

**ENGINEERED HARDWOOD FLOORING
INSTALLATION GUIDELINES and WARRANTY INFORMATION**

**Please Inspect all Flooring prior to Installation**

**Carefully confirm that the Color, Finish, Styling and Quality Fully meet the owner’s expectations. If you determine the product does not meet expectations DO NOT INSTALL and immediately contact your Place of Purchase. The Manufacturer will not assume any responsibility, including costs for removal or replacement, for flooring that has been installed that does not meet the owner’s expectations for any reason.**

**THIS ENGINEERED HARDWOOD FLOORING** **is INTENDED TO BE INSTALLED with approved full spread wood flooring adhesive, approved engineered wood flooring staplers, and NWFA approved Floating Floor methods.**

***Installations over Radiant Heated Sub Floors are not approved by The Manufacturer.***

***Light Commercial applications must be pre-approved and agreed to in writing by your supplier and this manufacturer only after an investigation of site conditions and limitations by manufacturer’s engineers to determine if it is possible to install the flooring at the specific site using these methods. Contact your supplier for additional information regarding the approval of Light Commercial jobs.***

**PLEASE READ AND REVIEW THE ENTIRE INSTALLATION INSTRUCTIONS BEFORE PROCEEDING WITH THE ACTUAL INSTALLATION**

**OWNER / INSTALLER RESPONSIBILITY**

Hardwood flooring is a beautiful and unique product of nature, and characterized by distinctive variations in grain and color. These natural variations in color and grain, (including filled knots, mineral streaks and scrapes), are not flaws, but are a part of the styling, natural beauty, and uniqueness of hardwood flooring. (These inherent variations should be expected and serve to enhance the natural beauty, styling, and aesthetics of the flooring) The variations may be of a manufacturing or natural type. No two hardwood floors are completely alike. **This Engineered Hardwood Floor s** is manufactured in accordance with the accepted industry standards, which allow a defect tolerance, (natural or manufacturing), of 5% of the total Engineered Hardwood Flooring purchase per job. The Manufacturer will warrants 95% of the total Engineered Hardwood Flooring purchase per job. The remaining 5% may be used at the owner’s discretion, but is subject to the industry standard 5% defect allowance. All flooring considered defective (outside of that listed in the Warranty Exclusions on the Engineered Hardwood Floor Warranty and Care sheet), after proper inspection by the installer or homeowner, should be culled, or trimmed out prior to installation and must not be installed. If an individual piece is doubtful as to grade, color, or finish, the installer should not install that piece. The Manufacturer's Warranties **DO NOT** cover materials that are installed with visible defects.

 If material in excess of 5% of the total job amount is found to be unacceptable, contact the place of purchase for your **Engineered Hardwood Floor** immediately.

**It should be realized that wood is a natural product that contains color variations, grain and characteristics, which are normal for all wood flooring products.** **Color changes may also occur when hardwood flooring is exposed to light sources.**

 The installer and homeowner must assume all responsibility for full inspection of product **prior to the installation**. Open and select planks from 3 or 4 cartons in order to blend color and grain characteristics, and to allow for staggering of end joints a minimum of 7 to 10 inches. Carefully examining the flooring for color, finish, texture, and quality before installing it. Use reasonable selectivity, and use touch-up markers and putty sticks, as well as culling or cutting out pieces with visible defects. 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, ensuring that it meets or exceeds all requirements specified in the **Engineered Hardwood Floor** installation RECOMMENDED SUB·FLOOR TYPES and PRE-INSTALLATION JOB SITE INSPECTION sections below.

**Hardwood flooring is a product of nature and is susceptible to damage when exposed to extreme changes in temperature or relative humidity. If environmental conditions and installation instructions listed below are not correctly followed,** Engineered Hardwood Floors may **suffer irreversible damage.**

**The Manufacturer** does not accept any responsibility for flooring failure resulting from or associated with inappropriate or improperly prepared subfloors or improper job site environmental conditions. The use of stain, wood touch up pens, filler or putty sticks for the correction of defects as well as cleaning of adhesives and residue during installation should be accepted as normal procedure. When ordering Hardwood Flooring, a waste factor between 5 - 10%, depending on layout, must be added to the actual number of square feet needed. (Diagonal Installations may require more.)

**Additional Installation Notes:**

* Refer to This Engineered Hardwood Flooring Warranty and Floor Care document for information on warranty coverage and exclusions.
* **NOTE – The Manufacturer’s Warranty for Engineered Hardwood Flooring does not warrant installation over radiant heat systems.**

# TOOLS AND/OR ACCESSORIES NEEDED:

**Warning:** The Manufacturer is not responsible for damage caused by user negligence related to installation practices or misuse of installation and fastening tools.

|  |  |
| --- | --- |
| Broom | Hammer/Rubber Mallet |
| Pencil - Chalk Line and Chalk | Pry Bar |
| Tape Measure | Hardwood Flooring Cleaner |
| Moisture Meter(s) | Trowel (if glue down) |
| Safety Equipment (Goggles and Mask) | Approved Engineered Hardwood Flooring Adhesive (if glue down) |
| Circular or Hand Saw; Miter or Table Saw | 2-in-1 or 3-in-1, 2mm high density underlayment and PVA(Poly Vinyl Acetate Cross-linking polyaliphatic emulsion) with SBR component(Synthetic Latex) Glue designed for Floating Hardwood Flooring installations (if Floating Method) |
| Adhesive Remover, use of mineral spirits to dampen a terry cloth will help to remove adhesive from the flooring surface (if glue down or floating) |

**Recommended Installation Products**

**Flooring Fasteners (Staplers and Nailers)**

The Manufacturer requires the use of 18 Gauge narrow crown (7/32" to 3/8") staplers and staples to properly fasten the Engineered Hardwood flooring with mechanical fasteners. Most staples have 2 legs that are treated with thermal adhesives that heat the adhesive when they are forced quickly into the floor and substrate and bond aggressively to the substrate. They also have divergent points that cause a slight curl at the end of the staple leg, making them much more difficult to loosen or remove.  Staples with crowns approximately 1/4" wide are recommended, but staples up to 3/8" crown width may be safely used when used properly.  Eighteen gauge staple leg thickness is the recommended gauge. Staple Leg lengths of 1- 1/4" to 1-1/2"  are necessary for 1/2" and thicker Engineered Floors, 1" to 1- 1/4" staple lengths are used for 3/8" Engineered Floors.  Many companies produce 18 gauge staples and they usually may be interchanged in the various staple guns.  It is best to use branded staples from a well-known manufacturer such as Stanley-Bostich or Spot Nail. The Bostich Staplers, EHF 1838K, and SX150 BHF are 18 Gauge Staplers with adjustable Foot Adaptors that are popular and reliable. The S50351 18 Gauge staple with an approximately 1/4" crown, (7/32") is used with these staplers. Many Flooring Manufacturers and Pro installers prefer the Spot Nail WS 4840 W2 stapler with the Spot Nail 4811 PN 1/4" X 1 3/8" 18 Gauge staples.  Duo Fast and Senco also have staplers and staples that meet these specifications and may be used effectively.

**NWFA approved Nailers and nails designed for installing Engineered Flooring may be used by qualified flooring professionals at your risk. Do not use 16 gauge or larger staples to install this Engineered Hardwood Flooring. Do not use staplers or nailers specifically designed for Solid Hardwood Flooring to install this Engineered Hardwood Flooring. The Manufacturer does not warrant flooring and accepts no liability when fasteners that are mis-used, or not designed for Engineered Flooring, are used to install this Engineered Hardwood Flooring.**

**Flooring Adhesives**

The manufacturer requires the use of a full-spread hardwood flooring adhesive to install this Engineered Hardwood Flooring. The Manufacturer strongly recommends the use of a3 in 1 Engineered Flooring Adhesive that is an anhydrous Engineered Hardwood Flooring Adhesive, or A Urethane Engineered Hardwood Flooring Adhesive containing no water. Adhesives that are Latex, or Acrylic Latex Based contain water and should only be used by experienced professionals.

**Regarding glue down installation on concrete floors:**

Engineered Hardwood floors can cup or buckle when exposed to excessive moisture. This moisture can come from one or more moisture sources: adhesive containing water that is not allowed to flash properly, (releasing excess water by prematurely placing the flooring in the wet adhesive before the proper drying period has taken place), the concrete sub-floor, damp basement walls, or the surrounding outdoor environment. A newly installed, glued engineered hardwood floor may cup or peak slightly after installation. The floor should return to normal over time (generally within a few weeks) as the moisture evaporates into the air as long as all other factors that create moisture issues are maintained within the proper range. **To address environmental moisture issues the manufacturer provides acclimation instructions below and the Engineered Hardwood Flooring must be kept climate controlled conditions with the indoor Relative Humidity within the 35-55% RH range.**

Regarding sub-floor moisture, subfloors must be within required moisture parameters (determined via NWFA approved moisture testing methods).

All concrete floors must be in condition to provide for proper adhesion. All sealers, coatings, polishes, and adhesive residue must be completely removed by mechanically abrasion, or shot blasting. Test all concrete sites to determine if the concrete is suitable for direct glue methods. Do not sweep concrete with treated floor sweeping compounds prior to glue down installations. See additional information in the Installing with Adhesive Section in the Installing the Floor Instructions.

If floating, the Manufacture strongly recommends a Floating Floor Tongue and Groove Glue, a PVA (Poly Vinyl Acetate Cross-linking polyaliphatic emulsion) with SBR component(Synthetic Latex) Glue designed for Floating Hardwood Flooring installations, or glue meeting these specifications from a reputable Adhesive manufacturer such as WF. Taylor 2049-16 or Franklin 2104 Tongue and Groove Glue. Glues designed for Armstrong, Mannington, Shaw, and other floating Engineered Wood Floor manufacturers meeting the above specifications may also be used.

# STEP 1: Pre-Installation Jobsite Inspection

When installing engineered flooring in new construction sites, **This Engineered Hardwood Flooring** should be one of the last items installed. Flooring should not be delivered until the pre-installation guidelines listed below are completed. After all the guidelines are met, the flooring should acclimate at the job site at least 48 hours prior to installation. **Do not open cartons until ready to install.** Prior to installation, the building must be structurally complete and enclosed. All exterior windows and doors must be installed. Any “wet” work inside the house (masonry, drywall, and paint) must also be complete – allowing adequate drying time to eliminate unnecessary moisture content within the building. Concrete should be at least 60 days old. Permanent HVAC (heating/air conditioning) systems must be operating for at least 14 days before installation, m**aintaining a constant room temperature between 60-78 degrees Fahrenheit and a** **relative humidity of 35-55%.** Exterior drainage – including gutters and downspouts, must be in place and drain away from the building. This Engineered Hardwood Floor can be installed **on**, **above**, or **below** grade, although they are not recommended for full bathroom installations. Basements and crawl spaces must be dry. Crawl spaces must be a minimum of 24” from the ground to the underside of the joists. A vapor inhibitor (6-8 mil **black** polyethylene film) must be put in crawl spaces with joints overlapped and taped. Sub-floors must be checked for moisture content using the appropriate metering device for concrete or wood. Examples of concrete moisture meters that work very well: the Delmhorst Moisture Meter Model G and the Tramex Concrete Encounter.

**Performing Moisture Tests:**

**WOOD SUBSTRATES:**

Test the moisture of the wood sub-floor using a calibrated moisture meter approved for testing wood moisture according to the meter manufacturer. The reading should not exceed 14%, or read more than 5% different than the moisture content of the product being installed.

**CONCRETE SUBSTRATES:**

There are multiple ways to test for excess moisture in concrete.

* Use an approved, calibrated moisture meter such as the Delmhorst Moisture Meter Model G or the Tramex Concrete Encounter. On the Tramex Concrete Encounter Meter, moisture readings should not exceed 4.5 on the upper scale.
* Perform a Polyfilm Test. Tape down 2’ x 2’ polyfilm squares (a clear garbage bag or plastic drop cloth will do) in several places on the floor. Wait 24-48 hours, and then check for the appearance of condensation on the inside of the bag or plastic and for a darkening on the concrete in that area. Either occurrence signals the likely presence of excess moisture, requiring a mandatory Calcium Chloride Test. Once you have determined the moisture content and that excess moisture is indeed present, a Calcium Chloride and pH Alkalinity Test must be performed to determine moisture emissions and alkalinity from the concrete slab.
* Perform a Calcium Chloride test (these can be found in flooring retail stores or online at www.moisturetestkit.com. The maximum acceptable reading is 3 lbs. /24 hours/1000 sq. ft. for moisture emissions.
* Perform a pH Alkalinity Test (a 3% Phenolphthalein in Anhydrous alcohol solution). Chip the concrete at least ¼” 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. Using the number method on the test, a pH reading of 6-9 on a pH scale of 1-14 is considered acceptable. If the tests results exceed this number, the concrete slab should be sealed with an appropriate sealer such as a 3 N 1 Adhesive (which also acts as a sealer when applied with an appropriate spread rate – see “Installing With Adhesive” below), prior to installation. **This Manufacturer is not responsible for Hydrostatic, Hygrostatic, or Thermal dynamics resulting from an improper concrete slab installation.** If performing a floating installation over concrete, another option is to lay out a 6 mil Polyethylene Filmor a 2 in 1 Underlayment prior to installing the floor. This will act as the moisture barrier between theconcrete and the hardwood flooring.

# STEP 2: Storing the Material Prior to Installation

Once the building meets the conditions in Step 1, the material can be delivered to the site. Handle and unload the flooring with care and **store within the area in which it is expected to perform.** Flooring stored on concrete floors should be elevated at least four inches to allow circulation underthe cartons. Cartons **must** be stored horizontally (parallel to the ground). **Never** store them standingon end. Stack the cartons 3-4 high to insure efficient acclimation. 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 air vents. **Leave all boxes SEALED while they are acclimating (this allows all boards to acclimate within the boxes at the same rate).** This Engineered Hardwood flooring **must** acclimate for a minimum of 48hours prior to installation. Extra precautions requiring additional acclimation may be necessary during extreme weather conditions.

# STEP 3: Approved Subfloor Types

**Radiant Heat Subfloors are Not Approved by the Manufacturer and installation of**

**This Engineered Hardwood Floor is not warranted over Radiant Heated Substrates.**

**It is the sole responsibility of the purchaser to determine that all subfloor types meet the required specifications.**

# Wood Panel Subfloors

# (Truss/joist spacing will determine the minimum acceptable thickness.

* On truss/joist spacing of 16” on center or less, use a minimum 5/8”CDX or better grade plywood panel or 23/32” APA E1 PS 2 rated NWFA approved OSB panel.
* On truss/joist spacing of more than 16” up to 19.2” on center, use a minimum 3/4” Tongue and Groove CDX or better grade plywood panel, glued and mechanically fastened, or a minimum ¾” APA E1 PS 2 rated NWFA approved OSB panel, glued and mechanically fastened.
* Truss/joist systems spaced over more than 19.2” up to a maximum of 24” on center require a minimum 7/8” Tongue and Groove CDX or better grade plywood panel, glued and mechanically fastened, or a minimum 7/8” APA E1 PS 2 rated NWFA approved OSB panel glued and mechanically fastened.
* **WARNING: Do not use staples or glue method to install This Engineered Hardwood Flooring directly over particle-board or unapproved OSB (use floating method only for installations over particle board and Unapproved OSB Substrates)**

# Concrete Substrates

* Concrete subfloors on all grade levels must be tested for moisture content prior to installation of the hardwood flooring The moisture content of the concrete subfloor must register in the approved range, according to whichever test method is used to determine the slab condition. (see performing moisture tests above). Concrete must be 60 to 90 days old with a PSI rating (3000 psi or higher) that is approved by NWFA for installations of Engineered Flooring. Concrete slabs must be totally flat– less than 3 lbs. /1000 sf. / 24 hr. moisture vapor transmission. Lightweight (Acoustic) Concrete must be solid with a PSI rating of at least 2000 psi, that has no spalling(loose patches), or friable ,(crumbling), surface areas.
* **All Concrete subfloors must be:**
* **CLEAN** - Scraped or sanded, swept, and free of wax, grease, paint, oil and other debris.
* **SMOOTH and FLAT** - Within 1/8” in a 6’ span. Sand or grind high areas or fill low areas with cement-based leveling compound with no less than a 3000 psi rating.

# Other Subfloors-

# Test all substrates for proper adhesive bond prior to the use of GLUE DOWN METHOD and follow all recommendations provided by the adhesive manufacturer regarding determining proper Substrates, conditions and exclusions.

# Existing engineered wood floors (installed perpendicular to new floor) must be fully adhered, level, flat, and abraded to accept adhesives, if staple installation method is used, the existing engineered floor must be at least 1/2" thick and installed over a NWFA approved substrate.

* Existing solid wood floors over wood substrates must be capped with and approved Plywood or APA E1 PS 2 rated NWFA approved OSB panel. Do not install Engineered Hardwood Flooring over Solid Hardwood Flooring on concrete.
* Acoustic Concrete -must be sound, and with an approved PSI rating (2000 psi or higher)
* Cork (acoustic) -must use URETHANE WOOD FLOORING ADHESIVE: Designed for use over properly prepped surfaces
* Ceramic, Terrazzo, Marble, or Slate must be fully adhered, level, flat, and prepped to accept adhesive
* Resilient Vinyl or Tile- must be fully adhered, over NWFA approved substrates, and prepared to accept adhesives.
* Do not Sand existing resilient tile, sheet vinyl, attached felt, or asphalt cutback adhesive as they may contain asbestos fibers that are not easily identifiable and are known to cause cancer.
* Metal -must be level, flat, and prepped to use only URETHANE ADHESIVES that are designed for use over METAL SUBSTRATES.

# STEP 4: Preparing the Sub-floor

# For wood panel subfloors:

* Ensure that there is proper expansion space (1/8”) between the panels. If the panels are not tongue and grooved, and if there is not sufficient expansion space, use a circular saw to create the necessary space. Do not saw through tongue and groove joints on T&G subfloors.
* Ensure they are structurally sound: Replace any water-damaged, swollen or delaminated sub-flooring or underlayment that is unable to properly hold fasteners. When possible, plywood sheets should be laid with grained outer plies at right angles to joists; adjacent rows staggered four feet and nailed every 6" along each joist with 7d or larger nails. When installing directly over old wood or strip floor, sand any high spots, re-nail old floor to eliminate squeaks or loose boards, and install new planks at right angle (perpendicular) to the old floor, or overlay old floor with 1/4" plywood underlayment. Leave a 1/8" gap at the edges and nail with 7d or larger nails every 6" at the edges and every 12" in both directions and through the interior of each sheet of plywood. It is normal for mechanically (staple/nail/cleat) fastened floors to make minor occasional noises such as popping, squeaking, or crackling which can change as environmental changes occur. **Noise from subfloors is not considered a** **manufacturing related issue and is not warranted by The Manufacturer.** You can help reduce popping, squeaking, or crackling by being sure that the subfloor is secured properly (as explained above) and is structurally sound, that there is no loose joists or decking, and is swept very thoroughly prior to installation.

**All Sub-floors must be:**

* CLEAN: scraped, sanded, or swept; free of wax, grease, paint, oil, and other debris.
* SMOOTH/FLAT: within 3/16” over 10’ and/or 1/8” over 6’. Sand high areas or joints. Fill low areas (no more than 1/8”) with a cement type filler.
* DRY: Moisture content of sub-floor must not exceed 12% prior to installation of wood flooring. All moisture testing must be done before wood has been acclimated for a minimum of 72 hours and job-site requirements met.
* ***CAUTION: WOOD DUST***

***The International Agency for Research on Cancer has classified wood dust as a nasal carcinogen as well as an eye and skin irritant.***

 ***In case of irritation, flush eyes or skin with water for at least 15 minutes. In case of severe irritation; seek immediate medical attention.***

* ***ATTENTION CALIFORNIA INSTALLERS AND CONSUMER’S WARNING!***

***Installation of this product may create wood dust, which is known to the State of California to cause Cancer.***

# *Sawing, sanding, and/or machining of wood products can produce wood dust that can cause respiratory, eye, and skin irritations. Equipment should be equipped with a dust collector to reduce airborne wood dust. Wear an appropriate NIOSH designated dust mask to reduce exposure to airborne wood dust. Avoid wood dust contact with eyes.*

# STEP 5: Installing the Floor

* Open several different cartons and mix the pieces to maximize the color and shade variations.
* Install the product parallel to the longest wall to provide the most appealing visual effect.
* Stagger the ends of the boards at least 10” in adjacent rows to insure a random visual effect.
* Allow for a ½” minimum expansion gap around all fixed vertical objects that reach the substrate. Engineered Wood as well as the housing structure expands and contracts with changes in humidity. Wood will buckle and break loose if an adequate expansion space is not provided. **ALWAYS** provide for expansion space when fitting flooring adjacent to vertical objects (i.e. walls, baseboards, door frames and facings, pipes, etc.).

**DOORWAY/WALL PREPARATION:**

* Undercut all door casings, including all door frames, and all fixed vertical structures, 1/16” higher than the thickness of the floor being installed where quarter round or surface trim cannot be used.
* Remove existing base and shoe molding on wall as well as doorway thresholds. Trim may be reapplied after the installation is complete.

# PREPARING THE INSTALLATION:

# 1. Before starting, measure the width of the room, and 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”, you will need to cut the first and last row of planks to be installed in such a way that both rows of planks will have the same approximate width for an overall continuous look. To cut the boards, always saw with the saw teeth rotating or cutting down into the face or top of the board. Cutting from the top down helps protect the surface from excess chipping. Use a carbide tip blade to ensure smooth cuts.

# 2. Always install This Engineered Hardwood Flooring with the groove side of the plank facing the wall, and with the installer positioned off the floor when possible.

Begin the installation at the corner of the room so that the groove side can be placed against the starting wall. Be sure to leave an expansion gap of approximately 1/2” using 1/2” spacers. If the starting wall is not straight, it may be necessary to scribe the first row to match the wall, allowing the opposite side of the row to present a true square base for the rest of the floor. Once the installation of the first row is complete, there will be an extra piece from the last plank which, if long enough, may be used to begin the next row. To locate the best starting point, an exterior wall is usually the straightest and best reference line to start the installation from. If possible, the direction of the flooring being installed should be at right angles to the floor joists. Establish a starting line by leaving a minimum ½” expansion gap around all vertical obstructions. In at **LEAST** 2 places, measure out equal distances from the starting wall equal to the width of the starting plank calculated earlier in this section regarding the room width and plank width. Allow for all doors and openings as well as the 1/2" expansion space needed at all fixed vertical structures. Mark these points and snap a working chalk line parallel to the starting wall allowing the required expansion space between the starting wall and the edge of the first row of flooring. Plan the floor layout (width-wise) so you don’t have to rip (which is cutting the board lengthwise to make it narrower) the last row NARROWER than 2”. You may have to rip the FIRST row to ensure that the LAST row is at LEAST 2” wide. **When installing a floor that is more than 40 feet in length, an expansion joint is required. The most effective way of providing the required expansion joint is to install T·Molding in that area.**

# INSTALLING THE FIRST ROWS:

* Establish your starting row (SEE ESTABLISH A STARTING POINT ABOVE).
* Install a temporary starter boards along the edge of the working line (using straight 2 by 4's or scrap wood flooring ,and temporarily secure them to the sub-floor), and begin installation. This will hold the first several rows in place as you begin installation to prevent the first rows from shifting as you add adjacent rows.
* Make sure to use the straightest, longest boards available when installing the first two rows.
* REMINDER: Take boards from 5 to 7 boxes while installing. Do not install 2 pieces from the same box side by side or in the same row – rack or mix the colors and shades while installing to achieve the proper visual effect. Stagger the end-joints of adjacent rows at least 10” to add structural stability and create a more appealing look for the floor.
* Line up the edge of the first row against the temporary starter board. Install **This Engineered** Hardwood Flooring with the groove side of the plank facing the wall with the installer positioned off the floor when possible. The tongue of the boards should always be facing the installer except where special circumstances exist.
* Make sure the end-joints of adjacent rows are staggered at least 10” across 4 to 6 rows to establish a random visual and avoid identifiable patterns forming in the installation, (stair-step appearance).

# INSTALLING THE REST OF THE FLOOR:

* Make sure to use the straightest, longest boards available when installing the first two rows.
* **Continue to take boards from 5 to 7 boxes while installing. Do not install 2 pieces from the same box in a row – mix the colors and shades while installing to get a more favorable overall look.**
* Stagger the end-joints of adjacent rows at least 10” to add structural stability and create a more appealing look for the floor.
* When installing individual pieces, connect the end-joints first as close to the long tongue and groove as possible. Then slide (push) the long tongue and groove together as tightly as possible. You may need to use a scrap piece of the same flooring product as a tapping block to help align the product, use caution and tap only into the tongue, never the finished edge of the flooring.
* Double check the edges and ends of your installed planks – all joints should fit tightly together.
* Continue with this method while installing the rest of the floor. In some cases, it may be necessary to cut the flooring lengthwise in the last row. In order to do so, place the last board over the next-to-last row (Refer to Preparing the Installation), marking the exact cut and taking into account the 1/2“ gap with regard to the expansion space.
* Once the flooring installation is complete, proceed to install the baseboards and trim profiles, which will cover the expansion gap without obstructing it. Fasten all trim into wall base. Do not nail or staple trim into or through the flooring surface.

**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, even rows into the next room. To correctly align plank rows from room to room, it is best to use a master reference line that runs through the doorway to the far ends of each room involved. Position the line so that it is perpendicular from the corresponding wall and parallel to the sidewalls. Use this line to align the plank rows from room to room.
* **Pipes, vents and other fixed objects:** Each instance of these items can be unique, but the general rule is to measure very carefully before you cut and remember to leave a 1/2” expansion gap between the object and the flooring. You will cover the expansion gaps with molding, vent covers or pipe rings when the floor is complete.
* **Installation on Stairs:** Working from the top step down, flooring and nosings should be installed using a premium grade wood flooring adhesive and screw type fasteners or nails for all trim pieces. All stair nose moldings must be glued and nailed / screwed every 6”, as a safety precaution.

# INSTALLING WITH ADHESIVE: Use only approved adhesives. Refer to and follow the Adhesive Manufacturer's instructions on the pail prior to installing This Engineered Hardwood Flooring. When adhesives other than recommended Engineered Flooring Adhesive, the adhesive performance liability is transferred to the Adhesive Manufacturer. The Manufacturer does not warrant, or accept any liability regarding adhesive performance or failure when the recommended Adhesive is not used. Contact your flooring supplier, or the Adhesive Manufacturer, when you experience problems, or if you have additional concerns.

 Follow all guidelines outlined earlier regarding pre installation and the general installation process.

* The Manufacturer requires the use of a full-spread hardwood flooring adhesive to install the This Engineered Hardwood Flooring. The Manufacturer recommends the use of Engineered Flooring Adhesive that is an anhydrous Engineered Hardwood Flooring Adhesive, containing no water. Adhesives must be approved for use and designed specifically to install Engineered Hardwood Flooring. Engineered Hardwood Flooring Adhesives that are Latex Based, or Acrylic Latex Based, contain water and should only be used by experienced professionals. Follow all Adhesive Manufacturer's instructions for use listed on the adhesive container.
* Make sure to use the appropriate trowel to get the correct coverage rate with the adhesive. Use a trowel with the adhesive manufacturer's recommended dimensions. The trowel allows for the correct amount of adhesive as well as the correct ridge depth and spacing to properly install the This Engineered Hardwood Flooring. Coverage will usually be about 60 – 70 s.f./gallon when used as recommended. Hold the trowel at a 90 degree angle firmly against the sub-floor and spread equal amounts of adhesive in an area that can be covered while the adhesive remains wet enough to transfer to the flooring properly. Actual working time with the adhesive varies depending on the humidity levels, and environmental conditions at the installation site. Do not attempt to install flooring over adhesive that has cured to a dry film and cannot transfer to the flooring planks properly.
* Certain Adhesives can also be used as a general concrete sealer (MVT up to 12 lbs.) and flooring adhesive combined. The spread rate for this method is approximately 30 – 35 s.f./gallon using a Complete 3N1 3/16” x ¼” x ½” Flat V Glide-On Trowel. Hold the trowel at a 45-degree angle firmly against the sub-floor, and spread equal amounts of adhesive in an area that can be covered in approximately 60 minutes. Do not use trowels after the Glide -On spacer tips have been worn excessively.
* Apply Adhesive to the substrate using a trowel motion perpendicular to the board length, or a half moon shaped spreading motion, avoid pulling adhesive parallel to the board length when possible. Do not to spread your adhesive too far ahead of your work area. If the adhesive skims over and starts to dry, this will prevent a proper bond between the substrate and the Engineered Hardwood flooring, immediately remove the old adhesive and spread new adhesive. You must have adequate adhesive transfer to ensure the floor will be installed correctly. You can double check the holding strength of the adhesive by occasionally lifting a board and checking the transfer of the adhesive.
* Do not stand on the recently installed floor while the adhesive is still drying. This can cause the boards to shift, leaving unwanted gaps between planks and can result in installation issues further into your install. Always work off the floor facing the flooring tongues during installation. Try to avoid sliding the pieces through the adhesive as much as possible – this will help reduce memory pull-back (boards pulling apart once they are in position) and adhesive bleed-through (excess adhesive squeezing out vertically through the joints).
* Once the boards are tightly fitted together, the use of 3M 2080 Blue Painter’s Tape may be used if necessary to hold the planks together while the adhesive cures. Make sure to clean any adhesive off of the surface of the wood with mineral spirits BEFORE you apply the tape! If the adhesive dries on the surface of the wood it is VERY difficult to remove. 24 hours after the installation is complete, remove all of the Blue Painter’s Tape from the surface of the flooring. NOTE: Use only 3M 2080 Blue Painter’s Tape. Do not use Masking or Duct Tape! These tapes leave residue on the surface of the wood, which is very difficult to remove and may permanently damage the flooring finish.
* Do not apply the adhesive if the room temperature or sub-floor is colder than 65 degrees Fahrenheit.
* **NOTE**: Adhesives are difficult to remove from the surface of the hardwood flooring after installation. Make sure to have Adhesive Remover/Stripper or Mineral Spirits and a Terry Cloth readily available to remove excess adhesive immediately.
* Check to make sure no adhesive residue is left to dry on the flooring surface during the installation process.

**INSTALLING WITH STAPLES/Nails/Cleats (Mechanical Fasteners):**

Follow all guidelines outlined earlier regarding pre installation and the general installation process.

**The Manufacturer recommends the use of 18 Gauge narrow crown (7/32" to 3/8") staplers and staples with the proper leg length to properly fasten this Engineered Hardwood Flooring. NWFA** **approved Nailers and nails designed for securing Engineered Flooring may be used by qualified flooring professionals at your own risk. Do not use 16 gauge or larger staples to install this Engineered Hardwood Flooring. Do not use staplers or nailers specifically designed for Solid Hardwood Flooring to install this Engineered Hardwood Flooring. The Manufacturer does not warrant flooring installations ,and accepts no liability problems that may arise, including but not limited to loose flooring, dimpling or distortion of the face, breakage of the core or tongue, and noise when fasteners that are mis-used, and are not approved or designed for Engineered Flooring , are used to install This Engineered Hardwood Flooring.**

* Use only Stapling and Nailing Equipment and Fasteners designed for Engineered Hardwood Flooring Planks over NWFA approved APA Stamped E1- PS2 Underlayment Grade Subfloors
* Staples and Nails should be of sufficient length to allow a minimum of 3/4" of the fastener to penetrate and hold into the subfloor. The Staples or Nails should be placed in the top of the tongue, about 2 inches from each end, and spaced along the length of the board every 6" to 8".
* Follow all instructions provided by the Manufacturer of the specific fastening equipment.
* Make certain the Fastener’s air pressure is set, and guide angle and depth settings on the adapter foot are correct in order to allow the staple crown or nail head to recess the fastener flush in the top of the flooring tongue (not protruding above or recessed below) the tongue so no damage or breakage of the core or tongue occurs. Occasional noise is inherently common to staple and nailed installations and is not considered a manufacturing defect. Inherent noise may be minimized by maintaining recommended indoor climate control.
* **WARNING: Do not use mechanical fasteners or glue method to install this Engineered Hardwood Flooring directly over particle-board or unapproved OSB (use floating method only for installations over particle board and Unapproved OSB Substrates)**
* **When using Mechanical Fasteners:** Using improper adapters and pressure settings can cause severe damage to the flooring while using the staple/nail/cleat installation method. Using the correct adapter and pressure will set the staple/nail/cleat correctly in the tongue. It is vital that the tool is adjusted properly so the staples/nails/cleats are being positioned at the proper angle. Air pressures set too high can cause damage to the tongue, creating blisters on the face (dimpling) of the flooring and making it difficult to install adjoining boards. Use Air pressure necessary to attach fasteners properly, the (PSI) from the compressor is usually around 80 PSI. A proper test is to set the Stapler/Nailer pressure initially at 70 PSI and adjust it until the staple/nail/cleat properly sets in the tongue. Test the stapler or nailer on a scrap piece of material first. If the tongue is being damaged when stapling/nailing, or the staple/nail/cleat is driving too deeply into the nail channel, lower the pressure. If the staples/nails/cleats do not set deep enough, raise the pressure. This Manufacturer is not responsible for damage caused by mechanical fasteners. If you need to remove a staple/nail/cleat that has gone in crooked, do not pull straight up from the tongue. This will damage the surface of the board. Instead, pull out the staple/nail/cleat from the tongue at the front of the board with all pressure from the hammer’s head directed to a fulcrum board on the sub-floor. This Manufacturer is not responsible for damage caused by negligent installation practices, the misuse of Mechanical Fasteners, hammers or other installation tools.

**INSTALLING WITH FLOATING METHOD:**

Follow all guidelines outlined earlier regarding pre installation and the general installation process.

Underlayments:

* Use a 2-in-1, or 3-in-1, 2mm High Density closed cell foam (polyethylene, polypropylene, or EVA) underlayment with attached polyethylene film or foil moisture barrier, overlap lip, and tape(2-in-1), or compatible industry approved underlayment. Do not use styrene bead, or open cell poly type (packing wrap type) underlayment. If the flooring has underlayment attached, or does not have a moisture barrier attached, prior to installing the underlayment, cover all substrates with a 6mil polyethylene sheet, and seal all seams. Lap the moisture barrier 1/2" up all walls to allow moisture vapor to escape from underneath the flooring as necessary.
* Underlayments must have adequate densities and must not be capable of permanent compression in order to prevent deflection at the flooring joint, allowing the flooring boards to remain level under traffic at all times throughout the life of the flooring.
* When sealing seams, Seal all underlayment or polyethylene film moisture barrier seams with a high quality, wide, waterproof packaging tape that adheres permanently and will not tear. Lap underlayment 1/2" up all walls to allow moisture vapor to escape from underneath the flooring as necessary.

**Floating Floor Glue:**

* Use a Floating Floor Tongue and Groove Glue, a PVA (Poly Vinyl Acetate Cross-linking polyaliphatic emulsion) with SBR component(Synthetic Latex) Glue designed for Floating Hardwood Flooring installations, or glue meeting these specifications from a reputable Adhesive manufacturer such as WF. Taylor 2049-16 or Franklin 2104 Tongue and Groove Glue. Glues designed for Armstrong, Mannington, Shaw, and other floating Engineered Wood Floor manufacturers meeting the above specifications may also be used.
* Never use a glue that does not contain the SBR (Synthetic Latex) component such as Titebond II, Elmers Glue All, Gorilla Glue, or Elmers Carpenters Wood Glue. Even though they may appear to be similar, these glues dry hard and brittle and will cause excessive noise and compromised joints throughout the life of the floor. This Engineered Hardwood Floor will not be warranted if unapproved glues, not specifically designed for floating hardwood installations are used.
* When gluing, run a continuous bead on the tongue of the end and full length of the board with the tongue facing
* The installer and the groove facing the opposing wall. Fit the boards tightly as secure in place making sure that the
* Hydraulic action of the glue, or movement from fitting does not loosen or cause separation of the tight fit. 3M 2080 Blue Painter's Tape (only) may be used to keep the flooring joints together during the installation process.
* Do not allow glue to remain on the flooring surface after fitting. Wipe off all glue and residue immediately throughout the installation process.
* Do not stand on the recently installed floor while the adhesive is still drying. This can cause the boards to shift, leaving unwanted gaps between planks and can result in installation issues further into your install. Always work off the floor facing the flooring tongues during installation.
* Floating Floor Tongue and Groove Glue is not freeze-thaw stable. Do not use glue that has been exposed to freezing temperatures.
* Once the boards are tightly fitted together, the use of 3M 2080 Blue Painter’s Tape may be used if necessary to hold the planks together while the adhesive cures. Use only 3M 2080 Blue Painter's Tape and remove within 12 to 24 hours. Use of other types of tape, or 3M 2080 tape left for more that 24 hours may permanently damage the flooring finish. Make sure to clean any adhesive off of the surface of the wood with mineral spirits BEFORE you apply the tape! If the adhesive dries on the surface of the wood it is VERY difficult to remove. 24 hours after the installation is complete, remove all of the Blue Painter’s Tape from the surface of the flooring. NOTE: Use only 3M 2080 Blue Painters Tape. Do not use Masking or Duct Tape! These tapes leave residue on the surface of the wood, which is very difficult to remove and may permanently damage the flooring finish.

# GENERAL TIPS: FLOOR REPAIR

* 1. Minor damage to your hardwood floor may be repaired by using a color fill putty stick or felt stain marker. This special product should be matched to the color of your floor and, when properly used, will make the damaged area virtually invisible.
* 2. A qualified hardwood flooring installer should repair extensive damage to traditional engineered hardwood flooring.
* 3. For splinters and loose edges, broken away or still attached, DO NOT PULL, carefully glue in place with clear (CA) Cyanacrylate (Super Glue), carefully trim small sprigs or raised edges with a chisel point razor and touch up with a matching color pen or putty stick available at most home centers.
* 4. Contact **your retailer** for information regarding locating matching Trim Pieces, board replacements, cleaning and maintenance, touch-up and minor repair, or other assistance.

**HARDWOOD FLOORING CARE & MAINTENANCE**

The Manufacturer does not warrant floors that are not properly maintained.

**Routine Maintenance**

**1.** Use a damp cloth to blot up spills as soon as they happen. Never allow liquids to stand on your floor.

**2.** For tough spots, such as oil, paint, markers, lipstick, ink, tar, or incidental topical residue from manufacturing processes, use Mineral Spirits, Denatured Alcohol (Clear Hand Sanitizer containing Ethanol) on a clean white cloth, then wipe the area with a damp cloth to remove any remaining residue. IMPORTANT! Never use Lacquer Thinner, of Citrus Based Solvents to Clean This Engineered Hardwood Flooring. Test all cleaning chemicals on an inconspicuous area or loose piece of the flooring before use.

**3.** Sweep, dust, or vacuum the floor regularly with a proper hard surface non-motorized attachment (not the beater bar) or microfiber dusting pad (such as available in the Bona floor care kit), to prevent accumulation of dirt and grit that can scratch or dull the floor finish. **Do not Use Swiffer type dust mops, Steam Cleaning Equipment** or Swiffer Type steam or wet mops of any kind on the hardwood flooring surface.

**4.** Periodically clean the floor with cleaning products approved for use on Engineered Hardwood Flooring, or a Bona Hardwood Floor Cleaner Kit, made specifically for prefinished hardwood floor care. Apply cleaning liquid to dampen (not dripping), a soft clean cloth or terry cloth mop cap. Dry the floor immediately after cleaning with a dry terry cloth towel to remove excess cleaner residue and avoid streaking.

**5.** Do not apply liquid cleaners directly to the flooring surface, never wash or wet mop the floor with soap, water, oil-soaps, detergents, vinegar, or any other liquid cleaning material. This can cause swelling, warping, delamination, or joint-line separation, and will void the warranty.

**6.** Do not use steel wool, abrasive cleaners, or strong ammoniated or chlorinated type cleaners.

**7.** Do not use any type of finish restorer, coatings to enhance shine, floor wax, or polishes.

**8.** For spots such as candle wax or chewing gum, harden the spot with ice in a plastic bag, immediately dry, 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.

**9.** For tough stains, you may need to use a heavy-duty stain remover made specifically for hardwood floors.

**10.** A more frequent dust mopping or vacuuming schedule may be required in very sandy areas such as a beach home.

**11.** Maintain a 35-55% air humidity and 60-78ºF temperature at all times within the room.

**On Site Protection**

1. 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.

2. When placing a rug, do not use rubber or foam backed plastic mats directly on the flooring as they may discolor the flooring finish. To prevent slippage, use an approved vinyl rug underlayment.

3. Use 1" minimum diameter felt floor protectors. As a rule, the heavier the object, the wider the floor protector. Proper Floor Protectors” on feet of all furniture is defined as any soft, cushioned product that will cover the feet/posts entirely. Metal or Plastic gliders, cardboard, or any other hard surface or pads too small for the feet are not considered “proper floor protectors”.

4. Maintain a normal indoor relative humidity level between 35 and 55% throughout the year to minimize the natural expansion and contraction of the wood.

a. Heating season (Dry): A humidifier is recommended to prevent excess shrinkage due to low humidity levels. Wood stoves and/or electric heat tend to create very dry conditions.

b. Non Heating Season (Wet): An air conditioner, dehumidifier, or periodically turning on your heating will help to maintain humidity levels during summer months.

5. Avoid excessive exposure to water during periods of inclement weather.

6. Do not walk on your floor with stiletto heels, spiked golf shoes, or other types of sports cleats.

7. Do not allow sharp, pointed, or rough textured objects to be exposed to the hardwood flooring.

8. Keep your pet’s nails trimmed to prevent them from scratching your floor.

9. Periodically rearranging your area rugs and furniture will allow the floor’s finish to age evenly and the color to remain uniform. UV sunlight will change the color of hardwood to varying degrees based on exposure and species type.

10. 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 use Cardboard to protect the floor when moving or rolling heavy objects. Never try to slide or roll heavy objects across the floor.

11. A hard, smooth bottomed protective mat designed for Hardwood Flooring should be used for furniture or chairs with casters.

# GENERAL TIPS: HARDWOOD MAINTENANCE AND ANNUAL SEASONS

**Wood floors will be slightly affected by varying levels of humidity within your building. To make sure the floors are protected for as long as possible, it is necessary to keep the relative humidity levels between 35% - 55%. Below are some recommendations on how to achieve proper indoor environment conditions throughout the year.**

* Wet/Humid Seasons increase the indoor Relative Humidity. Heaters are not generally used during these months. The Hardwood Floor increases in moisture content and expands. To maintain a proper humidity level, the use a dehumidifier or air conditioner may be required.
* Dry Winter Seasons lower the indoor Relative Humidity. Wood-burning stoves, gas and electric heating systems, and forced air heating systems are used often during winter months – creating very dry conditions indoors. Low indoor relative humidity causes the Hardwood Floor to lose moisture and subsequently contract and change shape, (cupping), resulting in gaps, misshapen boards, and permanent damage from cracking of the flooring surface, delaminating of the core. The use a humidifier to keep the humidity level between 35% - 55% may be required. In winter months, Forced air Heat Systems are capable of removing 15 gallons or more of water from indoor air per day in 1000 square feet of heated space.

# Other Installation Methods and Warranty Information

* You may obtain the “ Engineered Hardwood Flooring Warranties and Floor Care Guide“ documents as well as the installation instructions for all approved installation methods from your flooring provider.

**ENGINEERED HARDWOOD FLOORING WARRANTIES AND FLOOR CARE GUIDE**

The warranties described below are for the original purchaser, are not transferable, and are subject to the procedures, limitations, disclaimers, and exclusions set forth herein. These warranties cover only approved product applications as recommended by the Manufacturer. The warranties are only valid when the Engineered Hardwood Flooring products are used under normal, residential household conditions, with the exception of the light commercial finish warranty, providing all products are installed and maintained according to the Engineered Hardwood Flooring Installation Instructions, Exceptions and Required care and maintenance instructions are strictly followed.

**LIMITED LIFETIME RESIDENTIAL STRUCTURAL WARRANTY**

This Engineered Hardwood Flooring will be free of manufacturing defects for 95% of the total flooring purchase for each individual job. This limited manufacturing defects warranty remains in effect for the life of the flooring. The remaining 5% of the flooring purchase is subject to the industry standard 5% defect allowance, used under normal residential use, and providing that proper installation, required climate control, and recommended care and maintenance procedures are followed. The recommendations and exceptions are listed below.

**LIMITED 25-Year Residential Finish Warranty**

The Manufacturer warrants that the finish layer of this Engineered Hardwood Flooring will not release from the surface or wear through to the decorative wood surface in a total area in excess of 5% of the total surface of the job site for 25 years from the date of purchase, used under normal residential use, where recommended installation procedures, and all required care and maintenance procedures are followed. This warranty applies to this Engineered Hardwood Flooring when installed in normal residential household conditions.

**Exception for Light Commercial (pre-approved installations only)**

**LIMITED 3-YEAR LIGHT COMMERCIAL FINISH WARRANTY**

The Manufacturer warrants to the original purchaser that its finish layer will not wear through or separate from the decorative wood surface for a period of 3 years from the original date of purchase. Finish wear through is defined as 100% finish loss over a at least 5% of the total installation. This 3 Year Light Commercial Finish Warranty is subject to the same limitations and exclusions provided in this Engineered Hardwood Flooring Warranty *and Floor Care Guide,* and applies ONLY TO These Engineered Hardwood Flooring products when used in the light commercial locations. All Light Commercial Installations must be pre- approved by the supplier and manufacturer prior to final sale in order for the Limited 3 Year Light Commercial Warranty to be valid.

*The Following list of Light Commercial Locations, but not limited to this list , are Excluded and will not be approved: Restaurants, Lodging, Dining areas, Commons, Malls, Public Schools and Universities, Health Care Facilities where maintenance requires general mopping procedures and the use of specialized cleaning processes that are not suitable to be used for maintaining hardwood flooring. These locations do not qualify for Light Commercial Flooring Warranties and will not be approved.*

**THE MANUFACTURER DOES NOT WARRANT ENGINEERED HARDWOOD FLOORING INSTALLED OVER RADIANT HEAT SYSTEMS.**

**Warranty Exclusions**

**Exclusions- Unapproved Installation Processes Resulting in Failure and Noise**

This Engineered Hardwood Flooring Warranty is valid only if the flooring has been installed in accordance with instructions that accompany the product, provided after the purchase, and are present on the company website and customer support sites. The flooring must be installed only in areas of approved use and all required installation instructions and care and maintenance procedures are strictly followed. This warranty excludes the installation of flooring with defects that are visible prior to installation, problems related to noise from improper installations, use of unapproved adhesives resulting in failure of adhesive bonds, improper use of unapproved staples and staplers, Unapproved nails and nailing tools, installation over unapproved concrete and wood substrates, and loose substrates. This warranty excludes all issues related to noise, hollow sounds, cracking sounds, pops, and squeaks that may occur at any time throughout the life of the floor.

**Exclusions - Finish Damage and Gloss Reduction**

This Engineered Hardwood Flooring Warranty excludes damage caused by tapes and or adhesives, indentations, scratches, or damage caused by misuse, negligence, damage from toys, accidents, fire, erosion, natural disasters, insects, pet accidents, untrimmed pet nails, damaged high heel shoes, taps, sports spikes, pebbles, sand, and other abrasives. Damage as a result of lack of proper cleaning and maintenance, insufficient protection from chairs, furniture and appliances, and damage from the use of rollers and wheels on unprotected flooring is not warranted. Unauthorized alteration or repairs to the manufacturer’s original finish will void any and all warranties. This includes sanding, top coating, recoating, or refinishing of the factory applied finish. Gloss reduction, even is the flooring is properly maintained, as a result from use over time, is considered normal and is not considered as 100% loss of the total finish layer. Reduction or change of gloss is not covered under this warranty.

**Exclusions- Exposure to Water, Moisture, and unapproved cleaning and maintenance chemicals**

This Engineered Hardwood Flooring Warranty will not be valid when this Engineered Hardwood Flooring is installed in humid areas or areas that have drains, including bathrooms or outdoor installations. Damages from rain, snow, mud and sand resulting from being installed directly adjacent to unprotected exterior entrances, walls, water migrating through the subfloor, concrete slab, or from any source; damages from leaking or broken plumbing, landscape watering, irrigation, fire, floods, or standing water during or after construction. Environments exposed to seasonal Relative Humidity moisture levels outside 35% to 55% Relative Humidity necessary to properly maintain the flooring. Damage from hydrostatic pressure or moisture migration resulting from an improper concrete slab installation are not warranted.

Do not use a wet mop, steam cleaner, steam mop, Swiffer style duster or Swiffer style spray applicator to clean your floor. Never allow the floor to become flooded or allow cleaner to be applied directly to the flooring surface during the cleaning process. Never apply wax, shine treatments, floor polish, furniture polish, dust treatments, ammonia, window cleaners, oil soaps, citrus based cleaners, or use any cleaners not specifically designed to clean hardwood flooring to your hardwood floor.

**Exclusions- Visual Aspects, Color and Character, Matching Samples**

 Grain patterns and color variations created in wood are unique to each individual board. Naturally occurring wood characteristics such as mineral streaks, knots, variations in grain, textured scrapes, and color are not considered defects. Your newly installed floor may vary from samples or images shown and these variations are not covered by this Engineered Hardwood Flooring Warranty.

**Exclusions- Exposure to light sources and viewing angles**

All Hardwood Flooring will undergo changes to color and shade due to the effects of prolonged exposure to sunlight, and other light sources, and these changes in color and shading are not warranted. Area rugs and other furnishings should be moved occasionally as they block sunlight and may give the appearance of discoloration under the rug. Changes in shading and color, as a result of exposure to light sources are not considered as a flooring defect by the Hardwood Flooring Industry. Defects that are visible only in certain lighting conditions or viewing angles other than a standing position in normal lighting are excluded and are not covered under this Engineered Hardwood Flooring Warranty.

**Exclusions- Textures, Edge Treatments, Splintering**

Scraping of the hand scraped engineered flooring is performed manually and will vary in regard to texture or appearance. Individual Scrapes vary in texture and color is not considered defects. Splintering of hand scraped engineered hardwood flooring may occur during the decorative scrape process or as a result of damage from the installation process. Splinters may also appear throughout the life of the floor as a result of repeated exposure to water as a result of excessive mopping, or sustained exposure to relative humidity outside the recommended levels of 35% to 55% RH. Flooring with visible splinters and excessively rough edges should be discarded or trimmed off, and must not be installed. If rough edges and splintering resulting from decorative scraping are discovered after installation occurs, the flooring should be repaired by the installer before the final inspection and acceptance of the installation. Flooring found to be affected by splintering after installation may be repaired by gluing the splinters back in place instantly with clear CA Cyanoacrylate (superglue), or gently trimming away the splinter with a chisel point razor blade and subsequently recoloring with a matching stain pen or putty stick – available at most home centers. Touch up and repair of splintered boards, rather than replacement of individual boards or the entire flooring area, is considered to be standard practice in the flooring industry as a repair option. Special Edge Treatments such as "French Bleed" are colored and textured in a separate process prior to the application of wear surface and final gloss coatings. The treated darkened edges (Bleed) are below the plane of the wear and gloss coatings and therefore do not directly come into contact with normal surface traffic. Although the Decorative Edges are not subject to damage from wear, the edges may be damaged by repeated mopping and exposure to water, use of unapproved cleaning chemicals, and unapproved cleaning methods. The resulting damage may result in fading, color change, or color loss and is not considered a result of a manufacturing defect. Recoloring of the damaged edges with a matching stain pen will restore the original appearance and aesthetic effects of the Special Bleed edges.

**Exclusions - Confirmation of Color Match, Style, Quality and Pre Installation Requirements**

Also, issues related to species variance, age, character, and color changes due exposure to sunlight or other light may keep new or replacement flooring from matching existing flooring installations or flooring samples and is not covered by this warranty.

This Engineered Hardwood Flooring must be inspected and found to satisfactorily match the original sample and be subsequently approved by the original purchaser prior to installation. All flooring, found during pre-inspection, that does not satisfactorily match the original sample, or considered be defective by the person installing the flooring, should be presented to the place of purchase for inspection and possible replacement, PRIOR TO INSTALLATION. Flooring exhibiting visible defects (on the face of the flooring) must be noted by the installer and must not installed. Defective material in excess of 5% of the total job should be reported prior to installation so that replacement flooring may be obtained prior to the completion of the installation.

Installation constitutes acceptance of the flooring. No warranty or and cost reimbursements will be offered for appearance-related claims such as grade, color, or visible manufacturing defects, after the flooring products has been installed.

**Installations and Special Discounted Flooring**

 All installations must comply with the procedures outlined in these Engineered Hardwood Flooring Installation Instructions. Any alteration of original manufactured flooring is not allowed and is not covered under this warranty. Unauthorized Alteration or repairs to the manufacturer’s original flooring will void any and all warranties. This includes sanding, top coating, recoating, or refinishing of the factory applied finish. Gloss reduction is not considered surface wear and it is not covered under this warranty.

Flooring sold as Cabin Grade, Seconds, off-grade, flooring sold “as-is”, or any other flooring not including in the list of warranted items are not covered by this Engineered Hardwood Flooring Warranty.

The sole obligation and liability of the Manufacturer is to touch up, repair, refinish, or replace at the Manufacturer’s option, flooring defects covered by this limited warranty. Only Engineered Hardwood Flooring that is professionally installed may be eligible for labor cost reimbursement.

**Exclusions- Compensation**

This Engineered Hardwood Flooring Warranty excludes, and will not allow for reimbursement of consequential or incidental damages. This means any loss, expense, inconvenience, or damages to anything other than the flooring that may occur as a result from warranted defects in the installed flooring. Only a qualified hardwood flooring installer should attempt to repair extensive damage to an installed hardwood floor. If the flooring was not professionally installed, the Manufacturer reserves the right to cover the cost of replacement materials only. Consequential or incidental damages associated with any warranty claim are excluded and will not be paid. The Manufacturer will not pay costs associated with relocation during the repair process such as hotel, meals, or moving and storage of furniture.

**Claims Process**

This document is the complete and exclusive statement of the Engineered Hardwood Warranty, and supersedes all other preexisting expressed and/or statutory warranties. During the warranty period, should you have any problems with your floor, please contact the authorized supplier where the product was purchased within 30 days from the date the problem occurs. Dealers and flooring owners are not authorized to make final decisions regarding repair or replacement of flooring without the consent of the Manufacturer. The Manufacturer has the exclusive right to make any decisions regarding warranty coverage or take any action regarding repairing or replacing defective flooring material. Contact your supplier for written approval from the Manufacturer concerning all potential claim related issues PRIOR to attempting the repair, removal, or replacement of a flooring product. In the unlikely event that any portion of your flooring should be found defective with respect to the provisions of the warranties, The Manufacturer, after complete review of all issues, at its discretion, only to the original purchaser, will repair, refinish, or replace such defective portion with the same product or one of equal value. In the unlikely event that the Manufacturer is not able to correct the failure after a reasonable number of attempts, the Manufacturer will refund to the original purchaser, if requested, the purchase price for that portion of the floor that is determined defective by this warranty.

**TO FILE A CLAIM:**

The purchaser should contact the retailer where this Engineered Hardwood Flooring was purchased within 30 days from the discovery of the defect. In some cases the retailer may be able to correct your problem. If a resolution cannot be reached, the dealer will take the appropriate steps to communicate the problem tothe Manufacturer.

Claims must be filed in writing at the above address (or e-mail) within the warranty coverage period. Proof-of-purchase (sales receipt) is required to verify all warranty claims. The Manufacturer reserves the right to have the floor inspected by company personnel or a NWFA certified inspector and when necessary, remove portions of the affected flooring for technical analysis.

**Use of Certified Independent Hardwood Flooring Inspectors (must be Certified by NWFA only)**

For all claims – if either party cannot determine if the issue is caused by a manufacturing defect, the retailer or end user may elect to hire an independent NWFA Certified Flooring Inspector to inspect the job and provide their conclusions and suggestions for a remedy. Only inspections from a NWFA certified inspectors will be recognized by the Manufacturer. All other inspections may be determined to be invalid. If the affected flooring problem is determined to be a manufacturing defect, the end user and retailer should agree on requested settlement from the Manufacturer prior to submitting to the Manufactuer. If a settlement is reached regarding a claim, all parties must sign the Manufacturer Claim Approval Form as their acknowledgment of the settlement agreement. The Manufacturer will review the claim and all supporting documents provided. If the Manufacturer agrees with the requested settlement, the Manufacturer will submit the claim approval form (which will spell out the settlement in detail – including all approved expenses and other settlement requests). Both the customer and retailer should sign and return the letter to the Manufacturer. Once the settlement agreement is signed by all parties and received, compensation will be issued to the original supplie . The Manufacturer reserves the right to acquire, for technical analysis, pieces of the defect to provide to the manufacturer for quality control purposes. To present a claim to the Manufacturer, documentation must include proof of purchase of This Engineered Hardwood Flooring (sales receipt from the place of purchase, a photo of the information located at the end of a carton of material), a detailed list of expected expense reimbursements, and settlement requests will be needed as well as the inspection report detailing the findings. Upon review of claim and the Manufacture approves the claim, the Manufacturer will then proceed to repair or replace your Flooring as provided in this warranty. If your floor is no longer available, the Manufacturer may choose to replace or repair your floor with a comparable product. The Manufacturer will reimburse all inspection fees paid by the purchaser on claims if the product failure was determined to be caused by a manufacturing defect. The receipt for inspection expenses must be included in the settlement request.

**ENGINEERED HARDWOOD FLOOR CARE AND MAINTENANCE**

Clean loose dirt and grit from the floor using a microfiber dusting pad (such as available in the Bona floor care kit), broom, or vacuum (without the beater bar activated and not in motion). Use of Hand held Broom or vacuum with non-mechanized dusting attachments is recommended for cleaning Smooth , beveled edge, and Hand Scraped floors. Immediately wipe up food or liquid spills with a soft damp cloth. For cleaning use only an approved product designed for cleaning hardwood floors (such as Bona Hardwood Floor Cleaner with a microfiber or terry cloth cleaning pad).

Do not use a wet mop, steam cleaner, steam mop Swiffer style dust mop or spray applicator to clean your flooring. Never allow the floor to become flooded or allow cleaner to be applied directly to the flooring surface during the cleaning process.

Apply Bona Hardwood Flooring Cleaner (available at most flooring centers) or similar industry recommended hardwood flooring cleaner designed specifically for prefinished hardwood flooring directly to a Microfiber or Terry Cloth Mop Applicator in order to lightly dampen the cloth applicator and proceed to clean the hardwood flooring in sections, (approximately 4 ft. X 4 ft. areas) in sequence until the total flooring surface is cleaned. For best results, a dry white towel should be used to towel dry each section before proceeding to the next area.

Never apply wax shine treatments, floor polish, furniture polish, dust treatments, ammonia, window cleaners, oil soaps, citrus based cleaners, or any cleaners not specifically designed to clean hardwood flooring to your hardwood floor. Keep all pet’s nails trimmed.

Pet nails that are not properly trimmed and are allowed to come into contact with the hardwood flooring can potentially exert the equivalent of several thousand pounds per square inch of direct pressure to the flooring surface. This intense pressure may scar or scratch the wear surface and permanently indent the underlying hardwood layer*.*

Use plywood or Masonite to protect the flooring when rolling heavy loads such as appliances, furniture dollies, or furniture with attached wheels or legs across the flooring. Never drag anything across the flooring. Install proper floor felt protectors, 1" in diameter or larger, on all points that contact the flooring on all furniture and chairs. Avoid heavy impacts, spiked high-heels, and rotational loads. Have a professional repair any areas of the flooring that become damaged. Minor damage to your hardwood floor can be repaired by using a color fill putty stick or touch-up stain pen available at most Home Centers. These products can be closely matched to the color of your floor and, when properly used, provide satisfactory results. Contact your supplier for more information on the Recommended Care and Maintenance for your flooring.