

Installation Guide - Engineered Wood Flooring

READ THIS ENTIRE DOCUMENT THOROUGHLY BEFORE RECEIVING YOUR FLOORING and follow throughout the installation process. Failure to do so will void the warranty.

INSPECTION

IT IS THE RESPONSIBILITY OF THE INSTALLER TO INSPECT THE PRODUCTS PRIOR TO INSTALLATION. If, BEFORE INSTALLATION OR DURING INSTALLATION, you discover any product that has obvious defects, does not match the order or if for any reason you are not satisfied with the material, please contact reSAWN TIMBER co. immediately. **DO NOT** install the flooring. reSAWN TIMBER accepts no responsibility for costs of products or labor when products with visible defects have been installed nonetheless.

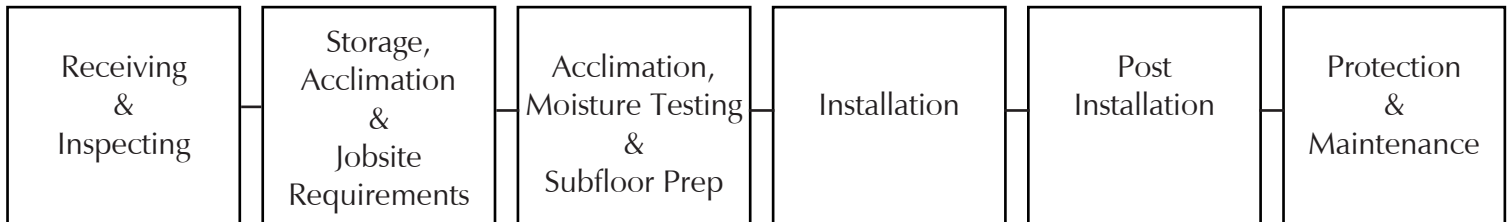
ACCLIMATION

DO NOT remove from packaging and acclimate like solid hardwood flooring. As wood is hygroscopic and responds to changes in temperature/humidity, proper acclimation is the most important step in ensuring a proper installation. Acclimation refers to the moisture content of the wood flooring and subfloor plus the conditions of the job site in terms of Temperature and Relative Humidity. Improper acclimation can cause a host of issues such as buckling, shrinking and/or cupping after installation. See further instructions below.

SUBFLOOR PREP

Subfloors must be level, clean and dry. Improper subfloor preparation can make the floor unstable and cause premature damage. See further instructions below.

These guidelines cover the following Sections:



This installation guide is provided as a reference. In addition to these instructions, all flooring must be installed in accordance with NWFA (National Wood Flooring Association) Installation Guidelines. NWFA Guidelines provide additional information on jobsite requirements, acclimation, moisture testing, subfloor guidelines & specifications, installation instructions, safety guidelines, fastening schedule, wood terminology and a jobsite checklist.

The NWFA can be reached at 800-422-4556 US, or 800-848-8824 Canada.

RECEIVING & INSPECTING

IT IS THE RESPONSIBILITY OF THE INSTALLER TO INSPECT THE PRODUCTS PRIOR TO INSTALLATION.

RECEIVING

Orders are shipped freight prepaid by Common Carrier or truckload Carrier. If your order arrives damaged due to shipping, note the damage on the freight bill before signing the bill of lading and contact your supplier immediately. Do not un-bundle your order and do not proceed with installation.

INSPECTING

Inspect the flooring prior to installation. Ensure adequate lighting for proper inspection. If, BEFORE OR DURING INSTALLATION, you discover any product that has obvious defects, does not match the order or if for any reason you are not satisfied with the material, please contact your supplier immediately. DO NOT install the flooring. reSAWN TIMBER accepts no responsibility for costs of products or labor when products with visible defects have been installed nonetheless.

Commencement of work by installer is considered an acceptance of flooring materials, subfloor/substrate, the jobsite itself including ambient temperature and relative humidity at the time of installation, and all impacting variables that may affect a wood floor. No warranty claim will be accepted for flooring which is visibly wrong if such flooring is installed. Installed flooring is deemed to be visibly acceptable. Since wood is a product of nature, not plastic, standard industry practice allows for up to 5% (10% for reclaimed) of flooring shipped to have milling, handling, finish and/or grade defects. Pieces determined to have such defects should not be installed or if possible installed in an inconspicuous location where these defects will not be seen nor impair the functionality of the floor.

STORAGE, ACCLIMATION & JOBSITE REQUIREMENTS

STORE THE FLOORING IN THE PROPERLY CONDITIONED INSTALLATION AREA FOR A MINIMUM OF **72 HOURS** BEFORE INSTALLATION TO ALLOW FLOORING TO ADJUST TO ROOM TEMPERATURE.

STORAGE/ACCLIMATION

Store materials in clean, dry area indoors on flat, level surface. Do not store materials directly on concrete or near outside wall. These floors need adequate acclimation for moisture equalization prior to installation. If possible, leave engineered wood flooring in their sealed packaging until time of actual installation. Do not remove from packaging and acclimate like solid hardwood flooring. If packaging was removed as a necessity to unload materials upon delivery, restack bundles onto the pallet in the installation area for storage/acclimation.

Store the flooring in the properly conditioned installation area for a minimum of **72 hours** before installation to allow flooring to adjust to room temperature. See jobsite requirements below for proper conditioning of installation area.

JOBSITE REQUIREMENTS

Prior to installation, the installer must ensure that the jobsite and subfloor meet the requirements of these instructions and the recommendations of the NWFA. reSAWN TIMBER co. accepts no responsibility for flooring failure resulting from unsatisfactory jobsite conditions and/or subfloor conditions.

All work involving water or moisture should be completed before installing hardwood flooring. For any new construction or remodeling project, hardwood flooring should be one of the last items installed.

HVAC systems must be operational and controlling site temperature and humidity. Area to receive flooring [and adhesive] must be properly conditioned at normal occupancy temperature (**60-70°F (15-21°C)**), and humidity levels (**35-55% humidity**), maintained for a minimum of **one week** prior to installation as well as during and continuously following installation. Do not install in areas subject to moisture, such as bathrooms or laundry rooms.

See NWFA Guidelines - Chapter 1 - for additional information on jobsite requirements.

Properly Conditioned Jobsite - maintain for 1 week prior to and continuously following installation	
TEMPERATURE	RELATIVE HUMIDITY
60-70°F (15-21°C)	35-55%

ACCLIMATION, MOISTURE TESTING & SUBFLOOR PREP

ACCLIMATION

Besides acclimating the wood flooring to the installation area as described in the previous section, Acclimation also refers to the moisture content of the wood flooring and the subfloor.

Upon delivery, check wood flooring moisture content with a moisture meter to establish a baseline for required acclimation. Check the moisture content of multiple boards. A good representative sample is typically 40 boards for every 1,000 square feet of flooring. Acclimate to moisture content % appropriate for your area -- see NWFA Guidelines - Appendix D for a map of the USA and recommended MC% by state.

MOISTURE TESTING *

KEEP DETAILED DOCUMENTATION OF TEST RESULTS AND ALL TEST LOCATIONS.

For Wood Subfloors:

Perform tests so that each test area does not exceed 200 square feet (18.6 sq. m), and perform no fewer than two tests in each installation area and with test areas evenly spaced in installation areas – minimum 20 testing locations per 1,000 square feet for wood subfloors.

Wood Subfloors must have a moisture content under 12% and within 4% of the moisture content of the flooring material. If you record excessively high readings in one or more areas, do not proceed with installation until the origin of the moisture is identified and moisture problems are remedied. Pay special attention to exterior and plumbing walls. See NWFA guidelines - Chapter 3 - for acceptable vapor retarders over a wood subfloor. Do not use an impermeable vapor retarder material with a perm rating of .7 or less as it may trap moisture on or in the wood subfloor.

For Concrete Subfloors:

Test concrete floors for moisture vapor emission using a Relative Humidity Test per ASTM F 2170 or Calcium Chloride Test per ASTM F 1869 or Calcium Carbide (CM) Test per ASTM (modified) D 4944-04. Before moisture testing begins, a concrete slab must be fully cured for at least 30 days. It is recommended that you first perform an electrical impedance and electrical resistance test with a moisture meter specifically designed for concrete (such as Tramex). These tests are not for the purpose of accepting or rejecting the subfloor, but rather are useful survey tools to select locations for further Relative Humidity or Calcium Chloride or CM testing.

**** NOTE: A “DRY” SLAB, AS DEFINED BY THESE TESTS CAN BE WET AT OTHER TIMES OF THE YEAR. THIS TEST DOES NOT GUARANTEE A DRY SLAB.** reSAWN TIMBER co. is not responsible for site related moisture issues.

Relative Humidity Test (ASTM F 2170)/Calcium Chloride Test (ASTM F 1869)/Calcium Carbide (CM) Test (ASTM (modified) D 4944-04)

Follow all NWFA testing guidelines and test manufacturer’s guidelines. Perform a minimum of 3 tests per 1,000 square feet and one additional test for each 1,000 square feet thereafter. For concrete slabs reading less than 75% Relative Humidity OR less than 3 lbs per 1,000 square feet (15 g/m²) in 24 hours using the Calcium Chloride Test OR less than 2.5% using the CM Test, we recommend using SikaBond T-21 all-in-one adhesive and vapor retarder (perm rating of 0.4 when properly installed). Visit www.SikaBondT21.com for product information including the latest Technical Data Sheet, MSDS, and application instructions. For concrete slabs reading greater than 75% Relative Humidity OR over 3 lbs and up to 7 lbs using the Calcium Chloride Test OR over 2.5% and up to 4% using the CM Test OR if there is any concern about the slab remaining “dry” year-round, a direct glue-down application (**SikaBond-T35/ SikaBond-T21/ SikaBond-T55**) is recommended **only in combination with a vapor barrier (Sika Primer MB) with a perm rating of 0.15 or less.** A concrete slab with a reading over 7 lbs using the Calcium Chloride Test OR over 4% using the CM Test is not acceptable for wood flooring installation. Keep detailed documentation of test results and all test location(s).

If directly gluing to concrete, use recommended Sika adhesive ONLY and follow all of Sika’s instructions.

On-Grade or Below-Grade Installations

Due to the concern of moisture, for **on-grade or below-grade installation**, we recommend installing a vapor barrier and a plywood subfloor over the concrete. If slab conditions are not adequate for a direct glue down application, building in a subfloor is common. An impermeable vapor barrier with a perm rating of .15 or less, such as a 6 mil polyethylene film or **Sika Primer MB**, is required over the concrete slab prior to building the subfloor. Gluing/Screwing down a plywood deck prior to installing the wood floor is one option. Plywood and adhesives **MUST** be rated for this application. A floated subfloor is another option. Additionally, installing sleepers then a nailed down plywood deck is another approach to the creating a subfloor condition where wood flooring can be nailed down, or glued and nailed to the deck. See NWFA Guidelines, Chapter 6 for additional information on installing a subfloor over concrete.

NOTE: Installing a plywood subfloor over the concrete is our recommendation for installation over concrete on- or below-grade. However, if you choose to perform a direct glue-down installations on-grade or below-grade, a vapor barrier (such as Sika Primer MB) with a perm rating below .15 is always required.

Do not use a concrete sealer nor install over one. The concrete must be high compressive strength (3,000 psi or greater). For weak concrete substrate or gypsum-based substrate use **Sika Primer MB** as a surface consolidator. All concrete sub-floors should be tested for moisture content. Visual checks are not reliable.

See NWFA Installation Guidelines, Chapter 3 for additional information on moisture testing.

Moisture Testing Summary	
Wood Subfloors	Must have a MC (Moisture Content) under 12% & within 4% of MC of flooring
Concrete Subfloors	Relative Humidity Test - Relative Humidity must NOT exceed 75% Calcium Chloride Test - Vapor pressure must NOT exceed 3 lbs per 1,000 square feet (15 g/m ²) in 24 hours CM Test - Moisture Content Reading not to exceed 2.5%

SUBFLOOR PREPARATION

SUBFLOOR MUST BE LEVEL, CLEAN & DRY

ACCEPTABLE SUBFLOOR TYPES:

- 3/4" or thicker exterior plywood, 5/8" minimum thickness, installed with the long edge forming a right angle to the floor joists.
- 1" x 4" to 6" wide, square edged, kiln dried coniferous lumber, laid diagonally over 16" on center on wooden joists. The ends of all boards are to be cut parallel to the center of the joists for solid bearing.
- 3/4" minimum O.S.B. on 19.2" center floor joists system properly nailed.
- Concrete Slab - minimum 3,000 psi (glue-down only)
- Sheet vinyl (glue-down only)

NOTE: Direct glue-down of reSAWN TIMBER co.'s engineered wood flooring over a Gypcrete subfloor is not recommended due to the possibility of shearing/cracking of the Gypcrete caused by the adhesive pulling on the subfloor as the wood naturally expands/contracts with changes to temperature & humidity. If working with a Gypcrete subfloor, we recommend building a plywood deck prior to installing the wood floor. Plywood MUST be rated for this application. Additionally, installing sleepers then a nailed down plywood deck is another approach to the creating a subfloor condition where wood flooring can be nailed down, or glued and nailed to the deck. Consult NWWFA for recommendations on constructing a subfloor over Gypcrete.

reSAWN TIMBER co. is not responsible for any flooring failure caused by subfloor conditions.

All sub-floors must be:

- **Structurally Sound**
- **Dry** and remain dry year-round.
- **Clean:** swept (or vacuumed with industrial vacuum if using glue-down method) thoroughly and free of all debris. If using glue-down installation, subfloor must also be free of wax, grease, paint, sealers and old adhesives which can be removed with sanding. A simple way to test for the presence of sealers on concrete is to pour a small amount of water on the concrete slab - the concrete should be porous and the water should seep into the concrete. If the water is beading, this would indicate the presence of a sealer which needs to be sanded prior to beginning the installation.
- **Level:** flat to within 3/16" in 10 feet or 1/8" in 6 foot radius.

Grind and fill sub-floor using methods and materials appropriate to the sub-floor construction to eliminate humps and depressions exceeding 1/8 (3 mm) inch in 6 feet (1830 mm) radius or 3/16 inch in 10 feet. If necessary, level down any irregularities using #20 grit paper and fill any uneven spots with cementitious leveling compound - we recommend **SikaLevel-125, SikaLevel-315 or Sika Level SkimCoat** (see next page for additional information). Remove all paint, wax, oil, plaster, sheetrock mud, protruding fasteners and previous or existing glues and adhesives. Grind concrete with #3 1/2 grit sandpaper if needed then sweep or vacuum thoroughly. Clean surfaces thoroughly prior to installation.

Wood sub-floor must be:

- Flat, clean, dry, structurally sound, well secured, free of squeaks, free of protruding fasteners and with a moisture content under 12% and within 4% of the moisture content of the flooring material.
- Nailed down or screwed down every 6" along the joist to avoid squeaking.
- Leave an 1/8" gap around perimeter to allow for expansion.
- Leveled by sanding down high spots and filling in low spots with a Portland based leveling patch as necessary. For installations using mechanical fasteners of 1 1/2" and longer, the subfloor should be flat to within 1/4" in 10 feet or 3/16" in 6 foot radius. For glue-down installations and installations using mechanical fasteners of less than 1 1/2", the subfloor should be flat to within 3/16" in 10 feet or 1/8" in 6 foot radius.

Concrete sub-floor must be:

- Fully cured for at least 30 days
- Installed properly with minimum 6-mil polyfilm between concrete and ground.
- Dry all year round. Do not install over concrete if you are not sure it will remain dry.
- Tested for moisture by using Relative Humidity Test or Calcium Chloride Test or CM Test (see moisture testing above)
- High Compression Strength - Minimum 3,000 psi (20 MPa)

Sheet vinyl must be:

- Well bonded to the floor.
- In good condition.
- Clean and level, no debris.
- Do not install over vinyl tiles.

PRIMER, LEVELER & ADHESIVE RECOMMENDATIONS

Sika® Primer MB- 2-component, solvent free, low viscosity, epoxy primer. Used in conjunction with SikaBond® Wood Floor Adhesives. Sika Primer MB is used as:

- Moisture **barrier** with a perm rating of 0.06 when properly applied with NO VOIDS.
- Substrate consolidator - compressive strength of 10,000 psi (after 7 days, at 73°F [23°C] and 50% RH)
- Adhesion promoter

SikaBond®-T35 - One-component, low-VOC, moisture cured polyurethane adhesive. Recommended for use with any of reSAWN TIMBER co.'s engineered wood products. 170% elongation.

SikaBond®-T55 - One-component, low-VOC, permanently elastic, super strong polyurethane adhesive. Recommended for use with any of reSAWN TIMBER co.'s engineered wood products. Suitable for bonding wood floors directly onto old ceramic tiles. 400% elongation.

SikaBond®-T21 - One-component, low VOC, permanently elastic, super strong, very low permeability moisture-cure polyurethane adhesive and vapor retarding membrane all-in-one. Elastic Adhesive, Moisture Control and Sound Reduction in one. 270% elongation.

**** Special Note:** Due to the risk of improper application, SikaBond T-21 is only recommended for applications requiring a quick turn-around time in conjunction with moisture control and sound reduction. For additional sound reduction solutions, please contact reSAWN TIMBER co. SikaBond T-21 is a vapor **retarder** with a perm rating of 0.4 (when properly applied with NO VOIDS) and is NOT a vapor **barrier**. If the jobsite and/or subfloor requires a vapor barrier, then we recommend using **Sika® Primer MB** in conjunction with either SikaBond T-35 or T-55 adhesive.

SikaBond®-T53 - One-component, ready-to-use polyurethane adhesive solid in sausages for use with hand-held applicator. Recommended in conjunction with nail/staple down installation for increasing holding power and for areas where it is difficult to get the nail/staple gun in place such as starter rows or the last rows of the installation.

Sika® Level SkimCoat CA - One-component, fast drying cementitious mortar for the repair or re-profiling of concrete, approved wood subfloors and correctly prepared ceramic or quarry tiles before the installation of Sika Level underlayments or final floor coverings. Can be used to fill and level defects from 1/2 inch (0-13 mm) in depth.

Sika® Level 125 - One-component, durable cementitious under-layment for interior concrete and cementitious substrates. Can be walked on after 8 hours at 23°C (73°F).

Sika® Level 315 - One-component, fast track cementitious underlayment for interior concrete, cementitious, wood and tiled substrates. Can be walked on after 4 hours at 73°F (23°C).

Additional information including applications guidelines, MSDS, and products specs can be downloaded at www.sika.com. See chart below for common applications, issues and solutions - all subfloors must be dry, clean, level, structurally sound and properly prepared. For further assistance, please contact reSAWN TIMBER co. or Sika's Technical Services (1-800-933-SIKA). Use of another manufacturer's adhesive may result in failure and void warranty.

I have ...	Recommendation ...
On-grade or Below-grade Concrete subfloor	Sika Primer MB in combination with either SikaBond T-35, T-55 or T-21 adhesive
Above-grade Concrete subfloor	SikaBond T-35, T-55 or T-21 adhesive
Wood subfloors	SikaBond T-35, T-55 or T-21 adhesive
Glue down application over Radiant Heat Subfloor	SikaBond T-35, T-55 or T-21 adhesive
Weak concrete substrate or gypsum-based substrate	Sika Primer MB in combination with either SikaBond T-35, T-55 or T-21 adhesive
Concerns about subfloor staying dry all year round	Sika Primer MB in combination with either SikaBond T-35, T-55 or T-21 adhesive
Substrate with old well bonded adhesive or adhesive residues	Sika Primer MB in combination with either SikaBond T-35, T-55 or T-21 adhesive
Unlevel sub-floor (humps/depressions) with defects 1/2 inch or less	Sika Level SkimCoat CA (before the installation of Sika Level underlayments or final floor coverings)
Unlevel sub-floor (humps/depressions) with defects 1/2 inch or more	Sika Level 125 or 315 (prior to the application of a final floor finish) - must prime first with Sika Level 01 or 02 Primer depending on subfloor
Small projects that require a 1-day turn-around and extra moisture protection	SikaBond T-21 All-in-One - Adhesive, Moisture Control & Sound Reduction
Need for Sound Reduction Layer	SikaBond AcouBond System

INSTALLATION

reSAWN TIMBER co.'s Engineered Wood Flooring can be installed above-grade on-grade, or below grade. It may be glued down over a plywood or concrete sub-floor. It also may be simply nailed down or stapled down over a plywood floor using specially designed hardwood floor nailers. Knot holes or other defects can be filled with a clear two part epoxy, wood filler, or clear adhesive. Note: this may take extra time when working with reclaimed wood. All cracks, open knot holes and large nail holes are normal with reclaimed wood and will require filling.

PLEASE NOTE: It is the duty of the installer to judge the suitability of any piece for placement in an obvious area of the room. If you feel a piece is not suitable, either do not install it or install it in an inconspicuous place.

PREPARING FOR INSTALLATION

Be sure to follow proper subfloor prep and moisture testing as outlined in the previous section. Undercut or notch-out door casings to fit flooring underneath by placing a piece of flooring on the sub-floor as a height guide for sawing. Remove door thresholds and base moldings and replace after flooring installation. Always leave at least 1/2" expansion space between flooring and all walls and vertical objects. Use wood or plastic spacers during installation to maintain this 1/2" expansion space.

Use a hammer and tapping block and tap against the tongue to pull planks together. Never tap against the groove of the plank. When near a wall, use a crow or pull bar to close end joints. Be careful not to damage flooring edge. All of reSAWN TIMBER co.'s Engineered Wood Flooring is milled to very exacting standards, so pieces that do not go together easily usually have debris in the groove, the tongue and/or groove has been damaged, or the board is a little bowed and you just need to flatten it out, rather than forcing the pieces together.

Starting Installation

For aesthetic purposes, wood flooring is often laid to the longest wall. However, the building owner/architect/design, upon the advice of the professional installer should make the final decision as to which direction the planks will run. Flooring should be laid at right angles to the floor joists and, if possible, in the direction of the longest dimension of the room. Most professional installers will begin installation next to an outside wall, which is usually the straightest wall, as a reference point in establishing a straight working line. A good way to establish a working line is to measure an equal distance from the wall at both ends and snap a chalk line. Measure distance from the wall at the width of the plank plus another 1/2" for expansion space for establishing your working line. It is advisable to "dry lay" a few rows before permanently laying the floor to confirm your directional layout decision and working line. This will also allow you the opportunity to select the varying colors and grains to create an aesthetically pleasing pattern. Adjustments of the working line may be necessary if the outside wall or other working line reference is out of square. This can be done by scribe cutting the first row of planks to match the wall, thereby creating a straight working line.

Stagger end joints of boards row to row a minimum of 8-10" for 3" to 5" planks, and 10" for planks wider than 5".

Glue-Down Installation

Consult previous page for recommended adhesive for common sub-floors types - for other subfloor types or if you have any questions about which product is best for your application, you can contact reSAWN TIMBER co. or Sika's Technical Services (1-800-933-SIKA). Use of another manufacturer's adhesive may result in failure and void warranty.

Follow Sika's instructions for minimum temperature and open time before beginning installation of flooring. Use the trowel recommended by Sika, since tooth size is important for the best adherence to the sub-floor. A P5 (3/16"x3/16"x3/16") trowel can be used for SikaBond T-55, SikaBond T-35 or SikaBond T-21 if T-21 is being used as an adhesive only. If using SikaBond-T21 as an 'All-in-One, then the SC+MB-trowel or 1/4"x1/4"-V-notch trowel is required. Periodically check trowel for wear any worn down trowel must be replaced before continuing application.

Always allow for adequate cross ventilation when working with flooring adhesive. Follow adhesive instructions regarding proper set time before affixing wood floor planks. **If using Sika Primer MB, as noted in the SikaBond instructions, Sika recommends allowing NO MORE THAN 36 hours between priming and beginning installation with adhesive otherwise, the primer epoxy will set and the adhesive will not be able to adhere to the primer.** With a trowel at a 45-degree angle, spread as much adhesive as can be covered by flooring in one hour.

Start at the outside wall. Once adhesive has set per instructions, lay the first of the flooring with the groove facing the wall. Continue laying the flooring until adhesive is covered with flooring. Remember to always check the alignment with the working line, being careful not to move the installed floor on the wet adhesive. Wood flooring should be immediately placed on wet adhesive - do not wait for set. Use a tapping block to fit the planks together. When the first section is complete, continue by repeating the process section by section until installation is complete. **Immediately remove** any adhesive that gets on the flooring's face by using a good quality PU-adhesive remover, e.g. TitanLaboratories Oil-Flo 141. When required, use weights to hold the flooring planks on the perimeter until adhesive is cured.

Staple or Nail Down Installation

In general, wood or plywood sub-floors should not exceed 12% moisture content, nor 4% moisture content difference between hardwood flooring and sub-floor.

Use stapler/nailer of your choice that is suited for the material being installed. See NWFA guidelines for fastener schedule (Appendix F).

Before installing, test a sample to make sure that stapling/nailing will not cause "dimpling" (localized raised edges) on the finished floor. If dimpling does occur, **STOP** and adjust the stapler/nailer shoe and angle/place of staple entry in order to avoid it. **reSAWN TIMBER co. is not responsible for dimpling.**

Adequate and proper nailing as well as soundness of the sub-floor should be ascertained. Foreign material should be removed from the sub-floor. The clean sub-floor should be covered, wall-to-wall, with 15 lb. asphalt saturated felt. When positioning felt, lap edges at least 4". Double the felt around any heat ducts in the floor. Basement and crawl spaces must be dry and well ventilated. Crawl space should be a minimum of 18" (457 mm) from ground to underside of joints. Crawl spaces must be 100% covered by a minimum 6 mil black polyethylene vapor barrier below the sub-floor on the ground.

For the first and second starting rows, lay first plank inside chalk line with grooved edge toward wall. Install entire first room in this same manner. Remember to always leave a 1/2" expansion space between flooring and all walls and vertical objects. Use wood or plastic spacers during installation to maintain this expansion space. Make sure that the nail gun's faceplate does not damage the UV-cured factory finish. 3M Blue tape can be placed on the faceplate to prevent damage.

In order to affix the first rows, as it is difficult to get the nail gun in place next to the wall, you may wish to set these rows in mastic and glue them down rather than face nailing them and leaving unsightly nail holes, which must be filled with putty to match the wood floor. After gluing down these starting rows with the recommended adhesive (**SikaBond-T35, SikaBond-T55, SikaBond T53 or SikaBond-T21**), set weight on top of these rows and allow them to set BEFORE commencing stapling/nailing the additional rows, as nailing the adjacent rows may cause the starting rows to subsequently move. Make sure the starting rows are straight and drawn tight.

Continue laying subsequent rows using stapler/nailer to blind-nail top inside edge of tongue at a 45° angle. Nail each board every 8" and within 2" of each end. Remember to stagger end joints from row to row at least 8" apart and use a tapping block to fit boards together.

It may be necessary to face-nail in doorways or tight areas where the stapler/nailer cannot fit (or glue-down in these areas and weight them while the mastic sets). The last two rows will need to be face-nailed (or glued-down) in the same manner as the first two rows.

Flooring wider than 7" in nominal width should be face-nailed or equivalent to minimize movement after installation.

Be sure to check the floor as you go to ensure that the stapler/nailer is not causing dimpling.

When tape is used to hold planks in place, the following tape must be used: *ScotchBlue™ Painter's Tape Advanced Delicate Surface*
Visit <http://goo.gl/um1kqr> for more info.

POST-INSTALLATION

For Hardwax Oil Finished products, please note that the finish required 21 days to fully cure. Prior to being fully cured, materials finished with Hardwax Oil should be cleaned using a dry mop ONLY. See reSAWN TIMBER co.'s Care+Maintenance Guide for instructions. Immediately following installation, clean and remove all dirt and debris on floor by dry mopping. All knots, cracks, etc. can be filled with an epoxy filler or the wood filler of your choice. Cover and protect completed flooring from further construction traffic with heavy Kraft-paper or other suitable coverings with a vapor permeance (perm rating) of 1 perm or more (tested in accordance with ASTM E-96) to avoid trapping moisture/vapor on or within the floor. However, be aware that covering a glue-down application may not allow some adhesives to properly cure. Follow Sika's recommendations. Do not use non-breathable sheet or film that could cause condensation to form. Any coverings should be taped, using a low-adhesion tape, to base or shoe moldings. Do not tape to finished flooring. When taping paper or sheets together, tape them to each other, not to the floor. Maintain covering throughout remainder of construction period. Do not allow any foot traffic or heavy furniture placement for at least 24 hours.

PROTECTION and MAINTENANCE

Follow reSAWN TIMBER co.'s Care + Maintenance Guide (available at resawntimberco.com) to ensure the longevity and lasting beauty of your new flooring.

PROTECTION

Wood is subject to fading when exposed to direct sunlight. Whenever possible, use drapes or other systems to protect your floor from excessive light. Wood expands/contracts in response to fluctuations in temperature/humidity. Maintaining the recommended temperature (60-70°F (15-21°C)) and relative humidity (35-55%) will minimize the visible effects of normal expansion/contraction. *In very dry climates, a humidifier may be necessary.* Wood is photosensitive & will change color as they are or are exposed to UV light. This natural occurring phenomenon is NOT considered a material defect and is excluded from coverage under the provisions of reSAWN TIMBER co.'s warranty. You can minimize the effects by:

- Avoiding rubber-backed mats/rugs as the backing may discolor your floor.
- Change location of rugs (if in front of doors/windows) and furniture periodically to allow the flooring to age uniformly.
- Use light filtering window treatments that will help prevent sunlight exposure.

Important Notes

- Baseboards should be installed so that their lower edge is slightly above the level of the finished floor. Do not nail to the floor.
- Professional advice should be sought before installing over radiant heat.
- Do not install any product with visible defects.
- To avoid movement in floor, a relative humidity rate of 35-55% should be maintained year-round.
- The use of color coordinated wood floor putty to cover small cracks and gaps is considered normal in flooring installations.
- See reSAWN TIMBER's Care + Maintenance Guidelines for information regarding helpful tips on keeping your floor looking new for years to come.
- Molding tip: Before installation, match the closest board in color and grain to the adjoining molding profile color and grain. Save the board(s) and use next to the molding piece.