KENTWOOD® COUTURE™ ABODE

INSTALLATION GUIDE

For All Collections of Kentwood Engineered Hardwood Floors

METROPOLITAN

SINCE 1992

Contents

PRODUCT USE & INSTALLATION OPTIONS

PLEASE READ THESE INSTRUCTIONS COMPLETELY BEFORE BEGINNING THE INSTALLATION.

Our engineered floors must be installed in accordance with the following instructions.
Failure to do so may void the product warranty.

PRODUCT USE:
Our engineered floors may be installed:

• On, above or below grade

• Over OSB, plywood or concrete subfloor

RADIANT HEAT SYSTEMS

Most of Kentwood's engineered hardwood floors are suitable for installation over compatible in-floor radiant heat systems. The following exceptions are;

• All Acacia floors and Hickory floor products.

Installation of Acacia and Hickory floors over radiant heat will void the product warranty.

It is the homeowner's responsibility to determine if the radiant heat system being considered is compatible for use under the floor being installed. We recommend that the homeowner contact the system manufacturer and get written confirmation that the system is approved for use with engineered wood flooring and under what operating conditions. If you are unable to obtain this information, please contact Metropolitan's Technical Services Team at techserv@metrofloors.com. Prior to 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. The system should be turned off for 24 hours prior to installation in the install zone. After installation, Kentwood™ recommends that the surface temperature of the floor never be allowed to exceed 80°F / 26°C and that changes in temperature be moderated in increments of 5°F/2°C per day to avoid 'shocking' the floor.

Where possible, we recommend the use of a data logger to monitor and record temperature and humidity conditions; this provides a record of the environmental conditions and may also help take preventive measures where conditions are outside of recommended levels. Kentwood™ accepts no responsibility for any damage to the floor caused by a radiant heat system. Such damage is not covered by the product warranty.

IMPORTANT: To confirm if the KENTWOOD™ floor you have selected can be installed using the nail-down method, full-spread glue method, or floating method, please refer to the chart on page 8.

Engineered hardwood floors should not be installed in a full size bathroom, laundry room or any area that may experience elevated humidity (sauna, sunroom, etc.) Exposure to moisture/elevated relative humidity in these rooms may void the warranty.

KENTWOOD™ floors are for indoor use only, in residential or light commercial applications.
The use of a certified installer is recommended for all installations.

PRODUCT INSPECTION & SITE PREPARATION

INSTALLER'S / CUSTOMER'S RESPONSIBILITY

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

Because KENTWOOD™ floors are made from real wood, every piece of KENTWOOD™ 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 that may include knot and grain fills. 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 expectation 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.

KENTWOOD™ 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 (i.e. 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. KENTWOOD™ accepts no responsibility for problems arising from incorrect or improper site preparation or installation procedures. For further information on installation standards and guidelines, call Metropolitan's Technical Service Team:

In Canada: 1-800-992-3163: In the US: 1-800-851-3841 or email techserv@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
- Finished basements must be maintained as per the environmental requirements of the rest of the house (see climate control)
- Unfinished basements must be dry (no standing water) with adequate air circulation.
- Crawlspaces must be dry, with no standing water and adequate cross-ventilation in accordance with NWFA guidelines
- Exposed earth crawlspaces must also have a vapor retarder (ASTM D 1745 Standard) 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 be ore 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.

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.

Do not deliver flooring materials to the job site until the following environmental conditions have been established and consistently maintained for a minimum of five (5) days prior to installation:

Temperature: 60°–80°F (15°–26°C)

Relative Humidity: 30%–50%

These conditions must also be maintained at all times after installation to ensure the flooring performs as intended. Refer to the product warranty for additional details.

Delivering flooring before these conditions are met and stabilized may result in product damage. Once delivered, keep all boxes sealed until installation begins. Open cartons only as needed during the installation process.

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, test and record moisture content of the flooring using a reliable and accurate moisture testing device. Wood flooring should have a moisture content of between 6% and 9%.

When testing wood for moisture, use a pin-type meter and probe only the lamella (top veneer). Probing through the lamella and into the plywood core will cause the moisture readings to be inaccurate due to the glue that is used in the ply layers.

SUBFLOOR PREPARATION

The flooring contractor is responsible for minor substrate preparation. The overall responsibility for the provision of acceptable substrate and surface conditions is that of the general contractor. Reminder - Installation constitutes acceptance.

All subfloors must be flat, clean, dry, structurally sound, 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.
All subfloors must be tested for moisture content, and the moisture content of both subfloor and flooring must be within allowable limits before commencing installation.

Plywood or OSB subfloors: the minimum acceptable thickness of the subflooring will be determined by the truss/joist spacing. In addition to meeting or exceeding the minimum acceptable thickness requirement, the subfloor must be secure to the joists, free of squeaks, and protruding fasteners. Subfloor moisture content must not exceed 12%.

Truss/joist spacing (Measured on center)	Minimum acceptable thickness, 4' x 8' sheets
16" (406mm) or less	5/8" (19/32", 15.1mm) CD Exposure 1 Plywood – or – 3/4" (23/32") Exposure 1 OSB
More than 16", up to 19.2" (488mm)	3/4" (23/32", 18.3mm) T&G CD Exposure 1 Plywood, glued and mechanically fastened, – or – 3/4" (23/32", 18.3mm) Exposure 1 OSB, glued and mechanically fastened
More than 19.2" (488mm) to a max. of 24" (610mm)	7/8" T&G CD Exposure 1 Plywood, glued and mechanically fastened – or – 7/8" Exposure 1 OSB, glued and mechanically fastened – or – two layers of subflooring

Concrete subfloors: must be 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.)
They must be fully cured (minimum 30 days) and have been tested to ensure they meet one of the following specifications:

ASTM F1869 – Calcium Chloride Test: the moisture vapor emissions rate (MVER) should not exceed 3 lbs. / 1000 Sq. Ft. per 24 hours.

ASTM F2170 – RH Probe Test: the maximum allowable limit of relative humidity within the slab is 75%.

If these conditions cannot be met, further curing or a moisture control system (vapor retarder or membrane) will be required.

Lightweight Concrete (Gypcrete) Subfloors: must meet manufacturer's recommendations for dry, cured conditions.

The manufacturer, distributor or dealer is not responsible for any floor installation failures associated with unaddressed site conditions such as, but not exclusively: vapor transmission, moisture permeation, improper PH levels, contaminated concrete, or damaged subfloors. The ultimate responsibility for subfloor acceptability and compatibility resides with the architect, designer, contractor and installer. Note that tests done today do not guarantee long term performance of substrate. Guard against long term exposure to moisture by installing proper vapor retarder and channeling water away from building.

RACKING / COLOR SORTING

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.
Choose the flooring pieces that closely match in color to the trims/moldings that have been provided when abutting the flooring to the trim/moldings.
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 (i.e. for boards 5" / 125mm wide stagger joints a minimum of 10" / 250mm).
For products 3" to 5" (8 – 13cm) in width do not start rows with boards of less than 6" (15cm) in length.
For products over 5" (13cm) in width do not start rows with 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.

Wide-Plank flooring has become increasingly popular in recent years and many of our KENTWOOD™ products feature wide plank designs. Most of these can be successfully installed using the nail-down method, however with some of the challenges installers face with today's subfloors in the areas of thickness and type, special consideration should be given to using either the full-spread glue down method or glue assist method in order reduce the potential for noise related issues. If you have any concerns in this area please contact one of our specialists through techserv@metrofloors.com.

INSTALLATION METHODS CHARTS

Couture by Kentwood

Collection	Nail-Down	Full-Spread Glue	Float
Katwalk	Yes	Yes	Yes
Monument	Yes	Yes	Yes
Rift	Yes	Yes	Yes
Rift Chevron	No	Yes	No
Rift Parquet	No	Yes	No

Kentwood

Collection	Nail-Down	Full-Spread Glue	Float
Avenue	Yes	Yes	Yes
Bespoke	Yes	Yes	Yes
Bespoke Herringbone	No	Yes	No
Bohemia	Yes	Yes	Yes
Cascades	No	Yes	No
Concert Hall	Yes	Yes	Yes
Desertscape	Yes	Yes	Yes
European Plank	Yes	Yes	Yes
Explorador	Yes	Yes	Yes
Grandeur	Yes	Yes	Yes
Grand	Yes	Yes	No
Gulf	Yes	Yes	Yes
Hometown	Yes	Yes	Yes
Hometown East	Yes	Yes	No
Landmark North	Yes	Yes	Yes
Landmark South	Yes	Yes	Yes
Milltown	Yes	Yes	Yes
Muse	Yes	Yes	Yes
Plateau	Yes	Yes	Yes
Ranchlands	Yes	Yes	No
Regency	Yes	Yes	Yes
Regal	Yes	Yes	Yes
Royal	Yes	Yes	Yes
Shoreline	Yes	Yes	Yes
Urban	Yes	Yes	Yes
Viaggio	Yes	Yes	Yes
Weekend	Yes	Yes	Yes

Abode by Kentwood

Collection	Nail-Down	Full-Spread Glue	Float
Alcove	Yes	Yes	Yes
Brenham	Yes	Yes	Yes
Countryside	Yes	Yes	Yes
Crafted	Yes	Yes	Yes
Dwell	Yes	Yes	Yes
Dwell Herringbone	No	Yes	No
Edge	No	No	Yes
Elan	Yes	Yes	Yes

Formation	Yes	Yes	Yes
Lantana	Yes	Yes	Yes
Loft	Yes	Yes	Yes
Masters	Yes	Yes	No
Progressives	Yes	Yes	No
Radiant	Yes	Yes	Yes
Serrate	Yes	Yes	Yes
Stellar	Yes	Yes	No
Tailored	Yes	Yes	Yes
Tempo	Yes	Yes	Yes
Tundra	Yes	Yes	Yes
Vino	Yes	Yes	Yes
Voyager	Yes	Yes	Yes
Weathered	Yes	Yes	Yes

NAIL DOWN INSTALLATION

FASTENERS & NAILING SCHEDULE

Couture by Kentwood

Collection	Fastener Type	Gauge	Length	Spacing	Distance From Ends	Notes
Katwalk	Cleat/Staple	16	2″	4″-6″	1″-2″	glue assist required
Monument	Cleat/Staple	16	2″	4″-6″	1″-2″	glue assist required
Rift	Cleat/Staple	16	2″	4″-6″	1″-2″	glue assist recommended
Rift Chevron	Full Spread Glue Only					
Rift Parquet	Full Spread Glue Only					

Kentwood

Collection	Fastener Type	Gauge	Length	Spacing	Distance From Ends	Notes
Avenue	Cleat/Staple	16	2″	4″ to 6″	1″ to 2″	glue assist recommended
Bespoke	Cleat/Staple	16	2″	4″ to 6″	1″ to 2″	glue assist recommended
Bespoke Herringbone	Full Spread Glue Only					
Bohemia	Cleat/Staple	16	2″	4″ to 6″	1″ to 2″	glue assist recommended
Cascades	Full Spread Glue Only					
Concert Hall	Cleat/Staple	16	2″	4″ to 6″	1″ to 2″	glue assist recommended
Desertscape	Cleat/Staple	16	2″	4″ to 6″	1″ to 2″	glue assist recommended
European Plank	Cleat/Staple	16	2″	4″ to 6″	1″ to 2″	glue assist recommended
Explorador	Cleat/Staple	16	2″	4″ to 6″	1″ to 2″	glue assist recommended
Grandeur	Cleat/Staple	16	2″	4″ to 6″	1″ to 2″	glue assist recommended
Grand	Cleat/Staple	16	2″	4″ to 6″	1″ to 2″	glue assist required
Gulf	Cleat/Staple	16	2″	4″ to 6″	1″ to 2″	glue assist recommended
Hometown/ Hometown East	Cleat/Staple	16	2″	4″ to 6″	1″ to 2″	glue assist recommended

Landmark North	Cleat/Staple	16	2″	4″ to 6″	1″ to 2″	glue assist recommended
Landmark South	Cleat/Staple	16	2″	4″ to 6″	1″ to 2″	glue assist recommended
Milltown	Cleat	18	1¾″	4″ to 6″	1″ to 2″	glue assist recommended
Muse	Cleat/Staple	16	2″	4″ to 6″	1″ to 2″	glue assist recommended
Plateau	Cleat	18	1¾″	4″ to 6″	1″ to 2″	glue assist recommended
Ranchlands	Cleat/Staple	16	2″	4″ to 6″	1″ to 2″	glue assist recommended
Regal	Cleat/Staple	16	2″	4″ to 6″	1″ to 2″	glue assist required
Regency	Cleat/Staple	16	2″	4″ to 6″	1″ to 2″	glue assist recommended
Royal	Cleat/Staple	16	2″	4″ to 6″	1″ to 2″	glue assist required
Shoreline	Cleat	16	2″	4″ to 6″	1″ to 2″	glue assist recommended
Urban	Cleat	18	1¾″	4″ to 6″	1″ to 2″	glue assist recommended
Viaggio	Cleat/Staple	16	2″	4″ to 6″	1″ to 2″	glue assist recommended
Weekend	Cleat/Staple	16	2″	4″ to 6″	1″ to 2″	glue assist recommended

Abode by Kentwood

Collection	Fastener Type	Gauge	Length	Spacing	Distance From Ends	Notes
Alcove	Cleat	18	1¾″	4″ to 6″	1″ to 2″	glue assist recommended
Brenham	Cleat	18	1¾″	4″ to 6″	1″ to 2″	glue assist recommended
Countryside	Cleat	18	1¾″	4″ to 6″	1″ to 2″	glue assist recommended
Crafted	Cleat	18	1¾″	4″ to 6″	1″ to 2″	glue assist recommended
Dwell	Cleat	18	1¾″	4″ to 6″	1″ to 2″	glue assist recommended
Dwell Herringbone	Full Spread Glue					
Edge						Floating type installation
Elan	Cleat	18	1¾″	4″ to 6″	1″ to 2″	glue assist recommended
Formation	Cleat	18	1¾″	4″ to 6″	1″ to 2″	glue assist recommended
Lantana	Cleat	18	1¾″	4″ to 6″	1″ to 2″	glue assist recommended
Loft	Cleat	18	1¾″	4″ to 6″	1″ to 2″	glue assist recommended
Masters	Cleat	18	1¾″	4″ to 6″	1″ to 2″	glue assist recommended
Progressives	Cleat/Staple	16	2″	4″ to 6″	1″ to 2″	glue assist recommended
Radiant	Cleat	18	1¾″	4″ to 6″	1″ to 2″	glue assist required
Serrate	Cleat	18	1¾″	4″ to 6″	1″ to 2″	glue assist recommended
Stellar	Cleat/Staple	16	2″	4″ to 6″	1″ to 2″	glue assist recommended
Tailored	Cleat	18	1¾″	4″ to 6″	1″ to 2″	glue assist recommended
Tempo	Cleat	18	1¾″	4″ to 6″	1″ to 2″	glue assist recommended
Tundra	Cleat	18	1¾″	4″ to 6″	1″ to 2″	glue assist recommended
Vino	Cleat	18	1¾″	4″ to 6″	1″ to 2″	glue assist recommended
Voyager	Cleat	18	1¾″	4″ to 6″	1″ to 2″	glue assist recommended
Weathered	Cleat	18	1¾″	4″ to 6″	1″ to 2″	glue assist recommended

During installation of flooring pieces, push or gently tap boards flush to the previous row. 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. Tap against the tongue; tapping the groove may damage the edge.

NAIL DOWN INSTALLATION

When installing hardwood flooring ranging from 4 ¾" to just under 10" in width using the nail-down method, the application of glue-assist to the backs of the boards is recommended to enhance performance. For boards measuring 10" in width or greater, a full-spread glue-down installation is recommended as the preferred and most effective method.

Our nail-down installation guidelines are intended to offer the best "industry practices" as they are known to be at this point in time. Adhering to them will help minimize (but may not eliminate) the occurrence of objectionable noises. The National Wood Flooring Association (NWFA) acknowledges that some minor noise associated with hardwood flooring should be considered normal.

When installing these products using the nail-down installation method, always follow the requirements for fastener selection and the nailing schedule for that specific product. Fastener spacing, gauge, length and type are critical, and it is the obligation of the installer to meet these requirements. Prior to beginning installation, installers are advised to test-nail a couple of pieces of flooring to ensure the nailer/fastener combination is providing a satisfactory result, and to ensure issues such as "dimpling" and "edge-splintering" are not occurring.

Nail down installation requires three different nailing systems:

• a pneumatic or manual blind-nailer

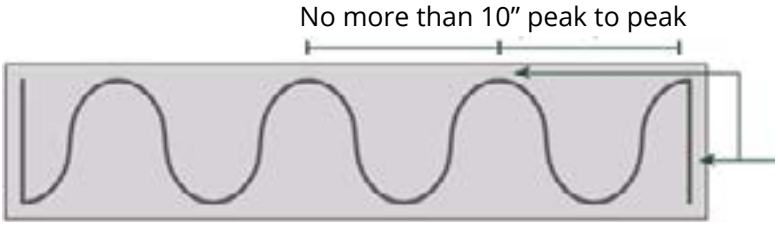
• a pneumatic finish-nailer

• a brad nailer for top-nailing

• See the recommended fasteners and nailing schedule for details on the floor you are installing

SERPENTINE GLUE-ASSIST

The correct method for serpentine glue-assist is to apply a bead of of Metropolitan Systems Complete™ Glue Assist or an approved equivalent elastomeric glue-assist adhesive to the back of the individual boards to be installed. Do not apply the bead of adhesive directly to the subfloor. The subfloor should be thoroughly vacuumed and free of debris to ensure proper adhesion of the elastomeric adhesive to the subfloor. In addition to gluing the flooring to the sub floor use a bead of tongue and groove adhesive in the end joint.



Failure to follow instructions for 'glue assist' may result in squeaking and/or other objectionable floor noise. Such noise is not the result of a product defect and is not covered by the product warranty. Some noise can be expected on all nail down installations. Keep in mind that by choosing to use the glue-assist method, you will no longer be able to install a Class II perm-rated vapor retarder like Aquabar B between the hardwood and the subfloor. If you have concerns regarding vapor migration from below, you may wish to consider applying a roll-on liquid moisture barrier applied to subfloor prior to installation.
If you wish additional information in this area please contact one of our specialists through techserv@metrofloors.com

During installation of flooring pieces, push or gently tap boards flush to the previous row. 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. Tap against the tongue; tapping the groove may damage the edge.

INSTALLATION

For nail-down installation instructions using the recommended glue-assist method, for floors 4 ¾" in width and greater, please use the following...

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 needed, snap a chalk guideline 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.

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. Use offcuts if lengths are suitable and stagger end joints as required (see above). 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 with glue assist 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 is the recommended method for all wide-plank floors. We recommend that it 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.

During installation of flooring pieces, push or gently tap boards flush to the previous row. To prevent damage to the finish, avoid tapping the face of the board with a rubber mallet or hammer. 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. Verify moisture content of both subfloor and flooring is within allowable limits before commencing installation.

Select the starting point for the installation and snap a chalk line and /or install a guide strip to ensure the first row of flooring is installed perfectly straight and, if relevant, parallel to starting wall, cabinetry, tile etc.

We recommend to use Metropolitan Systems Complete™ Urethane or Modified Silane or an approved equivalent adhesive for wood flooring installation. For trowel selection, adhesive application and all other aspects of adhesive usage, follow the adhesive manufacturer's instructions.

Open several packages of flooring and rack and inspect boards. (See Racking, above.)

Apply adhesive evenly to the subfloor in a pattern perpendicular to the direction of the flooring, and set first row of boards in place along the chalk line or guide strip with the groove facing outwards, towards the installer.

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 starting point. 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 into 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 excess glue immediately.

To prevent boards from shifting after they have been set into place, tape them with low adhesion delicate surface masking tape, such as 3M Scotch-Blue™ 2080 or Yellow Low Adhesion Frog Tape® for use on finished wood. Do not use regular masking tape as it may leave a residue of adhesive on the surface. Be sure to remove the tape the next day. Under no circumstances should the tape be left on the floor for longer than 24 hours, as damage to the finish may result. Remove the tape slowly and carefully, pulling it away from the floor at a 45º angle.

Continue with subsequent rows. 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 end joints as required (see above). Ensure 1/2" expansion space is maintained at all perimeter walls and other vertical obstructions.

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 tape. Install moldings and transitions as required. Wait 24 hours or until the adhesive has fully cured before moving furniture or appliances onto floor or before allowing heavy foot traffic. Wait 24 hours before applying a floor protection membrane.

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 per day. Never allow the surface temperature of the floor to exceed 80°F (26°C) and avoid dramatic temperature changes. 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.

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 or hammer. Use of tapping block is recommended to avoid splintering, and edge damage.

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

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

Next, install an underlay from our lineup of Metropolitan Systems Complete brands, or a approved suitable alternative. 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, a vapor barrier with a permeance rating 0.15 or less (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, vapor retarder with a permeance rating 0.7 – 10 (as per NWFA guidelines), must be installed. Many underlay products 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.

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

When installing over concrete, an additional vapor retarder with a permeance rating of .15 or less must be installed, unless the 3 in 1 underlay has a built in Class I vapor retarder attached. Some 3 in 1 underlay products claim to have a built in vapor retarder, but they do NOT meet Class I vapor retarder specifications as mentioned above

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 tongue and groove adhesive. 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.

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 Yellow Low Adhesion Frog Tape® for use on finished wood. 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.

Transition pieces allowing for expansion space should be built into the floating-floor system at any doorways less than 4 feet in width, and within any flooring system that spans greater than 20 feet in width, or greater than 40 feet in length. 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.

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.

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 Yellow Low Adhesion Frog Tape® for use on finished wood. Be sure to remove the tape the next day. Under no circumstances should the tape be left on the floor for longer than 24 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.

If the flooring was installed over a radiant heating system, bring the temperature of the system up gradually, in 5°F (2°C) increments per day. Never allow the surface temperature of the floor to exceed 80°F (26°C) and avoid dramatic temperature changes. It is recommended that a dedicated thermostat be installed to allow the temperature of the radiant heating system to be accurately controlled.

CHEVRON INSTALLATION

NOTE: Installation of Chevron style flooring requires a high degree of technical ability and should only be performed by a qualified and experienced professional hardwood installer.

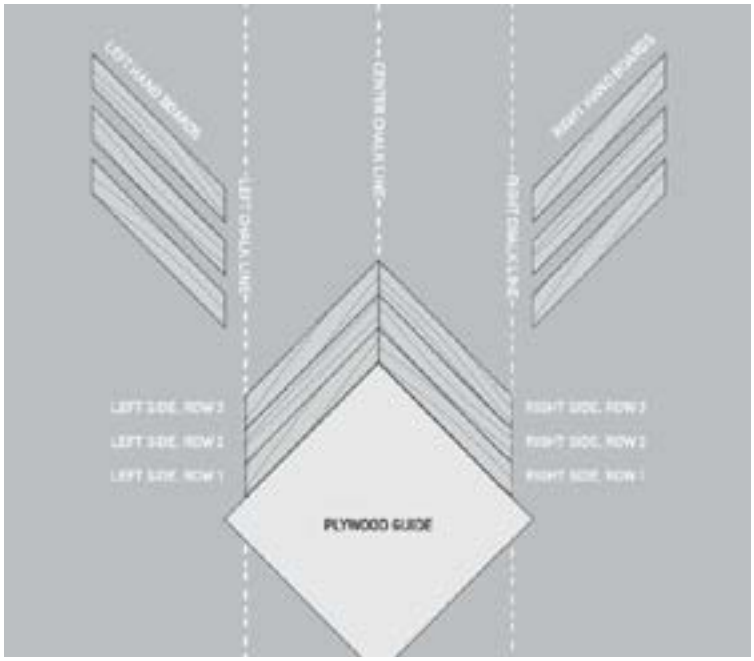
Chevron directions should be installed in accordance with client preference. The Pattern may look best with the points in the direction of the longest dimension of the room, or towards a major focal point.

Precise measurements are essential when laying a Chevron pattern. Verify Measurements and check row alignment frequently to ensure the pattern is being laid accurately and evenly.

LAYING OUT A CHEVRON PATTERN

Measure out the room. When you have determined the center line for the pattern, snap a chalk line along the entire length of the installation area. Then Measure to the left and right of the center line from one end of the plank to the other to establish your working lines. These will serve as guides for the outer edges of the first two rows. We recommend snapping additional lines as guides for the outer rows as you proceed with the installation. Once measurement is established, the working lines can be repeated throughout the installation

Dry lay a small section and measure to confirm a balances layout



To use as a guide to begin the installation, prepare a perfectly square piece of plywood cut to the size of the Chevron. Select your starting area in the middle of the room and anchor to the subfloor in a diamond position with the top and bottom points aligned with the center line.

Prepare the boxes of flooring. A unique feature of chevron herringbone flooring is that the boards are milled in two different profiles, one for the left side of the pattern and one for the right. It is recommended that you physically separate the boards, keeping the left boards on your left hand working side and the right boards on your right-hand working side. This will avoid confusion when you begin installing.

Open a box of each, inspect the boards, and rack out your first section of flooring.

We recommend to use Metropolitan Systems Complete™ Urethane or Modified Silane or an approved equivalent adhesive specially formulated for wood flooring installation. For trowel selection, adhesive application and all other aspects of adhesive usage and follow the adhesive manufacturer's instructions.

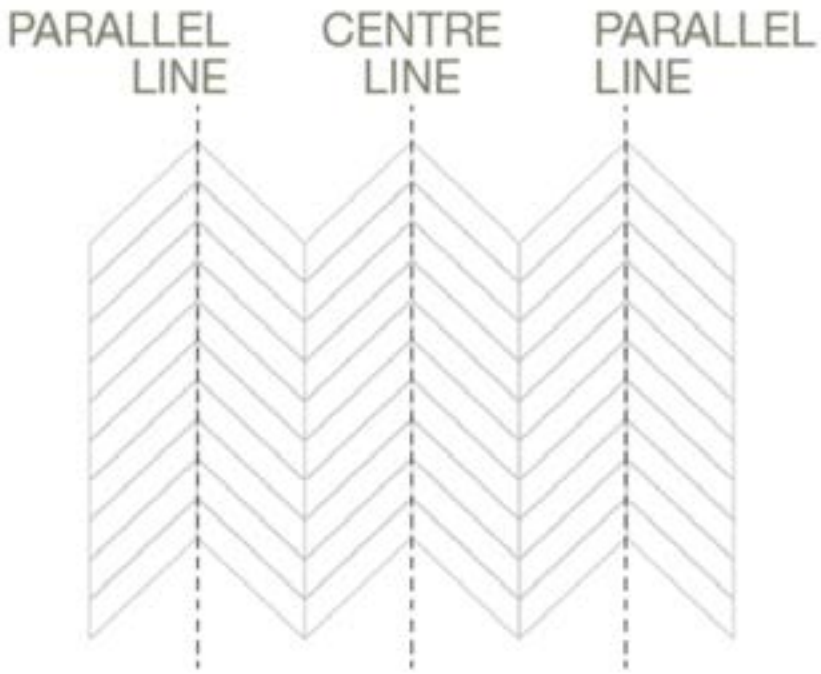
Begin installation in the area directly in front of your plywood guide. Spread adhesive over a reasonable working area. Set the first right hand board in place with the groove side snug to the plywood guide and the butt ends aligned with the chalk guides. Set the first left hand board in place against the plywood guide, engaging the upper butt joint with that of the right-hand board. When installing 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 letting adhesive on the flooring surface, and clean up any seepage or spills immediately according to the adhesive manufacturer's instructions.

To prevent boards shifting after they have been set into place, tape them with low adhesion tape, such as 3M Scotch-Blue™ 2080 or Yellow Low Adhesion Frog Tape® for use on finished wood. Do not use regular masking tape as it may leave a residue of adhesive on the surface. Be sure to remove the next day. Under no circumstances should the tape be left on the floor for longer than 24 hours, Remove the tape slowly and carefully, pulling it away from the floor at a 45° angle.

Open several packages of flooring and rack and inspect boards. (See Racking, above.)

Continue working forward until the first two rows are complete to the far wall. Cut final row to fit, allowing ½" expansion space to the wall. Remove the plywood guide and work back to complete the first two rows.

Continue with the installation in whichever direction best suits the working conditions. Check measurements and row alignment frequently to ensure that your rows are staying true and square. Snap new chalk lines with every row to serve as guides.



When installation is complete, remove all the tape from the floor. (Do not leave the tape on the floor for more than 24 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 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 per day. Never allow the surface temperature of the floor to exceed 80°F (26°C) and avoid dramatic temperature changes. It is recommended that a dedicated quick recovery thermostat be installed to allow the temperature of the radiant heating system to be accurately controlled.

HERRINGBONE INSTALLATION

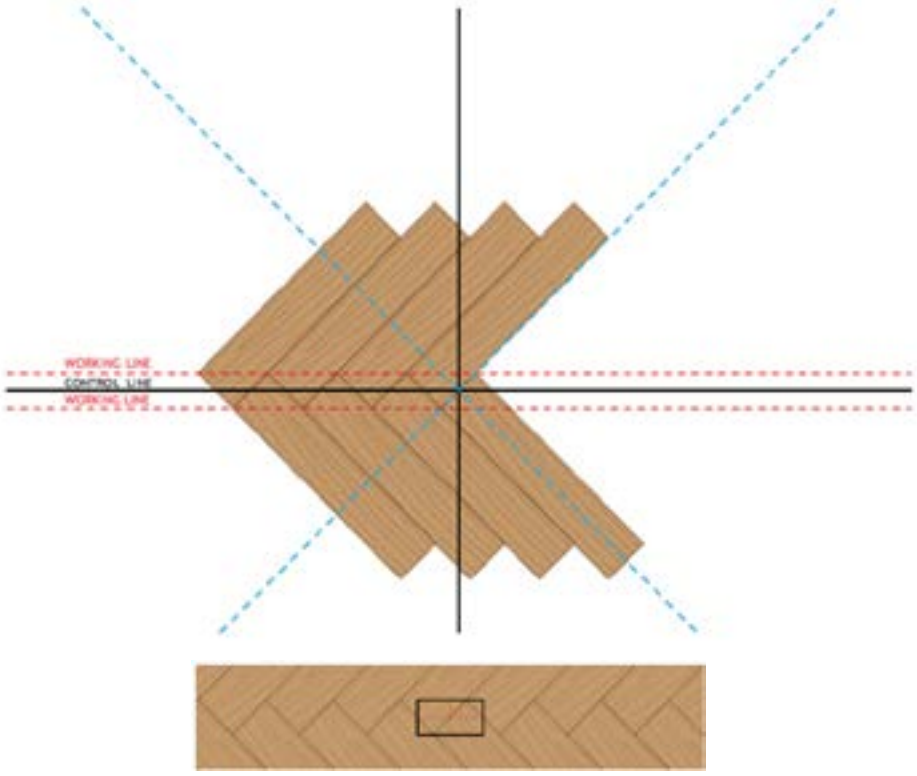
NOTE: Installation of Herringbone style flooring requires a high degree of technical ability and should only be performed by a qualified and experienced professional hardwood installer.

Herringbone directions should be installed in accordance with client preference. The pattern may look best with the points in the direction of the longest dimension of the room, or towards a major focal point.

Precise measurements are essential when laying a Herringbone pattern. Verify Measurements and check row alignment frequently to ensure the pattern is being laid accurately and evenly.

LAYING OUT A HERRINGBONE PATTERN

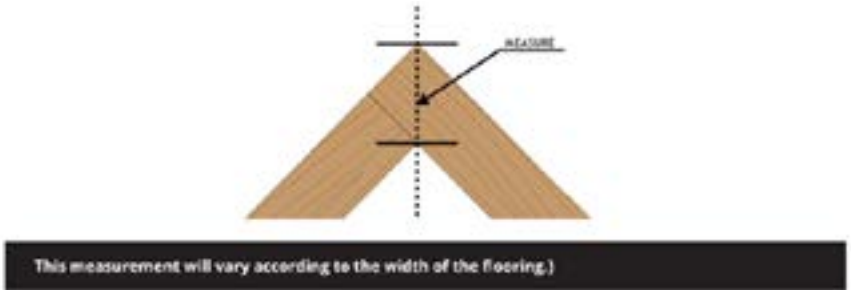
- Measure out the room for center and strike the main control, perpendicular and diagonal reference lines.
- Measure for true centre on the herringbone pattern to establish working lines.
- Strike two working lines alongside the main control line.
- Transfer the diagonal lines to the working lines
- Dry lay a small section and measure to confirm a balances layout



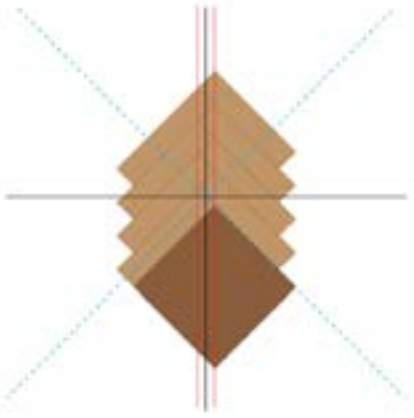
Note the true center position of a herringbone pattern.

DETERMINING THE DIAGONAL DIMENSION OF THE FLOORING

- Divide the diagonal measurement by four
- This is the dimension used to establish the working lines A and B on both sides of the control line



Once the working lines are established the installation can begin.
To keep the installation square, cut a square piece of plywood the size of the herringbone pattern and anchor it at the intersection of the working lines and diagonal lines.

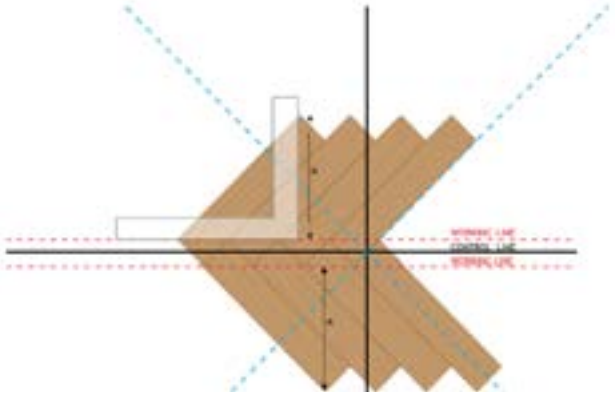


INSTALLING A HERRINGBONE PATTERN

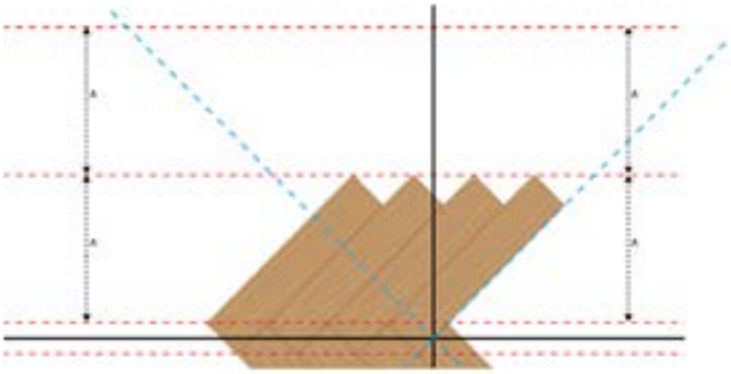
- The starting point must have working lines and diagonal lines.
- For direct glue make sure working lines are visible.
- Start with the tongue towards the build direction.
- Install pattern one row at a time
- Periodically check alignment.

TO CONTINUE THE PATTERN

- Dry lay eight boards
- Lay a framing square from the points on the working line to the outermost point
- Record measurement A, this becomes your working line for the next course



Once measurement A is established, the working lines can be repeated throughout installing



When installation is complete, remove all the tape from the floor. (Do not leave the tape on the floor for more than 24 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 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 per day. Never allow the surface temperature of the floor to exceed 80°F (26°C) and avoid dramatic temperature changes. It is recommended that a dedicated quick recovery thermostat be installed to allow the temperature of the radiant heating system to be accurately controlled.

AFTER INSTALLATION

IMPORTANT NOTE REGARDING OPEN GRAIN CONTAMINATION Excerpt taken from the National Wood Flooring Association (NWFA) Technical publication No. C200
Definition: An accumulation of contaminants in open voids or characters, such as in textured wood, the soft grain/springwood, open knots, splits/checks, etc., on the surface of the installed floor.

Causes:

- Any time drywall work has been scheduled post wood floor installation, the wood floor is susceptible to be coming exposed to drywall dust. Subsequent wetting/damp mopping of the surface will turn the drywall dust into a paste, which can be extremely difficult to remove from the exposed voids or characteristics of the flooring.
- Silt, salt residue, or other fine dust particles becoming embedded in the exposed voids or characteristics of the unprotected flooring.
- Paint, flooring adhesive, or other contaminants that have been spilled and subsequently cleaned from the surface, but remains in the exposed voids or characteristics of the flooring.

Because some minor collateral damage may occur during the installation of a prefinished floor, minor touch-ups with the use of the appropriate colored putty, marker-stick, or filler is considered acceptable industry practice, provided these repairs pass inspection from a standing position.

ON COMPLETION OF THE INSTALLATION

- To avoid open grain contamination when the floor is not being put into use immediately, the use of a floor protection membrane is strongly recommended. Use a material with a Perm Class 3 vapor permeance rating to avoid trapping moisture/vapor on or within the floor. When using floor protection, be sure to:
- Cover the entire floor to avoid exposing a partial area to sunlight causing an uneven color change.
- Overlap the seams of the membrane and tape them to each other. Never tape the membrane directly to the floor.
- Run membrane to the perimeter walls and tape to the base or shoe molding using low adhesion masking tape.
- Reminder—floor protection is for temporary use only.
- When ready to bring the floor into service, carefully remove the protective membrane to avoid dumping contaminants onto the floor. Immediately vacuum the floor thoroughly using a horse-hair vacuum attachment to remove all residual contaminates.
- For regular maintenance sweep or vacuum the floor and clean lightly with Metropolitan Systems Complete Easy Clean Mop Kit with Easy Clean Powder to ensure the floor is delivered to the customer looking its best.
- Use of steam assisted cleaning mops will cause damage and void warranty.
- Ensure the homeowner or site supervisor is aware of the need to maintain heat and humidity at the required levels at all times.
- Ensure the homeowner or site supervisor has been given a copy of the Kentwood Care & Maintenance guide lines (available online at kentwoodfloors.com).
- Complete a visual inspection of the installation with the homeowner or site supervisor. Inspect the floor from a standing position in non-reflected light. Touch up nail holes or slight imperfections with appropriate touch up putty or stain according to accepted industry practice.
- Complete the installation record form for future reference.
- 24 hours after installation. Remove low adhesion tape if necessary.
- Install a floor protection membrane where appropriate (see above).
- Prior to starting up the radiant heat system-Remove Floor Protection First. Bring the temperature of the system up gradually, in 5°F (2°C) increments per day. Never allow the surface temperature of the floor to exceed 80°F (26°C) and avoid dramatic temperature changes. It is recommended that a dedicated thermostat be installed to allow the temperature of the radiant heating system to be accurately controlled