

INSTALLATION INSTRUCTIONS

Congratulations on purchasing your new American Spirit floor. For best results, we suggest using a National Wood Flooring Association Certified Professional to install your floor. A list of active NWFA Certified Professionals in your area can be found online at www.nwfacp.org.

Prior to installation, the installer should check material for appropriate grade, color, graining and finish quality. Installer should STOP THE JOB if any defects are detectable by the eye or revealed through an attempt to install. More than once a beautiful installation has been ruined because the wrong material was sent to the job site. The manufacturer cannot accept responsibility for flooring installed with visible defects. Installer must test the subfloor for moisture to ensure the proper levels are present so that flooring will perform properly. Note: Wood flooring installed in areas where the relative humidity is below 35% may cup, shrink in width/length, or crack and in these dry conditions a humidifier is necessary to bring relative humidity above 35%. Flooring installed on top of wet sub floors may crown, (and then cup), swell, (and then shrink), buckle, telegraph, or edge/tip raise. Flooring that is soaked from above will do the same. **DO NOT INSTALL THIS FLOORING ON WET SUBFLOORS OR IN OVERLY DRY CONDITIONS** without first correcting any deficient conditions. Prior to installation of any flooring, the installer must ensure that the job site and subfloor meet the requirements of these instructions. The manufacturer is not responsible for flooring failure resulting from unsatisfactory job site and/or subfloor conditions. Temperature should stay between 65-75°F and should be consistent with normal, year-round living conditions for at least a week before installation of the wood flooring. See section below for installation over radiant heated systems. Store the wood flooring, in the unopened boxes, at the installation area for 24 hours before installation to allow flooring to adjust to room temperature and humidity. Do not store the boxes of flooring directly on concrete. Do not open the boxes.

PRE-INSTALLATION SUBFLOOR REQUIREMENTS

Subfloor should be structurally sound, clean (swept and free of wax, grease, paint, sealers & old adhesive residue which can be removed by sanding), flat to 3/16" in 10', Dry with moisture in plywood subfloors not to exceed 11% or concrete subfloors with less than 3.5 lbs moisture as measured by Tramex Commercial Concrete Moisture Meter or equivalent. When concrete moisture exceeds 3.5 lbs of moisture, it is highly recommended that you use Bostik or Mapei Moisture Barrier Systems to correct the problem. The moisture barrier manufacturer provides the moisture barrier warranty to you. Although your hardwood floor has been treated with WetWork, it is advisable to ensure that the subfloor is dry to avoid mold and/mildew growth beneath the floor which is potentially harmful to health. Mold and or mildew growth are not covered by the Floor&Decor warranty.

Ceramic tile, resilient tile and sheet vinyl covered subfloors must be well-bonded to subfloor, in good condition, clean, and level.

WARNING-Do not sand, bead blast or mechanically chip or pulverize existing resilient flooring, backing, lining, felt, asphaltting cutback mastic or other adhesives. These products may contain asbestos fibers and/or crystalline silica. Avoid creating dust. Inhalation of such dust is a cancer and respiratory tract hazard. Smoking by individuals exposed to asbestos fibers greatly increases the risk of serious bodily harm.

Unless positively certain that the product is a non-asbestos containing material you must assume it contains asbestos. Regulations may require that the material be tested to determine asbestos content and may govern the removal and disposal of the material. See www.rfci.com for the current edition of Recommended Work Practices for Removal of Resilient Floor Coverings.

CAUTION: WOOD DUST- The International Agency for Research on Cancer has classified wood dust as a nasal carcinogen. The 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 contact with eyes and skin. In case of irritation, flush eyes or skin with water for at least 15 minutes. In case of severe irritation seek immediate medical attention.

Radiant heat: Use only floating installation over radiant heat. Subfloor should never exceed 80°F. Check with radiant heat manufacturer's suggested guidelines to limit the maximum water temperature inside heating pipes. Switch off heating unit one or two days before flooring installation and bring heat up slowly after installation. See the Radiant Heat Section below for NWFA Recommendations and further information.

INSTALLATION TOOLS NEEDED

For all installation methods: Tape measure, Tapping block (or trimmed piece of flooring), Pencil, Pry bar, Chalk line, Wood or plastic spacers (3/8"), Crosscut power saw, table saw for ripping lengthwise, Hand saw or jamb saw for door trim under cutting, chisel, Hammer, Scotch Delicate or Scotch Blue Walls + Wood Floors Tape.

For glue down installation, you will need flooring adhesive with recommended trowel notching. Any manufacturer-approved adhesive made for engineered hardwood that suits the particular job site conditions is approved. When job site conditions are outside of adhesive supplier's recommendations, the installer/contractor must contact the relevant adhesive supplier in order to receive approval of the particular adhesive being used given the site conditions.

Bostik's Ultimate Urethane Adhesive Remover to remove adhesive from the face of the flooring.

For staple-down installation, you will also need: Industrial Flooring Stapler or Nailer with appropriate adapter shoe to assure the proper position for the nail/staple - 1/2" x 1-1/2" staples for the floor runner stapler (18 gauge); 1-1/2" L-shaped cleats (18 gauge), and an Air compressor.

For floating installation, you will also need: 6-mil polyfilm, Approved Foam Underlayment, WF Taylor 2049 Floating Tongue & Groove Adhesive, Scotch Delicate or Scotch Blue Walls + Wood Floors Tape.

Acceptable Subfloor Types:

- Plywood (at least 3/4" thick), Underlayment grade particleboard -floating/glue-down only), OSB PS2 rated (at least 3/4" thick) – Note: some OSB type products will not hold the nail in place which can result in squeaky floors. This is a subfloor issue and not warranted.
- Concrete slab (floating/glue-down only).
- Existing wood floor.
- Ceramic tile (floating/glue-down only).
- Resilient tile & sheet vinyl (floating/glue-down only).

STARTING YOUR INSTALLATION

Make sure subfloor is tested for moisture first and is properly prepared. Undercut the door trim and other trim pieces around the job so that the flooring can be installed under them for the best appearance. You can do this by taking a short piece of

flooring and placing it flat on the subfloor next to the door trim and using it as a guide to cut the trim with a hand saw. Or use an electric jamb saw set to the proper height. Do this first as it will be very difficult and messy once the job has been started and you encounter a piece of uncut trim. This is a good time to verify that you have all of the necessary trims and moldings needed to complete the job.

Since wood expands with any increase in moisture content, always leave at least a 3/8" expansion space between flooring and all walls and any other permanent vertical objects, (such as pipes and cabinets). This space will be covered up once you reapply base moldings around the room. Use wood or plastic spacers during installation to maintain this 3/8" expansion space.

When laying flooring, stagger end joints from row to row by at least 8". When cutting the last plank in a row to fit, you can use the cut-off end to begin the next row. If cut-off end is 8" in length or less, discard it and instead cut a new plank at a random length and use it to start the next row. Always begin each row from the same side of the room.

Inspect flooring from several open boxes and "dry lay" the floor before beginning to permanently install it, especially if you have more than one manufacturing lot number on the job. Manufacturing lot numbers will always have slight variations in color and gloss from run to run. You should be able to blend different lot numbers to achieve a harmonious floor. Do not lay half the job in one lot number and the other half of the job in a different lot number as these subtle differences will become more obvious. If the lot numbers are too different to blend successfully contact your flooring provider and get different material. Once you have a plan for using the material begin laying the floor. This will allow you to select the varying grains and colors and to arrange them in a satisfying pattern. It also allows you the opportunity to select out very dark/ light pieces for use in hidden areas in order to create a more uniform floor. Remember, it is the installers' responsibility to set the expectations of what the finished floor will look like with the end user first and then to cull out pieces that do not meet those expectations.

To draw planks together, always use a tapping block, (or a short piece of flooring), as tapping on the flooring itself will result in edge damage. When near a wall, you can use a pry bar to pry closed the sides and end joints. Take care not to damage the edge of the flooring.



For glue down and floating applications, use only Scotch Delicate or Scotch Blue Walls + Wood Floors Tape to hold any pieces which might have side bow and the need to hold them straight and tight until the adhesive sets up. Other tapes may cause the finish to peel off when you remove the tape. Some tapes get stickier and more aggressive over time. **USE THE RECOMMENDED TAPE!**

Begin installation next to an outside wall. This is usually the straightest and best reference for establishing a straight working line. Establish this line by measuring an equal distance from the wall at both ends and snapping a chalk line. The distance you measure from the wall should be the width of a plank plus about 3/8" for expansion space. You may need to scribe cut the first row of planks to match the wall in order to make a straight working line if the wall is out of straight.

You may want to dry lay a few rows, (no glue or nails), before starting installation to confirm your layout decision and working line.

In long planks (72" and longer) you may see an occasional board that shows some version of deformation such as slight "side-sweep," "crowning" or "end-lift." These characteristics can be reduced by simply cutting the board into shorter pieces that can be used as starter boards or at the end of the row, depending on where the cut side falls.

NOTE: If the flooring is to be installed adjacent to any cabinets, install cabinets first and run the floor to the cabinets. Do not install the cabinets on top of the floor. Flooring damage is common around cabinets and it will be much harder to spot repair the floor if the cabinets are installed on top of the flooring. Installation of cabinets on top of flooring is not warranted if you have to make a future repair.

GLUE DOWN INSTALLATION

Make sure subfloor is tested for moisture content first and is properly prepared. American Spirit recommends any adhesive that has been formulated for engineered wood flooring, as long as site conditions are met. American Spirit is not responsible for determining the adhesive used. Note: Use only urethane adhesives on 6 foot or longer floors. Manufacturer recommended water based adhesives are acceptable for 5 foot or shorter floors. The following is a partial list of approved adhesives:

Henry's H1171 for five foot or shorter floors.
Henry's H971 Pro Urethane.
Bostwick Pro-Cure Urethane.
Franklin 801 Preferred Urethane.
Royal Fontain Urethane.
Mannington Ultra Spread Cured Urethane.

On concrete subfloors, which are on or below grade (ground level), always test for slab moisture content and remediate if they test wet. Even if they measure dry, it is possible to become seasonally wet if there are exterior site conditions that turn water toward the house. Examples of these conditions are sprinkler systems that spray water on exterior walls (they may not be installed yet), subterranean water in wet seasons and if the ground outside slopes towards the house and surface or underground flow is not properly diverted. Slab moisture can damage your floor from below and it can provide an environment for mold and mildew to grow which is unhealthy. Mold and mildew are not covered in the floor's warranty. If in doubt it is best to remediate the situation using one of the two methods below.

Method #1: Install a sheet vinyl floor first and then glue down our wood floor over the sheet vinyl. Follow the vinyl manufacturers' recommendations for adhesive and trowel type.

Method #2: Both Mapei and Bostik offer Moisture Barrier Systems on which they provide a warranty that moisture will not pass through and affect your wood flooring installation. Install the moisture barrier system according to its manufacturer's instructions.

Once the spread adhesive has setup sufficiently per adhesive manufacturer's instructions, lay the first row of flooring with groove facing the wall, and continue laying flooring. Always check your working lines to be sure the floor is still aligned. Use a tapping block to fit planks together, but be careful not to let the installed floor move on the wet adhesive while you are working. When the first section is finished, continue to spread the adhesive and lay the flooring section by section until the installation is complete. Use a damp cloth to immediately remove any adhesive that gets on the flooring surface. Warning – DO NOT allow adhesives to dry on the finished flooring as it is very difficult to remove it once dried without damaging the flooring. For best results use Bostik's Ultimate Urethane Adhesive Remover.

Remember to stagger the end joints from row to row.

Always leave at least a 3/8" expansion space between flooring and all walls and vertical objects (such as pipes and cabinets). Use wood or plastic spacers during installation to maintain this expansion space.

Walk each section of flooring in order to make sure it is well bonded to the subfloor within the adhesive working time. Flooring planks on the perimeter of the room may require weight on them until adhesive cures enough to hold them down. Make sure the floor is clean from debris to avoid unwanted denting.

STAPLE/ NAIL DOWN INSTALLATION

Make sure the subfloor is tested for moisture content first and is properly prepared. Use an Industrial Flooring Stapler from Bostich or Powernailer – air stapler/nailer with 1/2" Naildown adapter or a stapler/nailer of your choice after testing to make sure that stapling/nailing will not cause dimpling in the finished floor.

For the first and second starting rows: Lay the first plank inside the chalk line with the grooved edge toward wall. Install the entire first row in the same manner. Always leave at least a 3/8" expansion space between flooring and all walls and vertical objects (such as pipes and cabinets). Use wood or plastic spacers during installation to maintain this expansion space. In order to affix these first rows, use screws to set a strong and straight starting row rather than face nailing. Begin the subsequent rows, and once you have installed enough flooring whereby the nailer will not move the starter row off alignment, unscrew the starter row, throw away the damaged pieces and glue down replacement boards with a urethane adhesive. Set a weight on top of these rows and allow them to set.

Subsequent rows: Lay by using a floor nailer/stapler to blind-nail the top inside edge of the tongue at a 45 degree angle. Nail each board every 4-6" and within 2" of each end. Remember to stagger the end joints from row to row and use a tapping block to fit the boards together. It may be necessary to face-nail in doorways or tight areas where the nailer/stapler can't fit, (or glue down in these areas and weight them while the mastic sets). The last two rows will need to be face-nailed, (or glued down), in the same manner as the first two rows.

WARNING – Stapling/nailing can cause dimpling on the face if stapled incorrectly. Always make sure to visually check the installed floor as you go to ensure that the stapling/nailing is not causing dimpling on the face. (Note: be sure to look at the face of the installed flooring at a low angle from a distance to see if dimpling is occurring as it is hard to see when directly above the floor.) If dimpling does occur, STOP and adjust the stapler/nailer shoe and angle/place of staple entry in order to avoid it. The manufacturer is not responsible for dimpling.

FLOATING INSTALLATION

Make sure the subfloor is tested for moisture content and is properly prepared. Not all underlayments are the same. ALL underlayments must be approved prior to installation by the underlayment manufacturer and confirmed in writing for the warranty to apply.

Laying an underlayment of polyfilm: If below or on grade, first lay a 6-mil polyfilm with seams overlapped 8". Fasten seams every 18-24" with duct tape. Run the outside edges of the film up the perimeter of each wall 4" (trim after the flooring installation is complete.)

Laying foam: Lay Foam Underlayment by butting edges, not overlapping. Tape the full length of the seam.

Start the first row with the groove toward the wall. Glue the end joints of the first row by applying a small but continuous bead of WF Taylor 2049 Floating Tongue & Groove Adhesive to the bottom side of the end groove. Always leave at least a 3/8" expansion space between the flooring and all walls and vertical objects (such as pipes and cabinets).

—Use wood or plastic spacers during installation to maintain this expansion space. Lay subsequent rows of flooring by applying glue to the side and end joints and fitting the planks together with a tapping block.

—Remember to stagger the end joints from row to row at least 8" apart. Clean up any adhesive on the floor by using a damp rag – DO NOT allow adhesive to dry on the flooring face as it is difficult to then remove without damaging the flooring face.

DOUBLE GLUE WITH UNDERLAYMENT INSTALLATION

***Gluing underlayment and hardwood to a subfloor is considered a commercial application. This creates a system of materials that must all work together. DO NOT INSTALL OVER UNDERLAYMENT WITHOUT WRITTEN CONFIRMATION FROM THE HARDWOOD MANUFACTURER THAT ADHESIVE AND UNDERLAYS ARE APPROVED. Testing of specific products is required and will be done on a case by case basis. Contact your sales representative regarding projects that require such installation methods.

RADIANT HEAT

American Spirit engineered wood floors are approved for use over radiant heat systems but must be installed and maintained according to NWFA's guidelines for engineered wood over radiant heat. Radiant Heat systems should not be turned on for accelerated increase in temperatures and a humidifier may be required to keep wood at the appropriate humidity levels. Failure to keep the wood within recommended temperature and humidity levels is not the responsibility of the manufacturer and will void the warranty.

GENERAL RADIANT HEAT INSTALLATION GUIDELINES ACCORDING TO NWFA GUIDELINES

- 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 above.
- 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. The type of subfloor determines subfloor preparation.

- 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.
- Radiant heat is dry heat. A humidification system may be necessary to maintain wood flooring in its comfort zone.

AFTER INSTALLATION

Clean up any adhesive that is on the face of the floor by using a damp rag – DO NOT allow adhesive to dry on the flooring face as it is difficult to then remove without damaging the flooring face. Rubbing the finish too vigorously can lead to shiny spots.

If you decide to cover the floor (to allow the other construction trades to continue working), in order to protect the floors prior to final cleanup and turnover to the owner, use rosin paper to cover the floors and only use Scotch Delicate or Scotch Blue Walls + Wood Floors Tape to hold the rosin paper to the floor. DO NOT USE plastic film or other non breathing type coverings as this can cause the floor to become damaged from humidity buildups. Also, only use the Scotch Delicate or Scotch Blue Walls + Wood Floors Tape as this tape is designed for use on finishes and other tapes may pull and damage the finish when removing it.

Remove expansion spacers and reinstall base and/or quarter round moldings to cover the expansion space.

It is suggested that you buff the floor with lambs wool pads in order to “pull any splinters”, remove any residues and handprints/foot prints, etc.

Install any transition pieces that may be needed (reducer, T-moldings, nosing, etc.).

Do not allow foot traffic or heavy furniture on floor for 24 hours (if glue-down or floating). Dust mop or vacuum your floor to remove any dirt or debris.

For routine cleaning — Use the Swiffer® WetJet Wood Floor Care System. For information on Swiffer WetJet Wood products call 1-800-214-8734 or go to www.swiffer.com.

Care/Maintenance Instructions available separately.

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