriate sealer (as per the sealer manufacturers' recommendations.) Cork must consist entirely of pure cork with polyurethane binder, and should be no more than 1/4" thick.

**Ceramic, Terrazzo, Slate & Marble:**

It is the installers' responsibility to ensure that all the above products are securely bonded to the sub-floor, and that all gaps that exceed 1/8" must be filled with a cementitious leveling compound. Any area containing the leveling compound must be dry prior to wood flooring installation. Perform all appropriate moisture tests.

**Staple-Down over Resilient Tile, Resilient Sheet Vinyl & Cork Filling:**

Ensure that the vinyl or tile is full spread adhesive and properly bonded to the sub-floor. Do not install over more than one layer, which does not exceed 1/8" thickness over a suitable sub-floor. In the event that the vinyl or tiles are loose, crumbled, or in poor condition, install an underlayment directly over the sheet vinyl or vinyl tiles. Be advised that as tiles age they become brittle, make sure that the staple will penetrate these tiles without breakage. Remove these products if necessary.

**VAPOR EMISSIONS TESTING FOR CONCRETE SLABS FOR ADHERED (GLUE DOWN) OR FLOATING INSTALLATIONS**

**Moisture Meters:**

Electronic Moisture Meters are to be used as they are designed, which is to calculate the percentage moisture content of the concrete slab and indicate whether additional testing is required. Calibration procedures can vary depending on what brand of meter is used. Always adhere to the appropriate manufacturer guidelines for whatever brand of meter that is being used. Most meters display a reading table that indicates a "danger zone", to let the tester know that a quantitative Calcium chloride test is necessary to determine the amount of moisture emissions actually moving through the slab; (and potentially into the installed flooring). This is important to know so that appropriate steps are taken to resolve the vapor emission problem before hardwood floors can be installed successfully.

**Readings of 3.5 to 4 percent moisture content indicates the need to perform quantitative moisture emissions testing.**

**Concrete Moisture Emissions Testing:**

The quantitative test to measure moisture vapor emissions from concrete slab constructions is the **ASTM F 1869**, "Standard Test Method for Measuring Moisture Vapor Emission Rate of concrete subfloor using Anhydrous Calcium Chloride". This test is commonly called the "calcium-chloride test". The time period for the test is 60-72 hrs, with three test domes required for the first 1000 sq. ft, and an additional test dome required for each additional 1000 sq. ft. of concrete subfloor area involved. The acceptable reading from the test must not exceed **3lbs. / 24hrs. / 1000 sq. ft.**, for hardwood flooring installations as calculated following the testing procedures included with the test kits.

**PH (Alkalinity) Testing:**

It is also a requirement that a pH test be performed to determine the acid/alkalinity content in the concrete slab surface. Tests should be conducted according to **ASTM F 710**. The reading scale is 0-14. High readings indicate alkalinity, while lower readings indicate acidity. The acceptable range is 6-9, before installations should proceed. High or low readings indicate that there is, or has been moisture transmitting in and through the slab within the previous year.

This test is especially important for direct glue down engineered hardwood installs to insure that the wood adhesive performs correctly. It is also a good backup test to follow the Calcium Chloride test because it is possible to get a low reading from a Calcium Chloride test in a dry season, and then have high vapor emissions during a wet/rainy season.

**If you have determined that high moisture is present, a Calcium Chloride and pH Alkalinity Test are mandatory, to accurately determine the amount of moisture emissions and the PH level in the concrete slab, so that appropriate corrective actions can be taken.**

- Perform a Calcium Chloride test according to the test kit manufacturer's instructions. The maximum acceptable reading is 3-lbs. /24 hours/1000 sq. ft for moisture emissions.
- Perform a pH Alkalinity Test according to the test kit manufacturer's instructions. A pH reading of **6-9** on a pH number scale of 1-14 is acceptable.
- If the test results exceed these numbers, the concrete slab should be sealed with an appropriate sealer to correct conditions to meet the flooring manufacturer recommendations.
- Any sealer system chosen must be compatible with the adhesive that will be used if the hardwood flooring is to be adhered (glued down).

**Important:** Do not install any Shaw Hardwood Flooring Product using the glue down installation method over any vinyl asbestos flooring, vinyl composition tile, linoleum, asphalt tile, ceramic or stone tiles, carpet, or vinyl sheet products. Use a Shaw Hardwood that is rated for the Floating Floor Installation Method instead.

**IMPORTANT:**

**ALL SUBFLOORS MUST BE LEVELED TO WITHIN 1/8" IN A 6 FOOT SPAN; OR 3/16" IN A 10 FOOT SPAN BEFORE ANY SOLID HARDWOOD INSTALLATION CAN BEGIN!**

**INSTALLATION PARAMETERS**

**Note:** Use only a flooring nailer that engages the top profile over the tongue at the appropriate angle. Make sure that the flooring nailer is flat against the board to prevent top edge damage. Plate in contact with floor must be smooth and free from nicks or scratches.

**Important:** Set air compressor to 70 - 80 PSI to start, (or follow specific manufacturer's suggested PSI setting). Adjust the air pressure to insure proper setting of nails or staples. Exotic species and denser species of solid hardwood may require specific and carefully controlled nailing pressure in order to insure that the flooring is securely fastened to the subfloor. If tongue damage occurs, lower the air pressure.

**Important:** If you need to remove a side nailed staple, do not pull straight up from the tongue. This will damage the surface of the board. Instead, pull out the nail or staple from the tongue at the front of the board with all pressure from the hammer head directed into the subfloor.

**NAIL DOWN INSTALLATION GUIDELINES:**

**3/4" SOLID HARDWOOD REQUIRED TOOLS AND ACCESSORIES:**

- Power Nailer / air compressor
- Tape Measure
- Door jamb saw / manual or power
- Circular Saw / Jig saw
- Miter or Table Saw
- Pry Bar
- 15 lb. Asphalt Saturated Felt Paper
- Broom / shop vac
- Chalk Line and Chalk
- Hammer
- Safety Equipment (Goggles & Mask)
- Utility Knife
- Nail Punch / wood chisels
- Soft Rubber Mallet

**APPROVED FASTENERS FOR 3/4" SOLID HARDWOOD INSTALLATION:**

- Power Nailer #445 Pneumatic, #45 manual 2" cleat nail
- Primatch Pneumatic Floor Nailer Model P210 with 2" Power Cleat
- Primatech Manual Nailer Model H300 or H330 with 2" Power Cleat
- Stanley-Bostich Pneumatic Floor Nailer MIIIFN with 2" Power Cleat
- Stanley-Bostich Pneumatic Floor Stapler MIIIFS with 2" Staple with 1/2" crown
- Porta-Nailer Manual Floor Nailer Model 401 with 2" Power Cleat
- Porta-Nailer Manual Face Nailer Model 501 with 2" Power Cleat

**ADDITIONAL TOOLS & ACCESSORIES NEEDED FOR 5/16" SOLID HARDWOOD STAPLE DOWN INSTALLATIONS:**

- Blue Hardwood Installation Tape
- 5/16" "Blind" stapling machine

**APPROVED FASTENERS FOR 5/16" SOLID HARDWOOD INSTALLATION:**

- Stanley-Bostitch SX-150-BHF-2 (Or other machines designed or adapted specifically for 5/16" solid flooring)
- 1" (minimum) glue-coated staples

## INSTALLATION INSTRUCTIONS

### Step 1: ESTABLISH A STARTING POINT:

- Before beginning the actual installation, provide proper layout of flooring by distributing short and long lengths equally over the areas where the flooring is to be installed.
- **Remember:** Flooring is to be installed at right angles to the floor joists and if possible, in the longest dimension of the room.
- Work out of at least six cartons at a time to insure proper color and shade mixture.
- Align the first row of planks to be sure you have a good straight line from one side of the room to the other. Snap a chalk line at the desired distance from the wall to help align the planks. The end joints of plank or strip flooring should be staggered to achieve the best appearance in the finished floor. (Minimum 6")
- **Important:** Always allow at least the thickness of the hardwood being installed as an expansion space at all walls and vertical obstructions. Expansion spaces will be concealed using baseboard, and quarter round trim.

### Step 2: INSTALLING THE FLOORING

- Align the first piece on the chalk line. The groove side and end will be facing the starting wall. Pre drill holes and drive 7D or 8D finish nails or screw type flooring nails into the face of the board every 12" approximately 1/3" - 3/4" from the edge closest to the starting wall and within 2"- 3" from the ends and in the darker grain of the wood.
- Edge nail the plank by driving the same type nails at a 50° angle through the tongue of the first piece, spacing the nails every 8" - 10" and within 2" - 3" from the ends. This process should be repeated for each piece in the entire first row. Upon completion of the first row, go back and sink the face nails with a nail punch. If it appears that the holes will not be covered by the wall base or quarter round trim, fill the holes with matching wood filler, which blends with your pre-stained floor.
- Typically, the first few rows must be edge nailed by hand, rather than with a nailing machine due to the vertical wall obstruction. When clearance allows, use an approved nailing machine, which drives 2" fasteners with an appropriate mallet. Used to simplify and speed up the nailing process.
- Install each succeeding row of planks by edge nailing the tongue side every 6" - 8" to within 2" - 3" from board ends. Be attentive to staggering the ends of the boards at least 6" in adjacent rows to avoid clustering end joints. It is best to build a rack 4-6 planks wide as you install wood through the length of the room. Upon reaching the last row to be installed, the planks should be ripped to allow the required expansion space. The last rows must be fastened by nailing approximately 1/2" - 3/4" from the back edge of the board every 12". The same process of counter sinking the face nails and applying color matched wood filler, should be repeated (as above on starting wall).
- Make sure when the installation is complete that the expansion space is covered with the appropriate molding such as, base board and 3/4 rounds.

### 5/16" Solid Hardwood Staple-down installation tips:

- Use appropriate 5/16" blind staple machine with 1" minimum glue coated staples. (We recommend the Stanley-Bostitch SX-150-BHF-2 or equivalent) Adjust pressure accordingly to achieve flush-sink stapling.
- Blind staple along the length of strips or planks and near the ends. Staple must be at least 2" from each end and 4" to 6" apart with a minimum of 3 staples per strip or plank. Proper staple schedule will enhance floor performance, and is required for warranty protection.
- Determine starting wall and snap a chalk line parallel to it.
- Install the first row using longer strips, groove side toward the starting wall. Use top nails or a sacrificial board on the opposite side of the chalk line to hold the first row "aligned and firmly in place".
- End joints should be staggered a minimum of 6 inches to maintain a random pattern.
- The final 1-2 rows may need to be face nailed if there is not enough space to utilize the staple machine.
- Allow 5/16" expansion space around the perimeter of the installation area. Take care to protect finished areas while completing install.
- Wood flooring performs best when there is no horizontal or vertical movement of the sub-floor. Ensure that the wood sub-floor is properly secured, and well nailed or screwed down every 6" along each joist to avoid squeaking or popping before the floor is installed. Make sure the sub-floor is given ample room to expand.

- Install wood flooring perpendicular to floor joists whenever possible.
- When installing over existing wood flooring, it is important not to install over wood flooring that has been glued down. In addition, do not install over nailed floors that exceed 3 1/4" in width. It is important to install the new wood flooring at right angles to the existing wood flooring. If this is not possible, it may be necessary to install 1/2" of plywood over the existing flooring to stabilize the sub-floor.
- Whenever installing this wood flooring, applicable standards and recommendations of the construction and materials industries must be met or exceeded.

**GLUE-DOWN INSTALLATION GUIDE FOR 5/16" SOLID HARDWOOD ONLY:**

**Note: Do not install 5/16" Solid Hardwood products over Radiant Heated Subfloors. Tools and Accessories Needed:**

Soft Rubber Mallet  
Hand saw  
Pencil  
Moisture meter

3-M Blue Hardwood Tape  
Table saw or jig saw  
Hammer  
Urethane Adhesive

Broom  
Chalk line & chalk  
Tape Measure

A moisture barrier must be used on subfloors to prevent damage to the flooring. Over concrete, use only concrete moisture sealer systems that are specifically designed for moisture suppression and adhesive bonding properties. For wood or wood based subfloors, use 15 pound asphalted felt paper. The sub-floor must be tested for moisture using the appropriate test method(s). (Please review NOFMA or NWFA guidelines for subfloors)

**General Glue-down Installation Tips:**

- In order to achieve the most appealing overall appearance of the floor, you must stagger the ends of the boards at least 6", from one row to the next, at all times.
- Flooring should be installed from several cartons simultaneously to ensure consistent color and grade mixing.
- Installation parallel to the longest wall is recommended for the best overall appearance.
- For larger installations, or in areas of high humidity, it is recommended that you allow ample room for internal or field expansion. In this situation, use 2-millimeter spacers every 3-4 ft. to allow sufficient room for expansion.
- Leave an expansion zone around the entire perimeter of the installation equal to the thickness of the flooring product to be installed.

**Concrete Slabs:**

- Use a Moisture-Cured Urethane Adhesive approved for this application. Carefully follow the instructions provided by the adhesive manufacturer, and make sure the adhesive system chosen is compatible with any moisture protection system used when installing over concrete subfloors.
- In order to prepare the concrete surface for optimum performance use mechanical methods such as sanding or scouring with open coat paper or a titanium disk.
- All concrete slabs should have a minimum of 6-mil poly film moisture barrier between the ground and concrete.
- Determine the starting wall, and measure an even number of planks out plus the required expansion and the width of the tongue of the flooring strip or plank, and used those measurements to snap a reference chalk line.
- Using the recommended trowel evenly spread the adhesive per the manufacturer's instructions. Special attention should be given to spread rate and cure times. Do not spread adhesive on an area larger than what can be covered in the open working time as specified by the adhesive manufacturer.
- Install the first row using the longer strips, groove side toward the starting wall. Use top nails or a sacrificial board on the opposite side of the chalk line to firmly hold the first row in place. The first row must be "completely and firmly" aligned and seated before proceeding, as all additional rows will be pushed against it.
- Allow expansion space equal to the thickness of the flooring product around the entire perimeter of the installation area, including undercut doorjambs or cabinet kick bases etc.
- Be careful to protect finished installed areas while completing the installation.

### **PREVENTIVE MAINTENANCE**

- Wood flooring is a natural product that will be greatly affected by the environment. It is important to know that as humidity levels change throughout the year, your flooring will have a tendency to expand and contract. In order to keep your wood flooring always looking its best, we recommend that you try and keep your humidity levels between 35-65% year round. Some suggestions on how to do that:
  - Heating Season (Dry)-In the drier months, a humidifier is recommended to prevent excess shrinkage. Wood stoves and electric heat tend to add to the dry conditions.
  - Non-Heating Season (Humid, Wet)-In the summertime, an air-conditioner, dehumidifier, or turning on your heating unit periodically can reduce humidity levels. In the wetter months, avoid excessive exposure to water and make sure all expansion areas around the perimeter of the floor are not blocked.
- Vacuum your floor regularly as you would carpet. Do not use a vacuum with any type of rotating brush; a brush attachment works perfectly. In addition, sweep your floor with a broom or a dry dust mop on an as needed basis.
- Water can be very damaging to your floor; therefore food or liquid spills should be removed in a timely manner. If a cleaner is needed for difficult spots, use a damp sponge. Do not use any abrasive type of sponge or cleaner. For general cleaning of soiled areas, dip or spray a clean cloth with Hard Surface Cleaner. The cloth should be slightly moistened, not wet. As you clean the floor, follow by wiping the floor dry.
- Never wet mop your floor with water and /or products like Oil Soap. Water is your floors' worst enemy. Water can cause wood to expand and may damage the floor. Adding an Oil Soap to the mop has a similar effect as with other waxes and cleaning agents. They can leave residue on your flooring surface and they can soften and dull the flooring finish.
- Use mats at all exterior doors to help reduce sand and grit from getting onto the floor. Gritty sand on the bottom of shoes will act like sandpaper and can damage any finish.
- Keep high heel shoes in good repair. Any spike high heel shoe that has lost the protective cap can exert over 1000 pounds per square inch of pressure which can damage your floor.
- Wood is a natural material and will change color due to exposure to natural and artificial UV light. Any area rugs should be moved from time to time, to allow the flooring to naturally change color when exposed to the light.
- Your floor already has the best finish available on the market today. There is no need to put any type of wax on the floor. Do not use any ammonia, wax or oil based cleaners.
- NOTE: Spray mist only as necessary. Do not apply moisture unnecessarily, vacuum instead. Ammonia will damage or dull many surface finishes and should not be used to clean your solid wood floor. Too much moisture will damage your floor and void the warranty.

### **SPECIAL CIRCUMSTANCES**

**Doorways:** Attempting to continue installing rows through a doorway into another room can cause problems because the narrow opening is a very small base upon which to continue consistent even rows into the next room. **Use a master reference line placed through the adjoining rooms to insure plank alignment.**

**To avoid these problems, rooms may be divided at doorways by using a color matched T-molding.**

**Pipes, vents and other fixed objects:** Each can be unique, but the general rule is to measure very carefully before you cut and remember to leave an expansion gap equal to the thickness of the flooring, between the fixed object and the flooring. You will cover expansion gaps with molding, colored sealant, vent covers or pipe rings when the floor is complete.

**Installation on Stairs:** Flooring on stairs must be fully nailed to the stairs. Installation on a flight of Stairs or complete stairwell is not recommended. Check with local building codes before cutting off any of the original wood or bull nosing on the existing step. Stair Nose Moldings should be installed using construction grade adhesive, as well as screw type fasteners or nails.

**CAUTION:** Hardwood installed on steps can be slippery when dusty or wet. Always use caution on steps, especially while walking on steps with stockings or socks only, on the feet.

## **MOLDINGS, TRIM & TRANSITION PIECES**

### **Installation Tips:**

- Moldings must be predrilled **to** avoid splitting whenever they are to be secured with nails or fasteners, unless a pneumatic trim nailer is used.
- The tool of choice for cutting hardwood moldings is a 10" or 12" motorized miter saw with pre-set adjustments for the basic miter cuts at 22.5°, 45°, and 90°. A carbide tipped blade makes the best cuts.
- When installing Wall Base molding, eliminate the need to putty as many holes on the molding by placing the bottom nail below the finished line of the Quarter Round.
- On Wall Base or Quarter Round moldings, never restrict the hardwood floor's natural contraction/expansion movement by driving the fasteners at a downward angle. Rather, attach the moldings to the wall or vertical surface.
- Always miter cuts rather than having butt cuts when splicing hardwood moldings. Decide the direction of the miter by cutting the molding with the long point oriented in the same direction as your natural line of vision when you enter the room.

**Wall Base** - Borders the wood floor at the base of the wall to give the room a finished look. This molding along with the Quarter Round conceals the required expansion space between the wall and the hardwood flooring. It is also sometimes used under cabinets and toe kicks.

**Quarter Round** - This molding conceals the required expansion space between the Wall Base and the hardwood flooring. It is also sometimes used under cabinets and toe kicks where a wall base won't fit or at the base of the stairs to provide a subtle blend between the floor and the wall or vertical surface.

**Threshold** – A molding typically used at exterior doorways as a transition between flooring and the doorway threshold. It is also used to transition a wood floor to different floors to make them fit together perfectly, such as high pile carpeting or tile. Another typical use for a threshold is to conceal the expansion space between the flooring and a vertical surface such as fireplace hearths and sliding glass doors.

- **Installation:** Lay the Threshold Molding in place to determine a proper fit. The Threshold Molding should overlap the flooring by 1/8" to 1/4" leaving the balance for expansion. Nail the molding to the subfloor behind the lip of the molding. Be sure when nailing, not to obstruct the floors expansion space.

**T Molding** - Used in doorways to join two wood floors in adjoining rooms, or when making transitions, from a wood floor to another floor that is approximately the same height such as ceramic tile, hardwood or laminate floors.

- **Installation:** A space of 1 1/4" between the two adjoining floors is necessary to properly install the T-molding. This is to allow for the expansion space. Measure, cut, and dry fit the T-molding in place to insure the proper fit. When using the T-molding between a ceramic tile floor and the hardwood floor, apply 1/4" bead of clear silicone sealant to the top edge of the ceramic tile. When using between two hardwood floors, seat the molding in place allowing for a minimum of a 1/4" overlap on the wood flooring. Make sure to allow for the expansion space between the T-Molding and the tile or wood. Fasten the T-mold by nailing to the subfloor through the center part of the molding.

**Flush Reducer** - Used to join hardwood floors with floors in adjoining rooms that have floor coverings that are lower in height, such as vinyl, ceramic tile, or low pile carpeting.

- **Installation:** To attached molding, pre-drill and nail in appropriate 6" to 8" intervals. Do not nail closer than 2"- 3" from the ends of either side.

**Flush Stair Nose** - Provides the proper transition for stair treads, which match the hardwood flooring that has been installed. The Stair Nose also provides the proper transition from one floor level to the next, such as the step down into a sunken living room.

- **Installation:** All Stair Nose moldings must be installed using construction grade adhesive as well as finish nails or screws. Set the nail or screw heads, then use color matched wood filler to achieve a desirable finished look.

## **HARDWOOD FLOORING CARE & MAINTENANCE**

### **Routine Maintenance**

- Use a damp cloth to blot up spills as soon as they happen. Never allow liquids to stand on your floor.
- For tough spot cleaning, such as oil, paint, markers, lipstick, ink, or tar, use an acetone based nail polish remover (10% solution) on a clean white cloth, then wipe the area with a damp cloth and buff dry to remove any remaining residue.
- Sweep, dust, or vacuum the floor regularly with the hard floor attachment (not the beater bar) to prevent accumulation of dirt and grit that can scratch or dull the floor finish.
- Periodically clean the floor with cleaning products made specifically for pre-finished hardwood floor care. Carefully follow the manufacturer's instructions.
- Do not wash or *wet* mop the floor with furniture polish, soap, water, or oil-soap detergents, or any other liquid cleaning material. This could cause swelling, warping, delamination, discoloration and joint-line separation, and void the warranty. Always avoid using excessive amounts of water or cleaner on the flooring. Damp mopping should only be done with a well wrung out sponge mop designed for hardwood flooring.
- Do not use steel wool, abrasive cleaners, or strong ammoniated or chlorinated type cleaners.
- Do not use any type of buffing, polishing or steam cleaning machine on your flooring.
- For spots such as candle wax or chewing gum, harden the spot with ice and then gently scrape with a plastic scraper, such as a credit card. Be careful not to scratch the flooring surface. Wipe clean with a damp cloth.
- For tough stains, you may need to use a heavy-duty stain remover made specifically for hardwood floors.
- A more frequent dust-mopping or vacuuming schedule may be required in very sandy areas such as a beach home.

### **Environmental Protection**

- Entry mats will help collect the dirt, sand, grit, and other substances such as oil, asphalt, or driveway sealer that might otherwise be tracked onto your floor.
- Do not use rubber or foam backed plastic mats as they may discolor the flooring finish. To prevent slippage, use an approved vinyl rug underlayment.
- Use floor protectors and wide-load bearing leg bases/ rollers to minimize indentations and scratches from heavy objects. As a rule, the heavier the object, the wider the floor protector.
- Maintain a normal indoor relative humidity level between 35% and 65% throughout the year to minimize the natural expansion and contraction of the wood.
  - Heating season (Dry): A humidifier is recommended to prevent excess shrinkage due to low humidity levels. Wood stove and electric heat tend to create very dry conditions.
  - Non Heating Season (Wet): An air conditioner, dehumidifier, or periodically turning on your heating will help to maintain humidity levels during summer months.
- Avoid excessive exposure to water during periods of inclement weather.
- Do not walk on your floor with stiletto heels, spiked golf shoes, or other types of sports cleats.
- Do not allow sharp, pointed, or rough textured objects to be exposed to the hardwood flooring.
- Keep your pet's nails trimmed to prevent them from scratching your floor.
- Rearranging your area rugs and furniture must be accomplished periodically allow the floor to age evenly. UV sunlight will soften or darken the tone of different species of hardwood to varying degrees.
- Use a dolly when moving heavy furniture or appliances; but first, put down a piece of quarter inch plywood or Masonite to protect the floor. Never try to slide or roll heavy objects across the floor.
- A protective mat should be used for furniture or chairs with castors.

### **Repairing Your Hardwood Floor**

- Minor damage to your hardwood floor can be repaired by using a color fill. This special product should be matched to the color of your floor and, when properly used, will make the damaged area virtually invisible. In addition, the repaired area will hold up well to traffic and wear.
- A qualified hardwood flooring installer should repair extensive damage to traditional engineered or solid hardwood flooring.
- Call the SHAW Information Center at 1-800-441-7429 for assistance.



**EPIC 3/8" PRE FINISHED ENGINEERED HARDWOOD by SHAW**

**INSTALLATION INSTRUCTIONS**

**THE FOLLOWING INSTALLATION INSTRUCTIONS ARE AN APPENDIX TO THE SHAW HARDWOODS WARRANTY FOR APPLICABLE PRODUCTS.**

PLEASE READ AND REVIEW THE ENTIRE INSTALLATION INSTRUCTIONS AND CARE AND MAINTENANCE BEFORE PROCEEDING WITH THE ACTUAL INSTALLATION. FAILURE TO MEET NECESSARY REQUIREMENTS STATED WITHIN THE INSTRUCTIONS WILL VOID THE SHAW WARRANTY COVERAGE.

**SPECIAL NOTE:**

**THE PLANK ORIENTATION FOR THE EPIC HARDWOOD 3/8" PRODUCT IS REVERSED FOR THE NAIL DOWN INSTALLATION PROCESS. THE PLANKS WILL BE PLACED WITH THE TONGUES TOWARD THE STARTING WALL. STAPLES WILL BE PLACED THROUGH THE BOTTOM GROOVE EDGE OF THE PLANKS.**

**OWNER / INSTALLER RESPONSIBILITY**

Shaw **EPIC** Hardwood flooring is a beautiful and unique product combining the best of Mother Nature's natural wood beauty, and the latest in environmentally responsible manufacturing techniques.

All engineered hardwood is characterized by distinctive variations in grain and color in the face of the product. These natural variations in color and grain are not flaws, but are a part of the natural beauty and uniqueness of hardwood flooring. (These inherent variations should be expected and serve to enhance the natural beauty and enduring charm.) Shaw Hardwood Floors™ are manufactured in accordance with accepted industry standards, which permit a defect tolerance not to exceed 5%. The defects may be of a manufacturing or natural type. (Remember: No two hardwood floors are alike.)

- The installer assumes all responsibility for final inspection of product quality. This inspection of all flooring should be done **before** installation. Carefully examine the flooring for color, finish and quality before installing it. Use reasonable selectivity and cull out or cut off pieces with glaring defects. If material is not acceptable, contact your Shaw Hardwood Flooring™ dealer immediately.
- Before beginning the installation of any hardwood flooring product, the installer must determine that the environment of the job site and the condition and type of the subfloor involved is suitable, insuring that both meet or exceed all requirements which are stipulated in the Shaw Hardwood Flooring™ installation instructions which follow.
- Shaw Industries, Inc. declines any responsibility for job failure resulting from or associated with inappropriate or improperly prepared subfloors or job site environment deficiencies.
- The use of stain, filler or putty stick for the correction of defects during installation should be accepted as normal procedure.
- When Shaw Hardwood Flooring™ is ordered, a 5 - 10% waste factor, depending on layout, must be added to the actual square footage amount needed. (Diagonal Installations may require more.)

**JOB SITE INSPECTION & ACCLIMATION**

**Acclimation of Shaw EPIC Hardwood is not required when jobsite conditions have been previously maintained within the ranges listed below. (Please read carefully!)**

- In new construction, Shaw Hardwood Flooring™ should be one of the last items installed. All work involving water or moisture, (plumbing, plaster/drywall ceilings or wall finishes, painting, etc.), should be finished and adequate time allowed for complete drying, prior to EPIC Hardwood Flooring being installed. Heating and air conditioning systems (HVAC) should be fully operational and capable of maintaining a consistent room temperature at 60-80° F, and a constant relative humidity range of 35%-65%, for at least **5 days**, prior to beginning the wood flooring installation. **Acclimation of Shaw EPIC Hardwood is not required when jobsite conditions have been previously maintained within the ranges listed above.**
- Where the above referenced site conditions have not been met for at least five days, normal 48 hour flooring acclimation in the previously stated climate controlled conditions is required.
- Flooring should not be delivered until the above environmental guidelines are met. Concrete and plaster should be fully cured, and dry. Check basements and under floor crawl spaces to be sure that they are dry and well ventilated to avoid damage caused by moisture. Shaw recommends a minimum of 6 mil vapor barrier placed on 100% of the surface of the ground in crawl spaces not finished with cement.



- Wood Subfloors must be dry, (less than 14% moisture content), and within a 4% range of the moisture content of the EPIC Hardwood flooring being installed.
- Handle with care. Do not stand on ends or sides. Store Shaw Hardwood flooring flat with proper support on the ends and center sections in a dry place.
- Do not store directly upon on grade concrete or next to outside walls. Cartons should be placed as close to the center of the installation area as possible, away from exterior walls, windows, and doors. Keep out of direct sunlight and away from heat or air vents.
- **Do not open the EPIC Hardwood cartons until ready to begin the installation.**

**REQUIRED TOOLS AND ACCESSORIES**

- Hand Saw or Electric Saw (Carbide Tip Blade Recommend)
- Carpenter's Square
- Utility Knife
- Tapping Block
- Spacers (3/8" to 9/16" )
- Safety Equipment (Goggles & Mask)
- Tape Measure
- Soft Rubber Mallet
- Broom
- Hammer
- Pull Bar

**FOR FLOATING INSTALLATIONS YOU WILL ALSO NEED**

- Shaw Hardwood Tongue and Groove™ Flooring Adhesive or equivalent
- Shaw Adhesive Remover or equivalent
- Both Damp and Dry Towels

**FOR GLUE DOWN INSTALLATION ONLY YOU WILL ALSO NEED**

- 100 or 150 lb. Roller
- ShawBond Hardwood Flooring Adhesive or an equivalent product.
- Shaw Adhesive Remover or equivalent product.
- Notch Trowel – 1/4" square notch ( for planks 5" or wider), 3/16" square notch (for planks less than 5" wide)
- Both Damp and Dry Terry Towels for clean-up.

**PNEUMATIC STAPLING GUIDELINES FOR STAPLE DOWN INSTALLATION ONLY:**

Shaw Industries Group, Inc. has identified the following staplers and their respective staple sizes, for the installation of the 3/8" thickness EPIC Hardwood Products:

Bostitch #LHF97-125	20 ga. x 3/16" crown x 1" long
Bostich #SX 150 BHF-2	18 ga. x 1/4" crown x 1" long
Porta-nail Twin Trigger 20	20 ga. x 3/16" crown x 1" long
Senco #SLS20HF	19 ga. x 3/16" crown x 1" long
Duo-Fast #SS1848F	18 ga. x 1/4" crown x 1" long

**Note: Always use a pneumatic flooring stapler that engages the top of the flooring profile over the bottom groove edge at the appropriate angle. Make sure that the flooring stapler is in good working condition and fully seats the staples properly against the bottom groove to prevent top edge or surface damage.**

**Important:** Start by setting the air compressor to 70-80 PSI (or follow the stapler manufacturer's suggested PSI setting). Adjust the air pressure to insure proper setting of staples. If splitting damage occurs to the bottom groove seating area, lower the air pressure. If the staples are not fully seating properly, increase the air pressure setting gradually until proper seating is achieved.



**Important:** If you need to remove a side nailed staple, do not pull straight up from the stapled groove with the claw hammer resting on top of the plank. This will damage the surface of the board. Instead, pull out the staple from the groove at the front of the board with all pressure from the hammerhead directed into the subfloor.

**Special Notes on Pneumatic Stapling of Epic Products:**

Air Pressure settings and the speed of installation are dependant upon the air compressor model used, and the **capacities of the tank system involved**. Care should be taken not to exceed the ability of the compressor and tank system to immediately return to full required air pressure during the stapling operations. The use of low capacity compressor tank systems will require a slower stapling sequence during installation, in order to insure that all staples are properly seated. Improperly seated staples will further slow down the board fitting installation process, and can lead to movement and noise within the flooring system, and possibly raised areas (staple bumps) on the flooring surface.

In situations where multiple pneumatic staplers will be used simultaneously during installation; an air compressor and tank system of sufficient horsepower and tank capacity should be used to support the continuous full pressure operation of **all** fastening equipment being used at one time.

In situations where hardened, moisture resistant sub floor materials are being used, such as OSB materials rated for wider spaced 19" or 24" joist or beam centers; **higher air pressure setting may be required to properly seat the flooring staples**. Always use a test piece of flooring to properly adjust the pneumatic stapler in these situations, **before** beginning the full installation of the flooring.

**SUBFLOOR PREPARATION**

**NOTE:** As flooring manufacturers and wholesalers, we are unable to specifically evaluate each engineered subflooring system. Spacing and span lengths, as well as their engineering methods, are the responsibility of the builder, engineer, architect or consumer, who are better able to evaluate their expected results, based on site-related conditions and performance requirements. The general information provided below describes common, non-engineered joists and subfloor decking systems. Engineered subflooring systems may allow for wider spacing of engineered beam support systems; and alternative subfloor decking materials, while also providing equal performance characteristics to the systems discussed below.

**Approved Subfloor Types:**

- APA approved minimum - 5/8" thickness, preferred - 3/4" or thicker exterior grade plywood, on 16" centered 2"x10" joists.
- **NOTE:** When installing and fastening approved plywood, please follow the specific structural panel manufacturer's instructions.
- 3/4" (23/32") OSB on 16" center, 2"x10" floor joists properly nailed. When installing hardwood over engineered joists and truss systems that are spaced wider than 16" on center, it may be necessary to add an additional layer of sub flooring or use additional cross bracing to stiffen the system, reducing excessive deflection.
- Concrete slab-Shaw Engineered Hardwood Flooring Products can be installed on all grade levels. Concrete slabs must be clean and dry- less than 3 lbs. /1000 sf. / 24 hr. - per CCTM.

**Subfloor must be:**

- **CLEAN** - Scraped or sanded, swept, free of wax, grease, paint, oil and other debris.
- **SMOOTH/FLAT** - Within 1/8" in a 6' span. Sand high areas or fill low areas with cement base leveling compound- no less than 3000 psi rating.
- **STRUCTURALLY SOUND** - Nail or screw any loose areas that squeak or reveal movement. Replace any damaged sub flooring or underlayment.
- **DRY** - Moisture content of wood subfloor **must not** exceed 12% prior to installation of wood flooring.
- **MOISTURE CONTENT BALANCED** - Wood based subfloors and the wood flooring to be installed must be within a 4% range of each other's moisture content.

**Remember: Moisture testing results must be verified both before and after, the wood has been acclimated 48 hours, and all other job site requirements have been met.**



**Wood Substrates:** Test the moisture of the wood substrate using a calibrated (pin type) moisture meter approved for testing wood moisture content. The reading should not exceed 12%, or read more than a 4% difference than moisture content of flooring products being installed.

**Concrete Sub floor requirements for adhered (glue down) or Floating installations:**

All concrete sub floors must be tested for moisture emissions prior to installation of the Bamboo flooring. The moisture emissions of the fully cured **concrete** sub floor must not exceed **3 lbs. /1000 sq.ft./24 hr. emissions**, measured using the Calcium Chloride Test method. When using an electronic moisture meter; readings higher than the maximum moisture level readings of 3.5% to 4% indicate the need for a Calcium Chloride and pH tests, **and any necessary corrective action for the concrete sub floor indicated by the test results, must be successfully completed and documented before the installation can proceed.**

**If you have determined that moisture is present, a Calcium Chloride and pH Alkalinity Test are mandatory, to accurately determine the amount of moisture content and the PH level in the concrete slab, so that appropriate corrective actions can be taken.**

- Perform a Calcium Chloride test according to the manufacturer's instructions. The maximum acceptable reading is 3-lbs. /24 hours/1000 sq. ft for moisture emissions.
- Perform a pH Alkalinity Test according to the manufacturer's instructions. A pH reading of 6-9 on a pH number scale of 1-14 is acceptable.
- If the test results exceed these numbers, the concrete slab should be sealed with an appropriate sealer to correct conditions to meet the flooring manufacturer recommendations.

**Installation on Plywood and Wood Substrates: Do not install over particleboard, with exception of products that can be installed using the floating installation method.** Subfloor suitable for nail down or stapled wood flooring installation should be constructed of a minimum 5/8", or preferably thicker plywood when installing directly over 16" on center 2"x10" joists. Plywood sheets should be laid with grained outer plies at right angles to joists; with adjacent rows staggered four feet and nailed every 6" along each joist with 7D or larger nails. When installing new hardwood flooring directly over an old wood or strip wood floors, sand any high spots. Re-nail the old floor to eliminate squeaks or loose boards, and install new planks at right angle (perpendicular) to the old floor. Remember, the moisture content of the wood or plywood subfloor should not exceed 14%.

**Important:** Do not install any Shaw Hardwood Flooring Product using the glue down installation method over any vinyl asbestos flooring, vinyl composition tile, linoleum, asphalt tile, ceramic or stone tiles, carpet, or vinyl sheet products. Use a Shaw Hardwood that is rated for the Floating Floor Installation Method.

**Installation on Concrete Slabs:**

**Note:** Slip Sheet method of Installation has specific installation requirements. Contact Shaw Information Center at 1-800-441-7429 for approved installation procedures.

**FLOATING FLOOR INSTALLATION METHOD**

**SPECIAL NOTE: BOTH 3 1/4" AND 5" WIDTH PLANKS OF SHAW EPIC HARDWOOD ARE APPROVED FOR FLOATING INSTALLATION.**

**Approved Subfloor Types:**

All Shaw Engineered Hardwood Flooring™ products which have been approved for the floating installation method can be installed over any dry, level, sound subfloor, regardless of install level or sub floor type. All subfloors should be covered with Shaw Silent Step™ "3 in 1" or "2 in 1" Underlayment, or an approved foam underlayment. When using a basic foam underlayment over a concrete subfloor, you must also use a 6 or 8 mil. polyethylene film under the foam pad, which acts as a vapor barrier.

**Note:** Any pre-existing wood panels or strips that are floating or direct glued to the concrete slab, must be removed before installing Shaw Engineered Hardwood flooring using the floating method.

**Below or On Grade:** Always check the slab for excessive moisture and perform a PH test to insure that the slab is suitable for hardwood installation. (See Concrete Slabs:) Install Shaw Silent Step™ "3in1", "2in1" Underlayment, or the 6 mil. poly film and basic foam underlayment, which should be installed with ends butted together and taped with a clear 2" packaging tape to prevent any moisture from coming up through the seams. The Silent Step™ "3 in 1", "2 in 1" underlayment or 6 mil. poly film should be lapped up the wall 4" all the way

around the room. This can be trimmed off after moldings are installed. If you are using the Silent Step™ “3 in 1” or “2 in 1” Underlayment, you are ready to begin the installation. However, if you have used the 6 mil. poly film, you need to install an approved basic foam pad on top of the 6 mil poly film butting the edges (but not overlapping). All seams must be taped with 2” clear package tape when installing over concrete slab.

#### **Installing EPIC Hardwood Floors over Radiant Heated Sub Floors**

- **Oak, Ash, Hickory, and Walnut** species of Shaw EPIC Engineered Hardwood products are approved for installation over radiant heated subfloors using either Adhered or Floating installation methods, if applicable for the product.
- Nail or Staple Down installation methods are not recommended for Radiant Heated Sub Floors.
- Radiant Heating Systems used must be designed and controlled specifically for Hardwood flooring by the system manufacturer, and include an Outside Temperature Probe, and Surface Temperature Controls.
- The end consumer should be aware that minor gapping between wood planks during the heating season is a normal occurrence with hardwood flooring installed over radiant heated subfloors.
- Proper humidity controls within the home or business will help to minimize the natural wood reaction to seasonally changing climate conditions.
- Indoor climate should be maintained between 60-80° F and a relative humidity range of 35%-65%.

#### **Adhere to the following guidelines for a successful installation over radiant heat:**

- Newly installed water type radiant heated flooring systems should be in operational mode with the temperature set between 64° -72°F, for a minimum of 4 weeks to insure that all sub floor moisture has properly dried.
- Older water type radiant floor heat systems should be fully pressure tested, properly maintained, and set to a minimum of 64°F, for at least 4 days before flooring delivery; acclimation, or installation processes may begin.
- All radiant heating systems must be set to room temp. (A minimum of 64°F), for at least 4 days before flooring delivery; acclimation, or installation processes may begin.
- Always check wood sub floors to insure that the moisture content is less than 14% using an accurate wood moisture meter.
- Concrete sub floors must register “dry”, using a reliable concrete moisture meter.
- The pH level of concrete sub floors should register between 6 and 9, on a fourteen point pH scale.
- Sub floors must fully comply with these “dry” requirements before proceeding with the delivery, acclimation, or installation of the wood flooring at the job site.
- Regulate the job site to insure that the relative humidity is between 35% and 65%, and that temperature is between 60° and 80° F, throughout the flooring delivery, acclimation, installation and any required curing processes.
- Deliver and acclimate the engineered hardwood flooring, for at least 48 hours before installation begins.
- Install the hardwood flooring according to the instructions that pertain to the product.
- After completing the installation, do not change the radiant heat setting for 48 hrs.
- Throughout the life of the installation, 3 to 5 degree daily increments must be used when adjusting system temperature for either upward or lower adjustments; so that the hardwood flooring can adjust to the temperature changes in a gradual manner.
- Never raise the flooring surface temperature setting above 85 degrees Fahrenheit.

#### **JOBSITE PREPARATION**

- Undercut door casings
- Remove any existing wall base, shoe molding, quarter round or doorway threshold.

**Important: Do not install cabinets, fixtures, or walls on top of the flooring when using the floating installation method.**

#### **Step 1: POSITION THE FIRST ROW**

**Important:** The flooring should be installed from several cartons at the same time to insure proper color, grain, and shade mix.

1. Before starting, first measure the width of the room, and then divide the room's width by the width of the plank. If this means that the last row of planks will be narrower than 2", then you will need to cut the first row of planks to make it narrower. Cut in such a way that both rows of planks (the first and last to be installed in the room) will have the same approximate width for an overall continuous look. See installing the last row.

- **Note:** To cut the boards, always saw with the teeth cutting down into the face or top of the board. Cutting from the top down helps protect the surface. Use a carbide tip blade to insure smooth cuts.

2. Begin the installation of the planks in the left-hand corner of the room with the long direction parallel to the longest wall of the room. Always start so that you will be working left to right when facing the starting wall. When possible, run the length of the planks in the same direction as incoming sunlight.

Be sure to install the first row of engineered planks with the tongue side facing the wall.

- Using the proper spacers (depending on the thickness of the flooring), provide a gap for the seasonal expansion of the flooring along the walls of the entire room. Always place expansion spacers against the wall every 2-3'. Also place spacers at each plank end joint connection, as this will make maintaining a straight line install easier.
- **Note:** Larger rooms require additional expansion space. Add 1/16" to the width of the expansion space for every 3' the room extends beyond 25'. Dimensions exceeding 40' in length or width require the use of a T-Molding for proper expansion.

3. If the starting wall is out of square, it will be necessary to scribe the first row to match the wall, allowing the opposite side of the row to present a true and straight base for the rest of the floor. When the first row is complete, you must have a straight, even base established to build upon.

## **Step 2: GLUING THE BOARDS TOGETHER**

When installing the Shaw EPIC Hardwood™ Flooring products which have been approved for the floating installation method, the boards must be side and end glued using Shaw Hardwood™ Tongue & Groove Adhesive (or other authorized product).

Always apply the adhesive into the bottom of the groove on each board. Do not fill the groove. Apply a continuous bead, filling the bottom of the groove no more than halfway full. Start & stop adhesive 2" from the ends on the long side of the board and 1" from the ends on the butt ends.

**Note:** If any excess adhesive squeezes up to the finished surface, wipe it off immediately using a water dampened cloth or Shaw Adhesive Remover. Then immediately dry the surface and buff with a dry cloth. If the adhesive has dried, use a soft white cloth moistened with Shaw Adhesive Remover. Do not abrade the wood surface.

## **Step 3: INSTALLING THE REST OF THE FLOOR**

**Note:** Always random stagger approximately 12" to 24" between end joints of adjacent board rows. The end joints should not repeat visually across the installed floor.

After installing the first row of boards, apply the adhesive to the first board on the second row using the above gluing instructions. Connect that board to the first row remembering the 12" to 24" stagger between the end joint of the board on the first row. Tap the boards together with a hammer and a tapping block. Be sure that the tapping block is against the tongue only and use only a gentle tapping motion to tap the boards together. Excessive force will damage the board making it difficult to install additional boards. Once the board has been tapped into place check for a tight fit on sides and ends. To install the rest of the flooring, continue placing the boards from left to right, building a rack 3 to 4 rows wide, as the installation continues to complete the floor.

**Note:** When installing around fixed objects, small areas or even in general installation areas, the use of installation straps may prove helpful for securing boards together. Installation Straps are a handy tool that will insure a tight fit when used to strap continuous rows of hardwood.

## **Step 4: INSTALLING THE LAST ROW**

Most often the entire length of the last row will need to be cut so that it is narrow enough to fit the remaining space. When this occurs, follow this simple procedure:



- Lay a row of boards, unglued, with the tongue toward the wall, directly on top of the last row installed.
- Take a full width scrap piece of the Shaw Hardwood™ product that is being installed with the face down and the tongue side against the wall. Use appropriate spacers against the wall to ensure the proper expansion space.
- Draw a line along the row moving down the wall. The resulting line gives the proper width for the last row which, when cut, can then be wedged into place using the pull bar. Spacers should remain while the adhesive sets.

**Note:** Floor should remain free of foot traffic for a minimum of 12 hours while adhesive sets.

A drying time of 24 hours is recommended before any damp-dry mopping, cleaning or heavy objects or furniture can be put back into place.

Make sure when the installation is complete that the spacers are removed and the expansion space is covered with an appropriate molding as described in **MOLDINGS, TRIM & TRANSITION PIECES**.

### **STAPLE OR NAIL DOWN INSTALLATION METHOD**

**SPECIAL NOTE: THE PLANK ORIENTATION FOR THE EPIC HARDWOOD 3/8" PRODUCT IS REVERSED FOR THE NAIL DOWN INSTALLATION PROCESS. THE PLANKS WILL BE PLACED WITH THE TONGUES TOWARD THE STARTING WALL. STAPLES WILL BE PLACED THROUGH THE BOTTOM GROOVE EDGE OF THE PLANKS. EDGE NAIL THE PLANKS BY DRIVING THE FASTENERS AT A 45° ANGLE THROUGH THE BOTTOM GROOVE OF THE PLANKS IN THE FIRST ROW OF PLANKS, SPACING THE FASTENERS EVERY 4" - 6"; AND WITHIN 2" - 3" FROM THE PLANK ENDS.**

#### **JOB SITE PREPARATION**

- Always acclimate the product for 48 hours prior to installation when installing in areas that have not been properly climate controlled for at least five days.
- Verify that the floor is level and structurally sound. Repair as needed.
- Undercut door case moldings as needed.
- Remove any existing wall base, shoe molding, quarter round or doorway thresholds.
- Cover the clean surface, wall to wall, with 15 lb. black asphalt saturated felt paper. Butting the edges together.

**Note:** National Wood Flooring Association guidelines recommend against the use of Red Rosin paper in place of asphalt paper.

#### **Step 1: ESTABLISH A STARTING POINT**

- Before beginning the actual installation, start a random layout of the flooring by arranging short and long lengths equally over the areas where the flooring is to be installed.
- Work out of several cartons at a time to insure proper color and shade mixture.
- Align the first row of planks to be sure you have a good straight line from one side of the room to the other. Snap a chalk line at the desired distance from the wall to help align the planks. The end joints of plank or strip flooring should be staggered to achieve the best appearance in the finished floor. (Minimum 6-8" for 3" planks, 12-24" for longer, wider 4-7" planks).

**Important:** Leave the 3/8" expansion space recommended for expansion at all vertical fixed objects. (Normal rule of thumb is to have the expansion space equal the thickness of the wood). Example: 3/4" thick wood planks require a 3/4" expansion space.

#### **Step 2: INSTALLING THE FLOOR**

- The **plank orientation** for the EPIC Hardwood 3/8" product is **reversed** from that of traditional engineered hardwood, for the nail down installation process. The planks will be placed with the tongues facing toward the starting wall. The planks will be fastened to the sub floor by shooting staples through the **bottom groove edges** of each plank.
- Align the first piece on the chalk line. The tongue side and end will be facing the starting wall. To avoid splitting the wood, pre drill holes and then drive 7D or 8D finish nails, or 2" pneumatic nails, into the face of the board every 12" approximately 1/3" - 3/4" from the edge closest to the starting wall and within 2" - 3" from the ends and in the darker grain of the wood.

- Edge nail the plank by driving the same type fasteners at a 45° angle through the bottom groove of the planks in the first row of planks, spacing the nails every 4” - 6”; and within 2” - 3” from the plank ends. This process should be repeated for each piece in the entire first row. Upon completion of the first row, go back and sink the nails with a nail punch. If it appears that the holes will not be covered by the wall base or quarter round trim, fill the holes on the product face with wood filler designed to blend with your wood floor.

**Note:** Typically the first few rows must be edge nailed by hand rather than with a nailing machine due to the vertical wall obstruction. When clearance allows, use the appropriate nail/staple tool, which drive fasteners, simplifying and speeding up the nail/staple process.

- Install each successive row of planks by edge nailing the bottom groove side every 4” - 6” to within 2” - 3” from board ends. Be attentive to staggering the ends of the boards appropriately in adjacent rows to avoid clustering end joints. Upon reaching the last row to be installed, the planks should be ripped to allow proper expansion space. The last rows must be fastened by nailing approximately 1/2” to 3/4” from the back edge of the board every 6”. Use the same process of sinking the face nails and applying wood filler as used on the starter row.

Make sure when the installation is complete that the expansion space is covered with the correctly sized molding.

## **GLUE DOWN INSTALLATION METHOD**

### **JOBSITE PREPARATION**

- Undercut door case moldings as needed.
- Remove any existing wall base, shoe molding, quarter round or doorway threshold moldings.

### **Step 1: GETTING STARTED**

**Note: For EPIC Hardwood planks less than 5” wide, use a 3/16” square notch trowel. For planks wider than 5”, use a 1/4” square notch trowel. Only trowel enough adhesive to set 30-45 square foot of wood. The hardwood can be “wet set” into the Shaw adhesive which has 45 minute open working time.**

- Always orient the wood so that the tongue is facing the starting wall.
- Install the flooring parallel to the longest wall in the room. Measure out from the wall in two places allowing the proper expansion space. Mark and snap a chalk line across the two marks. Glue the first row and place spacers against the walls to secure the row in place. Continue installing the floor from left to right. Spread only enough glue to install what can be set within 45 minutes. Planks can be set directly into wet glue (wet set), as Shaw Adhesives do not require flash off. Work your way out of the room. After the install is completed, keep the floor free from foot traffic for a minimum of 8-12 hours to allow adhesive to properly set.

### **Step 2: SPREADING THE SHAW ADHESIVE**

- Always refer to the specific instructions on the Shaw (or other authorized) hardwood flooring adhesive label.
- When using a Shaw adhesive, use 1/4” x 1/4” x 1/4” square notch trowel, (yields 30 sq. ft. per gallon spread ratio).
- Over very level, flat sub floor use 3/16” x 3/16” x 3/16” square notched trowel, (yields 40 sq. ft per gallon spread ratio).

### **Step 3: STARTING THE INSTALLATION**

- The flooring should be installed from several cartons at the same time to insure proper color, grain and shade mix.
- 3/8” expansion spacing is required on all installations.
- Working from the subfloor, (not on the hardwood), from left to right, lay the next board and continue working towards the right until you need to cut a piece to complete the first row. Measure the size you need to complete the first row and cut to length. (Remember to leave expansion space). The balance of the piece you cut may possibly be used to start the next row, if the length is a minimum of 12”. Be attentive to staggering the ends of the boards correctly in adjacent rows to avoid clustering end joints. A tapping block/hammer can be used to tap the boards until they are in proper position. Lock the row in place using spacers against the wall in the expansion space.



- To protect the face of the boards, always saw with the teeth cutting into the face of the board.
- **For Wood Subfloors:** If you are working on a wood type subfloor, you may want to use small finishing nails to hold the first row in place. Fill nail holes with wood filler designed to blend with your new floor.

#### **Step 4: INSTALLING THE HARDWOOD**

- Complete the rest of the installation by spreading enough adhesive to install 45 sf. at a time. Continue to dry rack when the hardwood so that you maintain the correct random end joint stagger, then continue setting the hardwood into the adhesive.
- Make sure that there is 100% contact between the hardwood and the adhesive. Use a clean, smooth, 100- 150 lb. roller to roll the flooring at every 150 sf. interval during the installation.

#### **Step 5: INSTALLING THE LAST ROW**

- Most often the entire length of the last row will need to be cut so that it is narrow enough to fit the remaining space. When this occurs, follow this simple procedure:
- Lay a row of boards, unglued, with the tongue toward the wall, directly on top of the last row installed.
- Take a short piece of the Shaw Hardwood™ product that is being installed with the face down and the tongue side against the wall.
- Draw a line with a pencil along the row moving down the wall. The resulting line gives the proper width for the last row which, when cut, can then be wedged into place using the pull bar.
- You will need to use the Pull Bar with care to make the last row fit tightly and allowing for proper expansion space. Leave spacers in the expansion space until the adhesive has cured, then remove. Keep the floor free from foot traffic, for 12-24 hours, until adhesive has set securely.
- Shaw Industries, Inc. recommends rolling the floor with a 100-150 lb clean roller to insure good adhesive to wood contact.

#### **SPECIAL CIRCUMSTANCES**

**Doorways:** Attempting to continue installing rows through a doorway into another room can be difficult because the narrow opening is a very small base upon which to continue consistent, straight and even rows into the next room. **T-moldings are available to install in doorways when joining flooring room to room.** When using the Floating install method, every doorway less than 6' wide must be transitioned using a T-molding. Floating flow through installs are allowed only if the total length of the flow-through does not exceed 40', and the flow through doorway is 6' or wider. To achieve alignment of plank rows from room to room, it is best to use a master reference line to run through the doorway to the far ends of each room involved. Position the line so that it is square and parallel from each room's corresponding wall. Use this line to align the plank rows from room to room.

**Pipes, vents and other fixed objects:** Each can be unique, but the general rule is to measure very carefully before you cut and remember to leave a 3/4" expansion gap between the object and the flooring. You will cover expansion gaps with molding, vent covers or pipe rings when the floor is complete.

**Installation on Stairs:** Working from the top step down, flooring should be installed using adhesive and screw type fasteners or nails. All stair nose moldings must be glued and nailed, or screwed every 8", as a safety precaution.

**Glue down over cork:** Using Shawbond Wood flooring adhesive, Shaw EPIC Hardwood can be installed over a structurally sound concrete sub floor that is covered with full spread, permanently bonded acoustic cork. Cork thickness should not exceed 1/4" (6.35 mm), with a density between 11.4 and 13 lb / cubic foot. Install cork in accordance with cork manufacturer's recommendations. Acoustic cork should be pure cork with a polyurethane binder.

## **MOLDINGS, TRIM & TRANSITION PIECES**

### **Installation Tips:**

- Moldings should be acclimated 48 hours
- Moldings must be predrilled to avoid splitting whenever they are to be secured with nails or fasteners.
- The tool of choice for cutting hardwood moldings is a 10" or 12" motorized miter saw with pre-set adjustments for the basic miter cuts at 22.5°, 45°, and 90°. A carbide tipped blade makes the best finished cuts. Be sure the saw blade is positioned to cut into the finished face.
- When installing Wall Base molding, eliminate the need to putty as many holes on the molding by placing the bottom nail below the finished line of the Quarter Round.
- On Wall Base or Quarter Round moldings, never restrict the hardwood floor's natural contraction/expansion movement by driving the fasteners at a downward angle. Attach the moldings to the wall or vertical surface.
- Always miter cuts rather than having butt cuts when splicing. Decide the direction of the miter by cutting the molding with the long point oriented in the same direction as your natural line of vision when you enter the room.

**Wall Base** - Borders the wood floor at the base of the wall to give the room a finished look. This molding along with the Quarter Round conceals the required expansion space between the wall and the hardwood flooring. It is also sometimes used under cabinets and toe kicks.

**Quarter Round** - This molding conceals the required expansion space between the wall/ wall base and the hardwood flooring. It is also sometimes used under cabinets and toe kicks where a wall base won't fit or at the base of the stairs to provide a subtle blend between the floor and the wall or vertical surface.

**Threshold** - This molding is used at exterior doorways as a transition between flooring and the doorway threshold. It also can be used to transition a wood floor to different floor types to make them fit together perfectly, such as high pile carpeting or tile. Another typical use for a threshold is to conceal the expansion space between the flooring and a vertical surface such as fireplace hearths and sliding glass doors.

**Installation:** Lay the threshold molding in place to determine a proper fit. The threshold molding should overlap the flooring by 1/2" to 3/4" leaving the balance for expansion. To attach the threshold, nail into the subfloor behind the lip of the molding. Be sure when nailing not to obstruct the floor's expansion space.

**T Molding** - Doorway molding used to join two wood floors in adjoining rooms. Also used when making transitions from a wood floor to another floor that is approximately the same height, such as ceramic tile, hardwood, or laminate floors. T-Moldings are also used to provide expansion joints when a floor dimension exceeds the length or a width of 40'.

**Installation:** A space of 1 1/4" between the two adjoining floors is necessary to properly install the molding. This is to allow for the expansion space. Lay the T-Molding in place to determine proper fit. To attach the T-Molding between a ceramic tile floor and the hardwood floor, apply 1/4" bead of construction adhesive to the top edge of the ceramic tile. To attach between two hardwood floors apply the 1/4" bead to the top edge of one side of the hardwood only. Seat the molding in place allowing for a minimum of a 1/4" overlap on the wood flooring. Make sure to allow for the expansion space between the T-Molding and the tile. When installing over a wood sub-floor, use finish nails to secure T-mold. When installing over concrete, use heavy-duty construction adhesive to secure T-mold.

**Overlap Reducer- (Floating Method)** Used to join hardwood floors that utilize the floating installation method with floors of different heights such as vinyl, ceramic tile, or low pile carpeting.

**Installation:** To attached molding pre-drill and nail in appropriate 6" to 8" intervals. Do not nail less than 2"- 3" from the ends of either side. To attach the molding using glue, apply glue to the front edge of the molding. Apply one or two 1/4" beads of construction adhesive to the subfloor and seat the molding in place. It is important not to attach the reducer directly to the floating floor to allow expansion and contraction.

**Overlap Stair Nose – (Floating Method)** provides the proper transition for stairways or steps, which have hardwood floors that have been installed using the floating installation method. The Stair Nose also provides the proper overhang for a transition from one floor level to the next such as the step into a sunken living room.

**Installation:** To attached molding pre-drill and nail in appropriate 6” to 8” intervals. Do not nail less than 2”- 3” from the ends of either side. Also apply glue to the front edge of the molding. Apply one or two 1/4” beads of construction adhesive to the subfloor and seat the molding in place. All stair nose moldings must be nailed and glued to secure the molding adequately. It is important not to attach the reducer directly to the floating floor to allow expansion and contraction.

**Flush Reducer** - Used to join hardwood floors that have been glued down or nailed down to transition with floors of different heights such as vinyl, ceramic tile, or low pile carpeting.

**Installation:** To attached molding pre-drill and nail in appropriate 6” to 8” intervals. Do not nail less than 2”- 3” from the ends of either side. To attach the molding using glue, apply glue to the front edge of the molding. Apply one or two 1/4” beads of construction adhesive to the subfloor and seat the molding in place.

**Flush Stair Nose** - Provides the proper transition for stairways or steps which have hardwood floors that have been installed by either the nail down or glue down installation method. The Stair Nose also provides the proper overhang for a transition from one floor level to the next such as the step into a sunken living room.

**Installation:** When used on a stair step, the Stair Nose molding should cover and overlap the riser. When used on a step-up to another room, the Stair Nose molding becomes the starting “edge” of the floor. Because of the interlocking of the molding with the floor, the Stair Nose molding should be installed first. Once the molding is in place, the interlocking floor can be installed. Moldings should be installed using adhesive and screw type fasteners or nails.

## **Hardwood Flooring Care & Maintenance**

### **Routine Maintenance**

- Use a damp cloth to blot up spills as soon as they happen. Never allow liquids to stand on your floor.
- For tough spots, such as oil, paint, markers, lipstick, ink, or tar, use acetone/nail polish remover on a clean white cloth, then wipe the area with a damp cloth to remove any remaining residue.
- Sweep, dust, or vacuum the floor regularly with the hard floor attachment (not the beater bar) to prevent accumulation of dirt and grit that can scratch or dull the floor finish.
- Periodically clean the floor with cleaning products made specifically for pre-finished hardwood floor care.
- Do not wash or wet mop the floor with soap, water, oil-soap detergent, or any other liquid cleaning material. This could cause swelling, warping, delamination, and joint-line separation, and void the warranty.
- Do not use steel wool, abrasive cleaners, or strong ammoniated or chlorinated type cleaners.
- Do not use any type of buffing or polishing machine.
- For spots such as candle wax or chewing gum, harden the spot with ice and then gently scrape with a plastic scraper, such as a credit card. Be careful not to scratch the flooring surface. Wipe clean with a damp cloth.
- For tough stains, you may need to use a heavy-duty stain remover made specifically for hardwood floors.
- A more frequent dust-mopping or vacuuming schedule may be required in very sandy areas such as a beach home.

### **Environmental Protection**

- Entry mats will help collect the dirt, sand, grit, and other substances such as oil, asphalt, or driveway sealer that might otherwise be tracked onto your floor.
- Do not use rubber or foam backed plastic mats as they may discolor the flooring finish. To prevent slippage, use an approved vinyl rug underlayment.
- Use floor protectors and wide-load bearing leg bases/ rollers to minimize indentations and scratches from heavy objects. As a rule, the heavier the object, the wider the floor protector.
- Maintain a normal indoor relative humidity level between 45 and 65% throughout the year to minimize the natural expansion and contraction of the wood.
- Heating season (Dry): A humidifier is recommended to prevent excess shrinkage due to low humidity levels. Wood stove and electric heat tend to create very dry conditions.
- Non Heating Season (Wet): An air conditioner, dehumidifier, or periodically turning on your heating will help to maintain humidity levels during summer months.
- Avoid excessive exposure to water during periods of inclement weather.
- Do not walk on your floor with stiletto heels, spiked golf shoes, or other types of sports cleats.
- Do not allow sharp, pointed, or rough textured objects to be exposed to the hardwood flooring.
- Keep your pet’s nails trimmed to prevent them from scratching your floor.
- Periodically rearranging your area rugs and furniture will allow the floor to age evenly. UV sunlight will soften the tone of different species of hardwood to varying degrees.
- Use a dolly when moving heavy furniture or appliances; but first, put down a piece of quarter inch plywood or Masonite to protect the floor. Never try to slide or roll heavy objects across the floor.
- A protective mat should be used for furniture or chairs with castors.



**Repairing Your Hardwood Floor**

- Minor damage to your hardwood floor can be repaired by using a color fill. This special product should be matched to the color of your floor and, when properly used, will make the damaged area virtually invisible. In addition, the repaired area will hold up to traffic and wear.
- A qualified hardwood flooring installer should repair extensive damage to traditional engineered or solid hardwood flooring.