



Exterior End Grain Wood Pavers

revised 8/2019

INSTALLATION, FILLING/FINISHING, AND MAINTENANCE INSTRUCTIONS FOR EXTERIOR BLACK LOCUST PAVERS

Black Locust Pavers, with optional tongue and groove for installation, and on mesh with or without spacing. Other species available: Iroko, Mesquite, Redwood and treated Pine.

! PLEASE READ THE ENTIRE SPECIFICATION BEFORE STARTING THE INSTALLATION.

EXTERIOR END GRAIN WOOD PAVERS

Wood pavers are fabricated from wet wood. They are not dried prior to shipping. After installation, pigmented oils/sealers, some offering UV protection, can help preserve the pavers, enhancing their natural color.

Black Locust is a medium-sized deciduous tree native to the central-eastern United States. Extremely hard, and rot resistant. Black Locust will “weather” in a gray tone. Once “weathered”, the pavers will remain unaltered in appearance for years. Because of its’ superior rot resistance, Black Locust is commonly used for fence posts, boat building, and mine timbers.



Weathered pavers with grooves.

SIZES, SHAPES, AND PATTERNS:

Sizes: Pavers can be cut to most any thickness. We recommend they be 3" to 4" in depth, with minimum of 1½". Standard face sizes: 4" x 4", 4" x 6". Other sizes include: 4" x 8", 4" x 10", 6" x 6". Custom face sizes on request.



1½" x 4 x 4 black locust with aluminum spine on gravel.

Shapes: Squares, rectangles, and hexagons (*Mesquite pavers shown on right*), with optional polished edges and corners.



Patterns: Running bond or tile pattern



2" depth x 4" x 6" Black Locust pavers on mesh, in running bond pattern, no spaces.



2" depth x 4" x 4" Black Locust pavers on mesh, in tile pattern, with 3/8" spaces.

FORMATS AVAILABLE:

- 1.) Pavers without grooves.
- 2.) Pavers with grooves, standard ¼" deep on two parallel

paver sides, 1/8" width grooves for 1/2" x 1/8" aluminum spline, creating a tongue and groove assembly.

3.) Pavers on plastic mesh panels. Panel size approximately 2' x 3', with or without spaces between pavers. They can be ordered with uniform spacing up to 1/2" in width (ADA compliant)



Pavers on plastic mesh panels.

CONDITIONING

All exterior pavers ship at or near 25% moisture content. We recommend they be significantly wetted again before installation to raise or maintain the moisture content to 25% or above. The intention is to install the pavers at their largest size possible, especially if tight joints are to be created during installation, so that only shrinkage after installation can occur.

EXPANSION VOID

Perimeter expansion joints or voids should not be needed if pavers are placed at their largest size possible. Cork strips, asphaltic fiber strips, or rubber gasket material 1/2" to 1 1/2" wide should be used against vertical obstructions.

INSTALLATION

1.) Pavers can be installed without adhesive directly over compacted soil, stone dust, or sand, with proper drainage. We recommend pavers be at least 2 1/2" in depth. Tongue and groove spline assembly may prevent pavers from being removed after installation, especially after shrinkage. Be sure surface water can leach into the ground. When installing splines, be sure to leave a spline space every 5-6' on each row to allow water to migrate below the spine to the base.

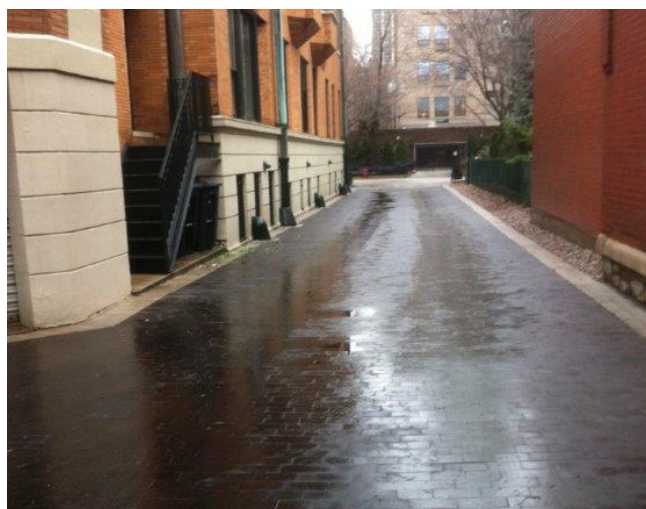
2.) Pavers can be installed dry or glued on to a concrete slab with proper drainage. Concrete must be pitched at least two degrees for proper run-off, or holes can be made in the concrete slab for essential drainage. We recommend Synthetic Surfaces, Inc., Scotch Plains, NJ, #34 G Adhesive be used for gluing.

3.) Pavers can also be installed over a drainage pad system to allow water to migrate to below the paver surface.

4.) All Black Locust areas must be framed with wood, concrete, or other material to keep pavers in place at their perimeter.



Black Locust installation over sand, no grooves, no mesh.



Black locust pavers street application wet from rain.



2 1/2 depth x 4" x 6" rectangular Black Locust pavers with aluminum spline for tongue and groove installation.

MACHINE SANDING (OPTIONAL)

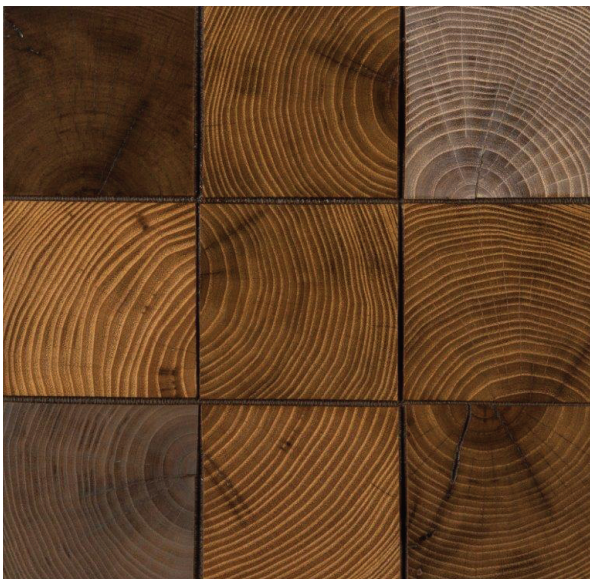
If a smoother surface paver is desired after installation, you must allow some surface drying before sanding. Sandpaper will deteriorate rapidly if the pavers are wet.

FILLING VOIDS (OPTIONAL)

Filler materials include sand, granite grinds (available in colors), crushed marble, recycled aggregates, granulated cork, walnut shells, gravel/soil. Sweep chosen filler across the paver surface to fill in all voids or spaces. If mesh panels are installed with spaces, the use of a vibrating machine will help the filler to better reach the bottom of the joints. For maximum longevity keep the joints or spaces filled between the pavers to help prevent loose pavers from developing.

FINISHING

Black locust is the most rot resistant specie we offer, and does not require penetrating oils for longevity. In fact, immediately following paver placement while wet, oils will not penetrate. When pavers begin to dry at the surface, you could effectively use a penetrating oil. We recommend **Woca Exterior oils**, (see woca.com) available in a multitude of colors. Penetrating oils are not coatings and so if used they must be thoroughly wiped from the surface to remove all excess oil. Or, re-wet the pavers to close the shrinkage cracks and spaces. Displacement of moisture by penetrating oils is preferred, but adding back the lost moisture is a good remedy as well.



Square pavers, machine sanded with Woca penetrating oils in colors or neutral.



Vibrating sand joint filling.

SLIP RESISTANCE DATA

Slip tests were conducted for both wet and dry black locust end grain pavers. The black locust pavers test indicate they are “unquestionably above the Slip Resistance Factor range that is considered non-slip when measured wet or dry”. You may request a copy of the full report.

MAINTENANCE

To enjoy the longevity of end grain black locust pavers we strongly recommend they remain wetted to keep them tight to each other. For installations where pavers are spaced, we recommend the joints or spaces between pavers be near 100% filled. Re-filling and possibly re-oiling, if ever done, should be considered annually.

KASWELL PAVERS

Exterior maintenance tips:

- Wipe colored spills promptly.
- Keep joints filled, if possible.
- Apply penetrating exterior oils, if possible.
- Keep a secure perimeter.

CARE & MAINTENANCE FOR YOUR OIL FINISHED BLOCK PAVERS

To protect your investment, and to ensure that your Kaswell Paving System provides years of lasting service, we offer the following recommendations for care and maintenance.

For oil finished paving:

Lightly clean with denatured alcohol, mineral spirits, lacquer thinner, or oil finish cleaner. Re-oil as needed, towel off immediately, and buff with soft pads. Keep the pavers free from dirt and abrasive particles by sweeping or vacuuming. **Note: Do not apply urethane coating to any outdoor pavers.**

Kaswell suggests a block paver moisture content of 25% or higher for exterior installations that are subjected to typical amounts of rain and snow. Unless advised otherwise, Kaswell will not dry the stock before fabrication into block pavers. For drier locations, pavers should be ordered at 15% or less. In place shrinkage can be filled with granulated cork, Bostik Flexible fillers, or Kafka grinds. Kaswell suggests that pavers be maintained with elevated moisture content either via rain-water or periodically via hose to combat shrinkage. By purchasing this product, you acknowledge that shrinkage and separation of wood is normal and not considered a defect. Notwithstanding the foregoing, for any unique environment such as deserts, dry areas, high humidity locations, or tropical climates, it is strongly recommended to consult with Kaswell Paving Systems to better determine the suitability of the product in the proposed project environment.

Maintenance is very important. Please call or e-mail us regarding your pavers and your needs.

KASWELL END GRAIN PAVERS GRADING AND SIZE TOLERANCE

The National Wood Flooring Association does not provide grading information/rules or size tolerance requirements for end grain pavers, as they do for conventional hardwood flooring. And so, we offer the following information, and believe it to be an accurate description of our paving 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 pavers can gain or lose moisture, thus changing their measurement. Our pavers, 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 pavers at time of delivery. Doing so is necessary to determine the length of acclimation time for your project. The target moisture content for our pavers is 15-20%, with a 5% allowance for pieces outside that range.

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 pavers 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 pavers, which includes paver 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 pavers 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: "Pavers 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 pavers are not detrimental to their performance and so we do not consider checks to be a defect.

We can produce pavers 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.

Square pavers can go "out of square" after fabrication because radial and tangential expansion and contraction is different. Even rectangular pavers can "go out of rectangle" with a change in moisture content. We recommend our pavers not be installed tightly together side by side.

KASWELL LIMITED WARRANTY

Seller warrants for a period of two (2) years from date of delivery that Kaswell exterior Black Locust pavers are free from material defects, provided the Kaswell pavers are installed according to the specifications provided by Kaswell in its Exterior Paver Specifications (revised 2/2019), and used under normal conditions as outlined in said Exterior Paver Specifications, except as modified herein. It is agreed that if any paver does not comply with this warranty, Seller will either repair the defect, provide replacement paver(s), or refund the purchase price at its sole discretion.

This warranty does not apply to failure of, damage to, or deterioration (including without limitation texture or color change) of the Kaswell exterior pavers from: (i) faulty subsurface preparation; (ii) failure due to settling or degradation of the subsurface; (iii) failure due to standing water or improper drainage; (iv) improper installations or applications not in accordance with Kaswell Exterior Paver Specifications; (v) fading or weathering due to environmental affects; (vi) materials provided by or actions of any person other than Seller; (vii) events of force majeure, including storms, floods, hurricanes, earthquakes, fires, lightning, tornadoes, or other acts of god; (viii) vandalism, civil unrest or other accidental or intentional events; (ix) contact with chemicals not suited for Kaswell exterior pavers, or other contaminant; or (x) normal wear and tear.

In addition, any labor associated with the removal and/or replacement of pavers is not included in this Warranty. Any claim must be submitted, in writing, along with proof of purchase and continued property ownership, to the Seller at its office located at 60 Pleasant Street, Ashland, Massachusetts 01721, prior to the expiration of the two (2) year warranty period. If Seller determines that the claim is in accordance with this Warranty, Seller will either repair the defect, provide replacement paver(s) or refund the purchase price. The choice of remedy is at the sole discretion of the Seller. In the event Seller elects to repair or replace any defective product, the owner shall provide Seller with reasonable access to the product and provide reasonable assistance to the Seller at no charge to the Seller. If the remedy is replacement, Seller will use best efforts to match color, size, and form from Seller's then existing product line.

This Warranty does not cover the cost of replacement or removal of defective product or surrounding product, including labor costs. This Warranty shall be the sole and exclusive remedy for any breach of warranty claim by the owner. Seller shall have no liability to any person for incidental, consequential, or special damages of any kind.

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.