

Engineered Wood Flooring Installation Guidelines

READ ENTIRE INSTALLATION GUIDELINES BEFORE PROCEEDING WITH THIS INSTALLATION. ALL WORK SHOULD BE PERFORMED IN ACCORDANCE WITH NWFA (National Wood Flooring Association) STANDARDS, BY A QUALIFIED HARDWOOD FLOORING INSTALLER.

INSTALLER/OWNER RESPONSIBILITY

Hardwood flooring is a beautiful and unique product of nature, therefore, not always perfect. It 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. Our 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/owner assumes all responsibility for final inspection of product quality. This inspection of all flooring should be done **before** installation. Carefully examine flooring for color, finish and quality under suitable lighting conditions **before** installing it. *If any material is not acceptable, do not install it and contact the seller immediately. The manufacturers liability is limited to material, not installation or labor related costs.*
- ✓ Prior to installation of any engineered wood flooring product, the installer/owner must determine that the job-site environment and the sub-surfaces involved meet or exceed all applicable standards and recommendations of the construction and materials industries. These instructions recommend that the construction and sub-floor be dry, stiff and flat. The manufacturer declines any responsibility for job failure resulting from or associated with sub-surface or job-site environment deficiencies.
- ✓ Prior to installation, the installer/owner has final inspection responsibility as to grade, manufacture and factory finish. The installer must use reasonable selectivity and cut off or hold out pieces with defects, whatever the cause. Use of filler, putty stick, or stain for defect correction during installation should be accepted as normal procedure.
- When flooring is ordered, 5% must be added to the actual square footage needed for cutting and grading. This is in addition to the 5% defect allowance mentioned above.
- Should an individual piece be doubtful as to grade, manufacture or factory finish, the installer/owner should not use the piece.
- "INSTALLATION IMPLIES ACCEPTANCE"

SUGGESTED TOOLS AND ACCESSORIES

- ✓ Broom (Soft Bristle)
- ✓ Tape Measure
- ✓ Table Saw, Jig Saw, Miter Saw
- ✓ Thickness Specific Flooring Nailer/and fasteners
- ✓ Urethane adhesive (i.e. Bostik EFA+ for glue down)
- ✓ Urethane Adhesive Remover (for glue down)
- ✓ 3M Blue Painters Tape # 2080 Delicate Surface
- ✓ Drill with assorted drill bits
- ✓ Hammer
- ✓ Quality Hardwood Flooring Cleaner
- ✓ Finish and or screw type nails
- ✓ Chalk line & Chalk
- ✓ Hand saw/undercut jamb saw
- ✓ Moisture Meter (Wood &/or Concrete)
- ✓ Nail Set
- ✓ 6' Straight Edge (Checking Flatness of Floor)

PRE-INSTALLATION PROCEDURES

Job Site Inspection

- ✓ The building should be closed in with all outside doors and windows in place.
- ✓ All concrete, masonry, framing members, drywall, paint and other "wet" work should be thoroughly dry.
- ✓ The wall coverings should be in place and the painting completed except for the final coat on the base molding. (When possible, delay installation of base molding until flooring installation is complete.)
- ✓ Sub-floor must be checked for moisture content using the appropriate testing method.
- ✓ All gutters and downspouts should be in place.
- ✓ Basements and crawl spaces must be dry and well ventilated. (Crawl space must be a minimum of 24" (600 mm) from the ground to underside of joists. A ground cover of 6-8 mil black polyethylene film is essential as a vapor barrier with joints lapped six inches and taped. The crawl space should have perimeter venting to a minimum of 1.5% of the crawl space square footage. These vents should be properly located to foster cross ventilation).
- ✓ Permanent air conditioning and heating systems should be in place and operational
- ✓ The installation site should have a consistent room temperature of 60-75 degrees F and humidity of 35-55% for 14 days prior, during and after installation for a proper living environment.
- ✓ HVAC Systems should be in place and working 10 days before installation

REMEMBER: Engineered wood flooring may be installed on any grade level. Even in basements.

STORAGE AND HANDLING

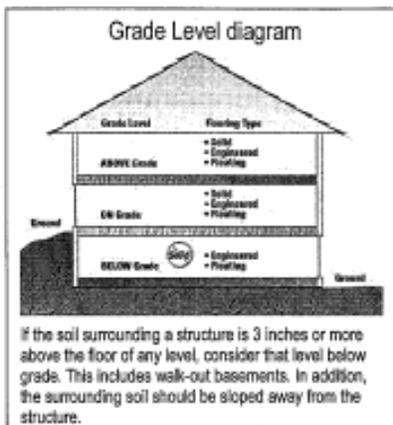
1. Deliver the materials to an environmentally controlled site.
2. Flooring should not be delivered until the building has been closed in with windows and doors in place and until cement work, plastering and all other "wet" work is completed and dry.
3. Handle and unload flooring material with care. Flooring products should be stored in the rooms in which they are expected to perform. **DO NOT STORE IN THE GARAGE.**
4. Materials should be allowed to acclimate for as long as necessary to meet minimum installation requirements for moisture content. (Generally a min. of 72 hrs, in some cases longer acclimation may be required). Acclimation in a closed or sealed carton may not be adequate. **Open the cartons and the interior plastic packaging to allow for proper air circulation and acclimation.** Moisture content of wood sub-floor must not exceed 12% on a reliable wood moisture meter, or read more than a difference of 3%, (2% for planks 5" and wider) in moisture level of flooring being installed. **Failure to properly acclimate may result in buckling or gapping of the wood planks.**
5. Store in a dry place (installation area) being sure to provide at least a four-inch air space under and around cartons. Not near an outside wall.
6. Concrete should be at least 60 days old.

INSTALLATION APPLICATIONS

NOTE: MINOR SQUEAKING OF MECHANICALLY FASTENED FLOORS IS NOT ABNORMAL. FOLLOWING THESE GUIDELINES CAN MINIMIZE THESE FACTORS, BUT OFFER NO GUARANTEE THAT THE FLOOR WILL NOT SQUEAK.

General Information for Flooring Nailers: Avoid striking the edge of pre-finished products with the fastener's mallet. Edge crushing can occur causing unsightly cracks and splinters. Use a block to hammer against if necessary. Faceplates should be covered with protective materials to prevent damage to the finished surface of the flooring.

- **Flooring Nailers:** Improper adapter plate selection can cause severe edge damage. Ascertain that the proper adapter has been selected and properly installed for your thickness of flooring
- **Pneumatic Flooring Nailers:** Improper pressure settings and failure to use proper adapters can cause severe damage to the flooring. The correct adapter and air pressure setting will properly set the fastener in the nail pocket
 - ✓ Low air pressures may fail to properly set the fastener and damage adjoining boards. Air pressures set too high may cause damage to



the tongue and or drive the fasteners too deep which may dramatically reduce the holding power of the fastener eventually causing loose, squeaky floors.

- ✓ Make certain that the compressor has a regulator in-line with the air hose for proper adjustment. Set pressure at 60 PSI to begin with and adjust until proper fastener setting occurs. DO THIS ON TEST MATERIAL

SUB-FLOOR REQUIREMENTS

Note: 15# builders felt (tarpaper) acts as a moisture retardant and may be used to reduce movement caused by changes in sub-floor moisture, thereby reducing cupping and warping. (This is especially helpful over crawl spaces and basements) Rosin paper may be used to make installation easier but DOES NOT serve any other purpose.

SUB-FLOORS MUST BE:

- ✓ **Clean** - Scrape, broom clean, and smooth; Free of wax, paint, oil or debris.
- ✓ **Level/Flat** - Within 3/16" in 10' and/or 1/8" in 6'.
 - Sand high areas or joints, per industry spec.
 - Low spots may be flattened using a cementitious underlayment material. Consult manufacturers guidelines prior to application.
- ✓ **Structurally Sound** - Nail or screw any loose areas that squeak.
 - Replace any water-damaged, swollen or delaminated sub-flooring or under-layments, as they are unable to properly hold fasteners.
 - Avoid any sub-floor with excessive vertical movement unless they have been properly stiffened prior to the installation of the wood flooring.
- ✓ **Dry** - Check moisture content of sub-floor.
 - Moisture content of wood sub-floor must not exceed 12% on a reliable wood moisture meter, or read more than a difference of 3%, (2% for planks 5" and wider) in moisture level of flooring being installed.

RECOMMENDED SUB-FLOOR SURFACES

Preferred: 3/4" (19 mm) CDX Grade Plywood 3/4" (23/32" OSB rated Underlayment

WOOD SUB-FLOORS & WOOD STRUCTURAL PANEL SUB-FLOORS

- **Plywood:** Must be minimum APA grade rated sheathing or CDX.
- **Oriented Strand Board (OSB):** Must be PS2 rated installed sealed side down.

Do not install over particleboard, wafer-board, pressed wood or fiber board.

- ✓ Make sure existing floor or sub-floor is dry and well nailed or screwed down every 6" along each joist to avoid squeaking or popping before the floor is installed.
- ✓ Measure moisture content of both sub-floor and wood flooring to determine proper moisture content with a reliable wood moisture meter. **Remember each wood species has its own specific gravity, so adjust your moisture meter accordingly.**

Optimum performance of hardwood flooring products occurs when there is no vertical movement of the sub-floor. The MINIMUM sub-floor recommendations described above are for 16" O/C joist spacing. Install flooring perpendicular to the floor joists when possible. Installations should not be made parallel to the floor joists unless the sub-floor has been properly stiffened. Stiffening may require the addition of a second layer of sub-flooring material to bring the overall thickness to a min. 1-1/8"

Applicable standards and recommendations of the construction and materials industries must be met or exceeded.

CONCRETE SLABS

NOTE: The concrete must be of high compressive strength, min. of 3000 psi. For lightweight concrete, consult the adhesive manufacturers specs for bonding to light weight concrete. All concrete sub-floors should be tested for moisture content. Visual checks are not reliable. Acceptable test methods for sub-floor moisture content include:

- A 3% Phenolphthalein in Anhydrous alcohol solution test. Chip the concrete at least 1/4" deep (do not apply directly to the concrete surface) and apply several drops of the solution to the chipped area. If any color change occurs, further testing is required.
- Calcium Chloride test. The maximum moisture transfer must not exceed 3 lbs. /1000 square feet with this test.
- Tramex Concrete Moisture Encounter Meter test. Moisture readings should not exceed 4.5 on the upper scale.

NOTE: Test several areas, especially near exterior walls and walls containing plumbing.

A "DRY" SLAB, AS DEFINED BY THESE TESTS CAN BE WET AT OTHER TIMES OF THE YEAR. THESE TESTS DO NOT GUARANTEE A DRY SLAB. ALL CONCRETE SLABS SHOULD HAVE A MINIMUM OF 6 MIL POLY FILM MOISTURE BARRIER BETWEEN THE GROUND AND THE CONCRETE.

RESILIENT TILE & RESILIENT SHEET VINYL

Make sure the vinyl or tile is well bonded to the entire sub-floor. Do not install over more than one layer, which does not exceed 1/8" in thickness over a suitable sub-floor.

Always consult individual products guidelines and specifications before proceeding with any installation.

All INSTALLATION TYPES

BEFORE GETTING STARTED, CONSIDER THESE TIPS

- Remove any existing base, shoe mold or door way thresholds. Replace after installing the flooring.
- Undercut door casings. All door casings should be undercut to avoid difficult scribe cuts.

- Flooring should be installed from 3-5 cartons at the same time to ensure a good overall color and shade mixture
- Be attentive to staggering the ends of boards at least 6", in adjacent rows. This will help ensure a more favorable overall appearance of the floor. Avoid unsightly H joints

Figure 8-1 Stagger End Joints

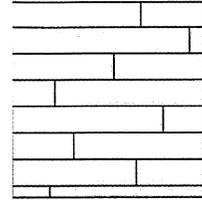
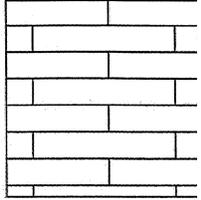


Figure 8-2 Avoid "H" Joints



- Large spans in areas of high humidity may require the addition of internal or field expansion. This can be accomplished by using spacers, such as small washers, every 10-20 rows inserted above the tongue and removed after several adjoining rows have been fastened.

REMEMBER; IF IN DOUBT ABOUT ANY PRODUCT RELATED TO PLACEMENT, CHARACTERISTICS, COLOR, GRAIN, OR ANY OTHER CONCERN OR QUESTION REGARDING INSTALLATION, CONTACT YOUR SUPPLIER **BEFORE** INSTALLING!

NAIL DOWN METHOD

STEP 1: ESTABLISH A STARTING POINT - WALL TO WALL INSTALLATION

Installation parallel to the longest wall is recommended for best visual effects, however, the floor should be installed perpendicular to the flooring joists unless sub-floor has been reinforced to reduce sub-floor sagging.

Find the appropriate sub-floor from **SUB-FLOOR TYPES**, section in these installation guidelines.

- If a moisture retardant material is to be used, such as Builders Felt (see NOTE, Sub-floor Requirements Above), install this material before proceeding, lapping joints 2" and staple if necessary.
- Measure the width of the product being installed.
- Allow for 1/2" expansion, or the actual thickness of the product being installed. Add the planks width + expansion + width of the tongue.
- Using this measurement, in at least two places, measure out equal distance from the starting wall and 12"-18" from the corners and snap a chalk line.

STEP 2: INSTALLING FIRST ROWS - WALL TO WALL INSTALLATION

- Use the longest, straightest boards available for the first two rows. Align tongue of first row on chalk line. The groove should be facing the starting wall. Pre-drill the nail holes 1/2" from back (groove) edge, 1-2" from each end, and at 10" intervals, also drill at a 45-degree angle down through the nailing "pocket" on top of the tongue at 3"-4" intervals.
- Face-nail the groove side where pre-drilled. When completed, blind-nail at a 45-degree angle through the tongue of the first row. Fasten using finish or screw type nails. Countersink nails to ensure flush engagement of next planks groove. Avoid bruising

the wood by using a nail set to drive the nails the last 1/4" into the tongue. Continue blind-nailing (only the tongue side) using this method with the following rows until a flooring nailer can be used to speed the installation. The nailers off-set handle will typically restrict its use until the 2nd or 3rd row.

- Beginning rows may be blind-nailed where clearance allows using a pneumatic finish nailer
- **It is critical that the 1st two rows of planks be secured straight and tight with no gapping.**
- Continue blind-nailing using this method with following rows until a flooring nailer can be used.
- End-joints of adjacent rows should be staggered a minimum of 6" to ensure a more favorable overall appearance. (**Do Not Repeat for 5 Rows**).

STEP 3: RACKING THE FLOOR

- "Dry" lay materials to cover approximately 2/3 of the room. Begin dry laying approximately 6" from the edge of the previously installed rows. Avoid pulling boards too tightly together on the sides, as they must move freely when fastening begins. (**Do Not Repeat end joint w/within 6"for 5 Rows**)
- Visually inspect flooring, setting aside boards that need to have natural character flaws cut out. Use these boards for starting and finishing the row after objectionable characteristics have been removed.
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STEP 4: INSTALLING THE FLOOR

- Fasten a sacrificial board to the floor. Check for surface damage, air pressure setting, tongue damage, etc. before proceeding. Make all adjustments and corrections before installation begins. Once proper adjustments have been made, remove and destroy the board.
- Begin installation with several rows at a time, fastening each board 3"-4" apart and 1"-2" from the ends (to avoid splitting). Use a min. of at least 2 fasteners on smaller planks. Tighten boards as necessary to reduce gaps before fastening
- End joints of adjacent rows should be staggered 6" to ensure a more favorable overall appearance.
- The last 1-2 rows will need to be hand nailed or glued, where clearance does not permit blind nailing with stapler or brad nailer. Pre-drill and blind nail in the nail pocket following the nailing pattern used for the first row.
- Rip final row to fit and face nail, as established on your starting row of planks. If the final row is less than 1" in width, it should first be glued and nailed to the previous un-installed plank (row) and the two joined units should be face nailed or glued as one.

GLUE-DOWN METHOD

Much of the information related to Nail-Down installations applies to Glue-Down as well. Therefore, please make certain to read all the previous instructions, before starting your glue-down installation.

Surface Preparation

- ⇒ Install over clean concrete or plywood
- ⇒ Remove 100% of any contaminates that may interfere with proper adhesion to substrate including sealers, adhesive residue, carpet

backing, curing compounds, "paint overspray" and any other contaminate.

- ⇒ Dust should be vacuumed up completely.
- ⇒ Low areas are the most common concern for any glue down installation. Variation in flatness should not exceed 3/16" in 10' and or 1/8" in 6'. If your surface exceeds this tolerance, see Sub-Floors (Level/Flat) page 2.

Glue Down Installation Tips

- **Install with Urethane Adhesive**, See Tools and Equipment Needed.
Adhesive Transfer
- Hollow spots can be eliminated if there is a 90 plus % adhesive transfer to the back of the flooring.
- If proper adhesive transfer is not being achieved stop the installation immediately and check adhesive manufacturer's recommendations and or flatness of the concrete slab.

Installation of a Starter Strip: A starter strip gives you something firm to push against. Tack Strip or strapping and masonry nails (concrete) work well. Without it, the boards would open up and move around every time you pushed against them or tapped them with a block and mallet.

Spread Adhesive: Following the directions of the adhesive manufacturer, spread the adhesive and install the flooring immediately. Avoid working "on" the floor.

Temporarily Tape the Flooring in Place: After a few rows are installed, tape them together with 3M removable blue tape as required. Tape will keep flooring joints tight while adhesive cures.

Clean Up: As you install your flooring, immediately clean up any excessive glue or adhesive smudges by wiping with a urethane adhesive remover or per Mfg Directions. Cured adhesive is very difficult to remove & often degrades the floorings finish.

STEP 1: ESTABLISH A STARTING POINT - WALL TO WALL INSTALLATION

Installation parallel to the longest wall is recommended for best visual effects, however, the floor should be installed perpendicular to the flooring joists unless sub-floor has been reinforced to reduce sub-floor sagging.

Find the appropriate sub-floor from **SUB-FLOOR TYPES**, section in these installation guidelines.

- Measure the width of 2 planks of the product being installed.
- Allow for 1/2" expansion, or the actual thickness of the product being installed. Add the planks width + expansion. (Remember the expansion gap needs to be around the entire floors perimeter.)
- Using this measurement, in at least two places, measure out equal distance from the starting wall and 12"-18" from the corners and snap a chalk line.

STEP 2: INSTALLING FIRST ROWS - WALL TO WALL INSTALLATION

Use the longest, straightest boards available for the first two rows. Remove the tongue from the planks to used in the row against the wall. The cut edge will be installed facing toward the starting wall (this is opposite from the nail down method). Spread

adhesive (using adhesive manufacturers recommended trowel), from the chalk line to the starting wall. Align groove edge of first row of planks on chalk line and press firmly into the adhesive. For the next row interlock the groove edge into the tongue of the previously installed planks, pressing into adhesive. The edge where you removed the tongue should be facing the starting wall. Make sure there are no gaps in side or end joints, use blue painters tape to tape the 2 rows of planks together. Pre-drill nail holes 1/2" from back edge closest to the wall, 2" from each end, and at 10" intervals, secure to the floor with nails. Countersink nails, avoid bruising the wood by using a nail set to drive the nails the last 1/4". (On a wood sub-floor you may be able to use a pneumatic finish nailer). This will stop any movement of the 1st two rows (on concrete you may have to temporarily shim between the planks and wall). **It is critical that the 1st two rows of planks be secured straight and tight with no gapping.**

STEP 3: RACKING THE FLOOR

- "Dry" lay flooring to cover approximately 2/3 of the width of room. Begin dry laying approximately 3ft from the edge of the previously installed rows. Be attentive to staggering the ends of boards at least 6", in adjacent rows. This will help ensure a more favorable overall appearance of the floor. Avoid unsightly H joints
- (**Do Not Repeat end joint within 6"for 5 Rows**)
- Flooring should be installed from 3-5 cartons at the same time to ensure a good overall color and shade mixture
- Visually inspect flooring, setting aside boards that need to have natural character flaws cut out. Use these boards for starting and finishing the row after objectionable characteristics have been removed.

STEP 4: INSTALLING THE FLOOR

- Spread a 2-3 ft width of adhesive from the starter rows towards the finishing wall. (spread only enough adhesive that can be covered with the flooring before it starts to skin over.
- For the next rows interlock the tongue edge into the groove of the previously installed planks, pressing firmly into adhesive. Do not slide in the adhesive. Push planks tightly together to eliminate gaps in side and end joints (lightly tapping with an appropriate block if necessary).
- Repeat until all adhesive is covered with flooring.
- Immediately clean any adhesive from the planks.
- Use blue painters tape every 2-3 ft to secure this section together and avoid movement/gapping.
- Continue using this method thru the balance of the installation.
- The last row may be fastened in the same manner as the 1st row.
- Consult adhesive manufacturers guidelines for curing/dry time and foot traffic limitations.
- Once the adhesive is cured you may gently remove the blue painters tape.

STEP 5: COMPLETING THE JOB

- √ Clean floor with the recommended wood flooring cleaner.

✓ Install any transition pieces that may be needed, such as Reducer Strips, T-Moldings, or Thresholds. The products are available pre-finished to blend with your flooring. (See the following

TRIM and MOLDINGS

- **Reducer Strip:** a teardrop shaped molding. Used around fireplaces, doorways, as a room divider, or as a transition between wood floors and adjacent floor coverings that are thinner. Fasten down with adhesive and or nails.
 - **Stair Nosing:** a molding undercut for use as a stair landings trim, elevated floor perimeters, and stair steps. Fasten down firmly with adhesive and nails or screws. Pre-drill nail holes to prevent splitting.
 - **Threshold:** a molding undercut for use against sliding door tracks, fireplaces, carpet, ceramic tile, or existing thresholds to allow for expansion space and to provide a smooth transition in height difference. Fasten to sub-floor with adhesive and/or nails through the heel. Pre-drill nail holes to prevent splitting. Always leave expansion beneath the undercut.
 - **Quarter Round:** a molding used to cover expansion space next to baseboards, case goods, and stair steps. Pre-drill and nail to the baseboard, not into the floor.
 - **T-Molding:** a molding used as a transition piece from one flooring to another or to gain expansion space. Fasten at the heel in the center of the molding. Leave expansion beneath the undercut on both sides.
 - **Fill all nail holes with a matching color putty.**
- ✓ Install all base and/or quarter round moldings to cover expansion space. Nail moldings into the wall, not the floor. Properly set and fill all nail holes.
- ✓ Inspect the floor, filling all minor gaps with the appropriate blended color filler.
- ✓ If the floor is to be covered, use a breathable material such as cardboard. **Cover the entire floor.**
- ✓ **Do not cover with plastic.**

NOTE: To prevent surface damage avoid sliding or rolling heavy appliances and furniture directly on the floor. Use plywood/hardboard or appliance lifts beneath heavy objects.

Use felt flooring protectors under the legs of all furniture.

Keep all pets toe nails trimmed or consider "booties", available at pet stores.

CARE AND MAINTENANCE

Regular Maintenance: Dust mop, lightly sweep or vacuum flooring to remove surface dust and or debris. When necessary, use a high quality hardwood flooring cleaner, misting sparingly, mop the floor with a clean terry cloth or micro fiber bonneted mop to properly clean and maintain the finish. **Do Not Use Solvent Based Cleaners**

Preventive Maintenance: As with any floor covering proper care and maintenance will help to keep a new floor looking its best. Here are some tips to help:

- Never wet mop or clean your floor with water. Water can dull the finish and permanently damage the floor.
- Use outside door mats at the entrances to keep dirt and moisture from being tracked in. Inside you may want to add area rugs to further prevent dirt and moisture from being tracked onto your floor. Don't use rubber, foam back or plastic mats as they may discolor the floor. To prevent slippage of area rugs, use an approved latex rug underlay from a reputable manufacturer.
- Normal exposure to any lighting source will bring about changes in the color of any floor. Aging/oxidation process causes your floor to darken.
- Sweep or vacuum your floor as often as required to remove loose dirt or grit before it can scratch the surface of the floor. Pet's nails can also cause surface scratches and should be kept trimmed.
- Wipe up spills as soon as possible before they get sticky or dry.
- Use felt floor protectors on the feet of furniture. This should help avoid scratches and gouging.
- Avoid using wheel or casters on furniture, they may damage your flooring.
- A humidifier is recommended to prevent excessive shrinkage in floors due to low home humidity levels. Wood stoves and electric heat tend to create very Dry conditions. Excessive humidity can also adversely affect your floor. A humidity level of 35% to 55% is recommended.
- In damp conditions proper humidity levels can be maintained with an air conditioner or dehumidifier, or by periodically turning on your heating system.
- Some types of high heel shoes may cause indentations and related damage to floors due to the extremely high compressive force they generate. Claims will not be accepted for damages which arise from such exposure.

FLOOR DARKENING

Normal exposure to any lighting source will bring about changes in any hardwood floor due to the natural aging/oxidation process. Over time, this process will cause your flooring to take on a deeper, richer and darker look. For the first 6 to 8 months, rugs and other furnishings that screen or block the flooring from natural or room lighting should be moved occasionally. This will minimize any appearance of discoloration under these objects. This is not a product defect and is not covered by any warranty.

PLEASE READ BELOW CAREFULLY.

Manufacturer does not warranty any wood flooring not installed in accordance with these installation guidelines. Labor is not covered under this warranty.

The following is not covered by warranties.

- Wood flooring installed in bathrooms.
- Damage caused by fire, flooding and other natural disasters and Acts of God
- Damage caused by negligence, accidents, misuse or abuse.
- Damage caused by vacuum cleaner beater bar heads
- Damage caused by appliances, furniture, casters and rolling chairs.
- Damage caused by scratches or cutting from sharp objects.
- Damage caused by spiked and or stiletto style heel shoes, pets toe nails, golf shoes or cleats
- Reduction in gloss, scratches, or indentations due to sand pebbles or other abrasives, pets, insects, construction traffic or failure to maintain floor as required
- Color shade or texture variations between samples, printed color photography or replacement flooring and the actual material.
- Deficiencies related to sub floor, floor joist assemblies, sub floor preparation materials.
- Noises, squeaks, etc. associated with anything other than the manufacture of the flooring.
- Naturally occurring wood characteristics such as variations in grain, color, mineral streaks and knots.
- Changes in color due to exposure to sunlight and normal aging of wood.
- Natural expansion and contraction resulting in separation between boards or damage caused by low or excessive humidity.
- Products designated as thrift, antique, tavern, bargain, cabin grade, special runs or seconds.
- Floors that are installed in other than owner occupied residences.
- Commercial or industrial installation. This product is for residential use only.
- Construction or installation related damages. Floors damages or adhesive breakdown caused by sub floor moisture or water damage including without limitation broken or leaking water pipes, flooding, wet mopping spills or weather conditions.
- Installation defects, including installations made in violation of applicable state or local housing or building codes contrary to written instructions furnished with the product.
- Defects not visible from a standing position
- Solid wood floors installed directly on concrete

