

ENGINEERED FLOORING INSTALLATION GUIDELINES

1 STAPLE DOWN INSTALLATION

ATTENTION

- **BEFORE** installation, check **ALL** materials carefully. MODERNWOOD Warranties **DO NOT** cover visible defects on materials after installation.
- The Installer/ Owner are responsible to decide if sub-floor in installation area and the surrounding condition are environmentally and structurally appropriate for wood floor installation. MODERNWOOD is **NOT** responsible for any post-installation damage and defect directly and/or indirectly resulted from insufficient sub-floor, sub-surface and/or location conditions.
- **DO NOT** open the wood flooring cartons until ready to install.

PREPARATION

TOOLS:

- 1 1/4" - 1 1/2" staples depending on product thickness.
- 15 - 18 gauge.
- 1/8 - 3/16 Crown staples.

SUB-FLOOR:

General

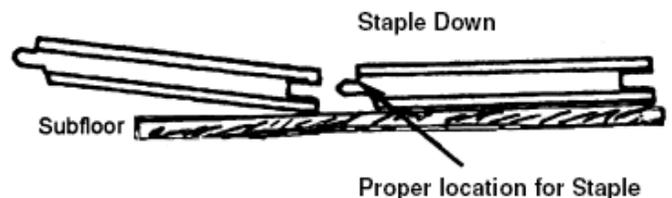
- Make sure the sub-floor is well constructed. Irregular and un-even sub-floor surface may cause flooring – sub-floor gaps. Such gaps are not engineered flooring manufacturing defects and are not covered by MODERNWOOD warranties.
- Sub-floor should be dry and sound. Water-lodged sub-floor (flooded or rained on) is not recommended for good flooring installation.
- When installing flooring on new wooden sub-floor, make sure that moisture content (MC) is maximum 14% on a MC meter. MC difference between engineered flooring and sub-floor should be within 4%. Check with your local distributor for geographical variances.
- Clean the sub-floor carefully and thoroughly surface before installation. Once cleaned, cover sub-floor surface wall to wall with 15 lb asphalt saturated felt or equivalent (no rosin paper). Remove the felt's edges when placing it down.

Construction

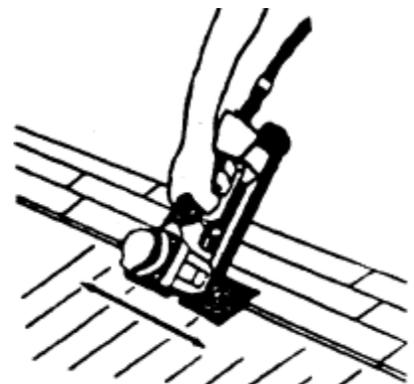
- Plywood 5/8" minimum thickness preferred 3/4" or thicker exterior plywood installed with long edges at right angle to 16" center joists and staggered so that the end joists in adjacent panels will break over different joists. Nail at each bearing with 6d threaded and 8d common nails spaced 6" on-center along all outer bearing edges and 10" on-center along immediate joists.
- 3/4" thick OSB on 19.2" or less center joist, approved sub-floor (dry & sound).
- Install baseboards un-nailed into the floor in such position so that their lower edge is slightly above the level of the finished floor.
- When installing flooring over basement and crawlspaces, make sure these areas dry and well ventilated. Have vapor barrier installed in the crawlspaces and underground sub-floor.

STAPLING DOWN

- **REMEMBER** install the wood flooring only after sheetrock and the entire tile work have thoroughly dried and when most of the construction job is completed except the final woodwork and trim. The building interior should be well dried and seasoned and within comfortable working temperature (min. 60° F) when installing.
- Place the floor at right angles to the floor joints parallel to the room's length, giving a distance the same as the flooring thickness for expansion space around the room.
- Maximum end joints gap is 4" between planks.
- Nail and staple the first row of flooring on face. Face nailing and counter sunk may necessarily be applied.
- For the next row, staple along tongue in every 4 – 6 inches and within 2 inches at each end joint.



- Keep the flooring relative humidity at 35 – 55% year round to prevent it from moving.
- Cover small cracks or face nail holes with putty. Such application is considered normal in hardwood flooring installation.



REMINDER: Failure to follow these instructions will void all warranties.

2 GLUE DOWN INSTALLATION



ATTENTION

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- **DO NOT** open the wood flooring cartons until ready to install.

PREPARATION

TOOLS:

- a hammer,
- hand or power saw,
- chalk line,
- wood floor adhesive,
- A trowel. (For 1/2" or 9/16" thick wood floor, use 3/16" wide x 5/32" deep v-notch trowel to yield approximately 45 to 50 sq. ft. per gallon or 1/4" x 1/4" x 3/16" square notch. For 5/16" thick wood flooring use 3/16" x 1/4" x 1/2" contour v-notch to yield 60 sq. ft. per gallon.)

SUB-FLOOR:

General

- Make sure the sub-floor is well constructed. Irregular and un-even sub-floor surface may cause flooring – sub-floor gaps. Such gaps are not engineered flooring manufacturing defects and are not covered by MODERNWOOD warranties.
- Sub-floor should be dry and sound. Water-lodged sub-floor (flooded or rained on) is not recommended for good flooring installation.
- Remove any existing base, shoe mold or doorway thresholds. Replace these items after installation, allowing at least 1/4" width for expansion around the perimeter of the room. Notch or undercut all door frames casings to provide such expansion area and to avoid difficult scribe cuts. Place a piece of the flooring on the sub-floor as a sawing height guide.
- Building interior and sub-floor should be dry. Interior walls should be dry enough for painting with room temperature of minimum 60°F. Maintain the relative humidity at 35-55% for before, during and after installation.

Concrete Sub-floor

- Make sure the concrete surface is NOT slick.
- Check for dryness using the standard rubber mat or taped plastic test for 24 hours. Do not install if any moisture visually found.
- Remove paint, wax, oil, plaster, old glues or adhesives, mud and other dirt. Use #3-1/2 grit open coat paper when the concrete sub-floor needs grinding as well as removing any dirt, loose concrete or contaminants. Sweep or vacuum thoroughly.
- If necessary, use Delmhorst moisture meter, Tramex Concrete Encounter or Wagner Concrete Meter to test the concrete sub-floors on or below grade on several locations. Consult with your local distributor for geographic variances.
- Suggested compression strength is 3000 lbs. P.S.I.
- Apply a calcium chloride test to check the concrete sub-floor Moisture Content. The tested concrete slab must be 5 lbs. or below or be reduced to 5 lbs. or below.
- Grind any un-flat sections or improve the surface with a leveling compound. Check the levelness carefully especially along the walls. Suggested level is 3/16" in 10' radius.

Wood Sub-floor

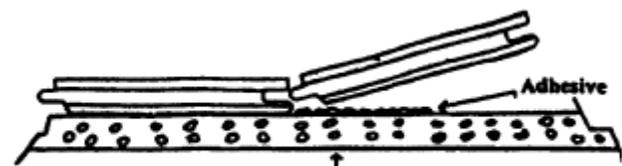
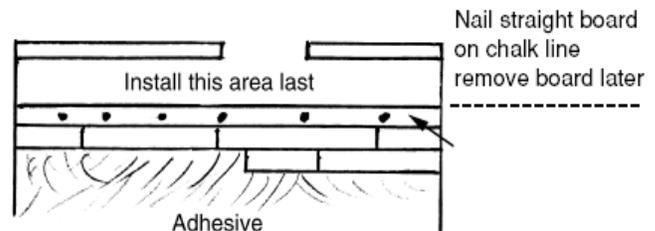
- When installing flooring on new wooden sub-floor, make sure that moisture content (MC) is maximum 14% on a MC meter. MC difference between engineered flooring and sub-floor should be within 4%. Check with local distributor for variances.
- Plywood is normally used as an overlay over an existing sub-floor. Make sure that the thickness of the overlay material is a total 3/4" of the sub-floor thickness.

Concrete or Plywood Radiant Head Sub-Floors (on or under grade)

- The maximum temperature of sub-floor with normal use is 80°F. Room temperature should not vary more than 15°F season to season
- MODERNWOOD approved systems must not exceed 8 watts per square foot heating capacity. (Check with heat system manufacturer.)
- For correct water temperature inside heating pipes, check with manufacturers suggested guidelines.
- Cover heating pipes with 1 1/4" of concrete or install at minimum of 1/8" below bottom side of plywood sub-floor.
- Let the heating system to run at normal living temperature for at least 14 days and turn it off 1 – 2 days before the installation. During the installation, sub-floor temperature should be 64° to 68°F.
- Some wood species are not recommended for Radiant Heat.

GLUING DOWN

- **REMEMBER;** install the wood flooring only after sheetrock and the entire tile work have thoroughly dried and when most of the construction job is completed except the final woodwork and trim. The building interior should be well dried and seasoned and within comfortable working temperature (min. 60° F) when installing.
- Give expansion space around the room in a distance the same as the flooring thickness.
- For 3" material, snap a chalk line 30 1/4" from the wall on the door side of the room. This small area will be your working space and installed last. Temporarily nail straight board on chalk line.



Concrete or plywood type subfloors

- Install the floor from several cartons at the same time to ensure color and shade mix.
- Maximum end joints gap is 4 "between planks.
- Install tongue into groove by hand.
- Lift a plank periodically to check adhesive transfer.
- Remove nailed board and install the remaining flooring. Reinstall base and molding after floor installation.
- Wipe adhesive off surface of wood with cleaner and soft cloth.
- Cover small cracks or face nail holes with putty. Such application is considered normal in hardwood flooring installation

For Unfinished Products:

- Sand the floor only when the adhesive has cured.

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3 FLOATING INSTALLATION



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PREPARATION

TOOLS:

- a hammer
- Pull/Pry bar
- Tapping Block and spacers
- hand or power saw,
- chalk line,
- wood floor adhesive
- Foam (minimum 1/8") or Cork Underlayment (6mil poly for excess moisture conditions)
- Clear poly tape

SUB-FLOOR:

General

- Make sure the sub-floor is well constructed. Irregular and un-even sub-floor surface may cause flooring – sub-floor gaps. Such gaps are not engineered flooring manufacturing defects and are not covered by MODERNWOOD warranties.
- Sub-floor should be dry and sound. Water-lodged sub-floor (flooded or rained on) is not recommended for good flooring installation.
- Remove any existing base, shoe mold or doorway thresholds. Replace these items after installation, allowing at least 1/4" width for expansion around the perimeter of the room. Notch or undercut out all door frames casings to provide such expansion area and to avoid difficult scribe cuts. Place a piece of the flooring on the sub-floor as a sawing height guide.
- Building interior and sub-floor should be dry. Interior walls should be dry enough for painting with room temperature of minimum 60°F. Maintain the relative humidity at 35-55% for before, during and after installation.

Concrete or Plywood Radiant Heat Sub-Floors (on or under grade)

- The maximum temperature of sub-floor with normal use is 80°F. Room temperature should not vary more than 15°F season to season
- MODERNWOOD approved systems must not exceed 8 watts per square foot heating capacity. (Check with heat system manufacturer.)
- For correct water temperature inside heating pipes, check with manufacturers suggested guidelines.
- Cover heating pipes with 1 1/4" of concrete or install at minimum of 1/8" below bottom side of plywood sub-floor.
- Let the heating system to run at normal living temperature for at least 14 days and turn it off 1 – 2 days before the installation. During the installation, sub-floor temperature should be 64° to 68°F.
- Some wood species are not recommended for Radiant Heat.

UNDERLAYMENT INSTALLATION

- Sweep/Vacuum the sub-floor before laying material. Make sure any high points in the sub-floor are removed, cleaned or sanded.

***Note: When installation over a wood sub-floor, make sure to install flooring perpendicular to the joist to avoid any sinking between the floor joists.

- Roll out specified pad material onto sub-floor. Make sure padding is butted edge to edge, joining the lengths at the edges with a clear tape, and leaving a 1/4" (6mm) gap around the edges of the room butting up to the walls. If insulation pad selected is not effective against dampness rising from sub-floor, install a 6 mil poly sheet prior to padding installation.

INSTALLATION OF OUR MODERNWOOD FLOORING

- After determining the direction to run the planks (longest, straightest wall), measure the width of the room or hall (the dimension perpendicular to the direction of the flooring). The last row should not be any less than 1 1/2" wide; if it is less, cut the width of the starter row to avoid a narrow last row.
- Select a starter wall. It is most likely to be an outside wall and will probably be straight and square with the room. Measure out from the wall, at each end, the overall width of the plank plus 1/2" for expansion. Snap a chalk line from these points.
- Install spacers at walls to maintain 1/2" expansion space between wall and flooring.
- Before installing planks, dry fit the first two rows of flooring. Install planks left to right with the tongue facing away from the long wall. When you reach the last plank, cut to fit. Look for walls that are not straight and use spacers to accommodate large gaps.
- Apply glue in the grooves of all planks as you install. Start 2" from end and fill the groove completely in 6" lengths, skipping 6" and repeating the length of the board. Fully glue the end joint. It is very important the groove to its full thickness as this will ensure the proper transfer to the tongue of the adjoining plank. Proper alignment is critical. Misaligned starter rows can cause side and end gaps to appear in proceeding rows of flooring.
- Use tapping block to secure all joints. Immediately wipe away any excess glue with a clean, slightly damp cloth.

CAUTION: Any excess glue not immediately removed can dry and may leave a haze or film.

- At the end wall, use an end pry bar to pull ends of planks together. This same bar can be used in tight or confining areas such as underside or against existing cabinetry.
- Continue the left to right installation process until complete. Continue to use spacers on all vertical surfaces to maintain 1/2" expansion gap.
- The last row will probably require cutting to size for a narrow width finish but it should be no less than 1 1/2" wide. Install this plank with the pry bar.
- Allow floor to dry for at least 12 hours before removing spacers and allowing normal foot traffic.
- Install trim and moldings the following day.

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