Newcastle Hardwoods • •









The luminous quality of Newcastle Hardwoods cannot be underestimated! Metallic powders infused through the staining process is a contemporary method offering a fresh take on hardwood flooring. Five iridescent 8" wide engineered White Oak planks are painted and wire brushed in a cool neutral palette that engages an unexpected natural sensibility.













Installation Photo Featuring Newcastle Hardwoods - FLADR541

View collection web page for the complete offering including additional product options, corresponding Spec ID# and updates.

SPECIFICATIONS

THICKNESS: 3/4" WIDTH: 8"

LENGTH: Random Lengths from 17" to 82.5"

CONSTRUCTION: Engineered with Beveled Edge, 5mm wear layer

SPECIES: White Oak

FINISH: Painted/Wirebrushed, UV-cured Urethane with Aluminum Oxide

INSTALLATION: Nail-Down, Staple, Glue-down, Float

- GREENGUARD Gold Certification
- Cradle To Cradle Certified™
- CARB II Compliant
- Lacey Act Compliant
- In Stock products are subject to availability
- Please note that variations in color and texture may occur due to the nature of the material



INSTALLATION METHOD

IMPORTANT INFORMATION BEFORE YOU BEGIN

It is **EXTREMELY IMPORTANT** that you read and understand this information completely prior to starting, since improper installation can void the warranties.

Installer/Owner Responsibility

Carefully inspect ALL material prior to installation for defects. Materials installed with visible defects are not covered under warranty. Remember – Wood is a natural product that can vary in color, grain, and contains natural characteristics that varies from plank to plank and is to be expected. We do not warrant against these natural variations from plank to plank or variations from sample to plank. Remember – If you are not satisfied with the flooring prior to installation, contact your dealer – DO NOT INSTALL the flooring. Accepting or rejecting the material must be done on full shipment of quantities only, not carton by carton or plank by plank. Material is manufactured to exceed industry standards (ANSI/HPVA EF 2009).

- We urge you, as the final inspector to inspect for proper color, finish, style, and quality PRIOR to installation. Verify that the flooring is the correct material. Care should be taken at this time to remove or repair particular characteristics you do not desire. Manufacturer declines responsibility for any costs incurred when plank(s) with visible defects have been installed.
- The use of stain, filler, or putty stick for the correction of minor defects during installation should be accepted as normal procedure.
- 5% cutting allowance, depending on layout, must be added to the actual square footage amount needed. (Diagonal, herringbone, or bordered installations will require a higher percentage)

TOOLS AND EQUIMENT NEEDED:

- Broom or vacuum
- Tape Measure
- Chalk Line & Chalk
- Niosh designated Dust Mask
- Moisture Meter
- Hand Saw
- Electric Miter
- Hammer

- Safety Glasses
- Color Wood Filler
- Saw/Table Saw
- Pry Bar

PRE-INSTALLATION & JOBSITE CONDITIONS

It is the installer/ owners' responsibility to ensure that the jobsite conditions and jobsite subfloor are environmentally and structurally acceptable prior to the installation of any hardwood flooring. The manufacturer declines any responsibility for failures or deficiencies of hardwood flooring resulting from or related to sub-floor, sub-surface, or job-site environmental conditions. All substrates must be clean, flat, dry, and structurally sound.

- Subfloors must be clean and free of dirt, curing compounds, sealers, drywall mud, paint, wax, grease, urethane, or other materials that may affect the integrity of the flooring material or adhesives used to install the flooring.
- Install cabinets prior to flooring to prevent damage to the flooring. Shaw is not responsible for removal of cabinets in the event of a claim.
- All subfloors and subfloor systems must be structurally sound and must be installed following their
 manufacturer's recommendations. Local building codes may only establish minimum requirements of the
 flooring system and may not provide adequate rigidity and support for proper installation and
 performance of a hardwood floor. Whenever possible install the planks perpendicular to the floor joists
 for maximum stability.
 - Our warranties DO NOT cover any problems caused by inadequate substructures or improper installation of said substructures.
- Test wood sub floors and wood flooring for moisture content using a pin-type moisture meter. Take readings of the subfloor minimum of 20 readings per 1000 sq. ft. and average the results. In most regions, a "dry" subfloor that is ready to work on has a moisture content of 12% or less and the wood should be within 4% of the subfloor moisture content.
- ASTM F-2170 in-situ relative humidity 75% RH or less is acceptable. Readings greater than 75% RH require the use of a proper vapor retarder.
- ASTM 1869 The moisture content for concrete subfloors registered after a calcium chloride test should not be greater than 3 pounds per 1000 square feet of area. If it exceeds these limits, DO NOT install the flooring. **Before moisture testing begins, the slab must be cured for a minimum of 30 days.**



- Basements and crawl spaces must be dry. Use of a 6 mil black polyethylene is required to cover 100% of
 the crawl space earth. Crawl space clearance from ground to underside of joist to be no less than 18" and
 perimeter vent spacing should be equal to 1.5% of the total square footage of the crawl space area to
 provide cross ventilation. Where necessary, local regulations prevail.
- The subfloor must be flat, meeting a minimum of 3/16" within 10' or 1/8" in 6'.

CONCRETE SUBFLOORS:

Grind high spots. Use cementitious patching and leveling compounds that meet or exceed ASI's maximum moisture level and pH requirements. Use of gypsum-based patching and/or leveling compounds which contain Portland or high alumina cement and meet or exceed the compressive strength of 3,000 psi are acceptable. Follow the leveling compound manufacturer's instruction. Leveling compounds must be allowed to thoroughly cure and dry prior to installation of wood flooring.

WOOD SUBFLOORS:

For staple down application use layers of 15lb. felt or wooden shims to fill low spots. Staples must be able to penetrate for holding power.

- All "wet" work i.e. paint, drywall, concrete, masonry, plumbing must be complete and dry well in advance of delivery of hardwood flooring
- Gutters and downspouts should be in place and the exterior grade complete to allow for proper drainage of water away from the building's exterior perimeter.
- Flooring should not be exposed to extremes of humidity or moisture.
- Permanent HVAC should be on and operational a minimum of 5 days and maintained between 65 75 degrees and a relative humidity of 35%- 55% prior to delivery, during, and after installation of the flooring.
- If HVAC is not possible at time of installation the environmental conditions must be at or near normal living conditions between 60 80 degrees and at the average yearly relative humidity for the area.

It is the Installer/Owner responsibility to ensure that the conditions are acceptable prior to the installation of the hardwood floors. The manufacturer declines any and all problems with the hardwood flooring that are related to or attributed to improper jobsite conditions

RECOMMENDED SUBFLOOR SURFACES

CONCRETE SUBFLOOR GUIDELINES:

Concrete slabs should be of high compressive strength and constructed to prevent groundwater from permeating the concrete. Engineered hardwood flooring can be installed on, above, or below-grade. In addition, it can be installed over above-ground, suspended concrete floors. The suspended concrete must be a minimum of 11/2 inches thick and must be structurally sound. The exception to this is lightweight concrete (which usually contains high amounts of gypsum) having a density of 100 pounds or less per cubic foot. Test for lightweight concrete by using a nail to scratch the surface of the concrete. If the concrete crumbles or turns to powder, it is not sound, and you should NOT install the hardwood flooring. Use the floating installation method (5 ply products 3" or wider) only for lightweight concrete subfloors.



WOOD SUBFLOOR GUIDELINES:

Subfloor panels should conform to U.S. Voluntary Product Standard PS1-07, Construction and Industrial Plywood and/or US Voluntary PS 2-04 and/or Canadian performance standard CAN/CSA 0325.0-92 Construction Sheathing. Other CSA standards also apply.

ACCEPTABLE PANEL SUBFLOORS: Truss/joist spacing will determine the minimum acceptable thickness of the panel subflooring.

- On truss/joist spacing of 16" o/c or less the industry standard for single panel subflooring is minimum 5/8" 19/32", 15.1 mm) CD Exposure 1 subfloor panels, 4x8 sheets.
- On truss/joist spacing of more than 16", up to 19.2" (488mm) o/c, the standard is nominal ¾" (23/32", 18.3 mm) T&G CD Exposure 1 Plywood subfloor panels, (Exposure 1) or nominal ¾" 23/32", (18.3mm) OSB Exposure 1 subfloor panels, 4'x8' sheets, glued and mechanically fastened.
- truss/joist systems spaced over more than 19.2" (488mm) o/c up to a maximum of 24" (610mm) require minimum 7/8" T&G CD Exposure 1 Plywood subfloor panels, (Exposure 1), or minimum 7/8" OSB Exposure 1 subfloor panels, 4'x8' sheets glued and mechanically fastened or two layers of subflooring or brace between the truss/joist in accordance with the truss/joist manufacturer's recommendations and with local building codes. Some truss/joist systems cannot be cross-braced and still maintain stability.
- For existing wood floors install new flooring at right angles to the existing flooring.
- Do not glue, staple, or nail down hardwood flooring over particle board, floating application is acceptable (products 3" or wider).
- Do not install over existing glue down hardwood floors.

CERAMIC TILE AND TERRAZZO:

All wax and sealers must be removed with an appropriate cleaner/stripper. Ceramic tile and terrazzo should be abraded to allow for proper adhesion. Check for loose tiles by tapping and re-adhere. Fill grout lines with a cementitious latex fortified leveling compound.

RESILIENT TILE, RESILIENT SHEET VINYL:

Material must be full spread and secured to the subfloor. Do not install over perimeter glued floors. Do not install over more than one layer that exceeds 1/8" in thickness.

NAIL/STAPLE DOWN ONLY - If old flooring is unsuitable to install new flooring, then overlay with new underlayment. Test to conclude that the staples/cleats are able to properly penetrate and secure the flooring to the subfloor.

GLUE DOWN ONLY - Do not install over more than one layer that exceeds 1/8" in thickness. Clean flooring with an appropriate cleaner and allow to thoroughly dry. If necessary, degloss the floor using an abrasive pad to enhance the bonding of the adhesive, if wax or other coatings are present, completely remove the material with a quality stripper, rinse the floor and allow to dry. Always check for proper adhesion bond prior to installing.

CAUTION: DO NOT SAND any existing resilient tile, sheet vinyl flooring, or flooring felt as they may contain asbestos fibers that are not readily identifiable. Inhalation of asbestos dust can cause serious bodily harm. Check local, state, and federal laws for handling hazardous material before attempting the removal of these floors.

ACOUSTIC CORK UNDERLAYMENT (GLUE DOWN ONLY):

Install the cork underlayment according to the manufacturer's instructions. The cork underlayment must be fully adhered to the subfloor. The cork underlayment should be of pure granulated cork combined with a polyurethane binder with a minimum density of 11.4 lbs. per cubic foot and not to exceed 13 lbs. per cubic foot.



PRE-INSTALLATION/JOB PREPARATION

INSPECT THE FLOORING:

Inspect material for color, finish, milling, and grade. Hold out pieces that may not be acceptable once installed.

PLEASE NOTE: We do not accept responsibility for any costs incurred when plank(s) with visible defects have been permanently installed.

UNDERCUT DOOR CASINGS:

Undercut all door casings 1/16" higher than the thickness of the flooring being installed. To do this, use a scrap piece of flooring as a guide. Lay it on the substrate and cut the casing with a handsaw or use a power jamb saw set at the correct height.

BLENDING OF CARTONS:

To achieve a uniform appearance across the entire floor, we highly recommend that you open and work from several cartons at a time and dry-lay the flooring, mixing the planks from several cartons. This will allow you to blend the planks for maximum aesthetic appearance. Make certain the room is well lit to ensure color is consistent and that any visual defects can be seen and removed.

MATCH TRANSITION MOLDINGS:

For best appearances blend all transitions and moldings to planks that have similar color and graining. Set them aside for use as needed.

LAYOUT OF FLOORING:

"Racking the Floor" is essential to achieve a random appearance. Start by either using random-length planks found in the carton or by cutting four or five planks in random lengths,

differing by at least six inches. As you continue working across the floor try to maintain a six-inch minimum between end joints. Randomly install different lengths to avoid a patterned appearance. Never waste materials; the end cuts from starter rows should be used at the opposite side of the room to complete rows or used to start the next row.

EXPANSION SPACE:

Expansion space around the perimeter is required and should be equal to the thickness of the flooring material. For floating installation, the minimum is $\frac{1}{2}$ " regardless of the thickness of the material. For commercial installations use a minimum of $\frac{1}{2}$ " expansion.



GLUE DOWN INSTALLATION GUIDELINES

ADDITIONAL TOOLS AND MATERIAL NEEDED:

- Hardwood Adhesive
- Mineral Spirits/Urethane Adhesive Remover
- Straight Edge

- Clean White Rags
- Adhesive Trowel

NOTE: Refer to the adhesive label for proper trowel required, spread rates, and installation application information!

Before you begin using the following instructions, please refer to the pre-installation job prep information above.

GETTING STARTED:

STEP 1:

Select a started wall. An outside wall is best: it's most likely to be straight and square with the room. Measure out from this wall, at each end, the width of two planks including the tongue plus the space needed (3/8" or 1/2") for expansion.

STEP 2

Snap a chalk line from these points, parallel to that wall.

STEP 3:

Prior to installing the flooring, secure a straight edge inside the chalk line to act as a guide and to prevent the row of planks fro shifting during installation. The straightedge could be a straight piece of lumber or piece of flooring. Alternatively, the first row can be face-nailed with finishing nails into the wood subfloor or prig nailed into a concrete subfloor.

SPREADING THE ADHESIVE:

Using the proper trowel, hold the trowel at a 45° angle to ensure proper spread rate of adhesive. Apply pressure to allow the trowel to leave ridges of adhesive on the substrate with little adhesive left between the ridges. This will help to achieve the proper spread rate of the adhesive. Temperature and air flow across the adhesive can have an effect on the open time of the adhesive. 3X (or urethanes) will have a longer open time in areas of low humidity and will have a shorter open time in areas of high humidity. (See Adhesive label for further information).

INSTALLING THE FLOOR:

STEP 4:

Spread adhesive from the chalk line/straightedge out to approximately the width of two planks. Install the first row of starter planks along the chalk line/straightedge and secure into position with the tongue facing the starter wall.

NOTE: Proper alignment is critical. Misaligned starter rows can cause side and end gabs to appear in proceeding rows of flooring. When you have the starter rows complete, you can begin the next row.

STEP 5:

When you are certain the first two starter rows are straight and secure, spread adhesive 2 to 3 feet wide across the length of the room. As a general rule, never spread more adhesive than can be covered in 30 to 45 minutes. If the adhesive has skinned over, remove dried adhesive and trowel new adhesive.

STEP 6:

Continue to install planks and push them into place. Place the tongue of the board into the grooves of installed boards and press into the adhesive. As you continue working across the floor try to maintain a six-inch minimum space between end joints. Randomly install different lengths to avoid a patterned appearance.

NOTE: Never strike a rubber mallet or hammer directly on the flooring to engage the tongue-and-groove. This practice can damage the flooring and/or the finish.



STEP 7:

Remove the adhesive from the surface of the installed flooring as you work – this will help to save time. A damp rag with water or mineral spirits will remove adhesive. Frequently change towels to avoid leaving a haze on the flooring surface. **DO NOT** use water to remove Urethane adhesives from the finish.

STEP 8:

As you approach the end wall it may be necessary to cut the width of the last row – be sure to allow for the expansion space along the end wall. Once the final cuts are made set planks into place.

STEP 9:

After the floor is complete remove the straight edge and glue down the first two boards.

STEP 10:

Restrict foot traffic for a minimum of 6-8 hours and wait 24 hours before permitting moving of furniture onto the floor.

STEP 11:

Clean any wet adhesive from the flooring with a lightly dampened clean cloth. If the adhesive has dried, use mineral spirits on a clean cloth. For Urethane adhesive use the recommended urethane adhesive remover.

STEP 12:

Roll and cross roll floor with a 100-150 lbs. (45-70 kg) roller at the end of the installation to ensure proper transfer of adhesive.

When installing unfinished wood flooring, wait a minimum of 72 hours before sanding.

FINAL INSPECTION:

After the floor has been cleaned, inspect the floor for nicks, scratches, gaps or planks that may have moved during installation, as well as any other imperfections that need attention. Touch up nicks and scratches with touch-up products. In typical climates, the new floor can accept foot traffic within 24 hours. In areas where additional curing time is required, more time may be needed.



NAIL OR STAPLE DOWN INSTALLATION GUIDELINES

ADDITIONAL TOOLS AND MATERIAL NEEDED:

- Drill
- Compressor
- In-line Air Regulator
- 15 lb. Roofers

- Tapping block
- Air Hose
- Pneumatic Nailer/Stapler
- Felt

Before you begin using the following instructions, please refer to the pre-installation job prep information above.

Note: Our products are not warranted against squeaking, popping or crackling when using staple-down or nail-down installation methods. Some squeaking, popping or crackling is normal and possible when using staple-down or nail-down installation methods. These symptoms may be aggravated in arid areas or during dry conditions.

GLUE ASSIST:

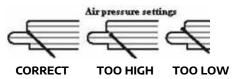
For products greater than 5" in width, it is recommended to use a combination glue down assist when using mechanical fasteners. Apply a urethane-based wood flooring adhesive to the subfloor prior to installing the planks. Follow the standard fastener schedule.

*This installation method doesn't require the use of a traditional vapor retarder, which enables the glue to adhere to the subfloor rather than the paper.

SET UP AND USER OF PNEUMATIC STAPLERS AND NAILERS:

Minor occasional noises within the flooring are inherent to all staple/ nail-down installations and can change as environmental changes occur. This is not a manufacturing defect and is therefore not covered under our warranties (see warranty brochure for complete warranty coverage). You can help reduce squeaking, popping, and crackling by being sure that the subfloor is structurally sound, does not have any loose decking or joists and is swept clean prior to installation. You should also be sure that your stapler or nailer is setting the fastener properly, not damaging the planks, and that you are using the correct nailing schedule.

When used improperly, staples or cleats can damage wood flooring. If the tool is not adjusted properly the staples/ cleats may not be positioned at the proper angle and cause blistering, peaking, squeaking, or crackling of the floor. Some models may require the use of an adapter to adjust for proper thickness. Test the tool on a piece of scrap material first - set the stapler/nailer flush on the tongue side of the plank and install a staple/ cleat. Should the staple/ cleat penetrate too deeply reduce the air pressure; if the staple/ cleat is not deep enough then increase the air pressure using an in-line regulator. The crown of the staple/ cleat should sit flush within the nail pocket to prevent damage to the flooring and to reduce squeaking. The flooring manufacturer is not responsible for damage caused by the mechanical fasteners.



IMPORTANT NOTE: Only use manufacturer's recommended staples or cleats.

- For 3/8" thick products, the minimum length staple/cleat is 1"
- For ½" thick products the minimum length staple/cleat is 1 ¼"
- For 9/16" thick products use a minimum length 1 ½" staple/cleat

Read and follow the manufacturer's instructions for complete set-up and operation of equipment.



GETTING STARTED:

STEP 1:

After the subfloor has been properly cleaned and prepped cover the subfloor with 15lb. asphalt felt paper. This material will help to keep the floor clean and help to retard moisture from below (there is no complete moisture barrier system for staple or naildown applications).

STEP 2:

Select a starter wall. An outside wall is best: it's most likely to be straight and square with the room. Measure out from this wall, at each end, the overall width of the plank [board width + tongue + the space needed (3/8" or ½") for expansion].

STEP 3:

Snap a chalk line from these points, parallel to that

STEP 4:

Install the first row of starter planks along the chalk line/straightedge and secure into position with the tongue facing away from the starter wall (toward you). Drill pilot holes through the face of the plank every 6" (in the dark grain); approximately 1" from the back edge of the board and secure planks with 1" finishing nails. Countersink nails and fill with appropriate colored wood filler – remove excess filler from surface.

STEP 5:

Blind nail at a 45° angle through the tongue 1"-2" from the end joints and every 6" in between along the length of the starter boards (Predrill holes to make this easier). Depending on the width of the flooring it may be necessary to do this for the first few rows prior to using a pneumatic stapler/nailer.

NOTE: Proper alignment is critical. Misaligned starter rows can cause side and end gaps to appear in proceeding rows of flooring.

COMPLETING THE JOB - ALL INSTALLATIONS

- Sweep or vacuum floor
- Clean the floor with proper hardwood floor cleaner
- Install transition pieces -i.e. thresholds, t-moldings, base boards and quarter round. Nail moldings to wall, not the floor.
- Inspect final floor for nicks and or minor gaps fill with appropriate color wood putty.
- Unused material should be left with owner and stored in a dry place in case of future repairs are needed.
- Use plywood or hardboard when moving heavy appliances or furniture across floor.

FLOOR PROTECTION DURING CONSTRUCTION

After installation, if you choose to protectively cover the floor, cover the floor completely, since some species are light-sensitive and uncovered areas may change color. Use a covering material with a vapor permeance (perm rating) of 1 perm or more (tested I accordance with ASTM E-96) to avoid trapping moisture/vapor on or within the floor. Any covering should be taped, using a low-adhesion tape, to base or shoe moldings. Avoid taping to finished flooring. When taping paper or sheets together, tape them to each other, not to the floor.



MOLDINGS HELP YOU MAKE EASY TRANSITIONS

T-MOLDINGS

Used to create a transition between floor coverings of similar heights or to cover an expansion gap.

STAIR NOSING

Used in conjunction with flooring installed on steps or provide a finished edge. Secure by gluing and nailing/screwing down into place. Predrill holes to avoid splitting.

REDUCER STRIPS

Used to transition floor coverings of differing heights wood floor to vinyl, vinyl composition tile, or low-pile carpet. Can also be used to border a fireplace.

THRESHOLDS

Used to transition floor coverings or to create a break between floor coverings – wood to carpet, can be used as a trim molding around fireplaces or sliding glass doors.

QUARTER ROUND MOLDINGS

Used to cover the expansion space between the Wall Base and your hardwood floor. You can also use them to make smooth transitions between the floor and cabinetry.

WALL BASE MOLDINGS

Can be stained and finished to the color of the flooring to be used an alternative to painted baseboards.



MAINTENANCE

Remember, like any floor covering, our factory finished wood floors will show signs of wear over time, depending on the size and lifestyle of your family. By observing a few precautions and setting up a regular cleaning routine and maintenance program, you can expect years of beauty from your floor. The following are examples of the reasonable and necessary maintenance you are expected to perform. They are not intended to be an exclusive list.

- 1. Sweep or vacuum regularly since built-up grit can damage the surface of the wood. The vacuum head must be a brush or felt type. Be certain the wheels of the vacuum are clean and do not damage the finish. Do not use a vacuum with a beater bar head.
- 2. Remove spills promptly using a soft cloth and cleaning products recommended by the manufacturer.
- 3. Never wet-mop, damp-mop, or clean your floor with water or other products. This can severely damage the flooring and will void the warranties. Do not use hardwood floor cleaning machines or steam cleaners. See section on Improper Maintenance.
- 4. Use the manufacturer's recommended Hardwood floor cleaners with a clean terry cloth mop. Always sweep or vacuum the floors prior to using wood floor cleaners. Do not allow excess cleaner to remain on the floors surface as this may permanently damage the wood fiber.
- 5. Important: Do not use oil soaps, liquid or paste wax products or other household cleaners that contain citrus oils, lemon oil, tung oil, silicon, or ammonia since these warranties do not cover damage caused by non-recommended products. Use of these and other such products will harm the long-term performance of your floor and may also affect its recoat ability.
- 6. Do not use 2 in 1 cleaners with polish that may contain acrylics or urethane polish to restore gloss the use of these products will void the finish warranty and may produce unsatisfactory results when not applied properly.
- 7. Keep pets' nails trimmed, and paws clean and free of dirt, gravel, grease, oil, and stains.
- 8. Place protective felt pads beneath furniture legs and feet to reduce scratches and dents. Replace pads as needed.
- 9. Use a dolly and protective sheets of plywood when moving heavy objects, furniture, or appliances.
- 10.Make certain furniture casters are clean and operate properly (a minimum 1" wide vinyl surface where it meets wood is recommended). Clean wheels periodically to remove dirt and debris.
- 11. Remove shoes with spiked or damaged heels before walking on floor.
- 12. Exposure to the sun and its UV rays accelerates the oxidation and aging of wood. This can cause the stain and/or wood to fade and/or to change color. We recommend that you rearrange rugs and furniture periodically so the floor ages evenly. Exotic species such as Brazilian Cherry are more susceptible to color change during the aging process. These warranties do not cover damage from the sun and its UV rays.
- 13. Use area rugs in high traffic areas and pivot points (e.g., stair landings, room entries, etc.), especially if you have a large family or indoor pets.
- 14. Maintain the proper Relative Humidity in your home between 35% 55%. The use of a humidifier during heating seasons.

WARRANTY

5 YEAR LIGHT COMMERCIAL LIMITED WARRANTY



TECHNICAL DATA

- **Cradle To Cradle Certified**TM: Verifying safe, recyclable or reusable ingredients across material health, material reutilization, renewable energy, water stewardship and social fairness.
- **GREENGUARD Certification:** Ensuring products meet design specifications for indoor air quality.
- California Air Resource Board (CARB) Certification: To promote low carbon development for cleaner, breathable air.
- **The Lacey Act:** Our hardwood is sustainably sourced in compliance with US law to protect and conserve our world's forests.
- Radiant Heat Approved
- Janka Hardness Rating: 1360

