



WOOD TILES

September 2018

## BEAUTY, LONGEVITY AND EXCEPTIONAL VALUE

### BISON WOOD TILES

Bison Wood Tiles offer the design flexibility to create versatile, unique outdoor spaces. Commercial grade, responsibly harvested, hardwood tiles weather well, and are available in standard and FSC® Certified species.

- Commercial Grade
- Species Include: Bamboo, Cumaru, Garapa, Ipê, Mahogany, and Massaranduba
- Exclusive Bison FS-1 Fastening Kit & Continuous Kerf Cut Design\* allows easy tile attachment, removal, and replacement
- Modular sizes 2' x 2', 4' x 2', 6' x 2', 8' x 2', and 30" x 30"
  - Pedestals to be spaced on a 2' grid for all Bison Wood Tile sizes\*
- Custom sizes available
- FSC Certified (SCS-COC-002585) species available
- Full System Warranty with Bison Pedestals
- Bison Ipê Wood Tile Systems Meet:
  - ASTM E108-07a Class A Fire Rating
  - ASTM C1028-07 Slip Resistance
  - ASTM TAS108-95 Wind Uplift
  - Seismic Design Categories (SDC) A-F



\*Bison 30" x 30" Wood Tiles installed on a 30" grid.

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## Installation

Bison recommends the use of Bison Pedestals and the FS-1 Fastening Kit<sup>†</sup> when installing Bison Wood Tiles. The Bison Pedestal/Wood Tile System installs quickly, securely, and allows single tile removal after installation, if needed. The FS-1, available exclusively from Bison, fastens wood tiles to the pedestals without penetrating or damaging the wood. Place the FS-1 washer between the bottom rail of the tile and the upper slat. Screw the long FS-1 screw through the FS-1 washer, into the center hole of the tab set and into the pedestal. Make sure that the washer secures all corners of the wood tiles and then tighten. To remove a wood tile, use a screwdriver to loosen the long screw and rotate the washer to release the wood tile.

## Testing

Bison Ipê Wood Tiles meet or exceed these standards.

Note: Customer to verify acceptable uses for each project according to the presiding building code authority. All products to be installed per the most recent Bison Innovative Products specifications at the time of installation.

Environmental	FSC Certification	Call for Available Species
Slip Resistance	ASTM C1028	SCOF Dry .90 and Wet .72
Solar Reflective Indices	ASTM E 1980-11	45 (Average) New 36 (Average) Weathered One Year
Solar Reflectance	ASTM C1549-09	0.321 New 0.403 Weathered One Year
Hemispherical Emittance	ASTM C1371-04a	0.894 New 0.925 Weathered One Year
Wind Uplift on Pedestals	FBC TAS-108	Aerodynamic Multiplier
Seismic	ICC ES AC-156	For use in Seismic Zones A-F with Bison Seismic System & Installation Guidelines
Fire – Flame Spread	ASTM E108-07a	Class A
Fire – Smoke Spread	ASTM E-84-08A	Class B
Fire – SF WUI Under-Flame Test	SFA 12-7-A-4 Part A	Pass
Concentrated Load on Pedestals	ICC ES AC300-2010	1250 lbs/psf FoS:3
Uniform Load on Pedestals	ICC ES AC300-2010	1250 lbs/psf FoS:3
Installation Temperature	NRCA Standard	40° F and above
Max. Bison Pedestal Height	Bison	36" with Bison Bracing System

<sup>†</sup> US #8,302,356 Patent and Patents Pending



## Sourcing

Bison ensures that the tropical hardwoods used in all our wood tile products are harvested from sustainable sources. Bison Wood Tiles are constructed from premium grade remnants from the flooring and furniture industries that comply with strict regulations regarding extraction, milling, and transport. All Bison Wood Tiles meet the IBAMA (Brazilian Institute of Environment and Renewable Resources) requirements that show Proof of Origin and Legal Harvesting. Bison Wood Tiles also comply with US Lacey Act requirements.





## Ipê Wood Tiles



Model: WT-IPE-24-SMOOTH  
 WT-IPE-24-RIBBED  
 WT-IPE-3030-10-SMOOTH

Fire Rating: Class A\*

Species: Ipê

Color: Brown\*\*

Janka Hardness Rating: 3,680 lbs.

Dimensions: 23.875" x 23.875" x 1.69"  
 29.875" X 29.875" X 1.69"

Weight: 24 lbs. / 34 lbs.

Weight PSF: 6 PSF / 5.4 PSF

Bison Continuous Kerf<sup>©</sup>  
 cut design\*\*\*



Model: WT-IPE-48

Fire Rating: Class A\*

Species: Ipê

Surface: Smooth or Ribbed

Color: Brown\*\*

Janka Hardness Rating: 3,680 lbs.

Dimensions: 47.9375" x 23.875" x 1.69"

Weight: 48 lbs.

Weight PSF: 6 PSF

Bison Continuous Kerf<sup>©</sup>  
 cut design\*\*\*

\*Meets and Exceeds ASTM E108-07a Class A Spread of Flame Test.

\*\*Wood tile colors may differ than pictured and change without notice.

\*\*\*Patent Pending.



## Cumaru Wood Tiles



Model: WT-CUMARU-24  
Fire Rating: Class A\*  
Species: Cumaru  
Surface: Smooth  
Color: Golden brown\*\*  
Janka Hardness Rating: 3,540 lbs.  
Dimensions: 23.875" x 23.875" x 1.69"  
Weight: 24 lbs.  
Weight PSF: 6 PSF  
Bison Continuous Kerf<sup>©</sup>  
cut design\*\*\*



Model: WT-CUMARU-48  
Fire Rating: Class A\*  
Species: Cumaru  
Surface: Smooth  
Color: Golden brown\*\*  
Janka Hardness Rating: 3,540 lbs.  
Dimensions: 47.9375" x 23.875" x 1.69"  
Weight: 48 lbs.  
Weight PSF: 6 PSF  
Bison Continuous Kerf<sup>©</sup>  
cut design\*\*\*

\*Meets and Exceeds ASTM E108-07a Class A Spread of Flame Test.

\*\*Wood tile colors may differ than pictured and change without notice.

\*\*\*Patent Pending.

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## FSC® Ipê Wood Tiles



Model: WT-FSC-100%-IPE-24  
 Fire Rating: Class A\*  
 Species: Ipê  
 Surface: Smooth  
 Color: Brown\*\*  
 Janka Hardness Rating: 3,680 lbs.  
 Dimensions: 23.875" x 23.875" x 1.69"  
 Weight: 24 lbs.  
 Weight PSF: 6 PSF  
 Bison Continuous Kerf® cut design\*\*\*

## FSC® Garapa Wood Tiles



Model: WT-FSC-100%-GARAPA-24  
 Fire Rating: Class A\*  
 Species: Garapa  
 Surface: Smooth  
 Color: Golden brown\*\*  
 Janka Hardness Rating: 1,630 lbs.  
 Dimensions: 23.875" x 23.875" x 1.69"  
 Weight: 24 lbs.  
 Weight PSF: 6 PSF  
 Bison Continuous Kerf® cut design\*\*\*

\*Meets and Exceeds ASTM E108-07a Class A Spread of Flame Test.

\*\*Wood tile colors may differ than pictured and change without notice.

\*\*\*Patent Pending.

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## FSC® Cumaru Wood Tiles



Model: WT-FSC-100%-CUMARU-24  
 Fire Rating: Class A\*  
 Species: Cumaru  
 Surface: Smooth  
 Color: Golden brown\*\*  
 Janka Hardness Rating: 3,540 lbs.  
 Dimensions: 23.875" x 23.875" x 1.69"  
 Weight: 24 lbs.  
 Weight PSF: 6 PSF  
 Bison Continuous Kerf® cut design\*\*\*

## FSC® Massaranduba Wood Tiles



Model: WT-FSC-100%-MASS-24  
 Fire Rating: Class A\*  
 Species: Massaranduba  
 Surface: Ribbed  
 Color: Reddish brown\*\*  
 Janka Hardness Rating: 3,190lbs.  
 Dimensions: 23.875" x 23.875" x 1.69"  
 Weight: 24 lbs.  
 Weight PSF: 6 PSF  
 Bison Continuous Kerf® cut design\*\*\*

\*Meets and Exceeds ASTM E108-07a Class A Spread of Flame Test.

\*\*Wood tile colors may differ than pictured and change without notice.

\*\*\*Patent Pending.

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## Mahogany Wood Tiles



Model: WT-MAHOGANY 24-5 SMOOTH

Fire Rating: Class A\*

Species: Fijian Mahogany

Surface: Smooth

Color: Golden brown\*\*

Janka Hardness Rating: 800 lbs.

Dimensions: 24.125" x 24.125" x 1.77"

Weight: 14 lbs.

Weight PSF: 3.5 PSF

Bison Continuous Kerf<sup>©</sup> cut design\*\*\*

Bison Genuine Mahogany Wood Tiles are harvested from government regulated Fijian plantations. The forests are closely regulated, adhere to strict performance requirements, are Lacey Act compliant, and are CITES exempt. The mahogany adheres to these same protocols during manufacturing in Vietnam to ensure the mahogany only comes from Fijian plantations. Bison Genuine Mahogany Wood Tiles can be easily stained to match interior flooring or to match specific color requirements.

\*Meets and Exceeds ASTM E108-07a Class A Spread of Flame Test.

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\*\*\*Patent Pending.

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# Bamboo Tiles



Model: WT-BAMBOO24-4PLANK-SMOOTH  
 Fire Rating: Class A\*  
 Species: Fused Bamboo  
 Surface: Smooth  
 Color: Dark brown\*\*  
 Janka Hardness Rating: 3,850 lbs.  
 Dimensions: 23.875" x 23.875" x 1.57"  
 Weight: 24.35 lbs.  
 Weight PSF: 6 PSF  
 Bison Continuous Kerf<sup>©</sup> cut design\*\*\*

Bison Bamboo Tiles are constructed from dasso.XTR Fused Bamboo<sup>®</sup> that is manufactured using dasso's patented process, which combines two stages of high heat to carbonize the bamboo, removing all of the starch and sugar, and then restructuring the bamboo, reinforcing its natural strength characteristics. The modified bamboo strands are fused together using phenolic resin - the same resin used to make bowling balls. The result is an extremely dense, durable, exterior-use product composed of 87% natural, fused strand bamboo fibers, and 13% resin. *Note: Please reference the last page of this document for care and maintenance specific to Bamboo Tiles.*

- Bamboo Tiles:**
- Renewable
  - Sustainable
  - Durable
  - Uniform Appearance



\*Meets ASTM E84-13a Class A Spread of Flame Test.  
 \*\*Wood tile colors may differ than pictured and change without notice.  
 \*\*\*Patent Pending.



## Special Order Wood Tiles



Model: WT-IPE-72-SMOOTH

Model: WT-IPE-72-SMOOTH  
WT-IPE-96-SMOOTH

Species: Ipê

Surface: Smooth

Color: Brown\*\*

Janka Hardness Rating: 3,680 lbs.

Dimensions: 72" x 23.875" x 1.69"

96.0625" x 23.875" x 1.69"

Weight PSF: 6.25 PSF

Please inquire for availability of other wood species.



Model: WT-IPE-96-SMOOTH

## Custom Wood Tiles

Bison custom wood tiles can be manufactured to your specific design requirements. Contact the Bison sales team for more information.

# Care and Maintenance

Bison Innovative Products (Bison) Wood Tiles provide warmth, excellent resistance to weather, and architectural charm to roof decks. Bison Wood Tiles are made from tropical hardwoods and are the ideal long-lasting, low-maintenance decking alternative. This instruction guide is intended to be used in conjunction with the most up to date version of the Bison Wood Tile Specification, which can be found online at [www.bisonip.com](http://www.bisonip.com).

**General Safety Precautions:** Bison recommends wearing puncture resistant safety gloves and safety glasses with side shields when handling, cutting, or sanding Bison Wood Tiles. Use a full-face shield outdoors or in a well-ventilated area for processes which may generate excessive dusts and splinters. Respirators MUST be worn if the ambient concentration of airborne contaminants exceeds Prescribed Exposure Limits (PEL). Dust masks may be worn to avoid the inhalation of nuisance hardwood dust, which according to the State of California, can lead to long-term health effects. Dust masks are not adequate protection in environments above the Occupational Safety & Health Administration's (OSHA) exposure limits. Refer to product SDS Section 8 for more information.

**Storage:** Store Bison Wood Tiles and system components out of direct sunlight until they are ready to be installed. Bison Wood Tiles should NOT be stored tightly wrapped in plastic. Bison Wood Tiles will adjust to the climate where they are installed and may already have, or develop, some slight cracking or checking.

**Cutting:** Bison Wood Tiles have a very high density and a slower feed rate is recommended when cutting; carbide blades are highly recommended. To minimize checking or small cracks, the installer should consider sealing any cut ends with an appropriate glue or end sealer specifically designed for use on exterior wood such as PVA Wood Glue by Elmers or Gorilla. Apply sealer with a foam brush to the cut ends ONLY, being very careful to not get any on the top surface of the wood.

**Reassembly:** To reassemble tiles after cutting, the installer must pre-drill holes from the bottom, using a carbide drill bit designed to extract stock during drilling. Exercise caution to not drill through the top surface. In addition, use only stainless-steel screws which are durable and provide maximum fastening power. Bison Wood Tiles use 1.20" (30 mm) long #11 stainless steel screws. Use of galvanized fasteners is not recommended.

**Fastening:** Bison strongly recommends the use of Bison Pedestals and FS-1\* fastening kits or FS-12\* splines when installing Bison Wood Tiles. The Bison Wood Tile and Pedestal Deck System installs quickly, securely, and allows for removal later if required. The FS-1\* and FS-12\*, available exclusively from Bison, secures Bison Wood Tiles to Bison Pedestals without penetrating or damaging the Wood Tile. (\*US Patent #8,302,356 and Patents Pending.)

**Wood Characteristics:** Bison Wood Tiles are made of South American (Cumaru, Ipê, Garapa, and Massaranduba), Fijian (Mahogany), and Chinese (Fused Bamboo) hardwoods which contain a rich variety of graining and coloration, are exceptionally dense, and resistant to insects. Bison Wood Tiles are a natural material and can absorb or lose moisture in different climates. The natural shading, coloration, and graining variations add to the architectural character and overall visual appeal of the finished product.

**During Installation & Periodically After Installation is Complete:** Check for rocking Wood Tiles and adjust or shim immediately. Failure to do so can cause a tripping hazard. Periodically check spacer tabs and immediately replace broken tabs to limit deck movement. Make sure the edge restraint stays intact and structurally sound. Most decks need to be cleaned once installation is complete.

**IMPORTANT NOTE:** Wood Tile surfaces may spot or stain when exposed to various materials or chemicals. If spotting or staining occurs, see Discoloration section below for more information. To avoid spotting or staining during construction, Bison recommends covering the deck thereby reducing exposure to metal that could rust and react to the deck tile surface. DO NOT cut metals or leave metal filings, debris or pieces on exposed deck tiles. DO NOT clean the deck or adjoining surfaces with steel wool or wire brushes. DO NOT place iron tools, fasteners, materials, or equipment on the deck.

*(Continued on next page.)*

\*Patent #8,302,356.

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## Care and Maintenance (continued)

**Discoloration:** Bison Wood Tiles are made of natural materials and surfaces may spot or stain when exposed to various materials including: metal, steel, iron, or aluminum filings, pieces, equipment, tools, or fasteners; iron enriched fertilizers; plant debris; animal urine; beverage, food, or grease spills; or mildew that naturally occurs in humid or moist locations. Bison recommends initially trying to remove the stain or spill with warm water, mild dish soap, and non-metallic stiff bristle brush. If unsuccessful, test a deck cleaner or brightener such as Messmer's Part B, Defy Deck Brightener, or other wood brightener with oxalic acid as their active ingredient in an inconspicuous location. If the spotting begins to clear up, the discoloration is likely being caused by exposure to metal, steel, iron, or aluminum filings, pieces, equipment, tools, or fasteners; iron enriched fertilizers; plant debris; or animal urine. If the spot does not clear up with warm water and mild dish soap or with oxalic acid, Bison recommends applying a Q-Tip soaked in chlorine bleach to a spotted area in an inconspicuous location. If the spot starts to clear up when bleach is applied, then the issue is likely a natural occurrence of mildew. See Cleaning instructions below for more information. ALWAYS test any cleaner or brightener on wood in an inconspicuous location, rinse the deck thoroughly after cleaning and follow manufacturer's instructions for best application practices and safe handling practices.

**Cleaning:** If desired, Bison Wood Tiles can be periodically cleaned. Bison recommends using a deck cleaning product designed for hardwoods which safely cleans the wood. Bison Wood Tiles are ready to re-seal once they are cleaned. IMPORTANT: Bison recommends that you test any cleaners or sealants in an inconspicuous area first before applying them to the installed deck. In addition, always check with the manufacturer of your roof membrane to ensure that any cleaning solution, stain, oil, deck brightener, or bleach will not compromise or damage the waterproofing membrane. DO NOT scrub tiles with wire, iron, or steel brushes.

**Sealing & Staining:** Wood stabilizers or sealants can help mitigate the loss of moisture and minimize checking and splitting. Cleaning and/or sanding the surface of the wood prior to applying the sealer can help the product penetrate deeper into the wood grain. Due to the density of the tropical hardwood, all the applied product may not be absorbed. Follow manufacturer's recommendations to gently wipe off the excess stain for a more even uniform appearance. The installer can also lightly apply glue or end sealer specifically designed for exterior exotic wood to the ends to help prevent splitting, as desired. NOTE: Small checks and splits are normal and a natural part of the wood as the wood balances with the humidity of the surrounding climate. The following manufacturers offer cleaning and sealing products specifically designed for use with exotic hardwoods: Cabots, Penofin®, Messmers, Cutek, or Defy.

**Sanding:** If you plan to seal or stain your Wood Tiles, a light sanding is highly recommended. Use 120 grit sandpaper to reduce the appearance of any minor marks, scratches, or imperfections. Use 200+ grit sandpaper to lightly sand the Wood Tiles for a more uniform appearance. After sanding, sweep the tiles and use water to rinse away any remaining dust and allow to dry thoroughly before applying sealer. Ensure the wood surface is clear of any steel or iron filings, dusts, or shavings as the natural acids in the wood will react with the iron and water to form a blackish-grey ferric oxide (rust). Exercise caution when sanding Bison Ribbed Wood Tile surfaces. IMPORTANT: Always test any product you apply in an inconspicuous place to make sure it performs as you expect. DO NOT use steel wool to sand any wood tile.

**Maintaining Tile Color:** To better maintain the rich coloration of the Wood Tiles, you can apply a natural oil finish or stabilizer with UV blocker. These products offer UV protection as well as mildew protection. Before applying any finish, first clean and remove any residue from the Wood Tile as described above. After your initial coat is applied, an annual maintenance coat will help keep the coloration vibrant for years to come. The following manufacturers offer UV protection products specifically designed for use with exotic hardwoods: Cutek and TimberPro Coatings. IMPORTANT: Always test any product you apply in an inconspicuous place to make sure it performs as you expect. Bison recommends reapplying the natural oil finish, stabilizer, stain, or sealant per the product manufacturer's recommendation for optimal results.

**Natural Aging:** Left to weather naturally and depending on climatic conditions, Bison Wood Tiles will develop a silvery-gray patina. If you prefer this look, Bison recommends that a coat of wood stabilizer be applied after installation. Some products provide UV protection, allowing your wood tiles to acclimate more uniformly as weather and environmental conditions season the deck. NOTE: Each board has unique characteristics and will weather at different rates. The amount of direct and indirect sunlight, temperature, humidity, moisture, furniture placement, and other local conditions will factor into the aging of the deck.



## Care and Maintenance (continued)

**Pressure Washing:** You may also use a pressure washer to remove built-up dirt, stains, spotting, or mildew from your Wood Tiles. CAUTION: Use the lowest PSI for the species of wood you are cleaning. A maximum of 1200 PSI is suggested for Bison Wood Tiles. Bison also recommends using a professional deck cleaning contractor. IMPORTANT: Test an inconspicuous area first and be careful to use the wand in even strokes to avoid lap marks.

**Commercial Buffing Machines:** Commercial floor scrubbers or floor buffing machines are not recommended due to their potential to damage the Wood Tiles and/or Pedestals with their movement mechanisms.

**Snow Removal:** Sweeping: A non-metallic, stiff-bristled broom is the recommended method for removing snow from a wood deck, as it causes the least damage to your decking material. The use of mechanical snow scoopers and blowers is NOT recommended on Bison Wood Tiles or Pedestal products. Shoveling: Never use a metal shovel, as this can gouge, scrape, or otherwise cause damage to the decking material. Use a plastic shovel and shovel along the length of the deck boards (instead of across) to minimize damage to the wood grain. Avoid chipping away at ice with a shovel or pick, as this can also damage the decking material. Small or narrow plastic shovels may be purchased to help get into tighter areas such as stairs while still moving with the grain of the decking.

**Ice Removal:** Salts or deicers should never be used on a natural wood deck because of the corrosive nature of the salt. Deicers come in a range of compositions, including: Sodium Chloride (NaCl), Magnesium Chloride (MgCl<sub>2</sub>), Calcium Chloride (CaCl<sub>2</sub>), and Potassium Chloride (KCl) as well as many other more expensive components. These chemicals can erode any waterproof stain or finish and leave water marks on the wood itself. Wood absorbs and releases moisture and expands and contracts over time. Deicers absorb most of the moisture in natural materials, which makes the wood more brittle and will cause additional cracking and checking. As an alternative, carefully pour hot water over the iciest areas of the deck and use your outdoor broom to remove the ice and excess water. Sand or kitty litter can be spread over the deck to help prevent more ice from building up although this may be tracked indoors.

**Bamboo Tile Maintenance:** During installation, especially when cutting and sanding the tiles, be sure to thoroughly and completely remove fine dust particles from the tile surface. If allowed to dry, these contaminants can cause discoloration, which can be removed with a more rigorous scrubbing. In order to minimize checking (small cracks), the installer should seal any cut ends with PVA Wood Glue by Elmers or Gorilla or other equivalent product. The Bamboo Tiles have a primer coat of Woca Exterior Oil (Natural Color) pre-applied. After several months, the bamboo fibers will open and this is an opportune time to apply your first coat of penetrating oil. Messmer's or Penofin® deck oils are recommended for bamboo, though most penetrating oils work. Follow the oil manufacturer's instructions for best results. To maximize the life of your beautiful new deck, Bison recommends annual cleanings. The annual cleanings do not need to be complicated - warm water, mild dish soap, and a non-metallic stiff bristle brush (to avoid surface scratching) will remove most of the year's accumulation of dirt. For cleaning exceedingly soiled areas, use deck cleaning products which contain Sodium Percarbonate or Potassium Hydroxide. Pro-Tech Wood Cleaner by Penofin® and Messmer's Wood & Deck Cleaner are two of a variety of options. IMPORTANT: Bison recommends testing any stains, stabilizers, or sealants on an inconspicuous area to ensure it will not cause discoloration or other unintended damage.

- We DO NOT recommend using a power washer to clean your Bamboo Tiles.
- Never use a metal edged shovel or power equipment to remove snow. For light snows a soft bristle broom will suffice; for heavier snows, use a hard-plastic shovel with rounded edges to prevent scratching. Always shovel along the length of the boards, never across.
- Never use rock salt or other de-icing products as they may cause discoloration. If you must use a de-icing agent, choose a product which is pet safe, urea free, and salt free.

