Installation Instructions

Product Description	Grade Levels	Installation Method	Warranty
Engineered Hardwood Click lock/Click lock (Long side/Short side)	Above Grade On Grade Below Grade	Floating or Glue Down Indoors Only	Limited Lifetime Residential

CAUTION: ASBESTOS IN EXISTING FLOOR: Product does not contain asbestos. Existing installed resilient flooring and asphaltic adhesive may contain asbestos fillers or crystalline silica. Do not sand, dry sweep, dry scrape, drill, saw, bead-blast, or mechanically chip or pulverize existing resilient flooring, backing, lining felt, asphaltic "cutback" adhesive or other adhesives. See "Recommended Work Practices for Removal of Resilient Floor Coverings" (rfci.com) for detailed information and instructions on removing all resilient covering structures.

WARNING: This product can expose you to formaldehyde gas which is known to the State of California to cause cancer. For more information, go to www.P65Warnings.ca.gov.

WARNING: Drilling, sawing, sanding or machining wood products can expose you to wood dust, a substance known to the State of California to cause cancer. Avoid inhaling wood dust or use a dust mask or other safeguards for personal protection. For more information go to www.P65Warnings.ca.gov/wood.

MINNESOTA STATUTE: "IMPORTANT HEALTH NOTICE. SOME OF THE BUILDING MATERIALS USED IN THIS HOME (OR THESE BUILDING MATERIALS) EMIT FORMALDEHYDE. EYE, NOSE, AND THROAT IRRITATION, HEADACHE, NAUSEA AND A VARIETY OF ASTHMA-LIKE SYMPTOMS, INCLUDING SHORTNESS OF BREATH, HAVE BEEN REPORTED AS A RESULT OF FORMALDEHYDE EXPOSURE. ELDERLY PERSONS AND YOUNG CHILDREN, AS WELL AS ANYONE WITH A HISTORY OF ASTHMA, ALLERGIES, OR LUNG PROBLEMS, MAY BE AT GREATER RISK. RESEARCH IS CONTINUING ON THE POSSIBLE LONG-TERM EFFECTS OF EXPOSURE TO FORMALDEHYDE.
REDUCED VENTILATION MAY ALLOW FORMALDEHYDE AND OTHER CONTAMINANTS TO ACCUMULATE IN THE INDOOR AIR. HIGH INDOOR TEMPERATURES AND HUMIDITY RAISE FORMALDEHYDE LEVELS. WHEN A HOME IS TO BE LOCATED IN AREAS SUBJECT TO EXTREME SUMMER TEMPERATURES, AN AIR-CONDITIONING SYSTEM CAN BE USED TO CONTROL INDOOR TEMPERATURE LEVELS. OTHER MEANS OF CONTROLLED MECHANICAL VENTILATION CAN BE USED TO REDUCE LEVELS OF FORMALDEHYDE AND OTHER INDOOR AIR CONTAMINANTS.
IF YOU HAVE ANY QUESTIONS REGARDING THE HEALTH EFFECTS OF FORMALDEHYDE, CONSULT YOUR DOCTOR OR LOCAL HEALTH DEPARTMENT."

Safety and Health Precautions

Power tools can be dangerous. Operate in strict accordance to manufacturer's operating instructions and safety precautions. Unsafe and improper use can cause serious injuries. Avoid inhalation and exposures to dust by mechanical means and by wearing personal protective equipment. Wear appropriate personal protective equipment (PPE) which includes NIOSH or OSHA-approved dust masks, safety goggles and work gloves.

Warranty

This flooring product comes with a Limited Lifetime Residential warranty. For the warranty to be effective, the flooring must be installed and maintained according to manufacturer's installation instructions and maintenance guide. The warranty applies to the original purchaser of the flooring for the duration of the stated warranty from date of purchase. It guarantees the original purchaser that the finish surface will not wear through from normal foot traffic. The warranty excludes damages resulting from outside the normal conditions including but not limited to: Scratches and dents from sharp objects, shoes with spikes and cleats, environmental conditions including excessive humidity or extreme temperatures, mold/ mildew, appliance leaks, natural disasters, Acts of God and damages which are generally covered by casualty insurance.

Owner/Installer Responsibility

Quality Check

Perform a Quality Check. You may open up to four boxes before installation to carefully examine the color, finish, and quality of each plank. DO NOT open more than four boxes. If you are dissatisfied with the material, contact the retailer before installation. Installing the floor indicates the owner's acceptance of the product's quality.

Customer Support

To assure the warranty is not inadvertently voided, before proceeding with any activity that is not covered in this manual, please contact our Customer Support Team.

The owner is advised to be present during installation to provide consultation and direction. Before installation begins, the owner and installer should discuss the layout and installation plan to ensure satisfaction. If the owner cannot be present, this consultation should take place beforehand. Installers must be familiar with the National Wood Flooring Association's (NWFA) installation guidelines (woodfloors.org). The owner and installer assume full responsibility for the quality of the completed installation.

For uniformity, purchase all flooring for a single installation area at the same time. Flooring purchased later may vary in appearance beyond expectations.

Accessories, trims, and moldings are designed to complement the natural variations in floor planks. Exact matches are coincidental and not guaranteed. Non-matching accessories are not considered defects.

This product is manufactured according to strict quality standards. However, industry standards allow for a defect tolerance of up to 5%. To accommodate cutting waste and grading allowances, order at least 5% extra material (10% extra for diagonal installations).

During installation, continuously inspect planks for defects. Any defects visible from a standing position should be cut off or set aside. Installing a defective plank signifies acceptance of the product's quality.

Clicking and squeaking noises may result from interactions between the flooring, joists, and subfloor movement. If excessive noise occurs during installation, stop work and identify the cause before proceeding.

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Wood flooring is a natural product and will exhibit variations in color, tone, grain, mineral streaks, and knots from plank to plank. Differences between samples, photos, and purchased flooring are normal and do not indicate a defect.

Subfloor Requirements

CONCRETE SUBFLOORS

Concrete subfloors must be tested in compliance with ASTM F3311 which includes F2659, F1869 and F2170. Acceptable results at the TIME OF INSTALLATION must be recorded and documented and are as follows:

- Surface temperatures must be 55°-85°F and 10° above ambient Dew Point.
- Ambient conditions must be between 55°-85°F and 35-65% RH (relative humidity).
- Acceptable testing options:
    - ASTM F2659- A meter calibrated for concrete qualified by gravimetric testing must be used. Moisture Content must be less than or equal to 4.5% MC; or
    - ASTM F1869- Calcium Chloride testing to determine moisture vapor emissions (MVER) less or equal to 5 lb/24 hr per 1000 sqft; or
    - ASTM F2170- In-situ probe testing to confirm the Relative Humidity (RH) is less than or equal to 90%.

- If any of these test results are outside of requirements, the following mitigation options can be used:
    - High moisture resistant adhesives. Refer to vendor to confirm compatibility with flooring.
    - Rolled applied moisture mitigation systems.
    - Rolled goods moisture barrier systems.

> Note: Concrete moisture content may be acceptable at the time of the test. These tests do not guarantee a perpetually “dry” concrete slab. The concrete slab moisture content can vary at other times of the year. We are not responsible for moisture related damages to installed flooring.

WOOD SUBFLOORS

Wood subfloors must be tested in compliance with ASTM D4442. Acceptable results at the TIME OF INSTALLATION must be recorded and documented and are as follows:

- Ambient conditions at the time of installation must be between 60°-80°F and 30-50% RH (relative humidity).
- A pinless (dielectric) or pin-type (electrical resistance) meter must be used to perform and record 1 moisture tests per 100 sqft.
- Moisture Content of wood subfloors must be between 6-13% MC.
- Variance between subfloor and finished wood or laminate flooring may not exceed 2% for flooring 3” or wider and 4% for flooring less than 3” wide.
- If the moisture content of the subflooring and wood flooring are outside of these tolerances, the flooring should not be installed until it is within the proper range.
- Confirm regional requirements as outlined in the NWFA Wood Flooring Installation Guidelines.

PLYWOOD OR ORIENTED STRAND BOARD (OSB) REQUIREMENTS

On truss/joist spacing of 16 in. (406 mm) O/C or less, the industry standard for single-panel subflooring is a minimum 5/8 in. (19/32 in., 15.1 mm) CD Exposure 1 plywood subfloor panels (CD Exposure 1) or 23/32 in. OSB Exposure 1 subfloor panels, 4 ft. x 8 ft. sheets. Expansion gap between panels should be 1/8 in. (3 mm). If panels are not tongued and grooved and there is not sufficient spacing or is inadequate, cut in the required spacing with a circular saw. Do not cut in expansion space on tongue and groove panels.

PARTICLE BOARD REQUIREMENTS

Floating installations ONLY unless additional underlayment is installed.

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EXISTING FLOORS

Installation over existing floors requires the installer to ensure the existing floor meets the above subfloor requirements for either concrete or wood above.

Acceptable floor coverings: solid hardwood, linoleum, terrazzo, ceramic tile and other hard surface flooring.
Unacceptable floor coverings: carpet, needle punch felt, edge glued linoleum and other soft and compressible flooring.

Jobsite Requirements

GENERAL

The installer must ensure that job site conditions—including the subfloor or substrate, ambient temperature, relative humidity, and other influencing factors—will not negatively impact the flooring. The manufacturer is not responsible for damages from improper installation or poor site conditions.

STORAGE CONDITIONS

Do not store flooring in uncontrolled environmental conditions, such as garages or exterior patios. Handle and unload flooring with care and store it in the environmentally controlled area where it will be installed.

EXISTING HOME CONDITIONS

Before, during and after installation, maintain a consistent room temperature of 60°F–80°F with a relative humidity (RH) of 35%–55%.

NEW CONSTRUCTION OR REMODEL CONDITIONS

All moisture-related work, such as pouring concrete floors, drywall and plaster installation, and plumbing, must be completed well before the flooring is delivered. Ensure the building is enclosed. Permanent heating and/or air conditioning systems must be operational for at least five days before installation and maintained during and after installation.

CRAWL SPACE CONDITIONS

The bare ground in crawl spaces must be completely covered with 6-mil black polyethylene. Crawl space clearance between the ground and the underside of the joists should be at least 18 inches. The total vent area should be at least 1.5% of the crawl space square footage or meet local building codes.

RADIANT HEATED SUBFLOOR

This product can be installed over radiant-heated subfloors with embedded heating elements. The heating system must be separated from the flooring by at least ½ inch. Set the heating system to 70°F and run it for 48 hours before and during installation. Continue running the system for 48 hours after installation before gradually increasing the temperature over 24 hours to its normal operating level.

The floor temperature must not exceed 85°F.
Avoid abrupt temperature changes in the radiant heating system.

MOISTURE BARRIER (Concrete Slabs Only)

A moisture barrier is recommended to prevent moisture migration. Use a 6-mil plastic film with 4–6 inch overlapped seams, secured with suitable tape.

SOUND CONTROL UNDERLAYMENT

Use a sound control underlayment as necessary.

Preparation

TOOLS AND MATERIALS

Tape measure • Moisture meter (wood, concrete or both) • Chalk line & chalk • Electric power saw • Carbide tipped saw blade for fine cut • Hand saw or jamb saw • PPE • Straight edge Spacers • Pry Bar • Mallet • Broom • Color matched wood putty • 12oz soft face mallet • Tapping block • Pull bar • Painters tape • 100% silicon caulk.

ADDITIONAL CONSIDERATIONS

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- Make sure your work area is well lit. Good visibility ensures that color is consistent and that visually defective planks are detected and removed.
- Remove existing base, shoe molding or threshold carefully. They can be used to cover the 3/8 in. expansion gap left around the edge of the room.
- Prior to installation, arrange planks from several boxes to ensure even distribution of colors, shades and characteristics in the installed flooring.
- Accessories, trims and moldings are manufactured to coordinate with the varied appearances of the floor planks. Any exact matches are coincidental. Non-matching accessories are not defective products.
- If an underlayment is used, install it according to underlayment manufacturer instruction.
- The remainder of the last plank can be used as a starter board on the following rows. Minimum end-join stagger of 6" must be maintained.
- During installation, inspect the planks continuously. Defects that can be seen from a standing position should be cut off or held out. Installing defective planks implies acceptance.
- Minor scratches can generally be repaired with the use of putty, stain or filler.

EXPANSION GAP

Required gap width range is 3/8 in. It is required around the perimeter of the floor and between floor and all vertical obstructions. Do not place permanently mounted structures such as kitchen counter/cabinet on the installed floor.

TRANSITION MOLDING

Maximum continuous installation without transition molding is 40 lineal feet. Recommended at doorways or passageways 5 ft. wide or more.

Note: Floor areas interrupted by wall openings greater than 5 ft. wide, or interrupted by wall sections extending out of the wall, or floor areas which are not rectangular may experience buckling or gapping if there is excessive floor expansion or shrinkage.

ACCLIMATION

If flooring is delivered at a moisture content and temperature that coincides with the expected in-use (e.g., normal living) conditions of the facility, and these conditions are maintained, no on-site acclimation is required. Acclimation temperature range is 60°F-80°F and relative humidity (RH) of 35%-55%.

Conditions in which the floor was acclimated must be maintained after installation.

Installation Procedures- Floating Installation

1. Measure the room to ensure equal width pieces on starting and ending walls. Starting and ending planks should be a minimum of two inches wide.
2. Place a 3/8" space between walls and planks. You can also place the spacers after you have completed three rows as you can easily position the flooring at that time.
3. Press the short end of the next plank at an angle to the first one, and then fold down. Complete the first row in this manner.
4. Cut the final plank of a row while using a spacer to maintain expansion requirements. Save the remaining piece to use as a starter for the next rows. Ensure that the piece is a minimum of 6".
5. Install the cut piece from the previous row as the starter in row two. Place a spacer against the wall at the start of the row.
6. Ensure end-joint stagger of a minimum of 6". If the cut piece from the previous row doesn't maintain the minimum end-joint stagger, use a new piece.
7. Place the first plank on an angle against the plank in the previous row, press forward and fold down at the same time. Allow the plank to remain slightly angled as you install the next plank. Using wedges under the installed plank can help improve the ease of installation.
8. Place the end of the plank at an angle against the end of the previous installed plank and fold down to lock the end joint.
9. Lift the second row at a slight angle and push the second plank long edge into the previous row groove and fold it partially down. Remove wedges as if they were used. Then fold the second row completely down to lock the joints.
10. Use a tapping block to close any gaps between rows. Do not impact the flooring directly with a mallet or hammer.
11. After assembling three rows, adjust the flooring to wall and place spacers as needed to maintain a 3/8" expansion. Keep the spacers in position during the entire installation.
12. Use a pull bar to close gaps or when there is not enough space to use a tapping block.
13. When angling is not possible, around door jambs or other obstructions, remove the raised part of the groove with a chisel or grinder.
14. Apply a bead of tongue and groove adhesive to the groove and press panels together. Clean excess adhesive with a damp rag using the cleaner recommended by the adhesive manufacturer. Place boxes of material on the plank until the adhesive dries.

Installation Procedures- Glue Down Installation

1. Follow all procedures in Floating Installation instructions.
2. Perform and document all moisture testing requirements as specified by the adhesive manufacturer.
3. Use a high-quality acrylic or polyurethane based adhesive suitable for engineered wood flooring.

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4. Using a ¼" x ¼" x ¼" Flat Top V Notch Trowel, apply only enough adhesive that can be covered up while still wet.

5. Clean excess adhesive with a damp rag during the installation. Do not allow adhesive to dry on the face of the planks. Use the appropriate cleaner as specified by the adhesive manufacturer.

6. Use low adhesive tape to keep planks tight during installation. Remove at the end of the installation.

7. Roll the installed flooring into the adhesive using a clean 75 lb. roller.

Installation Procedures- Wet Areas

1. Seal the perimeter of the flooring with a 100% silicone caulk.

2. To reduce the amount of silicone, a compressible PE foam backer rod can be used to fill the void first.

3. Then use 100% silicone caulk to seal the gap.

Installation Procedures- Repairs & Disassembling Flooring

1. Disengage the lock by carefully angling up the entire row. Depending on the size of installation, more than one person may be required for this task.

2. Separate the last row by carefully pulling the row away from the previous row. Remove individual planks by lifting the plank at the end to create an angle. Gently pull the plank away at the end joint.

Finishing

- Clean the floor.
- Use matching putty where necessary.
- Install or reinstall all wall base or molding. Attach trim to the walls. DO NOT attach trim to the flooring.
- Install transition strips. Attach them to the subfloor following manufacturer instructions. DO NOT fasten or adhere transitions to the flooring
- At doorways, transitions should be used to protect the edges of the floor and to provide a decorative transition from one floor type to another.
- If the floor is to be covered, use a breathable material such as cardboard. Do not cover with plastic.

Care and Maintenance

DAILY MAINTENANCE

- Sweep, dust mop or vacuum your floor regularly to remove any particles that could cause abrasion or scratch your floor. CAUTION: Vacuums with a beater bar or power rotary brush head can damage a floor and should never be used.
- Use a damp mop to remove spots and soil. Apply appropriate cleaning solution to the cleaning cloth / mop. Do NOT apply directly to the floor.
- Use only pH Neutral cleaning solutions intended for wood surfaces.
- Do not use chlorinated solvents.
- Do not use wax or varnish coating.
- Do not use a steam cleaner.
- Do not leave any amount of liquids (water, juice, soft drinks, spills, etc.) on the floor. Clean any wet spots immediately.
- Do not use steel wool or scouring powder which will scratch the floor.

PREVENTATIVE MAINTENANCE

- Protect your floor when using a dolly for moving furniture or appliances. Protective sheets and/or plywood may be needed. Never slide or roll heavy furniture or appliances across the floor.
- Place protective pads beneath furniture legs and other heavy objects.
- Do not use rubber backed rugs.
- Minimize abrasive material and dirt by placing mats on both sides of exterior doors and by using area rugs in high-traffic areas.
- Rearrange furniture and rugs periodically to avoid uneven color and shade changes from light exposure.
- Avoid exposure to extreme sunlight. Close curtain or blinds during such times.
- Use protective mats beneath rolling chairs.
- Keep furniture casters clean.
- Use soft non-rubber wheels for office chairs.
- Keep pets' nails trimmed.
- Remove shoes with cleats, spikes or exceptionally pointy heels before walking on the floor.

CLIMATE MAINTENANCE

- Extreme temperature changes may result in unacceptable thermal expansion or contraction of the flooring. Acceptable temperature range is 60° F to 80° F. Extreme humidity changes may result in unacceptable expansion or contraction of the flooring. Acceptable Relative Humidity (RH) range 35% to 55%. Expansion may cause buckling or edge peaking. Shrinkage may result in gapping.
- Once shrinkage or expansion has taken place, the floor will not appear as it was initially installed. This is not a manufacturing defect.

FLOOR REPAIR

- Light surface scratches can be repaired with a staining "touch up" pen of the appropriate color.
- Slightly deeper scratches can be repaired by means of colored putty or stains. Fill the scratches with the putty. Level with putty knife. Wipe off excess putty.
- Deep scratches may require the replacement of the planks.

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