



WOOD FLOOR AND MILLWORK GUIDE



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MADERA wood floors are a unique expression of nature made from living material and should be treated with the utmost care. This document provides a general guideline for purchasing, receiving, acclimating, installing, protecting, and maintaining your wood floors.

The most important thing to understand is that wood floors are a living and breathing material. Wood is affected by its environment and significant changes in temperature or humidity can have negative results. Like all living things, wood performs best in a stable environment, in equilibrium with temperature and humidity. With this in mind, we cannot stress enough how important it is to properly understand the conditions within your home environment and how to adjust them accordingly if necessary.

The next most important thing to do is to hire licensed professionals for your flooring project. Make sure your installer has experience installing and caring for high quality wood floors. It may also be worth looking up any local associations that may provide more site-specific guidance for installing hardwood floors. Wood floors are a significant investment and we recommend that you read through this guide and follow the recommendations to ensure that your floors last a lifetime.

Please contact us if you have any questions regarding your wood floors and the conditions of your home.

INTRODUCTION

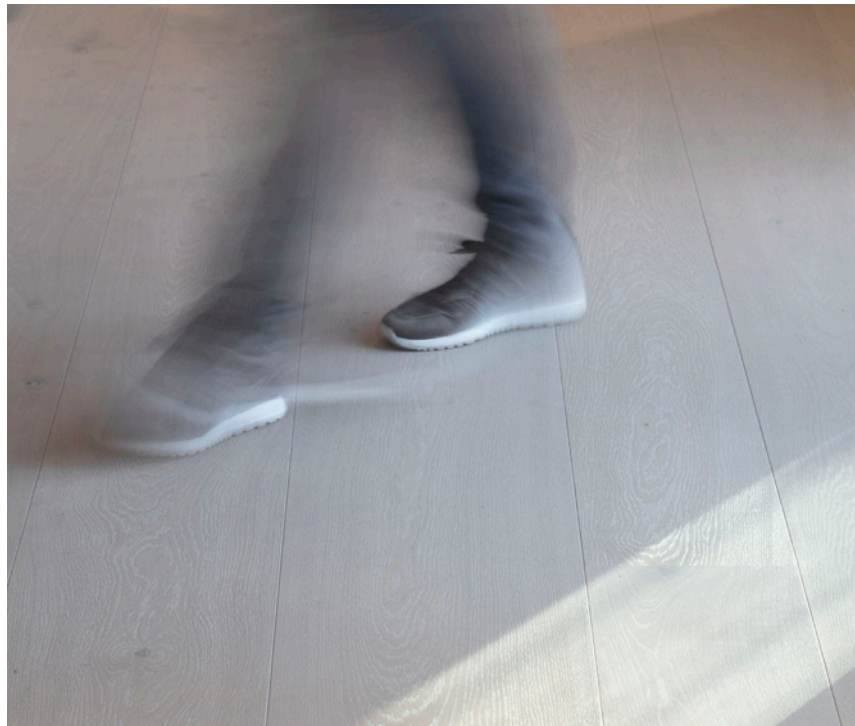
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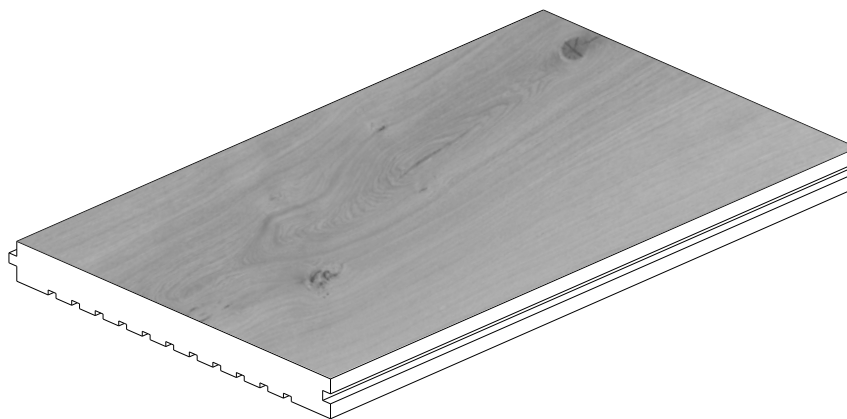
There are several things to consider when purchasing a hardwood floor and we want to make this process as easy as possible. This section will go over the most important considerations while choosing the perfect MADERA wood floor for your project and help to answer some of the most frequently asked questions. We want you to make an informed decision and we are here to help you do that.

1.1 MADERA Wood Floors Explained

MADERA supplies three unique types of hardwood floors. All three are high-performance floors, made from the best available raw materials and, produced using leading manufacturing techniques. In the past several years, the hardwood flooring market has moved almost exclusively to some form of engineered flooring due to the rising cost of hardwood lumber and advances in techniques and manufacturing. Not all engineered flooring is equal, and cheap versions of engineered flooring are ubiquitous. High-quality floors are expensive to make, and to cut costs some manufacturers compromise on material quality, including lumber, plywood, and glues - all of which are vital to the structural integrity of engineered flooring. This is not the MADERA way.

Solid Wood Flooring. A solid wood floor is the most traditional hardwood floor and has been around for centuries. A solid wood floor is milled from a single piece of lumber, with a tongue on one long side of the board and a groove on the other. MADERA solid wood floors also have an end-match, a tongue, and a groove on the short ends of each board.

Some purists prefer solid wood flooring but outside of a preference for solid wood, there is little reason to choose a solid floor over an engineered floor. This is especially true as MADERA's wear layer typically mimics that of a solid floor.

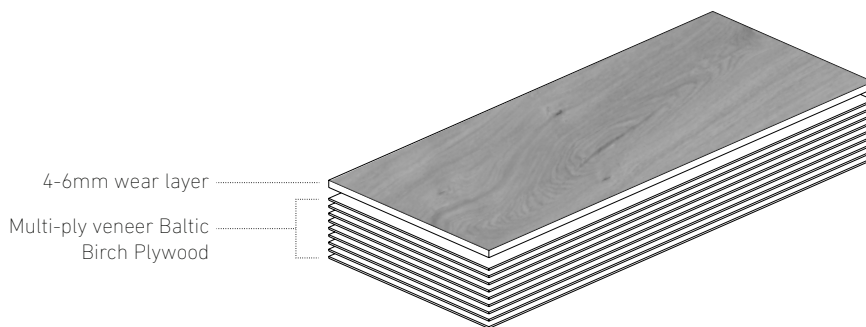


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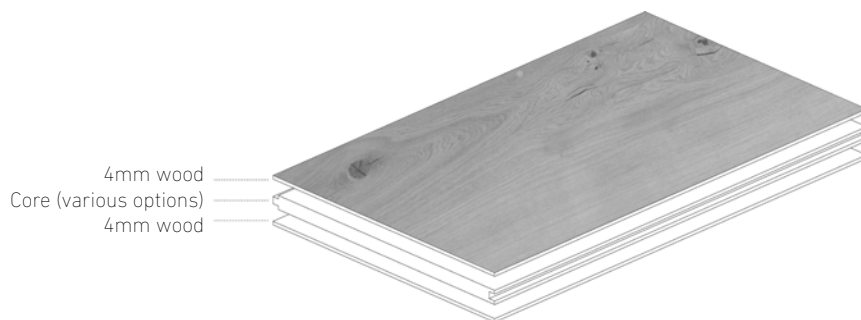
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2 ply Engineered Wood Flooring. MADERA 2-ply engineered wood flooring has two elements: the wear layer and the substrate. The wear layer is typically a 4-6mm thick sawn veneer that is cut from a full log or kiln-dried planks. The substrate is a multi-ply veneer Baltic Birch Plywood. The plywood is stable, strong, and moisture-resistant, which is why many consider engineered wood flooring to be more stable than solid wood flooring, especially for wider widths and longer lengths. The visible top wear layer is adhered onto the plywood with an incredibly strong and flexible glue and then milled into a tongue and groove plank. Our 2-ply engineered wood flooring boasts a thick wear layer (4mm or 6mm) which mimics the sandable layer of wood above the tongue of a solid plank.



3 ply Engineered Wood Flooring. MADERA 3-ply engineered wood flooring takes all the benefits of engineered wood flooring and elevates it to offer superior stability. MADERA 3-ply engineered wood flooring is made by layering 2 veneers of 4mm wood onto a core of Radiata pine, marine grade plywood, or a hardwood like oak. The balanced boards help to resist dimensional changes in the flooring due to varying humidity which makes it perfect for beachfront or desert homes or exceptionally wide or long dimensions. 3-ply engineered wood flooring with a pine core has become increasingly used as a way to avoid Baltic birch plywood, which has increased in cost and decreased in availability due to the war in Ukraine.



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1.2 MADERA Finishes Explained

MADERA wood floors are finished in advance. That means that the floors have been treated with a combination of stains, reactive stains, and techniques to achieve a particular color and texture and then coated with multiple layers of a sealer like natural oils, water-based urethanes, or UV cured finishes.

A MADERA wood floor arrives pre-finished and is ready to install and protect with no need to sand, stain, or coat once installed! How nice is that?

Below is a list of the benefits of installing a MADERA wood floor over an unfinished material that needs to be finished on site.

- More complex and beautiful finishes can be achieved at a more affordable rate than on-site finishing.
- More finish variety and complexity (including textures such as wire brushing, hand scraping, and contour sanding) can be achieved.
- Pre-finished floors can contribute to a cleaner job site and less downtime. A floor that has been finished in advance is ready to walk on the moment it has been installed.
- You won't experience any lingering or unpleasant smells. Site finished oils and polyurethanes can off-gas for weeks or even months.
- You have more flexibility and more control. You know what the floor will look like before it's installed, and you or your installer can sort through boards to get a more consistent-looking floor and reject boards that do not fit the look you are after.

1.3 The Finishes We Use

MADERA relies on two unique finishing styles, each with its own properties. Some of our collections are only available in Oxidized Oil finishes, such as Atelier and Volant Collections. The Stockholm and the Terra collections utilize both to varying degrees.

UV Cured. UV cured finishes are a robust coating of aluminum oxide or oil-based polymer that offers superior scratch and scuff resistance. UV finishes often have a slightly higher sheen level, and to some, the wood can feel less natural than when finished with an oxidized oil. UV finishes are very easy to clean and can be maintained with a variety of cleaning products. Even the worst spills can be easily mopped up, and because the wood is coated in a layer of protection, stains are rare. UV finish quite literally creates a barrier between the wood and whatever touches it. Day-to-day maintenance is therefore very straightforward, but longer-term maintenance and refinishing of floors can be more complicated and often require a buff or sand to add a new coat of finish.

Air Dried. Air dried finishes such as oxidized oils have been used to finish floors for hundreds of years and are the preferred method of finishing floors in most of Europe. These plant-based oils leave a natural-looking matte finish and highlight the natural

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beauty of the wood in a way lacquers do not. Maintenance can be both satisfying and easy. If you use the right products—see MADERA's maintenance guidelines—oiled floors can and will last a lifetime, and compared to UV cured floors, it is easier and more cost effective to spruce up an oiled floor by applying a fresh coat of oil rather than buffing or sanding.

1.4 MADERA Grading Explained

When we talk about the "grade" of a wood floor, we are referring to its level of character. All wood floors, no matter the grade, will have variations in both color and grain. Knot size, face checking (cracking), color variation, and grain pattern are just a few of the considerations when picking a grade, and every species has a different set of variations to consider and appreciate.

At MADERA, we disagree with the notion that character should be seen as an imperfection. On the contrary, we see the beauty in character and aim to celebrate it in our products. Character, such as knots, sapwood, or flecking (medullary rays) natural to wood. We don't refer to the character as a "defect." MADERA offers several grades in each species, giving our clients and specifiers the flexibility to choose the right floor for their project. Some finishes are best presented on a particular grade, and the curation of our collections often takes this into consideration.

In selecting a wood floor, it is important to understand the overall "look" and "feel." A sample can give you a general idea but should not act on its own as a measure of the overall appearance of the floor once installed. Do your best to fully understand the grade to minimize the risk of surprise. We find that the most effective way to understand a grade is to see an image of a floor installed. For that reason, we have many quality images of our wood floors in different grades available on our website. Simply navigate to a specific collection or "Product Page" and look for the word "Grading." Please note that different species and collections will have different grading guidelines. Wood floors wider than 10-12 in will typically have different grading guidelines as well. If you have any questions about a specific finish or collection, please reach out to us directly.

1.5 MADERA Grades

MADERA wood flooring is available in 5 unique grades, each with a different set of characteristics.

- **Live Grade.** Dynamic and full of character featuring knots, cracks, and rift & quartered edges.
- **Natural grade.** A mix of sweeping cathedral grain, tight vertical grain edges, knots, and handsome cracks.
- **Choice Grade.** Prime grade with a mix of handsome character. Knots are sparse and mostly unfilled. No large checks or cracks create an overall calm look.
- **Prime Grade.** Prime grade is a clean grade with sweeping cathedral grain, minimal pin knots, and only occasional sap lines. Some boards may include

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smaller filled knots and filled end checks can be present in a small number of planks, especially in wider planks over 10 in.

- **Premium RQ.** A select rift and quarter grade with mostly vertical grain, infrequent pin knots, and a good amount of flecking (medullary rays).

1.6 MADERA Lead Times

MADERA wood floors are all made to order unless otherwise specified. Manufacturing can take anywhere from 4 weeks to 3 months, depending on the species, dimension, and size of the order. Several of our collections are manufactured in Europe which results in longer lead times due to cross-Atlantic shipping. This is very important when creating your construction schedule as well as factoring in any delays due to weather or seasonal holidays. Here is a brief breakdown of typical lead times for our five collections. (This is merely a guide - depending on availability and shipping location your order can take less or more time).

- **Atelier Collection.** 14+ weeks
- **Volant Collection.** 16+ weeks
- **Stockholm Collection.** 5-8 weeks
- **Terra Collection.** 8-14 weeks
- **Bevel Collection.** 8-12 weeks
- **Antique Heart Pine Collection.** 10-12 weeks
- **Custom millwork, interior doors, and cabinet fronts.** 22 + weeks

From time to time, we may have material that is ready to ship or available in a shorter lead time than those listed above. If your project requires an expedited timeline and you are flexible on the specification, please contact our sales team to see what is available.

NEXT **Receiving and Storing your MADERA Wood Floors.**

BEFORE PURCHASING

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RECEIVING + STORAGE

2.1 Preparing for a MADERA Wood Floor Delivery

Wood is a hygroscopic material that absorbs and emits humidity from the environment. In lay terms, if the environment is dry, wood emits moisture into the air, and if the environment is humid, wood absorbs moisture from the air. MADERA wood planks arrive at the job site with a moisture content (MC) of 7% - 9%. This MC corresponds to a Relative Humidity (RH) of 40 – 55%. If the humidity is lower than 40%, the wood will emit moisture and dry out. If the air has a higher RH than 55%, the wood will absorb moisture.

40-50% RH level is ideal, and it's not the end of the world if your home has a slight deviation in RH levels. As a rule of thumb, your home's RH level should remain above 30% and below 60% to ensure that your MADERA wood floors are not adversely affected by humidity.

Below is a list of conditions your home or job site needs to meet before your new wood floors are delivered.

- The job site is fully enclosed. All windows and doors are in place, and the home is protected from the elements.
- The HVAC system is in place, works, and is turned on. The home environment, including temperature and humidity, should be as close to "normal" conditions as possible. (See above regarding RH levels).
- All heavy construction has been completed, including framing, plastering, sheetrock, etc. The home should be in its final stages of construction with only finished elements remaining.
- All poured concrete should measure between 7 % and 9% moisture content. Wet concrete can seriously damage wood floors, even in plastic covering. To properly measure the MC level of concrete, use a concrete moisture meter and measure in at least 10-20 spots per 1000 SF, to verify a consistent moisture content.
- There should be ample, protected, and clean space to safely stack and store your new wood floors.

2.2 Receiving a MADERA Wood Floor Delivery

MADERA wood floors arrive in wrapped bundles, the size of which depends on the width and lengths of the floor you ordered. Make sure to understand the delivery method before scheduling the delivery, and if you are uncertain about anything related to the delivery, do reach out to our logistics team.

Depending on the delivery method, you may or may not be responsible for the offloading of the flooring from the truck. If that is the case, make sure to have adequate labor on site to unload a truck and safely bring the material into your home or job site. Under no circumstances should you leave a MADERA wood floor outside for any significant period. The material should be brought inside as soon as possible to avoid any damage from the elements or theft.

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2.3 Inspecting a MADERA Wood Floor

We have an amazing production and logistics team, but sometimes things happen that are outside of our control. To ensure that the right floor and the right amount of material has arrived, it is prudent to inspect the material before it is offloaded from the truck. The inspection should include the following steps:

- Prior to unloading, open one bundle to ensure you have the right material. If the material is not right, STOP! Do not unload the material and, contact our customer support team as soon as possible.
- Once unloaded, inspect the entire order for any damage to the material. If you notice any damage, document with photographs and notes and send them along to our logistics team. A damage report needs to be submitted within 24 hours of delivery so that we can ensure the damage was done before or during the delivery.
- Count the number of bundles to ensure nothing is missing. The packing slip should tell you how much material and how many bundles you should have received. (You have seven (7) days to claim missing material, it is vital to do a piece count and submit any discrepancies ASAP so our team can identify the problem and correct it.)

2.4 Storing a MADERA Wood Floor

If you do not need your new wood floors on site, do not schedule a delivery. The longer material sits on site, especially during construction, the higher the chance of loss or damage. Unless specifically noted, your MADERA wood floors are ready to install the day they arrive (see above for conditions needed to install a MADERA wood floor). So, be sure not to have the flooring delivered too soon.

If, for whatever reason, you must store a MADERA wood floor in your home or project site, make sure the material remains properly stowed away. Try to pick a location that will avoid the need to move the material. Every time product is moved, there is a chance of damage!

- Move flooring to a secure area with minimal construction and traffic.
- Make sure the RH level stays within the desired levels during storage.
- Make sure the inside temperature does not exceed 80 degrees F. (26.6 C)
- Do not remove the plastic covering on the bundles.
- Cover flooring with a protective RAM board and drop cloths to avoid any damage.
- Do not use flooring as a workbench or staging area for other trades.
- Do not stack anything on top of the flooring.
- Do not store flooring near south-facing windows.
- Do not plaster or sand plaster in a room with stored wood flooring.
- Only remove the plastic wrap on the day of installation.

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2.5 Acclimating a MADERA Wood Floor

As mentioned above, MADERA wood floors arrive at the job site with a moisture content of 7% - 9%. This MC corresponds to a relative humidity of 40 – 55%. If your home or job site is within the healthy range for a wood floor, there is no need for acclimation. You can go ahead and install your new floors right away! If your home is not within this range, adjust the HVAC or improve the inside conditions and only install the floors once the RH is good. The last thing you want is for the wood floors to acclimate to a space that is not within the healthy range. And keep in mind that humans do best in a home that is within the range of 40-55% humidity! We all win!

NEXT — Installing and Protecting your MADERA Wood Floors.

RECEIVING + STORAGE

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3.1 Installing a MADERA Floor

A MADERA wood floor is a high-performance product that is built to last a lifetime if installed correctly. A proper installation makes all the difference and a bit of care and patience will go a long way. From the glues used, to the placement and sorting of boards, the way a MADERA wood floor is ultimately laid out and installed can be the difference between a great floor and an amazing floor.

MADERA provides some of the best quality wood flooring in the world, and as such we recommend you hire an experienced professional to install our product. We are not installers, and recognize that a good installer will have their preferred methods for installing a wood floor. We do not want to change their behavior or compromise their work. We do want to ensure that your MADERA wood floors are installed correctly so they keep their warranty and, more importantly, so they look amazing and last a lifetime.

Before installation begins, go over the installation with your installer. Do not assume that the installer knows what you want! If you have time, have the installer “dry-lay” or mock-up a section of flooring, so you are on the same page and know what to expect. Once the floor is glued down, it is very difficult and costly to take up.

Questions to ask your installer include:

- Do you understand how I want the floorboard oriented?
- What do you have planned for transitions between rooms?
- What guidelines will you use for color sorting and rejecting boards?
- On wider plank flooring, do you plan to space the floorboards?
- Will there be a baseboard? If so, what type?

If you have an architect or designer on board, they can likely help to clarify some of the above questions and, they might have additional aesthetic considerations that should be clearly outlined to the installer prior to installation!

MADERA engineered wood flooring (both 2-ply and 3-ply balanced) are designed and fabricated to last a lifetime. These floors do not require complex installation methods to ensure a quality lifetime floor. We generally tell installers to follow their local flooring association guidelines when in doubt. In the United States, the NWFA is the best source for this.

The preferred installation method for a MADERA wood floor depends on the subfloor. Typical subfloors include concrete, plywood, rubber, or cork underlayment (typically used as a sound barrier) and radiant flooring subfloor (warm board or concrete).

Below are our recommendations for installation over the most widely used subfloor types:

- Concrete floor: 100% full coverage glue spread with a properly notched trowel and appropriate adhesives.

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INSTALLING + PROTECTING

- Plywood: 100% glue down + hidden nails every 6 – 12 in.
- Cork or Rubber: 100% glue down (no nails).
- Radiant Heated Floor: 100% glue down (no nails).

There are a few basic rules for installing a MADERA wood floor that should be followed by anybody installing it. Some of these rules can also affect the MADERA warranty, so be sure to look this over and share it with your installer and/or contractor before the floor is installed.

- The subfloor must be level, any deviations in the subfloor will articulate in the floor unless the subfloor is properly leveled.
- The subfloor must be void of any defects, dust, grease, or chips. Vacuum and clean thoroughly before installing a MADERA wood floor.
- Any concrete subfloor must be cured for at least 60 days, or measure 7 – 9% moisture content throughout the concrete area before installing a MADERA wood floor over it.
- For a quick dry self-leveler, allow at least 48 hours to cure before installing a wood floor, and always use a 100% glue spread to create a moisture barrier between the leveler and flooring.
- Only install a MADERA wood floor if windows and doors are in place and functional and the HVAC system is in working order and turned on.
- Only install a MADERA wood floor if the relative humidity of the home or job site is between 40% and 60% humidity for at least three days in a row.
- Always leave expansion gaps on the edges of the floor. Typically, a 1/2 in gap along the long edge of the last board is sufficient for expansion on an engineered floor, and 1/4 in gap where the ends of the boards meet the wall or threshold. The gap at the edges of the floor can be smaller if you leave penny gaps between boards. This is quite typical in the installation of wide planks.
- Immediately protect a floor once it has been installed. If it's a large installation, protect one room at a time or sections as they are completed. A MADERA wood floor is pre-finished; after installation, you cannot sand out scratches and scuff marks.

See below for the best methods for protecting a pre-finished wood floor.

3.2 Protecting a MADERA Wood Floor

You cannot be too careful with a pre-finished wood floor. Using adequate protection will ensure that your new floors remain protected during the final stages of construction and move-in. Be extra careful during the move-in, as large furniture and appliances can seriously damage wood floors, and typically, protection has been removed at this time.

Materials that do not breathe (like tetra paper) can make floors finished in oxidised oil turn green. Therefore, MADERA recommends protecting your floor with a breathable covering.

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MADERA's recommended protection method:

- Sweep, vacuum, and/or swiffer the floor before adding protection. Don't leave any dust, debris, or particles under the protection that can cause scratches and scuff marks.
- Make sure there isn't any moisture on the floors before adding protection.
- Start by covering the entire floor with brown construction paper.
- Tape all edges and seams of constructing paper together to ensure no dust or debris can get in under the paper. At the edges of the floor, tape the paper to the wall or, if there is baseboard, you can use orange painters tape (FROG) along the edges of the wall to seal the protection.
- Never use blue tape or any other type of tape on a wood floor. Over time, the glue on the tape will adhere to the finish and cause irreparable damage. Sweep and vacuum the brown paper to pick up any dust, dirt, and other debris.
- Roll out a high quality and durable protective layer such as Masonite or RAM Board to cover the entire area, taping the seams with a more robust tape like duct tape. 100% coverage is vital as gaps in the protection can allow UV to get in, causing slight color changes when the floor is covered for a longer period of time.
- At the walls and edges, cut the protection 1 in short and tape it to the brown paper to create an additional seal.
- For superior protection, you can add a layer of thin foam or even door skins (Luan) in between the two layers. This will prevent dropped tools and heavy equipment from damaging the floors during construction.

NEXT — Please review the Care + Maintenance Guide for your specific floor finish.

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