HDF Click Engineered Hardwood Flooring Installation Instructions

Tip: Check for proper color selection and style prior to Installation. No claims will be accepted after installation

Important Information before You Begin

1.1 Installer/Owner Responsibility
Carefully inspect all materials before installation. Materials installed with visible defects are not covered under the warranty. Do not install - if you are not satisfied with the flooring; contact your dealer immediately. Final quality checks and approval of the product is the sole responsibility of the owner and installer. Make sure you are installing the correct color; no claims will be accepted for color once the material is installed. Please read the provided warranty for your product before installation.
The installer must determine that the job-site environment and sub-floor surfaces meet applicable construction and material industry standards. We recommend the use of National Wood Flooring Certified Professional Installers. The Manufacturer declines any responsibility for job failure resulting from deficiencies caused by sub-floor or job-site environment or installation related items. All sub-floors must be clean, flat, dry and structurally sound.

1.2 Basic Tools and Equipment
Broom or vacuum, moisture meter, chalk line & chalk, tapping block, tape measure, safety glasses, hand or electric saw, miter saw, 3M 2080 blue tape, hardwood floor cleaner, hammer, pry bar, color wood filler, straight edge, trowel and tapping block

1.3 Putty and Filler Use
Please keep on hand like colored putty or filler as well as colored markers to touchup minor chips and nicks in the finished product. It is also advised to fill any allowable gaps before leaving jobsite

1.4 Recommended Installation Methods

Our HDF Click products* can be installed using the floating method and direct glue down method of installation.

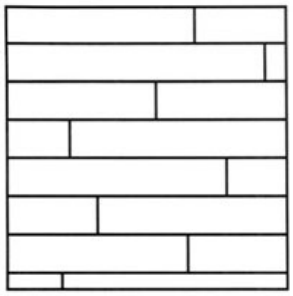
Job-site conditions

2.1 Handling and Storage
- Don’t truck or unload wood flooring in the rain, snow or other humid conditions.
- Store wood flooring in an enclosed building that is well ventilated with weather proof windows. Garages and exterior patios, for example, are not appropriate for storing wood flooring
- Leave adequate room for good air circulation around stacks of flooring

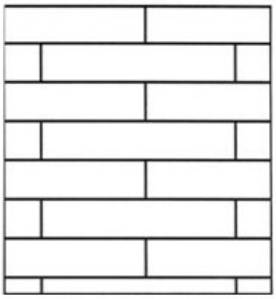
2.2 Job-site Conditions
- Wood flooring should be one of the last jobs completed in a construction project. Prior to installing hardwood floors, the building must be structurally complete and enclosed, including installation of exterior doors and windows. All finished wall coverings and painting should be completed. Concrete,

masonry, drywall, and paint must also be complete, allowing adequate drying time as to not raise moisture content within the building.
• HVAC systems must be fully operational at least 7 days prior to flooring installation, maintaining a consistent room temperature between 60-75 degrees and relative humidity between 30-50%.
• Engineered hardwood floor may be installed above, on, and below grade level.
• It is essential that basements and crawl spaces are dry. Crawl spaces must be a minimum of 18" from the ground to underside of joists. A vapor barrier must be established in crawl spaces using 6 mil black polyethylene film with joints overlapped and taped.
• During the final pre-installation inspection, sub-floors must be checked for moisture content using the appropriate metering device for wood and/or concrete.
• Engineered flooring is typically ready to install upon delivery in most normal environments when the site temperature is maintained between 60-75 degrees and 30% - 50% ambient RH. Ambient temperature and humidity along with subfloor moisture content must be in synch with the moisture content of the wood.
• Flatness required as follows- 3/16" in 10' or 1/8" in 6'. Floating floors requirements are more stringent, see section 4.4 for more details. Sand high areas and joints. If the floor is to be glued down, then fill low areas with the appropriate cementitious sub-floor leveling compound. The leveling material should provide structural soundness for the flooring being installed. Structural soundness is the responsibility of the installer
• Distribute lengths, avoiding "H" patterns and other discernible patterns in adjacent runs. Stagger end joints of boards row to row a minimum of 6" for strip flooring, 8-10" for 3" to 5" plank, and 10" for plank wider than 5" for better visual effects when possible. However, the length of the material may dictate end joint proximity. Close end joint proximity may affect structural stability on mechanically fastened installations if there is deflection of the substrate present.

Staggered End Joints



Avoid H-Joints



Sub-floor Preparation

3.1 Wood Sub-floors
• Sub-floor must be structurally sound and properly secured with nails or screws every 6 inches along joists to reduce the possibility of squeaking.
• Wood sub-floors must be flat, dry, structurally sound and free of wax, paint, oil, and debris. Replace any water-damaged or delaminated sub-flooring or underlayments. Flatness - – 3/16” in 10’ or 1/8” in 6’
• Additional requirements for flatness are required for floating floors as stated in installation guidelines
• **Preferred sub-floors** - 3/4" CDX Grade Plywood or 3/4" OSB PS Rated sub-floor/underlayment, sealed side down, with joist spacing of 19.2" or less; **Minimum sub-floors** - 5/8" CDX Grade Plywood sub-floor/underlayment with joist spacing of no more than 16". If joist spacing is greater than 19.2" on center, add a second layer of sub-flooring material to bring the overall thickness to 1-1/8" for optimum floor performance. Hardwood flooring should be installed perpendicular to flooring joists. If flooring is installed parallel with joists, then an additional layer of ½" plywood must be installed to meet minimum requirements of 1-1/8"

• **Sub-floor moisture check.** Measure the moisture content of both the sub-floor and the hardwood flooring with a pin moisture meter. Sub-floors should not exceed 12% moisture content. **The moisture difference between sub-floor and hardwood flooring should not exceed 4%. If sub-floors exceed this amount, an effort should be made to locate and eliminate the source of moisture before further installation.**

3.2 Concrete Sub-floors

• Concrete slabs must be of high compressive strength with minimum 3,000 psi. In addition, concrete sub-floors must be clean, flat, dry, structurally sound, smooth and free of wax, paint, oil, grease, dirt, non-compatible sealers and drywall compound etc.
• Engineered hardwood flooring may be installed on, above, and/or below-grade.
• Concrete substrates must meet or exceed adhesive manufacturers guidelines for flatness – 3/16" in 10' or 1/8" in 6'
• Additional requirements for flatness are required for floating floors as stated in installation guidelines
• Lightweight concrete that has a dry density of 100 pounds or less per cubic foot is not suitable for engineered wood floors. To check for lightweight concrete, draw a nail cross the top. If it leaves an indentation, it is probably lightweight concrete. Lightweight concrete can be used if properly treated. Check with the adhesive manufacturer for the proper material to use.
• All concrete subfloors must be tested for moisture content and the results documented. Visual checks are not reliable. Minimum sample size is 3 per 1000 square feet of area and one test for every additional 1000 square feet thereafter.
• 3 lbs. or less per 1000 square feet per 24 hours when using Calcium Chloride test (ASTM F-1869).
• 75% or less when using In-situ Relative Humidity Testing(ASTM F-2170).
• Please note: Concrete moisture content may be acceptable the time of the test but these tests do not guarantee a perpetual "dry" concrete slab. The concrete slab moisture content can vary at other times of the year. We are not responsible for moisture related damage to installed flooring.

3.3 Sub-floors other than wood or concrete

• Ceramic, terrazzo, resilient tile and sheet vinyl, and other hard surfaces are suitable as a sub-floor for engineered hardwood flooring installation.
• The above tile and vinyl products should be level and permanently bonded to the sub-floor by appropriate methods. Clean and abrade surfaces to remove any sealers or surface treatments to insure a good adhesive bond. Do not install over more than one layer that exceeds 1/8" in thickness over suitable sub-floor.
• Substrate must meet or exceed adhesive manufacturers guidelines for flatness
• Additional requirements for flatness are required for floating floors as stated in installation guidelines, see section 4.4 below

Moisture Retarder
Concrete Subfloor: For floating installation, use 6-mil polyethylene film or other means with equivalent permeability. Overlap the edge seams and tape it together. Extend moisture barrier up to the wall about 1 inch high. When installed on above grade concrete and the concrete moisture content meets the concrete moisture standard, a moisture barrier is not required. For direct glue installation, use a moisture barrier if moisture level exceeds requirement (see Concrete Moisture section above).
Wood Subfloor: Use asphalt-saturated paper or #15 or #30 felt that meets ASTM Standard D4869 or UU-B-790, Grade D. Overlap along the edge seams 2"- 4" wide. This retards moisture movement from below.

Sound Control Underlayment
Check with sound control manufacturer for application guidelines. Underlayment must be fully adhered to subfloor. Acoustical Cork Underlayment: (Glue Down Only) – Install the cork underlayment according to the manufacturer's instructions. The cork underlayment must be fully adhered to the subfloor. The cork underlayment should be of pure granulated cork combined with a polyurethane binder with a minimum density of 11.4 lbs. per cubic foot and not to exceed 13 lbs. per cubic foot.

3.4 General Radiant Heat Installation Instructions

• To minimize the effect that rapid changes in temperature will have on the moisture content of the wood floor, NWFA recommends that an outside thermostat be installed. If one is not present, suggest to your customer that this should be considered. Unlike conventional heating systems, which switch on as needed, radiant systems work most effectively and with less trauma to the wood floor if the heating

process is gradual, based on small incremental increases in relation to the outside temperature.

- Subfloors should have proper moisture tests according to the moisture testing procedures outlined in Chapter 3. Of the National Wood Flooring Association Installation instructions
- The essential requirement in proper applications of wood flooring over radiant heated systems is to avoid penetration of the heating element. Radiant-heated subfloor systems can be concrete, wood or a combination of both.
- If the subfloor is concrete and it has cured, turn the heat on, regardless of season, and leave it on for at least 5-6 days to drive out residual moisture before installation of the wood flooring.
- Some installation systems, particularly glue-down applications, require the heat to be reduced or even turned off before installation of the flooring begins, so the adhesive does not cure excessively.
- With water-heated radiant-heat systems, a pressure test must be performed and documented by a qualified plumber or the system installer prior to beginning the installation of the wood flooring.
- If flooring materials that conduct heat at different rates are on the same circuit or heating zone, check with the HVAC mechanical engineer before proceeding. Ensure that floor temperature does not exceed 82 degrees. The use of an in-floor temperature sensor is required to prevent the subfloor from exceeding the temperature of 82 degrees.
- Radiant heat is dry heat. A humidification system may be necessary to maintain wood flooring in its comfort zone of 30%-50% R.H.
- It is the responsibility of the Owner/Installer to determine the correct installation method over Radiant Heat. Please refer to National Wood Flooring Installation Guidelines - Appendix H for additional information
- Subfloors should have proper moisture tests according to the moisture testing procedures outlined in Chapter 3. Of the National Wood Flooring Association Installation instructions

Installation

4.1 Preparation

- To achieve a uniform color and shade mixture across the entire floor, open and work from several different cartons at a time.
- Stagger the ends of boards and maintain at least 6" between end joints on all adjacent rows when material permits.
- Undercut door casings 1/16" higher than the thickness of the flooring being installed. Also remove existing moldings.
- Start installation parallel to the longest unbroken wall. An outside wall is often used, however ensure all walls are straight/plum prior to beginning
- Expansion space shall be left around the perimeter, the minimum expansion space shall be 1/2".

4.2 Floating Installation Guidelines

- Sub-floor flatness is critical to the success of a floating floor installation. **A flatness tolerance of 1/8" in a 10-foot radius is required for floating floor installation.**
- 2n1 underlayment must not exceed 2mm in thickness and should be high density
- Follow underlayment manufacturer's instructions for either a wood or concrete subfloor application. If concrete sub-floor, it may require the addition of a 6 mil poly film if the underlayment does not have a minimum of a 6 mil poly film attached. Do not tape seams of poly over wood subfloors.
- Minimum expansion space at all vertical surfaces is ½" (12.7 mm)
- **Use adhesive such as Franklin's Titebond Tongue and Groove adhesive to glue the end joints together or similar product as recommended by your retailer/distributor – THIS IS REQUIRED.**
- Snap a working line parallel to the starting wall, allowing expansion space as specified above.
- Boards should be installed left to right with the tongue facing away from the wall. Install first three rows by applying a thin bead of glue in the groove on the side and end of each board. Press each board firmly together and lightly use a tapping block if necessary.
- Continue installation as above by applying a thin bead of glue in groove side and end groove of every board throughout installation
- Clean excess glue from between boards with a clean cotton cloth and water, frequently changing the water and rags to avoid a haze.
- Tape each board together at side and end seams using 3-M 2080 Blue Tape.
- Allow glue to set before continuing installation of subsequent rows.
- Continue the installation until finished. Distribute lengths, staggering end joints as recommended above. Stagger on the first three rows should be 16"s or greater: thereafter stagger planks a minimum of 6" s and avoid stair-stepping.

• Maximum span without a transition is recommended to be 40 ft in any direction. Additionally, it is recommended that transitions be installed at any doorway or opening 36 inches or less. Without the use of t-molds buckling of the floors or separation may occur at doorways

• Thoroughly clean, sweep, and vacuum installed floor and inspect the floor for scratches, gaps and other imperfections. **Do not apply any tape directly to the installed flooring to hold down floor protection.** The new floor can be used after 12-24 hours depending upon the allowed cure time of the adhesive.

4.3 Glue-Down Installation Guidelines – Non Water Based adhesive required – Urethane or Silane based adhesives only

• Snap a working line parallel to the starting wall, leaving appropriate expansion space around all vertical obstructions. Secure a straight edge on the working line before spreading adhesive. This prevents movement of the boards that can cause misalignment.

• Apply urethane adhesive using a trowel recommended by your glue manufacturer. **Do not use a water-based adhesive with this hardwood flooring product.**

• **Some adhesive residues can damage finish if left on too long. It is imperative that you clean off as soon as possible to avoid damage. Finish damage caused by adhesive residue is not covered by the manufacturer's warranty**

• Spread adhesive from the working line out to approximately the width of two or three boards.

• Install a starter board along the edge of the working line and begin installation. Boards should be installed left to right with the tongue side of the board facing the starting wall.

• Continue installation in this method

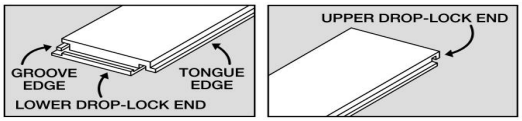
• 3-M 2080 Blue Tape can be used to hold planks tightly together and reduce minor shifting of floors during installation. Remove adhesive from the surface of the installed flooring as you work. All adhesive must be removed from flooring surfaces prior to applying 3-M Blue Tape. **Tape should never be allowed to remain on floor for an extended period and never overnight. No claims will be processed for tape damage.**

• Thoroughly clean, sweep, and vacuum installed floor and inspect the floor for scratches, gaps and other imperfections. **Do not apply any tape directly to the installed flooring to hold down floor protection.** The new floor can be used after 12-24 hours.

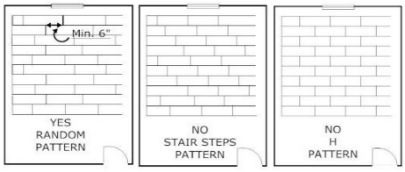
• Thoroughly remove all adhesive residue prior to leaving the job site. Be sure that any solvent used to remove adhesive is not directly applied to the floor. Any area wiped with a solvent rag must be re-wiped with a damp cloth to remove solvent residue

• Be sure to change rag/cloth frequently to avoid spreading adhesive residue

- Understand the parts of the locking part of the flooring plank. The tongue is the thinner extension coming out of the side of the planks. The groove is the wider extension coming out of the other side of the floor plank. The ends do not have tongue and groove. There is an upper drop-lock end on one side and a lower-drop lock end on the other side.



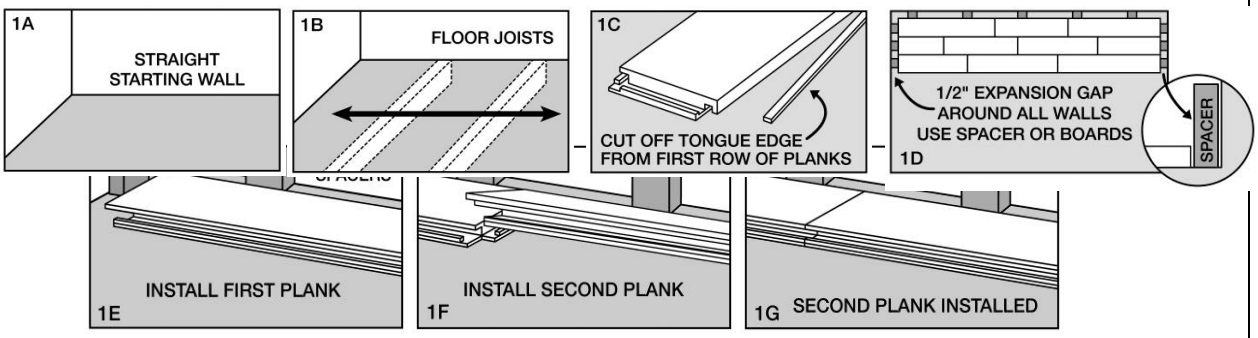
- Lay out several cartons. Randomly rack planks to ensure good color and shade mixture and end joint spacing. Minimum end stagger is 6”. Inspect plank quality and grading.



- Lay out trim moldings in advance and find planks whose shade closely matches. Set these aside for future use.
- Remove existing base, shoe molding or threshold carefully. They can be used to cover the 1/2" expansion gap left around the edge of the room.
- Undercut doors and casings using a handsaw laid flat on a piece of scrap flooring.
- Install vapor retarder on concrete. For concrete, let the vapor retarder run up the wall a few inches before cutting to size and tape all seams.
- Install the underlayment (if used) according to underlayment manufacture instructions.

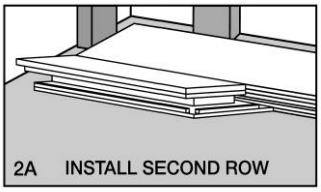
Step 1 – Install the First Row

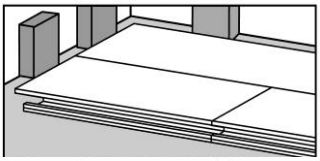
- When possible, begin installation from the straightest wall. If wood subfloor, install the flooring perpendicular to the joists.
- Allow 1/2" expansion gap between plank and the walls. Use spacers or scrap boards.
- Place the first plank with the groove side facing **away** from the walls. Work left to right
- Place the upper drop-lock end of the second plank on the lower drop-lock end of the first plank. The ends do not click lock so you MUST apply a bead of adhesive to the joint. Maintain straight edge along the rows.
- Continue placing the succeeding planks to complete the row.

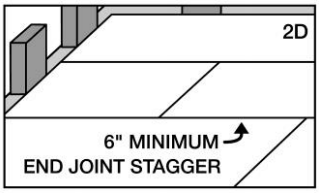


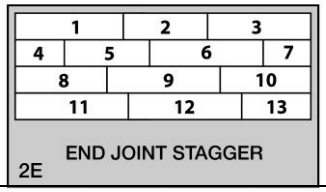
Step 2 – Install the Second and Remaining Rows

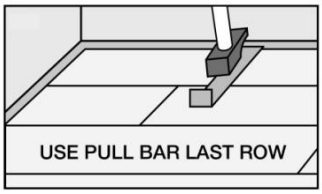
- Cut off a section the first plank lengthwise to ensure 6” joints staggering.
- Hold the plank with the tongue facing the previous row. Keep it at about 30° angle.
- Insert the tongue into the groove.
- Make sure the tongue is snug and securely engaged in the groove by applying a constant pressure in the direction of the groove.
- Maintain the pressure while pressing the plank flat to lock the edge joints.
- If there is a slight gap along the edge joints, it can be eliminated with the help of a tapping block and a rubber mallet. Use caution to prevent impact damage.











Step 3 - Install the Last Row

- Use the pull bar to draw the last row to fit tightly to the previous row.

- **Check jobsite thoroughly for any adhesive residue left on flooring.**
- **Check to make sure all chips and nicks are properly colored.**
- **Check to ensure all acceptable gaps are filled with like-colored putty.**

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