Natural wood
Made to last

Installation Guide

Face & Edge Fastening for Decking

Kebony Deck Board (#2637)

Kebony Deck Board - Single Groove (#2638)

2x6 Boardwalk (#2522)

#2226

5/4x4 Clear Square S4S E2E (#2558)

2×4 Square S4S E2E (#2746)

2×8 Square S4S E2E (#2747)

Please read these guidelines carefully, and if you have any questions, **e-mail: info@kebony.us** or **call: +1 833.795.8660**

www.kebony.us

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Preparing for Installation

GENERAL GUIDELINES

Kebony decking materials are for outdoor use above the ground and not in ground contact. Local conditions and building regulations must always be taken into consideration. This guide assumes that the installer has the necessary professional competence.

Kebony is a Dually modified™ wood whose properties are permanently changed and enhanced through an eco-friendly process without the use of toxins. Our process yields a stable, sustainable, hardwearing, long-lasting and beautiful decking material. Kebony wood will behave like natural timber and will swell and shrink along with changes in the environment in which it is installed, albeit to a lesser extent.

Pay particular attention to the design and execution of end-grain handling and ventilation, and avoid moisture traps. In this guide, we show examples of good solutions that adhere to these principles.

Some surface cracks and fissures are natural in timber that is installed outdoors without surface treatment. Initially, the runoff of rain from a Kebony surface will have a dark color that may be visible on some light surfaces.

Kebony Clear Decking weathers quickly after installation outdoors when exposed to the elements. A surface color change from brown to grey normally takes place over the first year, while surface cracks and fissures develop within the first months of installation. This is a natural process for wood.

It is a condition of the warranty that the directions in this installation guide are followed.

SAFETY GUIDELINES

Building a deck is a construction project, therefore you should wear protective clothing and safety equipment such as safety glasses, gloves, long sleeves, and a mask, particularly when cutting wood.

The installer is responsible for identifying and following all building codes and construction safety practices. Kebony accepts no liability or responsibility for the improper installation of this product.

Kebony decking may not be suitable for every application, and it is the sole responsibility of the installer to ensure that Kebony decking is fit for the intended use. Because all installations are unique, it is also the installer's responsibility to determine specific requirements for each deck application.

Kebony recommends that all applications be reviewed by a licensed architect, engineer or local building official before installation.

STORAGE GUIDELINES

Kebony should not be exposed directly to the elements before installation. Kebony should be kept enclosed in its original packaging or re-wrapped if previously opened. Ideally, Kebony should also be stored indoors or under cover.

Additionally, it's good practice when working with an uncovered unit of Kebony to flip over (reverse) the top boards so that they are face down, i.e. the top face of the board is not directly exposed to the elements. This will help reduce the likelihood of having boards with different degrees of fading.

Ground Clearance: Please refer to the Ground Clearance document available on the Kebony.us website.

Metal Fixture & Framing Considerations: Kebony can be fastened to, or be in contact with aluminum, enameled, powder-coated or foiled fixtures without concern for discoloration. In some cases, surface water runoff from Kebony wood can result in the discoloration of adjacent materials. For example, it could cause black stains on zinc fixtures or polished copper.

Drainage and runoff from galvanized or iron-based fixtures onto Kebony can result in black discoloration of the wood.

With respect to metal framing, it is important to ensure that there is no direct contact between Kebony and the exposed metal surfaces. This may require the use of a G-tape or some sort of butyl tape to create a separation between the metal and the boards.

Water run-off from Kebony onto copper parts may result in color variations on the copper surfaces since the Kebony will keep copper shiny with the original copper color on the affected surfaces, while copper normally goes through surface oxidization to a dark green or black surface color.

RECOMMENDED TOOLS & EQUIPMENT

Electric Saw (Table, Chop etc.)

- 72-tooth or greater saw blade with carbide teeth

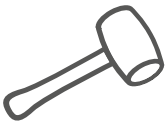
Miter saw

- 72-tooth or greater saw blade with carbide teeth

Drill (Cordless or Corded)

- With Carbide Drill Bit for Pre-Drilling

Ladders and/or scaffolding



Rubber Mallet

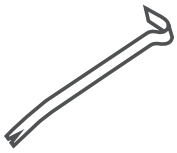
Level

T-bevel

Hammer

Chalkline

Laser Level

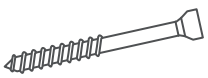


Flat pry bar

Utility Knife

Measuring Tape

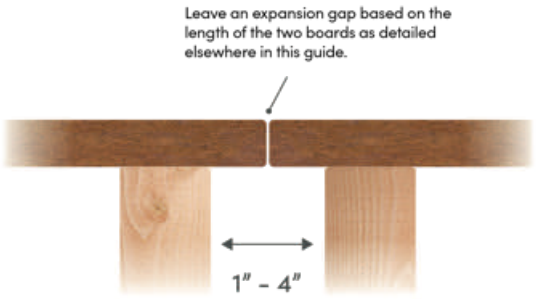
Pencil



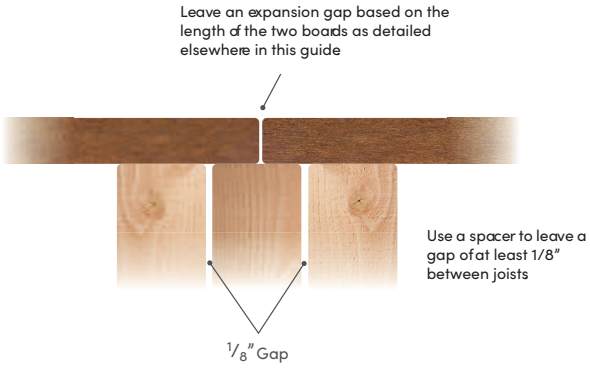
304 or 316 Stainless Steel Deck Screws (#8 or larger)

Or Pro Plug® System for Kebony

KEY GUIDELINES BEFORE YOU START



- Use only 304 or 316 stainless steel screws, selecting based on site conditions.
- Framing should be square
- Framing should be level within ⅛" (3 mm)
- Each board must be secured across a minimum of 2 spans. This means that each board must be secured to a minimum of three 3 joists.
- Butt Joint Inline boards require additional framing (sistering). Try to keep the contact patch between Kebony boards and the joists to a maximum of 2" to avoid water traps and facilitate ventilation to help dry out the boards. Best practice is to separate multiple joists wherever they are used - which is especially common at butt joints. A distance of 1" to 4" across the butt joint is recommended.



  A secondary option is to sister joists as you normally would with an additional consideration. At least two sistered joist boards should be used at each butt joint. Separate the joists from each other with a plastic spacer or gap of at least 1/8" to facilitate water drainage and airflow. Ensure that board gaps are free of debris by basic, regular cleaning.

  Remember to leave an appropriate gap between the inline butted boards based on the expansion details listed elsewhere. For an attractive finished result, all cut ends should be finished with a small chamfer or bevel. TIP: Use an edge router with a rounding radius of 1/8" (3 mm) to 1/5" (5 mm).

- Follow the span ratings set out in ICC-ESR-3756 available on our Technical Data page.
- It is recommended that all ends be treated with an end-sealing wax. This both protects the wood and reduces the risk of ends splitting. We further recommend that you test the end-sealing wax of your choice on some scrap material. Kebony suggests that you consider the following product: https://saicosna.com/exterior/saicos-end-grain-sealing-wax.html
- Board ends should always have an overhang over the last joist. Do not end it flush with or directly on a joist.
- The framing is recommended to be made from materials of equivalent or better longevity than the decking to ensure that the entire structure is durable. As an example, joist tape such as G-Tape or a butyl tape should be considered to enhance durability.
- To prevent water from pooling on the decking, better building practice recommends a slope along the length of the decking. If the deck is built without a slope, more care and maintenance is to be expected.
- While significantly more stable than most woods, Kebony will still swell lengthwise by about 0.1% when fully saturated. When placing boards in-line, ensure that you account for this swelling by determining the gap spacing between the two board ends as a function of their respective lengths. This is especially important where multiple end-to-end lengths are used.

KEBONY DECKING GROUND CLEARANCE & VENTILATION GUIDELINES AND REQUIREMENTS

12" minimum clearance above exposed ground: For decks with standard clearance of 12" above grade or greater, only minimal ground preparation under the deck is required, but is strongly recommended. However, there are requirements typical of best practices for deck construction for ensuring proper ventilation to be able to have a deck height of 12".

1.5" minimum clearance: For decks with clearance less than 12" above grade and down to 1.5".

Figure 1

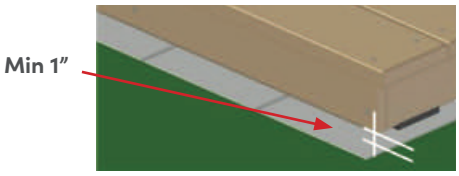


Figure 2

Provided that the below are implemented as applicable to maintain the warranty and claim justification. The deck structure can be placed on sleepers or a joist/beam system.

Design Feature	Clearance of 12" above grade or greater	Clearance between 1.5" to 12" above grade
The structure below the decking must be properly ventilated so that wood that gets wet can quickly and evenly dry out again.	✔	✔
Cover the soil/ground with an impermeable membrane or concrete. This suppresses the growth of vegetation and facilitates water runoff.		✔
Ventilation - Install ventilation grates where the deck comes up against a wall in order to facilitate airflow. Leave at least a 3/4" (19 mm) air gap from the edge of the deck surface to the main structure (e.g. house) to ensure adequate airflow. **(Figure 1)**	✔	✔
Ensure that the ground or concrete slopes away from the structure in a manner that drains quickly and avoids the pooling of water/moisture, facilitating water runoff from underneath the deck. A minimum 1.5-degree slope is typically sufficient.	✔	✔
Install vertical ventilation screens placed on the outer fascia or faces of steps. (if these are part of the design)	✔	✔
For any fascia, leave at least a 1" (25.4 mm) ground clearance gap from the bottom of any edge to ensure airflow. **(Figure 2)**	✔	✔
Drains underneath the deck. (optional - if the design supports it)		✔
Leave at least a 3/4" (19 mm) air gap from the edge of the deck surface to any other deck element such as a post or a hot tub, etc. to ensure adequate airflow.	✔	✔
Avoid design details that allow moisture to accumulate in the end grain.	✔	✔

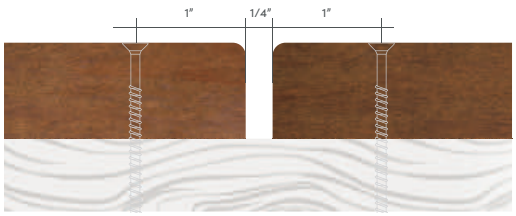
INSTALLING THE DECK SURFACE USING #2558, #2746, #2226 AND #2522

There are two ways to attach the profiles listed above:

(1) Face fastening with exposed fasteners or with hidden (plugged) fasteners
(2) Edge fastening with the Camo MARKSMAN Pro® Tool

Face Fastening:

- Pre-drill all holes with the appropriately sized pre-drill bit based on your screw size
- Do not drill within 1" of any edge
- Use 1/4" (6 mm) spacing between boards when face fastening
- Use two screws per joist
- Use #8 screws or larger



- Each board must be secured across a minimum of 2 spans. This means that each board must be secured to a minimum of three 3 joists.
- Butt Joints: Sister at least two additional boards at each butt joint. Please review the butt joint and sistering details outlined in the preceding Key Guidelines Before You Start section of this document.
- The STARBORN Pro Plug® System for Kebony Wood can be used for hidden face fastening. Please review the butt joint and sistering details outlined in the preceding Key Guidelines Before You Start section of this document.

Edge Fastening with Camo:

- The profiles listed above can be edge fastened only when used with softwood framing. Edge fastening with is not permitted with steel/metal framing.
- Follow published Camo MARKSMAN Pro® Tool Installation Instructions to ensure the most up-to-date installation method, while also ensuring that you follow the edge and end distance drilling restrictions for Kebony where applicable.
- All holes must be pre-drilled*
- Installation Guide: https://www.camofasteners.com/wp-content/uploads/Pro-Series-Guides-2019.pdf
- Edge fastening applies only to #2558, #2746, #2226 and #2522. . It does not apply to #2637 or the grooved side of #2638.

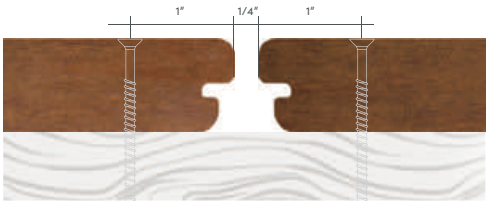
Starborn Pro Plug® System for Kebony Wood:

- Installation Guide: https://s3.amazonaws.com/starborn/resources/pdfs/000/000/010/original/PRO-PLUG_FOR_WOOD_INSTRUCTIONS.pdf

*Pro Plug® System is designed for Kebony Clear grade only

INSTALLING THE DECK SURFACE USING #2637 AND #2638

If you choose not to use any of the other fastening systems we offer, then you can face-fasten 2637 and 2638 with either exposed or hidden (plugged) fasteners:



- Pre-drill all holes with the appropriately sized pre-drill bit depending on your screw size
- Do not drill within 1" of any edge
- Use 1/4" (6 mm) spacing between boards when face fastening
- Use two screws per joist
- Use #8 screws or larger
- Each board must be secured across a minimum of 2 spans. This means that each board must be secured to a minimum of three 3 joists
- Butt Joints: Sister at least two additional boards at each butt joint. Please review the butt joint and sistering details outlined in the preceding Key Guidelines Before You Start section of this document.
- The STARBORN Pro Plug® System for Kebony Wood can be used for hidden face fastening. Please review the butt joint and sistering details outlined in the preceding Key Guidelines Before You Start section of this document.

INSTALLING THE DECK SURFACE USING #2747

#2747 cannot be edge-fastened and must only be face-fastened. Three screws must be used.

- Pre-drill all holes with the appropriately sized pre-drill bit depending on your screw size
- Do not drill within 1" of any edge
- Use 1/4" (6 mm) spacing between boards when face fastening
- Use two screws per joist
- Use #8 screws or larger
- Each board must be secured across a minimum of 2 spans. This means that each board must be secured to a minimum of three 3 joists
- Butt Joints: Sister at least two additional boards at each butt joint. Please review the butt joint and sistering details outlined in the preceding Key Guidelines Before You Start section of this document.
- The STARBORN Pro Plug® System for Kebony Wood can be used for hidden face fastening. Please review the butt joint and sistering details outlined in the preceding Key Guidelines Before You Start section of this document.