MULTIPLY INSTALLATION INSTRUCTIONS

Hardwood flooring is a natural product and its fundamental beauty stems from the fact that each piece is unique- no two pieces are alike. Due to the fact that this flooring is a natural product, the installer and/or owner, have the following responsibilities:

- **Understanding how the floor will look after installation** – the installer and owner must review prior to installation:
  - Review the control samples, (the samples from which the floor was chosen), and compare to the purchased flooring onsite prior to installation. Make sure it meets the owner's expectations as to:
    - Grade – is it the proper grade? Grade from may vary slightly from batch to batch, so make sure the owner is happy with this batch of flooring you are about to install.
    - Color/Graining – do dark/light or wild grained pieces need to be culled-out to meet the owner's expectations?
    - Color Change – does the owner understand how the wood will change color over time? The owner may have chosen their floor from samples that have aged so they need to understand in advance of installation the expected color change in this wood. (Ask your sales representative for more information on color change).
    - Finish issues:
      - Is the gloss-level correct?
      - Does the appearance of the finish meet the owner's expectations?
      - Does the owner understand that the finish will scratch and wear and that the floor must be properly maintained during installation and in-use?

  Congratulations! You have now made sure that the owner will not be disappointed once the flooring is installed and they see it for the first time! JG Architectural Supply cannot be responsible for visual issues after the flooring is installed.

- **Installer responsibilities during installation:**
  - Make sure the flooring is received as ordered and meets the owner's expectations.
  - Test the subfloor and relative humidity on site to make sure site conditions conform to NWFA guidelines.
  - Follow these Installation Instructions.
  - Cull-out any pieces with visible defects and stop the installation should a reoccurring problem be found that exceeds the 5% defect tolerance used in the industry. DO NOT INSTALL pieces with visible defects.

- **Keep a Permanent Job Record** – use JG Architectural Supply's Wood Flooring Installation Report.

- **Make sure the owner understands the danger of excessively moist and excessively dry conditions as they relate to their hardwood flooring – wood is a natural material and will shrink/cup/move when over-dried and will expand, delaminate, warp and buckle/cup when excessively wet.**

- **Make sure the owner understands proper floor maintenance** – Give them a copy of JG Architectural Supply's Wood Flooring Maintenance Guide and Warranty.

WARNING: Our hardwood flooring is manufactured to strict tolerances and levels of quality. We are not responsible for site conditions, as we do not control them. Only the installer can test and correct for proper site conditions prior to installation.

NOTE: Wood flooring installed in areas where the relative humidity is below 35% may cup, shrink in width/length, or crack. In these dry conditions a humidifier is necessary to elevate the 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 inadequate conditions.

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PRE-INSTALLATION JOBSITE REQUIREMENTS

Inspect the flooring in a well-lit area prior to installation for grade, color, finish and quality. If flooring is unacceptable, contact your distributor immediately and arrange for replacement. JG Architectural Supply cannot accept responsibility for flooring installed with visible defects. Prior to installation of any flooring, the installer must ensure that the jobsite and subfloor meet NWFA guidelines. JG Architectural Supply is not responsible for flooring failure resulting from unsatisfactory jobsite and/or subfloor conditions.

Hardwood flooring should be one of the last items installed for any new construction or remodel project. All work involving water or moisture should be completed before flooring installation. Warning – Installing hardwood flooring onto a wet subfloor will likely cause cupping, tip & edge raising, telegraphing of core and subsequent gapping.

Room temperature and humidity of installation area should be consistent with normal, year-round living conditions for at least a week before installation of wood flooring – i.e. HVAC should be running to maintain a room temperature of 65-75°F and a humidity range of 35-65%. Warning - humidity levels below 35% will likely cause movement in the flooring, including gapping between pieces and possible cupping and checking in the face.

JG Architectural Supply cannot be held responsible for site conditions. Flooring formats, such as JG Architectural's MultiPly, are particularly susceptible to showing movement such as edge/end shrinking and face checking from low relative humidity below 35% on site and/or tip raising and subsequent end shrinking if installed over a wet subfloor.

Store the wood flooring, in the UNOPENED boxes, at installation area for 72 hours before installation to allow flooring to adjust to room temperature. Do not store the boxes of flooring directly on concrete. DO NOT OPEN THE BOXES PRIOR TO INSTALLATION!

Engineered wood floors such as JG Architectural's MultiPly DO NOT need any moisture equalization prior to installation and should be installed immediately after opening the boxes. DO NOT OPEN more than a few boxes in advance of installation and only the number of boxes which will be installed within the next few hours.

PRE-INSTALLATION SUBFLOOR REQUIREMENTS

All subfloors must be:

1. Structurally sound
2. Clean: Thoroughly swept and free of all debris (If being glued down, subfloor must be free from wax, grease, paint, sealers, & old adhesives etc., which can be removed by sanding)
3. Level: Flat to 3/16" per 10-foot radius
4. Dry and will remain dry: Subfloor must remain dry year-round. Moisture content of wood sub floors must not exceed 11%; concrete must not exceed 3.5% as measured with a commercial concrete moisture meter.

Wood Sub floors must be dry and well secured. Nail or screw every 6" along joists to avoid squeaking. If not level, sand down high spots and fill low spots with an underlayment patch.

Concrete Sub Floors must be fully cured, at least 60 days old, and should have minimum 6-mil polyfilm between concrete and ground. Subfloor should be flat and level within 3/16" on 10'. If necessary grind high spots down and level low spots with a self-leveling concrete.

Do not install on concrete unless YOU ARE SURE it stays dry year-round. All concrete should be tested for moisture and be below 3.5% moisture content as measured by a commercial concrete moisture meter.

It is highly recommended, that if gluing down on concrete, (even if you believe it is dry), which is on or below grade, to install Sheet Vinyl first and then glue the wood flooring on top of the vinyl, as this provides an effective permanent moisture barrier. Another alternative to sheet vinyl is to use Sika Primer MB moisture barrier systems, which provides a warranty to you.

Remember, a concrete slab on /below grade that measures dry today may become moist in the future due to rising groundwater. Installing a moisture barrier now may be viewed as an insurance policy against concrete becoming wet in the future, which would lead to subsequent floor failure. JG Architectural Supply is not responsible for site related moisture issues.

Ceramic tile, resilient tile, cork and sheet vinyl covered Subfloors must be well-bonded to subfloor, in good condition, clean and level. *Do not sand existing vinyl floors, as they may contain asbestos.*

Radiant heat: Use only floating installation over radiant heat. Subfloor should never exceed 80°F. Check with radiant heat manufacturers 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.

INSTALLATION TOOLS AND MATERIALS

For all installation methods:

- 3M Blue Tape
- Chalk line
- Crosscut power saw
- Hammer
- Pencil
- Pry bar
- Tape measure
- Tapping block
- 3/8" Wood or Plastic spacers

Sub Floor Type	Installation Method
Plywood (at least 1/2" thick)	All Methods
Underlayment Grade Particleboard	Floating / Glue-down Only*
OSB (at least 3/4" thick)	All Methods
Concrete Slab	Floating / Glue-down Only*
Existing Wood Floor	All Methods
Cork	Floating / Glue-down Only*
Ceramic Tile	Floating / Glue-down Only*
Resilient Tile & Sheet Vinyl	Floating / Glue-down Only*

**JG Architectural Supply recommends a Glue-Down installation over Floating Installation*

For the glue-down installation method, you'll also need:

- Urethane Flooring Adhesive (**DO NOT USE** water based mastics as they will cause the floor to fail)
- On concrete slabs, which are on/below grade, we strongly recommend installing Sheet Vinyl or another permanent moisture barrier such as the Sika Primer MB system prior to installing the wood.
- Trowel per flooring adhesive manufacturer's recommendations.

For floating installation, you'll also need:

- Foam Underlayment or Cork Underlayment or 6-mil Polyfilm
- Franklin Titebond 2 PVAC glue
- Duct Tape

STARTING THE INSTALLATION

Make sure subfloor is properly prepared and is tested for moisture.

Since wood expands with any increase in moisture content, always use 3/8" wood or plastic spacers to leace an expansion space between flooring, 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.

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 use a new plank at a random length to start the next row. Always begin each row from the same side of the room.

Work from several open boxes of flooring and "dry lay" the floor before permanently laying the floor (But never open more than a few boxes in advance). This will allow you to arrange the varying grains & colors in a harmonious 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, and then to cull out pieces that do not meet those expectations.

Always use a tapping block (a short piece of flooring) with a hammer to fit planks together, as tapping the flooring directly will result in edge damage. When near a wall, you can use a pry bar to pry close the side and end joints. Take care not to damage edge of flooring. For glue down & floating applications, use 3M Blue Tape to hold any pieces which might have side bow straight & tight until the adhesive sets up.

It is usually best to 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.

Nail or staple according to NWFA guidelines, or continue with glue-down or floating installation below.

GLUE-DOWN INSTALLATION (RECOMMENDED)

On concrete subfloors, which are at or below grade, always assume the worst and even if they measure dry. Installing a permanent moisture barrier is cheap insurance against the cost of ripping out and replacing a floor which has failed due to high moisture from the subfloor.

Option #1: Install a sheet vinyl floor before gluing down our MultiPly hardwood over the sheet vinyl. Follow the vinyl manufacturers' recommendations. An example is provided here: Sheet Vinyl Installation Instructions .
Option #2: Use Sika Primer MB moisture barrier system, which provides a warranty against moisture damage.

We Recommend the Following Flooring Adhesives: SikaBond T-54 and T55
(WARNING: Use only urethane adhesives – **DO NOT USE** water based mastics!)

Follow the adhesive instructions for proper trowel size, application, and set times. Lay the first row of flooring with groove facing the wall, and continue laying flooring for the first section of the floor. Use tapping block to fit planks together, but be careful not to let installed floor move on the wet adhesive while you are working.

Continue laying the floor section by section. Use a damp cloth to immediately remove any adhesive that gets on the flooring surface. DO NOT allow adhesives to dry on the finished surface as it is very difficult to remove without damaging the flooring. Remember to stagger end joints from row to row and to leave at least a 3/8" expansion space between flooring and all walls and vertical objects (such as pipes and cabinets).

Walk the floor within its drying time to ensure a good adhesive bond. Flooring planks on the perimeter of the room may require weight on them until adhesive cures.

FLOATING INSTALLATION

On concrete subfloors, which are at or below grade, always assume the worst and even if they measure dry. Installing a permanent moisture barrier is cheap insurance against the cost of ripping out and replacing a floor which has failed due to high moisture from the subfloor.

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

For additional sound dampening and cushioning, an optional foam or cork underlayment can be installed. On concrete slabs at or below grade, this foam or cork should be installed over the polyfilm moisture barrier:

Option #1 - Lay Foam Underlayment by butting edges, not overlapping. Tape the full length of the seam.
Option #2 - Lay Cork Underlayment according to manufacturer's instructions.

Start first row of MultiPly hardwood with the groove toward wall. Glue end joints of first row by applying a small but continuous bead of Franklin Titebond 2 PVAC glue to bottom side of the side groove. Lay subsequent rows of flooring by applying glue to side and end joints and fitting planks together with a tapping block. Remember to stagger end joints from row to row, and to leave at least a 3/8" expansion space between flooring and all walls and vertical objects (such as pipes and cabinets).

Clean up any adhesive that is on the flooring surface 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.

AFTER INSTALLATION

- If you decide to cover the floor while other construction trades continue working, or to protect the floors prior to final cleanup and turnover to the owner, use only rosin paper and 3M Blue Tape (to hold the rosin paper to the floor). DO NOT USE plastic film or other non breathing type coverings as this can cause humidity buildup and ultimately flooring damage. DO NOT USE any tape to hold the rosin paper that was not designed for delicate finishes.
- 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.

CLEANING, MAINTENANCE, & REFINISHING

Please visit our website for cleaning, maintenance and re-finishing instructions, see the Wood Flooring Maintenance Guide: http://www.jgarchitectural.com/tech.htm