

## INSTALLATION INSTRUCTIONS

# 9.5, 10, 10.5 & 12mm

## *Engineered hardwood flooring*

### **PLEASE READ THESE INSTRUCTIONS COMPLETELY BEFORE BEGINNING THE INSTALLATION**

ABODE floors must be installed in accordance with the following instructions. Failure to do so may void the product warranty. Professional installation is recommended for floating floor or nail down application, and required for glue down application.

## *Product Use & Installation Options*

### **PRODUCT USE**

This floor may be installed:

- On, above or below grade
- With glue down, nail down or floating installation
- Over OSB, plywood or concrete subfloor

This floor may be installed over radiant heat if:

- The floor is installed with glue down or floating installation
- The installation conforms to the conditions specified in the ABODE Special Instructions for Installation over Radiant Heat (available from your dealer).
- The floor is not made from Jatoba, Acacia, or Hickory - these species may NOT be used over radiant heat.

### **Note**

Special instructions for installation over radiant heat appear throughout this brochure. These instructions apply only to styles of abode flooring that are specifically approved for use over radiant heat and meet the conditions given above. Installation of non-approved products, or installation of approved products in a non-approved manner, over radiant heating systems will void the product warranty.

This floor should **NOT** be installed in a bathroom, laundry room or any area that may experience elevated humidity (sauna, sunroom, etc) Such use will void the product warranty.

ABODE floors are for indoor residential use only. The use of a certified installer is recommended for all installations.

## Before Installation – Product Inspection & Site Preparation

It is the responsibility of the installer and/or customer to ensure that the ABODE product meets or exceeds their expectations for visual appearance and manufacturing quality.

Because ABODE floors are made from real wood, every piece of ABODE flooring will have a unique appearance, often with naturally-occurring variations in color, texture and grain pattern. Showroom samples and photographic reproductions may not represent the full range of color, texture and grain variations and milling tolerances which can occur in the product itself. It is strongly recommended that, prior to commencing installation, the customer and installer opens several boxes of product and loose lay the boards on the floor. Examine the product carefully to ensure that it meets the customer's expectations for appearance, color and visual character and quality before proceeding with the installation.

If the visual appearance or manufacturing quality of the product is deemed unacceptable, it should not be installed. Flooring that has been installed will be deemed to have been inspected and accepted by the installer and customer, even if the customer is not present at the time of installation. Every piece of flooring should be inspected and if any piece does not meet expectations of quality, it should not be installed.

### Note

**ABODE floors are manufactured in accordance with accepted industry practices which permit a defect tolerance not to exceed 5%. These defects may be the result of manufacturing or naturally occurring characteristics of the material. It is recommended that a minimum 5% cutting or grading allowance be added to the total square footage when calculating the quantity of flooring required. Boards that are judged to be defective should not be installed or should be installed in an inconspicuous location where they will not be noticeable (eg inside a closet).**

It is the sole responsibility of the installer to ensure that the job site, subfloor and installation tools and materials meet or exceed these instructions and any applicable industry standards. ABODE accepts no responsibility for problems arising from incorrect or improper site preparation or installation procedures.

For further information on installation standards and guidelines, call

CA: 1-800-992-3163

US: 1-800-851-3841

or email [info@metrofloors.com](mailto:info@metrofloors.com)

### **SITE PREPARATION:**

Installation in newly-constructed home

Installation of wood flooring is one of the last jobs of a new home construction. Prior to installing a wood floor, the following conditions must be met:

- The building is completely enclosed with all outside doors and windows in place and securable, including a door from an attached garage to house interior
- All concrete, masonry, plastering, drywall, texturing, painting, tiling and other wet work is complete and dry
- Basements must be dry, within recommended temperature and humidity ranges, with no standing water and adequate cross-ventilation in accordance with local building codes.
- Crawlspace must be dry, with no standing water and adequate cross-ventilation in accordance with local building codes. Exposed earth crawlspaces must also have a vapor retarder installed to NWFA guidelines

- Gutters and downspouts are in place, directing water away from the building
- Landscaping is directing water away from the building
- HVAC systems are fully operational, enabling heat and humidity levels to be controlled and maintained throughout the home, and have been operating for a minimum of 5 days prior to installation,
- Subfloor is properly inspected and prepared for installation in accordance with these instructions
- If installing over radiant heat, ensure that the system is in full working order and has been fully tested and running for a minimum of two weeks prior to installation. The system should be turned off for 24 hours prior to installation in the install zone.

Installation in existing home (Renovation)

Installation in an existing home must meet the same conditions as a new home. If part of a larger remodeling project, ensure that all wet work (painting, wallpapering, texturing, etc) is completed and thoroughly dry before commencing flooring installation. In addition:

- Remove all furniture, artwork and other valuables from installation area
- Remove baseboards and moldings
- Undercut door casings and jambs (use a piece of the flooring as a depth gauge)
- Remove existing flooring, if necessary
- If installing over radiant heat, it is strongly recommended that a radiant heat technician be consulted prior to installation to ensure that the heating system can be operated effectively at temperatures acceptable to the wood flooring. The system should be turned off for 24 hours prior to installation in the install zone.

### **CLIMATE CONTROL**

Conditions at the job site must be maintained with the temperature between 60 - 80°F (15 - 26°C) and humidity at 30-50% before, during and after the installation.

#### **Note**

**In areas with extreme climate conditions it may be necessary to use humidifiers or dehumidifiers to ensure the humidity is kept within the recommended range.**

Flooring material should not be delivered to job site until these conditions have been met and maintained for five days prior to installation.

Following installation, these conditions should be maintained at all times to ensure proper performance of the floor. See Warranty for details.

Required interior conditions for hardwood flooring are temperature of 60 - 80°F (15 - 26°C) and relative humidity of 30 to 50%. When these conditions have been established at the jobsite, material may be delivered to the site. Do not deliver flooring to jobsite if climate conditions have not been met and maintained as described above otherwise damage to product may result.

When flooring has been delivered to the jobsite, stack the boxes cross-stack to ensure good air flow between the layers. Leave the boxes closed until ready to commence the installation, and then open only as needed.

### **MOISTURE CONTENT**

All wood flooring must be tested for moisture content prior to installation to ensure moisture content is within allowable limits. When ready to commence installation, open several boxes of product and test and record moisture content of the flooring using a reliable and accurate moisture testing device. Wood flooring should have a moisture content between 6 and 9 % or as expected for the environment in which the flooring will be used. If the moisture content is not within this range,

allow the flooring to acclimate at the climate controlled jobsite until the moisture content comes to within the acceptable range.

### **SUBFLOOR PREPARATION**

The installer is responsible for ensuring that the subfloor is suitable for the flooring application and properly prepared for installation.

**All subfloors** must be flat, clean, dry, structurally sound, and free of squeaks and protruding fasteners. The subfloor must be flat to within 3/16" over 10 feet, or 1/8" in 6 feet radius.

**Plywood or OSB subfloors** must meet local building code requirements. (US: minimum 3/4" T&G Exposure 1 rated plywood or 23/32" T&G Exposure 1 rated OSB. Canada: minimum 5/8" T&G Exposure 1 rated plywood or 23/32" T&G Exposure 1 rated OSB installed over joists 16" on center or less.) They must be secure to the joists, free of squeaks and protruding fasteners. Subfloor moisture content must not exceed 12%, and the variance in moisture content between the full thickness of the subfloor and the flooring boards must not exceed 3 percentage points, based on a minimum of 20 tests per 1000sf.

**Concrete subfloors** must be dry, clean and free of non-compatible sealers, waxes, oil, paint, drywall compound, or other bond-breaking substances. (Check for the presence of sealers by applying drops of water to the slab. If the water beads up, there may be sealers or oils.)

All slabs must be tested for moisture content using test method ASTM F2170-11 must return a reading of 75% relative humidity or less.

### **RACKING**

Real wood flooring contains natural variations in color and grain pattern. In order to prevent color clustering or repetitive grain patterns in the finished floor, it is recommended that boards be racked (visually sorted) before installation to create a satisfactory and pleasing color arrangement. Immediately prior to installation, unpack several cartons to get a sense of the range of color variation and arrange the planks to achieve a satisfactory appearance.

When racking, distribute lengths where possible. Avoid 'H' patterns, stair-steps and other discernible patterns in adjacent rows. When racking, a general rule is to stagger the end joints by a minimum of double the board width (e.g. for boards 5" / 125mm wide stagger joints a minimum of 10" / 250mm).

For products 3" to 5" (8 - 13cm) in width, do not use boards of less than 6" (15cm) in length.

For products over 5" (13cm) in width, do not use boards of less than 12" (30cm) in length.

When racking, inspect all boards for visible manufacturing defects. Boards with manufacturing defects in excess of industry standards (5% of total quantity) may be replaced by the dealer under the terms of the product warranty. Once installed, boards will be considered to have been accepted by the customer and will not be eligible for replacement. (See Warranty for details.)

### **EXPANSION SPACE**

Wood flooring will expand and contract with changes in ambient temperature and humidity. To allow for this, during installation leave a 1/2" expansion space around the entire perimeter of the floor between the flooring and the walls. Also leave expansion space where the flooring will meet any vertical obstruction, such as stairs, pipes, door sills, tiles, cabinets etc.

## *Nail Down Installation*

Nail down installation requires three different nailing systems:

- A pneumatic nail gun
- A pneumatic finish nailer
- A brad nailer for top-nailing
- A tapping block

|            | <i>Fastener</i> | <i>Gauge</i> | <i>Size</i> | <i>Nail Spacing</i> | <i>Distance from end</i> | <i>Comments</i> |
|------------|-----------------|--------------|-------------|---------------------|--------------------------|-----------------|
| Engineered | Cleat           | 18           | 1 3/4"      | 4 - 6"              | 1 - 2"                   |                 |

#### Note

During installation of flooring pieces, push or gently tap boards flush to the previous row. Tap against the tongue; tapping the groove may damage the edge. To prevent damage to the finish, avoid tapping the face of the board with a rubber mallet. Use of tapping block is recommended to avoid splintering, and edge damage

#### Note

- Recommended fastener is 18 gauge cleats, 1 3/4" or longer (plywood or OSB).
- For products wider than 7", glue assist is recommended especially on OSB & dry climates.
- Products 7" and wider that are not glue assisted may result in squeaks, crackling/popping. This is not considered a defect and is not covered by warranty.
- Install perpendicular to joists.

### INSTALLATION

Check nail gun to make sure the depth is set for the appropriate thickness of the flooring. Ensure the nailer is not scratching the floor surface.

Test nail a piece of scrap to make sure the nailer is correctly set up, and that the fasteners are being properly positioned and set.



Ensure plywood subfloor is suitable and properly prepared. Verify moisture content of both subfloor and flooring is within allowable limits before commencing installation. Open several packages of flooring and rack and inspect boards. (See Racking, above.)

If the installation is over an unfinished crawlspace, basement or exterior space (eg: above a carport) a vapor retarder must be used. Before proceeding, place a vapor retarder (IRC-rated Perm Class 2 or 3, permeance rating 0.7 – 1.0) over the subfloor. Kentwood recommends AquabarB or equivalent. Wax paper is not an approved vapor retarder. Install according to underlay manufacturer's instructions.

Set the first row in place. If required, snap a chalk guideline on the surface of the vapor retarder to act as a guide. If starting the installation against a wall, place boards with the groove side facing the wall and remember to allow expansion space.

Top nail along the groove edge with the brad nailer using minimum 18g 1½" fasteners set 10 to 12" apart, with a fastener 1 to 3" from each end of each board. Keep the nailer perpendicular to the direction of the flooring and set nails no less 1/4" in from the edge of the board.

Using a pneumatic finish nailer, blind nail along the tongue edge at a 45° angle. Follow the nailing schedule specified above, spacing the recommended fasteners as indicated. Ensure a fastener is placed as indicated near the end of each board.

At the end of the row, cut a board to fit, allowing 1/2" expansion space.

#### Note

**It is a common practice among some installers to use a ‘full spread glue down’ on the first and last few rows of a nail down installation in order to avoid top nailing. This practice is not recommended by Kentwood for any nail down installation. Any use of full spread glue down on first and/or last rows within a nail down installation will automatically void the product warranty.**

Set the second row in place and set the tongue and groove joints. Use offcuts if lengths are suitable and stagger end joints as required (see above). Blind nail along the tongue as before or, if working space permits, use the nail gun.

Continue with subsequent rows. To avoid a repetitive or predictable board patterns, cut some boards to random lengths to begin rows. Open new packages several at a time and rack and inspect boards as described above. Ensure 1/2" expansion space is maintained at all perimeter walls and other vertical obstacles. Maintain nailing schedule and keep butt joints staggered as described above.

In the last couple of rows, there may not be space to use the nail gun, so revert to using the finish nailer as before, blind nailing through the tongue. For the final row, measure the gap to the wall, allowing expansion space, and rip a row of boards to the required width. Top nail the final row into place using brads or finishing nails placed 1/4" in from the edge. Install moldings and transitions as required.

## Glue Down Installation

Glue down installation should only be performed by professional wood flooring installers.

For installations over radiant heat, product & installation procedure must also conform to conditions listed in ‘product use’ (above).

#### Note

**During installation of flooring pieces, push or gently tap boards flush to the previous row. Tap against the tongue; tapping the groove may damage the edge. To prevent damage to the finish, avoid tapping the face of the board with a rubber mallet. Use of tapping block is recommended to avoid splintering, and edge damage**

#### Reminder For Installations Over Radiant Heat

**Prior to flooring installation, ensure that the radiant heat system is in full working order and has been fully tested and running for a minimum of two weeks prior to installation. The system should be turned off for 24 hours prior to installation in the install zone.**

Ensure subfloor is suitable and properly prepared. (See subfloor Preparation Section). Verify moisture content of both subfloor and flooring is within allowable limits before commencing installation. If installing over radiant heat, place approved heat sensors on the subfloor in accordance with manufacturer’s instructions. A minimum of 5 sensors must be placed for every 1000 square feet of flooring installed. (Sensors and Special Instructions For Installation Over Radiant Heat are available from your ABODE dealer. Failure to install the product in accordance with these instructions will void the product warranty.)

There are several acceptable techniques for starting a glue down installation. The following is one common procedure; installers may prefer another method with which they are more familiar.

Select the starting wall and verify straightness as described above. Snap a chalk line parallel to the wall and add expansion space. Nail a guide strip along the chalk line on the starter wall side.

Use a moisture-cured urethane adhesive specially formulated for wood flooring installation (eg Pro Series 3089 - Urethane adhesive). For trowel selection, adhesive application and all other aspects

of adhesive usage, follow the adhesive manufacturer's instructions.

Open 1 or 2 packages of flooring and rack and inspect boards. (See Color Racking, above.) Apply adhesive to the subfloor and set first row of boards along the guide strip with the tongue against the guide strip. Leave 1/2" expansion space between the end of the first board and the wall. At the end of the row, cut a board to fit, ensuring board length is not less than minimum specified. Allow 1/2" expansion space to end wall. If desired, use offcut to begin next row.

Set subsequent rows working away from starter wall. When installing new boards, avoid pushing them into place across the subfloor as this may unevenly redistribute the adhesive. Instead, hold the new board above the subfloor at an angle, engage the tongue and groove joint, then press the board directly down onto the subfloor. Ensure no glue is forced into tongue & groove joints during installation as this may affect the fit of the joint. Avoid getting adhesive on the flooring surface, and clean up any seepage or spills immediately according to manufacturer's instructions.

To prevent boards shifting after they have been set into place, strap them with low adhesion, delicate surface masking tape designed for prefinished flooring. (Do not use regular masking tape as it may leave a residue of adhesive on the surface.)

Continue with subsequent rows. To avoid a repetitive or predictable board pattern, cut some boards to random lengths to begin rows. Open new packages 1 or 2 at a time and rack and inspect boards as described above. Use offcuts if lengths are suitable and stagger butt joints as required (see above). Ensure 1/2" expansion space is maintained at all perimeter walls and other vertical obstacles.

Complete the installation to the far wall. For final row, rip boards to required width (allowing 1/2" expansion space at far wall). Remove the guide strip from the starter row and complete the last ten rows back to the starter wall.

When installation is complete, remove all low adhesion tape designed for prefinished flooring. (Do not leave the blue mask tape on the floor for more than 12 hours.) Install moldings and transitions as required. Ensure baseboard moldings are affixed to the wall, not the floor. Wait 24 hours before moving furniture or appliances onto floor.

If the flooring was installed over a radiant heating system, wait 24 hours after installation or until the adhesive has fully cured before turning the system back on. Bring the temperature of the system up gradually, in 5° increments. Never allow the surface temperature of the floor to exceed 80°F (26°C) and avoid dramatic temperature changes; always adjust the system gradually in 5°F increments. It is recommended that a dedicated quick recovery thermostat be installed to allow the temperature of the radiant heating system to be accurately controlled.

## *Floating Installation*

For installations over radiant heat, product & installation procedure must also conform to conditions listed in 'product use' above.

### **Note**

**During installation of flooring pieces, push or gently tap boards flush to the previous row. Tap against the tongue; tapping the groove may damage the edge. To prevent damage to the finish, avoid tapping the face of the board with a rubber mallet. Use of tapping block is recommended to avoid splintering, and edge damage**

### **Reminder For Installations Over Radiant Heat**

**Prior to flooring installation, ensure that the radiant heat system is in full working order and has been fully tested and running for a minimum of two weeks prior to installation. The system should be turned off for 24 hours prior to installation in the install zone.**

## Note

If installing any kentwood floor in a single room greater than 30' x 40' (9m x 12m) special installation measures may be required. Please contact kentwood technical services for more information.

CA: 1-800-992-3163

US: 1-800-851-3841

or email [info@metrofloors.com](mailto:info@metrofloors.com)

Ensure subfloor is suitable and properly prepared. Verify moisture content of both subfloor and flooring is within allowable limits before commencing installation.

All floating floor installations require that an underlay be installed over the subfloor before laying the floor itself. Some installations may require the installation of an additional vapor barrier in addition to the underlay.

**If the flooring is being installed on a concrete subfloor, an a vapor barrier with a permeance rating 0.15 or higher (as per NWFA guidelines), must be installed in addition to the underlay.** To install a vapor retarder with a permeance rating 0.15 or less, use 6 mil polyethylene sheathing. Lay a single layer of poly over the entire subfloor. Overlap seams by 12" and seal all seams and any tears or slits with moisture proof tape.

**If the flooring is being installed on a plywood or OSB subfloor that is over a crawlspace or below ground level, a vapor retarder with a permeance rating 0.7 – 10 (as per NWFA guidelines), must be installed.** Many underlay products (eg Kentwood Kombo) include an integral vapor retarder has a minimum permeance rating of 0.7; if using one of these products, an additional vapor retarder is not required.

## Note

**When installing over concrete, an additional vapor retarder with a permeance rating 0.15 or less must be installed in addition to the underlay, even if the underlay is a '3-in-1' product that has an integral vapor retarder. The vapor retarder component of these products inhibits moisture transmission but do not meet the specifications of a vapor retarder with a permeance rating 0.15 or less. Install the vapor barrier before installing the underlay.**

Next, install Kentwood Kombo underlay or equivalent over the entire subfloor surface. The seams should butt, not overlap.

Open several packages of flooring and rack and inspect boards. (See Racking, above.) Select starting wall and snap a chalk line to use as a guide. Set first row of boards in place with the groove side facing the starting wall, using chalk-line as a guide to ensure the flooring is laid in a perfectly straight line. Set expansion spacers between the flooring and the starting wall.

Glue the end joints together using a non-crystallizing wood flooring glue (eg Deccobond). Apply glue in a 1/8" bead to upper edge of groove portion of joint only. Set joints closed using a hammer and tapping block. Never use a hammer directly on the tongue and groove joints as damage to the joint may result. Clean up excess glue immediately according to glue manufacturer's instructions.

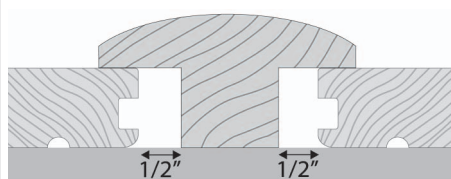
Begin second row. Run a 1/8" bead of glue along the upper edge of the groove on the long side and the right hand end joint. Align left hand edge with first row and set in place, engaging long side joint. Tap joint closed and clean any excess glue. Repeat for subsequent boards in second row. Use offcuts if lengths are suitable and stagger end joints as required (see above).

When second row is completed, tape the boards with low adhesion delicate surface masking tape, such as 3M Scotch-Blue™ 2080 or Frog Tape®. Do not use regular masking tape as it may leave a residue of adhesive on the surface.

After one hour, resume installation using same technique for gluing and setting joints. To avoid a repetitive or predictable board pattern, cut some boards to random lengths to begin rows. Open new packages several at a time and rack and inspect boards as described above. Use offcuts if lengths are suitable and stagger butt joints as required (see above). Maintain 1/2" expansion space at all perimeter walls and other vertical obstructions.



**Note**



Where the flooring transitions from one room to another in a doorway or archway, leave an expansion gap at the threshold and cover with a T-cap molding. The gap should be wide enough to accommodate the molding and expansion space on both sides. Ensure the molding is glued to the subfloor and not to the flooring.

For the final row, measure the gap to the wall, allowing expansion space, and rip a row of boards to the required width. Ensure all excess glue has been cleaned from the floor surface.

To keep the joints tight while the adhesive sets up, tape the entire floor with low adhesion delicate surface masking tape, such as 3M Scotch-Blue™ 2080 or Frog Tape®. Be sure to remove the tape at the end of each workday; do not leave it on the floor overnight. Under no circumstances should the tape be left on the floor for longer than 12 hours, as damage to the finish may result. Remove the tape slowly and carefully, pulling it away from the floor at a 45° angle.

After tape is removed, install moldings and transitions as required. Ensure baseboard moldings are affixed to the wall, not the floor.

**Note**

**It is essential that a floating floor has freedom to move and is not impeded in any way from doing so. In addition to expansion space, ensure nothing is attached to the floor in such a way that the floor becomes affixed to the subfloor below. Cabinetry, closet tracks, chair rails etc should not be mounted on the floor in such a way that they are impeding the movement of the floor.**

If the flooring was installed over a radiant heating system, wait 24 hours after installation or until the adhesive has fully cured before turning the system back on. Bring the temperature of the system up gradually, in 5°F (2°C) increments. Never allow the surface temperature of the floor to exceed 80°F (26°C) and avoid dramatic temperature changes; always adjust the system gradually in 5°F (2°C) increments. It is recommended that a dedicated quick recovery thermostat be installed to allow the temperature of the radiant heating system to be accurately controlled.

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