



AACER™

AACER FLOORING
INSTALLATION INSTRUCTIONS
Solid Prefinished & Unfinished Flooring



AACER FLOORING INSTALLATION INSTRUCTIONS 3/4" Solid Prefinished & Unfinished Flooring

INSTALLER / OWNER RESPONSIBILITY

- The Installer assumes all responsibility for final inspection of the flooring for proper color, grade, visible manufacturing defects, damage, or otherwise unsatisfactory appearance. The inspection of all flooring must be done before installation. Installer must use reasonable selectivity and hold out or cut off pieces with deficiencies. **Do not install damaged or visibly unsatisfactory material. Installing flooring constitutes acceptance of its appearance.** After identifying a visible problem, do not open any additional cartons. Contact your local retailer or distributor immediately.
- Prior to installation of any hardwood flooring product, the Installer must determine that the jobsite environment and the sub-surfaces involved meet or exceed all applicable standards. Local codes and recommendations given by the construction and materials industries must be followed. These instructions recommend that the construction and sub-floor be dry, stiff and flat. The manufacturer declines any responsibility for job failure resulting from or associated with sub-surface, sub-flooring or jobsite environmental deficiencies.
- Use of stain, filler or putty stick for touch-up during installation is an acceptable normal procedure.
- When flooring is ordered, include an additional 5% square footage to allow for cutting and grading allowance.
- Should an individual piece of flooring be doubtful as to grade, manufacture or factory finish, the Installer should not use the piece.

REQUIRED TOOLS & ACCESSORIES

- Broom
- Miscellaneous hand tools
- Flooring Nailer 2" Cleats
- Drill with 1/16" drill bit
- Tape measure
- Hammer
- Chalk line & chalk
- Hardwood flooring cleaner
- Hand saw
- Nail set
- Table saw, jigsaw or circular saw
- 6-7d screw-shank nails
- Moisture meter (wood, concrete or both)
- 2" 'Blind' fastening machine
- Undercut or Jamb saw
- Ear plugs & safety glasses

NOTE: It is extremely important to use the proper adapters, staples or cleats. Improper use of fasteners, machines and air pressure can cause sever damage. The manufacturer of this flooring is not responsible for damage caused by improper selection or use of tools.

PRE-INSTALLATION: JOBSITE INSPECTION PROCEDURE

- Ensure the building is completely enclosed.
 - All outside doors and windows are in place.
 - All concrete, masonry, framing members, drywall, paint and other “wet” work is thoroughly dry.
 - The wall coverings are in place and the painting is completed except for the final coat on the base molding.
 - When possible, delay installation of base molding until flooring installation is complete.
 - Basements and crawl spaces must be dry and well ventilated.
- All gutters and downspouts are in place. Exterior grading is complete with surface drainage.
- Solid wood flooring must be installed on or above grade level. Do not install in full bathrooms.
- Crawl spaces must be a minimum of 24” (600 mm) from the ground to underside of joists. A ground cover of 6-8 mil black polyethylene film is essential as a vapor barrier with joints lapped 6” and taped. The crawl space should have perimeter venting equal to a minimum of 1.5% of the crawl space square footage. These vents should be properly located to foster cross ventilation. Where necessary, local regulations prevail.
- Check moisture content of sub-floor using the appropriate testing method.
- Permanent air conditioning and heating systems is in place and operational. The installation site should have a consistent room temperature of 60-75 degrees F and humidity of 35-55% for 14 days prior to, during and until occupied, to allow for proper acclimation.

STORAGE & HANDLING

- Flooring should not be delivered until the building is enclosed: windows and doors are in place and cement work, plastering and all other ‘wet’ work is completed and dry. Concrete should be at least 60 days old.
- Solid wood flooring should be stored in the environment in which it is expected to perform. Deliver materials to an environmentally controlled site and acclimate for 72 hours or as long as necessary to meet minimum installation requirements for moisture content.
- Due to lack of air movement, do not acclimate flooring in a closed carton. Store in dry place being sure to provide at least a four-inch air space under cartons, which are stored upon “on-grade” concrete floors.
- Handle and unload with care.

INSTALLATION APPLICATOR OPTIONS

Note: Minor occasional noises in mechanically fastened floors is normal due to structural movement caused by changes in environmental conditions. Following these instructions can minimize factors but does not guarantee that the floor will not create minor occasional noises.

- **FASTENING MACHINES**

- Avoid striking the edge of factory finished products with the fastener's mallet as edge crushing can occur leaving unsightly cracks and splinters. If necessary, use a block to hammer against. Faceplates should be covered with protective materials to prevent damage to the surface of the flooring. Any sub-flooring material that is water damaged, swollen or delaminated will not hold fasteners properly and must be repaired or replaced.

- **MANUAL FASTENING MACHINES**

- Improper adapter plate selection can cause severe edge damage. Confirm that the proper adapter has been selected and installed for $\frac{3}{4}$ " flooring.

- **PNEUMATIC FASTENING MACHINES**

- Improper pressure settings and failure to use proper adapters can cause severe damage to the flooring. The correct adapter and air pressure setting will properly set the fastener in the nail pocket. Low air pressures may fail to properly set the fastener and damage adjoining boards. Air pressures set too high may cause damage to the tongue, preventing installation of adjoining boards and cause blisters on the face of the flooring. Make certain that the compressor has an inline regulator with the air hose for proper adjustment. Set pressure at 70 psi to begin with and adjust until proper fastener setting occurs.

SUB-FLOOR REQUIREMENTS

- **CLEAN.** Scrape subfloors so they are free of debris, wax, paint, oil, sealers, adhesives, and curing agents. Sweep and/or vacuum all debris from the floor.
- **LEVEL/FLAT.** Subfloors must be flat to within 1/8" in 10' radius. Check the flatness using a straight edge, laser line or string line. Sand high areas or joints. Flatten low spots with layers of 15# builders felt, plywood or shims (not leveling compounds).

Note: Laminated rosin paper or 15# builders felt (tar paper) acts as a moisture retarder and may be used to reduce movement caused by changes in sub-floor moisture, thereby reducing cupping and warping. (This is especially helpful over crawl spaces and basements). In addition, the use of these materials can give the flooring a more solid feeling, reduce sound transfer, prevent noise caused by minor irregularities and debris, and make it easier to slide the wood together across the surface of the sub-floor.

- **STRUCTURALLY SOUND.** Nail or screw any loose areas that squeak. Replace any water damaged, swollen or delaminated sub-flooring or underlayments. Avoid sub-floors with excessive vertical movement.
- **DRY.** Check and record the moisture content of the sub-floor with the appropriate moisture meter.

RECOMMENDED SUB-FLOOR SURFACES

- PREFERRED: ¾" (19mm) CDX grade plywood
- Existing solid wood flooring
- Screeds
- Tongue & Groove (T&G) wood subflooring

SUB-FLOOR TYPES

Do not install solid wood plank or strip flooring over radiant heated sub-floors or attempt to glue to a sub-floor of any type.

• WOOD SUB-FLOORS & WOOD STRUCTURAL PANEL SUB-FLOORS

- Plywood. Must be APA grade rated sheathing or CDX minimum.
- DO NOT install over particleboard, waferboard, pressed wood or fiberboard.
- Make sure existing floor or sub-floor is dry. The wood sub-floor must not exceed 13% moisture content (MC). Measure MC of both sub-floor and wood flooring to determine proper MC with a reliable wood moisture meter. The difference between the MC of the wood sub-floor and the wood flooring must not exceed 4%.
- Make sure existing floor or sub-floor is nailed or screwed down every 6" along each joist. This will minimize squeaking and popping.
- Optimum performance of hardwood floor covering products occurs when there is little horizontal or vertical movement of the sub-floor. The MINIMUM sub-floor recommendations described above are for 19.2" O/C joist spacing with minimum recommended spans. If the sub-floor has excessive vertical movement (deflection) before installation of the flooring, it is likely it will do so after installation of the flooring is complete. Deflection may cause the floor to become loose creating a noisy floor or cause premature finish wear. Avoid installations over sub-floors that do not meet this minimum standard. As flooring manufacturers, we are unable to evaluate each engineered system. Other spacing and spans as well as their engineering methods are the responsibility of the builder, engineer, architect or consumer who is better able to evaluate the expected result based on site related performance.
- All underlayment panels should be spaced 1/8" apart to ensure adequate expansion space or have the space cut around the perimeter using a circular saw. T & G panels normally have built in expansion. DO NOT cut around their perimeter. When installing over existing wood floors parallel with the flooring, it may be necessary to install an additional layer of plywood to stabilize the flooring or install the wood floor at right angles. Applicable standards and recommendations of the construction and materials industries must be met or exceeded.

• CONCRETE SLABS

- Solid flooring can be installed over concrete once the appropriate nailing surface has been installed. The concrete must be of high compressive strength. All concrete sub-floors should be tested for MC. Visual checks are not reliable.

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

- A 'dry' slab, as defined by these tests can be wet at other times of the year. These tests do not guarantee a dry slab. All concrete slabs should have a minimum of 6 mil poly film moisture barrier between the ground and the concrete.

- **SUBFLOOR SYSTEMS ANCHORED**

- Install a suitable moisture retardant followed by a plywood sub-floor with a minimum thickness of 3/4". Allow 1/2" expansion space around all vertical objects and 1/8" between all flooring panels. The panel must be properly attached to the sub-floor using a minimum of one fastener per square foot and more if necessary. Use pneumatic or powder actuated fasteners. Do not hand nail the sub-floor with concrete nails. Install a moisture retardant barrier with joints lapped 6" and begin installation of flooring using 1-1/2" fasteners.

- **FLOATING**

- Install a suitable moisture retardant followed by a plywood sub-floor with a minimum of 3/8". Allow 3/4" expansion space around all vertical objects a 1/8" between all flooring panels. Install a second layer of 3/8" plywood at a right angle to the previous panels, offsetting the joints 2'. Staple together using staples that will not penetrate the first layer of sub-floor with a crown width of 3/8" or more. Install a moisture retardant barrier with joint lapped 6" and begin installation of flooring.

GENERAL INSTALLATION TIPS

- Floor should be installed from several cartons at the same time to ensure good color and shade mixture.
- Be attentive to staggering the ends of boards at least 6" in adjacent rows. This will help ensure a more favorable overall appearance of the floor.
- In regions where there are large swings in humidity levels, it may be necessary to add internal or field expansion. This can be accomplished by using spacers. We recommend inserting a .080 weed wacker line every 10-20 rows above the tongue and remove after several adjoining rows have been fastened.

INSTALLATION:

STEP 1: DOORWAY AND WALL PREPARATION

- Undercut door casings. Remove any existing base, shoe mold or doorway thresholds. These items can be replaced after installation. All door casings should be notched out or undercut to avoid difficult scribe cuts.

WALL-TO-WALL INSTALLATION

STEP 2: ESTABLISH A STARTING POINT

- Installation parallel to the longest wall is recommended for best visual effects. However, the floor should be installed perpendicular to the flooring joists unless sub-floor has been reinforced to reduce sub-floor sagging. Find appropriate sub-floor from "Sub-floor Type" section in this instruction manual.

- If a moisture retardant material is to be used, such as Laminated Rosin Paper (see Note, Sub-floor Requirements), install this material before proceeding, lapping joints 6" and stapling if necessary.
- Measure the width of the product being installed. For random or alternate width products, use the widest plank for the first row. Add 1" to allow for $\frac{3}{4}$ " expansion and the width of the tongue.
- Using this measurement, in at least two places, measure out equal distance from the starting wall and 12" – 18" from the corners and snap a chalk line.

WALL-TO-WALL INSTALLATION

STEP 3: INSTALLING FIRST ROWS.

- Note: Always glue the ends of wide width (4" or more) planks with PVA (Polyvinyl Acetate) wood glue.
- Use the longest, straightest boards available for the first two rows. Align tongue of first row on chalk line. The groove should be facing the starting wall. Pre-drill the nail holes 1" from back (groove) edge, 1" – 2" from each end, and at 6" intervals at a 45-degree angle down through the nailing "pocket" on top of the tongue.
- Face-nail the groove side where pre-drilled. When complete, blind-nail at a 45-degree angle through the tongue of the first row. Fasten using 6-7d nails. Countersink nails to ensure flush engagement of groove. Avoid bruising the wood by using a nail set to drive the nails the last $\frac{1}{2}$ " into the tongue. Continue blind nailing using this method by following rows until a nailer can be used.
- End-joints of adjacent rows should be staggered a minimum of 6" to ensure a more favorable overall appearance.
- Where clearance allows, the beginning rows may be blind-nailed using a pneumatic finish nailer with 15 gauge, 1-3/4" (minimum) nails in lieu of above.

CENTER-TO-WALL INSTALLATION

STEP 2 & 3:

- Snap a chalk line down the center of the room
- Install a sacrificial row that extends the entire length of the room on the centerline
- Install three rows of flooring.
- Remove the sacrificial row and insert a slip tongue (spline) in the open groove. Always glue and nail the slip tongue in place.

STEP 4: RACKING THE FLOOR

- Rack materials to cover approximately 2/3 of the room. Begin racking approximately 6" from the edge of the previously installed rows. Avoid pulling boards too tightly together on the sides as they must move freely when fastening begins.
- Mark the final board in each row and cut to proper length allowing for expansion. Visually inspect flooring, setting aside boards that need to have natural character flaws cut out. Use these boards for starting and finishing rows after objectionable characteristics have been removed.

STEP 5: INSTALLING THE FLOOR

- Fasten a sacrificial board to the floor. Check for surface damage, air pressure setting, tongue damage, etc. before proceeding. Make all adjustments and corrections before installation begins. Once proper adjustments have been made, remove and destroy the board.
- Begin installation with several rows at a time, fastening each board with at least two fasteners, 8-10" apart and 2-3" from the ends (to avoid splitting). Tighten boards as necessary to reduce gaps before fastening.
- End-joints of adjacent rows should be staggered 6" when possible to ensure a more favorable overall appearance.
- The last 1-2 rows will need to be face-nailed where clearance does not permit blind nailing with a Brad nailer. Pre-drill and face-nail on the tongue side following the nailing pattern used for the first row.
- Rip final row to fit and face-nail. If the final row is less than 1" in width, it should first be glued to the previous UNINSTALLED row and the two joined units should be face-nailed as one.

STEP 6: COMPLETE THE JOB

- Clean the floor with the recommended wood flooring cleaner by Acer Flooring.
- Re-install any transition pieces that may be needed, such as Reducer Strips, T-moldings, or thresholds. These products are available prefinished to blend with your flooring.
- Reinstall all wall base and/or quarter round moldings. Nailing into the wall, not the floor.
- Leave the warranty and floor care information with the owner. This information is available on Acer Floorings website.
- To prevent surface damage avoid rolling heavy appliances or furniture on the floor. Use plywood, hardboard or appliance lifts if necessary.

For Warranty information, refer to Acer Flooring Warranty

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