



revised 9/2017

INSTALLATION, FINISHING, AND MAINTENANCE INSTRUCTIONS FOR THE FOLLOWING SPECIES:

Acacia	Cherry	Hornbeam	Maple-Curly	Oak-Parquet Fumed	Teak
Alder	Cypress	Iroko	Maple-Bird's Eye	Oak-Parquet Natural	Tigerwood
Ash	Elm	Kaleidowood	Maple-Spalted	Pine	Walnut
Birch	Fir	Larch	Mesquite	Plytype	Walnut Burl
Black Locust	Hemlock	Mahogany	Oak-Red	Redwood	Wenge
Butternut	Hickory	Maple	Oak-White	Sandlewood	

⚠️ PLEASE READ THE ENTIRE SPECIFICATION BEFORE STARTING THE INSTALLATION.

CHECK HUMIDITY

With a reliable hygrometer, sling psychrometer, or electronic monitoring device, check the humidity in the space where the flooring is to be installed. Humidity should read between 35-55% assuming a 65°-75° temperature. If humidity is not normal, postpone installation until conditions are normal.

CONDITIONING

Do not install unless heating, air conditioning, and humidity controls are in full operation and room conditions are normal. End Grain blocks are available as individual pieces (unfinished only), wired into strips (unfinished or

prefinished), on panels (factory sanded only), and on engineered planks (unfinished or prefinished). Please note: Engineered End Grain planks have separate installation instructions. Individual blocks are available from ½" to 4" in depth. Blocks in strips are available from ¾" to 3" in depth. Blocks on panels are available in ½" depth. Most individual blocks are kiln dried to 10-12%. Most strips and panels are dried to 8-10%. All blocks must be allowed to acclimate or adjust to your specific room condition. Only after HVAC systems are operating normally and assuming a room temperature between 65°F and 75°F, then break the palletized strips and open-stack them so that both top and bottom is exposed, or scatter individual blocks in a loose pile in the room where the flooring will be installed, or open cartons of panels and spread panels. Do not store individual blocks, strips, or panels where humidity is abnormal.

ACCLIMATION FOR ALL KASWELL INTERIOR WOOD FLOORING PRODUCTS

The purpose for acclimating wood block is to allow the moisture content of the wood to adjust to normal conditions; the temperature and humidity that will be typical once the facility is opened, and the permanent Heating, Ventilating and Air Conditioning (HVAC) system is up and running.

Before wood blocks are delivered, the jobsite must be checked to determine if it is ready. The structure should be fully enclosed, with doors and windows in place, and interior climate controls operational for at least 48 hours to stabilize the moisture conditions of the interior. Wood flooring should not be delivered until all wet-work is completed.

Acclimation must include de-palletization or scattering of all individual blocks, opening of stack strips, or removal of panels from cartons or boxes. Acclimation would be faster if the pile is low and more spread out.

If conditions are not stable, acclimation may be harmful to the installation. For example, acclimation could dry the block too low if the humidity were too low. In so doing, you might install the block too dry during the heating season, and have problems during the more humid months.

If you know the Equilibrium Moisture Content (EMC) of wood in your region, the wood brought to a jobsite might already be at the proper moisture content, and acclimation for any length of time may not be necessary. The installer should have a clear understanding of the EMC in order to determine the length of acclimation. This requires knowing and recording the moisture content of the wood at the time of delivery, and what the expected moisture content will be at equilibrium.

At equilibrium the moisture content of the wood neither gains nor loses water because it has reached equilibrium with the vapor pressure of the surrounding atmosphere. Changes in relative humidity and temperature of surrounding air cause both seasonal, long term, and daily short-term changes in the moisture content. Long-term changes are gradual as moisture slowly penetrates the wood, while short-term fluctuations influence only the wood surface. Protective coatings slow the changes in moisture content, but ultimately the wood will be in equilibrium.

We are often questioned about the humidity being too high or too low. Humidity maintained above 60-70% at normal residential temperatures can adversely affect wood



Acclimation of individual blocks



Acclimation of strip blocks



Acclimation of pavé panel blocks

components. Humidity sustained at or above this level can result in an EMC of 12% or more with associated expansion. Humidity maintained at or below 25-30% can adversely affect wood components and result in an EMC below 6%. This condition can cause greater than normal shrinkage with associated cracks. (Source: *Wood Handbook U.S. Department of Agriculture, Forest Products Laboratory*)

Ideal conditions for all wood flooring would be to acclimate and install at the average level of humidity in your particular facility, which should be in 35-55% range. (Source: *National Wood Flooring Association Wood Flooring Installation Guidelines and Methods, revised 05/2012, page 10, article B-1 Wood's Comfort Zone. As a general rule, with geographic exceptions, wood flooring will perform best when the interior environment is controlled to stay within a relative humidity range of 30-50%, and a temperature range of 60° to 80° F. In some climates, the ideal humidity range might be higher or lower, 25-45% or 45-65%, for example.* We would be pleased to discuss with you length of acclimation for your particular installation.

NOTE: We always recommend at least 2 days of acclimation prior to installation. We never deliver and install block flooring on the same day.

CHECK CONCRETE SUB-FLOOR

The sub-flooring should be depressed corresponding to the depth of the block specified. If cork or rubber underlayment is specified for added resiliency, allow for extra depth. A vapor barrier or reliable water resistant concrete sealer (i.e. Bostik's MVP or an equivalent) should be used when moisture from below is of concern. New concrete slabs must be cured (at least 50 days) and dry. Below grade installations are not recommended. Be sure the concrete sub-floor is smooth and level. Tolerance should not exceed 3/16" on a 10 ft. straight edge in any direction. Check floor level with straight metal strip on edge, double check edges and corners. Eliminate any washboard irregularity. All rough spots or gravel protruding must be ground smooth, and low areas filled/flashed. We recommend low areas be filled with the chosen mastic, and not with a cementitious material. If tolerance is not as specified, flooring contractor shall INSIST masonry contractor make necessary corrections. Concrete should be tested for moisture content, and be no greater than 3 lbs. per 1,000 sq. ft. per 24 hours (ASTM F-1869), or 75% RH (ASTM 2170). We recommend a bond test before

spreading mastic and installing blocks. A test should be made with your chosen adhesive and several of our blocks before beginning the installation. Check with us about your particular condition.

WOOD SUB-FLOOR

Wood blocks may be installed directly over wood or plywood sub-floors, which are solid, level, and well ventilated below. There should not be any cupped area, or projecting nails. If blocks are to be installed on an existing synthetic floor or raised computer floor system, 1/2" minimum plywood or hardboard underlayment should be added, glued and screwed to the synthetic surface.

EXPANSION VOID

Cork strips 1/2" to 1-1/2" should be used against all walls and columns, unless concealed by shoe moldings or other base. Place temporary wooden strips along the walls and columns equal to the width of the void to be created. After installing blocks flush to the strips, and at the end of the day remove the temporary strips, leaving a uniform void for expansion. In aisle ways and other narrow areas where blocks meet carpet or other flooring, the expansion void can be omitted. Schluter strips should be used at block edges against carpet or other adjacent flooring materials.

APPLYING MASTIC

For older sub-floors, be sure the surface is clean and free from dirt, oil, or grease. Store all mastic/adhesive for 72 hours at room temperature. For individual blocks and strips: Use a 3/16" V notched trowel. If the coverage is less than 50 sq. ft. per gallon, change trowel angle or file down trowel to reduced depth. For all species with the exception of treated pine blocks we suggest Bostik's Best Urethane or Mapei 980 adhesive. **DO NOT:** use mastic or adhesive that contains water or a mastic that combines vapor barrier quality within the adhesive, such as Bostik's "Single Step". This type of adhesive/vapor barrier product requires a spread of approximately 20 sq. ft. per gallon. This is too much adhesive for our block flooring. Blocks would sink into the Single Step product during installation, creating significant high and low blocks. Also, the mastic would ooze up between the blocks during installation, and stick them together. We suggest Bostik's MVP if a vapor barrier is needed. Allow MVP to dry and apply Bostik's Urethane Adhesive the next day. For treated pine blocks, use Kaswell S2705 White

Adhesive. Adhesive open time up to 2½ hours, but read mastic labels. Always use with adequate ventilation. For panel blocks: Apply mastic with caulking gun to each hole in the membrane below, and then place the panel on to the sub-floor.

INSTALLING INDIVIDUAL BLOCKS

Blocks should be well mixed before beginning installation. If blocks are not mixed some clustering may result where several blocks from the same log may be installed next to each other and might appear in a cluster as a different color section than the surrounding pieces. So, be sure to mix them when they are scattered loose on arrival, and continue to mix them during installation. Blocks are to be glued down, and **NOT TO EACH OTHER**. Working to straight lines, or from a straight wall, spread mastic the entire length of the laying line, then place blocks in the desired pattern. We suggest blocks be spaced apart slightly, allowing for some later growth, and so the flooring will look and feel like individually placed blocks. Tape can be used during installation to help maintain rows.

INSTALLING BLOCKS IN STRIPS UNFINISHED OR PREFINISHED

Strips should be well mixed before beginning installation. Determine the direction of the rows. Snap a chalk line parallel or perpendicular to a straight wall to start the installation. Determine the number of rows to be installed comfortably, and spread mastic to a chalk line the full length of the laying line corresponding with the number of rows to be installed. Make sure to maintain square-ness with the room. Work to chalk lines for each section, and continue to check square-ness to the room as the strips are installed. Place the first full strip (approximately 33" length) in a corner, parallel and tight to either pre-molded cork (if to be left exposed), or to a temporary lumber filler to create a space, (to be concealed later by base molding). The lumber filler must be removed later in the same day it was installed.

For prefinished strips, install the wooden splines provided before placing the strip on to the mastic. Extend the spline slightly beyond each strip so it catches the next strip. Strips without spline can easily be snapped into shorter pieces. The aluminum is soft. However, if the strips are snapped, be sure to tap the ends to flatten the elongated aluminum caused by snapping. Begin every other row with a shorter strip, perhaps even one half of a full strip. Every other row should

also begin with a half block to create a laped joint from strip to strip. Place adjoining strips as close as possible to the next strip. Avoid crowding mastic between strips.

STRIPS ARE TO BE GLUED DOWN AND NOT TO EACH OTHER. All mastic must be kept off exposed surfaces. Do not pound directly on block edges. Suggest a short section of a 2 x 4 on edge and snug against the last row. Tap the 2 x 4 as needed with a mallet (avoid edge damage) to snug the rows. If the installation is not complete, use a backer along the entire last row at the end of the day to keep the rows in position. Continue to snap lines to maintain square-ness. Keep lines straight. Strip ends will be square when received. When you reach a wall or column and need shorter lengths, be sure your end cut is exactly square to the strip length, and no piece should be less than ⅓ block. **NO SLIVERS!** You may need to cut the next to last block back slightly so a larger piece can be used to "cut in", rather than install a sliver. Occasionally some blocks within the strips are slightly angled. Removing blocks without cutting square to strip length can cause one end to be out of square and create a space in the floor. The blocks within the strips will vary such that maintaining a perfect lap joint will be difficult, although every effort should be made to do so. **DO NOT** attempt to install strips so that blocks are in straight rows in two directions. Straight lines or rows in two directions cannot be created with blocks in strips. Blocks within strips appear to all be the same size, but there is slight variation that would adversely affect your ability to maintain straight lines or rows in two directions. For prefinished strips, be sure to fill the groove that was made for the splines when the last row abuts another surface. Do not leave a void below the surface. Fill the void with either ½ tongue, or cut off the groove.

INSTALLING BLOCKS IN PANELS

Be sure panels are well mixed before beginning installation. If panels are not mixed some clustering may result. Continue to mix panels. Place panels with mastic on to sub-flooring, maintaining square-ness. Place the first panel in a corner parallel and tight to a temporary lumber filler. Precision manufacturing will allow placement of adjoining panels as close as possible to the next panel. The lines created from each panel must be kept straight and parallel, and an effort should be made to create a lap of at least 3-4 blocks. Straight lines in two directions can be created with square blocks on membrane. We suggest rolling the surface with a 70-100 lb. wood floor roller during installation.

SANDING

For individual blocks or unfinished strips use a drum or belt sander first with 60 grit, then 80, then 100 grit drum paper. **SAVE SAWDUST FOR FILLING.** Disc sand with 100 grit paper, 120 and 180 grit screens, making sure sanding is uniformly performed, and all drum lines and disc lines are removed. Vacuum clean. Be absolutely sure no liquids (i.e. paint, coffee, water, mud etc.) touch the flooring at this point. Keep everyone out of the room until the surface is protected. If there is a time lag between sanding and finishing, resin spots might appear in some species. They will disappear once finished. After the flooring has been screened to 180 grit make the first application of oil. We recommend Woca Oil, or another VOC compliant oil finish. See WoodcareUSA.com for more information about Woca. **DO NOT USE TUNG OIL.**

Fill voids cracks or spaces between individual blocks, strips, planks, and panels. Filler materials can include stain accepting patch compound, granulated cork, wood flour, or a mixture of granulated cork and wood flour. Mix wood flour with the chosen finish. For detailed information on product and technique of application for filling voids and cracks, please request our “[Filling Voids and Cracks](#)” information sheet. Refer to Woca second application instructions. Make sure paste filler is the same color or darker than the wood. It should not be lighter in color.

APPLYING OIL FINISH

Oil finishes are not top coatings like urethane. Oil finishing is a process of oiling the wood block several times, allowing the oil to penetrate until the blocks won't take on any more oil. After each oil application the flooring must be buffed and re-buffed with absorbent towels or other soft cloth so that there is no oil left on the surface. You cannot over buff, so if you're not sure, buff again. Applying oil finish to the surface until the wood won't take on anymore oil will require at least three applications, and may require 4 or 5. On completion the surface should have a uniform sheen, rich and silky. Inspect the surface at different angles after each oiling before leaving the project. If there are starved blocks that seem to need more oil to achieve the uniform silky surface, then apply an additional application of the oil the next day, and again buff off all excess. At this point you've done all you can. However, weeks later the flooring will become dry and dull. This is normal and to be expected. Resins in the oil shrink slightly,



Grouting



Application of Woca Oil



Applying Woca Oil using lambswool applicator

and the wood will then take on more oil. Re-oiling and buffing will return the surface to “like new again”. We recommend Woca Commercial Oil Cleaner to maintain the surface.

! DO NOT USE TAPE PRODUCTS ON THE FLOOR AFTER SANDING, DURING SANDING OR AFTER OIL FINISH IS COMPLETE.

PLEASE FOLLOW ALL WOCA OIL FINISH INSTRUCTIONS:

WE RECOMMEND ONLY ONE APPLICATION OF WOCA PER DAY.

1st Application:

Woca Master Oil is considered the primer application. Its role is to act as a base for subsequent oil applications. Choose your starting area and pour the oil into a paint tray. Spread the oil with a ¼" nap paint roller and extension pole or lamb-swool applicator. Roll the oil as if you are painting the floor. Continue to spread oil until finished. Do not buff the oil into the floor, as this forces too much oil into the floor and the oil will be too deep. This may cause later bleed back and prolonged drying. When finished, rest your roller in the paint tray or on cardboard. Inspect for shiny spots. Buff or wipe the entire surface with clean white towels to remove any shiny spots. Coverage should approximate 130-170 sq. ft. per liter. It is best to let the primer application dry and harden a minimum of 48 hours, but 24 hours is acceptable before continuing.

! ALL FURTHER OIL APPLICATIONS MUST BE THOROUGHLY WIPED OFF FROM THE SURFACE. DO NOT ALLOW THE OIL TO BUILD UP.

2nd Application and Filling:

The second application is made with a mixture of Woca Master Oil and wood flour to fill joints and spaces between blocks. The Woca Master Oil is mixed with the sanding dust that you accumulated in the drum sander bag during the drum or disc sanding. This filler mixture can be forced into the voids with a sponge trowel or rags, then buffed clean with a towel to remove excess. Buff with white towels to remove excess oil, and know that you cannot over buff. Let this application dry and harden a minimum of 24 hours before commencing with the third application.

NOTE: Other filler materials include stain-accepting patch compound and granulated cork.

3rd Application:



At this point, the third, fourth and fifth applications are made using **Woca Diamond Oil**. This oil should be buffed into the floor with Kaswell green patina discs and 3M white pads until an even sheen has been obtained. Without the green patina discs you will not achieve optimum results. Coverage should approximate 300 sq. ft. per liter. Buff with white towels to remove excess oil, and know that you cannot over buff. Let this application dry and harden a minimum of 24 hours before commencing with any additional applications.

ADDITIONAL APPLICATIONS IF NEEDED:

4th Application:

The fourth application is made with Woca Diamond Oil using 3M white pads under the buffer, without green patina discs. We suggest removal of the small center hole of a 3M white pad, pour a capful of Woca Master Oil into the hole and buff and polish. Continue to spread and polish as you pass the buffer back and forth across the work area. The floor should appear silky, with an even look, with no oil spray or droplets visible. Pour more oil onto the floor as needed and continue polishing. Overlap work areas to ensure an even finish with no spray residue from previous passes. Repeat the process until the floor is finished. Buff with white towels to remove excess oil, and know that you cannot over buff. Coverage should approximate 1,250 sq. ft. per liter. The Diamond Oil will usually pre-harden in 4-6 hours. Allow the oil to cure 72 hours before placing rugs and furniture on the floor.

5th Application:

A fifth application will repeat the process of the fourth application, but without green patina discs. After all oil finish application(s) are complete, the surface can be top coated with urethane. If urethane is to be applied, you must first allow the oil finish to thoroughly dry a minimum of 3 days. No further oiling can be made after urethane is applied unless the floor is re-sanded.

WOCA DRYING TIME

Dry time for careful walking could be after 6 to 8 hours without issue. However, drying time is affected by temperature, humidity, air movement, and exchange. Therefore, we suggest hospital booties be used to protect against damage from footprints, especially construction boots with a grid bottom. Best to wait until the next day before walking. For Woca application the HVAC system should be running with good airflow, between 60°F and 86°F, and within 30-60 RH.

Full cure after all applications have been made will be 3-5 days after the last application, depending on temperature and humidity. **Caution:** DO NOT INTRODUCE WATER DURING CURE TIME.

Woca Oil finished flooring can be covered if necessary within 12-18 hours after the last oil application. Use breathable covers such as brown kraft paper, RAM board, or a combination of both. DO NOT EVER cover the flooring with polyethylene plastic.

HOW TO INCREASE THE LUSTER AND/OR SHEEN LEVEL OF WOCA OILS:

Standard Woca Oils provide a low sheen level. We suggest two methods to increase the sheen level. One is to apply one or two applications of Hard Wax Oil to the surface, applying and buffing it in with 3M white pads, towel buffing off all excess. Since very little Hardwax Oil is to be used, spreading the product must be done carefully and sparingly. We suggest using a squeegee applicator with a sharp edge with lots of downward pressure on the squeegee. Pour a small bead of Hardwax Oil onto the floor, and carry the bead back and forth from one side of the area to the other with the sharp edged squeegee. Only a very small amount of Hardwax Oil will be left behind, and that is correct. Work small areas. No worries for overlap marks. Once the spread is complete, buff the Hardwax Oiled surface with 3M white pads. Dry buff the surface with new clean 3M White pads. You cannot over buff. We suggest the last buffing be done with a soft cloth or felt. This will polish the surface slightly. Allow to dry overnight before using.

Another way is to use patina discs. Patina discs are available in 400, 600, and 800 grit. They are edger type discs that adhere to 3M white pads with velcro. Start with 400 grit patina discs. The resulting luster may be sufficient. If not, then try 600 grit patina discs, etc. The procedure is as follows: Apply Woca Diamond oil to the surface and disc the oil in with the patina discs/white buffing pad. Towel buff off all excess, then re-oil without patina discs and towel buff off all excess again. The last buffing is done with a soft cloth or felt. This will polish the surface slightly. Allow to dry overnight before using. **BE SURE NOT TO ALLOW** the Hardwax Oil to build on the surface. If you are not sure of the results, dry buff again. The results should be the same as the Woca Diamond Oils, but with a slightly higher sheen.

Woca Oils are Volatile Organic Compound FREE. In 2007, new regulations were introduced in the European Union regarding VOC levels in coating materials. All Woca products fulfill these regulations. Woca VOC free oils have the following features:

- Positive influence on the working area and living environment. Improvement of product characteristics and application methods. No effect on indoor-air quality.
- Woca products are certified by independent laboratories, the German Institute for Biological Building Materials, and are in accordance with DIN-Norm 53-160. Woca WoodCare Denmark products meet or exceed the most stringent US standards for volatile organic compounds.

Woca Leed Rating: Woca is a plant-based non-emitting finish, which complies with South Coast Air Quality Management standards and always qualifies for the following LEED credits in the chart below.

Avoid spontaneous combustion: Water-soak all oily cloths after use and place outside of buildings and away from combustible materials.

Environmental Feature	Leed Credit	Lead Points
Rapidly Renewable Materials	Materials and Resources (MR) Credit 6	1
Low-Emitting Adhesives and Sealants	Indoor Environmental Quality (EQ) Cr. 4.2	1

APPLYING URETHANE FINISH

We prefer oil finishes, but if urethane is chosen, either water based or solvent based, we recommend Bona Woodline Satin Urethane or Bona Traffic water based urethane, visit bonakemi.com. Apply one or more applications of urethane finish, solvent-based or water-based. Solvent-based urethanes are preferable, but water base urethanes can also be applied. Check with the chosen manufacturer for more details. Four applications of a urethane may be needed. Apply thin coats until the surface is uniformly sealed.

NOTE: There are many excellent finishes for wood flooring. The choice is many times made according to the experience of the workmen, but in all cases the finishes should be a commercial or industrial brand. Coverage rates on finishes will vary depending on the wood specie. We suggest checking with us before purchasing your chosen finish.

QUESTIONS AND CONCERNS

If there are any questions or concerns, please do not hesitate to contact us before or during installation and finishing. Call or e-mail for technical support. Kaswell Flooring Systems cannot be responsible for results of installations made by others. **We reserve the right to change specifications without notice.**

KASWELL FLOORING

Top 10 maintenance tips:

1. Maintain proper humidity conditions, ideally in the 35-55% range.
2. Vacuum or sweep daily to remove sand and grit.
3. Apply carpet or felt protection to chair legs.
4. Wipe spills promptly.
5. Use walk off mats at entrance doors.
6. Reapply finish at the appropriate time.
7. Only use damp mops. Never use wet mops.
8. Avoid using wax or oil soap products.
9. Use only maintenance products furnished and recommended by the finish manufacturer.
10. Call or e-mail Kaswell regarding your flooring.

CARE & MAINTENANCE INFORMATION PREPARED BY WOCA FOR THEIR OIL FINISH ON KASWELL WOOD FLOORING

To protect your investment, and to ensure that your Kaswell Flooring System maintains its beauty with years of lasting service, we offer the following recommendations for care and maintenance.

Daily maintenance:

For dirt, drips, spots, etc., sweep/dust/vacuum area regularly using broom or cotton cover on swiffer style mop. Woca Natural Soap is available in a spray bottle for easy, touch up wipe ups. Using this light, fine mist spray is an excellent way to prevent future stains. Please be sure to wipe away all liquid. Excessive water will damage wood flooring.

Monthly/Quarterly maintenance procedures using WOCA Cleaning Oil:

The care and maintenance schedule for this type of cleaning may need to be adjusted based on the look of the floor from wear, traffic, etc.

Objective: To leave large floor areas clean of dirt and free of scratches from foot traffic.

Items needed: Slow speed buffer, WOCA Cleaning Oil, WOCA Green Patina Discs under white buffer pads, absorbent cloths around white pads

Working method: Spray WOCA Cleaning Oil on surface area. Using 3 Green Patina Discs on white polish pad, wet buff the WOCA Cleaning Oil into the floor. A second pass with buffer, with a WOCA polishing cloth or cotton rag wrapped around a clean white pad, will be used to remove the excess oil from the floor. The process is totally dependent on the Patina Discs as that add abrasion to the process and grind oil into paste, which both eases its removal and accelerates drying time.

Drying Time: The oil is dry on the surface within 1 hour. A further dry burnish is recommended to remove a latent greasiness on the floor that is attractive to dust. Any oil that remains damp at the start of the dry burnishing stage should be quickly buffed with patina discs beforehand. This serves to convert the oil into a paste and ensure it is picked up by the burnishing pads.

Productivity: A 2-man squad should complete at least 700 sq. ft. per man per hour. After 2 hours of drying, one man should dry burnish the area before traffic begins walking on the floor.

Pros: Cures all the ills the floor may accumulate. Cleans the floor without using water. Keeps the floor saturated with oil helping to keep dirt on the surface instead of deep into the wood grain. Sections can be done at regular intervals. No building closed. Work can be done in the evening and walked on in the morning.

Cons: Areas cleaned with oil must be dry burnished during the same shift (no later than 4 hours). If not, a greasy film will be left on the floor that is attractive to dust walked on it; i.e. it can quickly look dirtier than it nothing had been done!

CARE & MAINTENANCE INFORMATION FOR URETHANE FINISHED FLOORING

Keep the surface free from dirt and abrasive particles by daily sweeping, using a treated flat mop or regular dust mop. Under no circumstances should water be permitted to remain on the flooring more than 10 minutes, either from spills or from washing. Routine cleaning is best accomplished with a damp mop. Be sure no puddles are created or left on the surface. Soft steel wool buffing and waxing can be added. However, if waxes are used, they will make future re-coating with urethane more difficult. An acrylic “after market” product can be used to “dress up” the surface. To refinish with the same urethane used originally will first require screening by rotary disc type sanding machine. Tack-rag dust and recoat. For additional information contact your water-based urethane manufacturer.

KASWELL END GRAIN BLOCKS GRADING AND SIZE TOLERANCE

The National Wood Flooring Association does not provide grading information/rules or size tolerance requirements for end grain block flooring, as they do for conventional hardwood flooring. And so, we offer the following information, and believe it to be an accurate description of our block flooring products.

Wood is a natural product, subject to numerous variations in grain, color, hardness, and dimensional stability. Machine tolerances are measured by us during manufacturing only, with tolerance of +/- .02". Moisture can enter and exit rapidly through the end grain. And so, after manufacturing, the blocks can gain or lose moisture, thus changing their measurement. Our blocks, as well as other wood items, change in moisture content and dimension during and after fabrication, while awaiting shipment, in transit, and at the jobsite. For this reason, as well as others, it is important that the installer measure and record the moisture content of the blocks at time of delivery. Doing so is necessary to determine the length of acclimation time for your project. The target moisture content for all of our wood flooring products is 8-10%, with a 5% allowance for pieces outside that range up to 13%.

There is a grading allowance for hardwood flooring shipments of not greater than 5% of the pieces mis-graded or off graded. However, end grain blocks are not graded at all, and therefore no description that we can make, and no sample that we can make, could encompass all possible variations. However, there is an ASTM specification D1031-86 for industrial pine blocks, which includes block description and size tolerance. The ASTM size tolerance was written as follows: "Permissible variations from the specified dimension shall not exceed 1/16". We recognize that this is for industrial application, and may not be appropriate for high end commercial and residential applications. ASTM does not grade pine blocks but they do describe them in detail, and we have adopted their standard for all of our end grain species for commercial and residential applications as follows: "Blocks should be sound and well manufactured, square butted, and square edged, and shall be free from unsound, loose or hollow knots, knot holes, and other defects such as shakes and checks that would be detrimental to their performance". In most cases, normal season checks in end grain blocks are not detrimental to their performance and so we do not consider checks to be a defect.

We can produce blocks in many species that are check-free, sap-free, knot-free, pitch pocket-free, blueing-free, and the number of annual growth rings per inch can even sometimes be part of a specification. These natural conditions should be addressed when ordering. We encourage you to speak with us about your particular project and specie choice.

Although our logs are kiln dried to 8-12% +/-2%, square blocks can go "out of square" after fabrication because radial and tangential expansion and contraction is different. Even rectangular blocks can "go out of rectangle" with a change in moisture content. We recommend our blocks not be installed tightly together side by side. Our installation instructions advise the blocks should be slightly spaced apart to accommodate slight irregularity of size and shape. The space can allow for some growth as well and the net affect will be that "out of square" or "out of rectangle" blocks can appear below the JND, the "Just Noticeable Difference" (in size and shape). If slightly irregular squares, rectangles, or hexagon blocks are installed tightly together, the blocks might appear slightly above the JND, and you might deem them un-useable or unacceptable for your project.

Running bond patterns of both rectangles and squares can easily be created below the JND. However, due to slight size variation, you should "open an installation of square blocks" even slightly if a tile pattern is required. The four points of the four blocks must meet. Therefore, square blocks must be carefully placed during installation. All voids created from spacing can be easily filled during the finishing process.

KASWELL LIMITED WARRANTY

Seller warrants for a period of two years from date of delivery that Kaswell flooring is free from defects, which makes the flooring not fit for use for which they are normally intended. Seller's only obligation during this warranty period is, at its sole option, to either repair, replace, refund or credit the purchase price of the flooring, or part thereof, found to be so defective. At the conclusion of this warranty period, Seller shall be under no further obligation whatsoever. This warranty is void in the event of negligence, abuse, abnormal usage, misuse, accidents, improper installation, improper maintenance, or any circumstances or conduct beyond the control of the Seller, most particularly job-site conditions. Seller is not liable for consequential damages arising out of or in connection with the sale or use of Kaswell wood flooring including, but not limited to, all labor and/or material charges or loss of income or profit relating to the goods in any way whatsoever.

CONDITIONS OF SALE

All pricing is per sq. ft. or surface measure with no milling or cutting waste figured.

All orders are subject to availability of stock for prompt delivery.

Special orders are non-cancelable and non-refundable.

A 15% restocking and handling charge is applicable on all authorized returns.