

# BAMBOO

*Phyllostachys spp.*



## Appearance

**COLOR:** Typically available in light (manila/yellow tones) or dark (tannish brown) shades. Colors vary between manufacturers.

**GRAIN:** Distinctive grain pattern shows nodes from the bamboo stalks.

**VARIATIONS WITHIN GRADES:** Available either horizontally or vertically laminated. Horizontal construction tends to show nodes more prominently.

## Properties

**HARDNESS (JANKA):** Bamboo is a grass. Janka values vary widely between various manufacturers and between horizontal and vertical construction.

**DIMENSIONAL STABILITY:** Engineered construction.

## Workability

**SAWING/MACHINING:** Cuts easily with most tools.

**NAILING:** No known problems.

**SANDING:** Due to its unique, fibrous structure, bamboo should not be sanded across the grain or at a 45-degree angle to the grain. Its light color tends to show swirl marks, other sanding marks and finish imperfections, much as a light maple floor can.

## Suggested Sequence

**First Cut:** 60 at a 7-15 degree angle with the grain

**Second Cut:** 80 straight with the grain

**Third Cut:** 100 or 120

**Hard Plate:** Not recommended

**First Screen:** 100 or 120

**Second Screen:** 150

**FINISHING:** All surface-type finishes have been used successfully with bamboo. Darker colors may tend to show lap marks—moving quickly during application and applying finish quickly around cut-in areas can minimize this effect. Filling is recommended.

**COMMENTS:** Mostly available factory-finished.

Because the product is rigid, installers should pay careful attention to the flatness of the subfloor.

## Origin

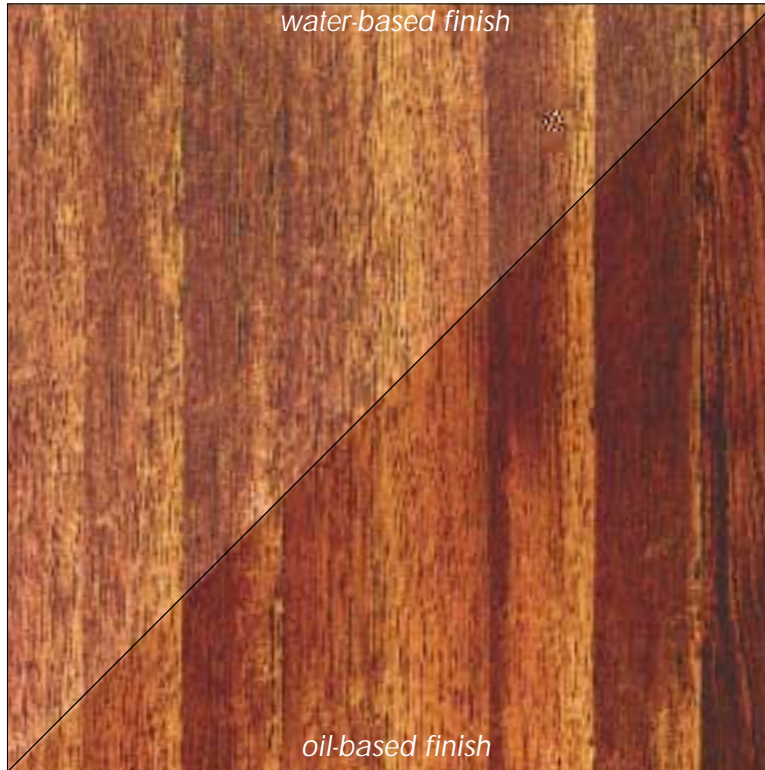
Asia. The majority is made in China from the *Phyllostachys pubescens* (common name: Moso) species; however, some bamboo flooring is made from different bamboo species grown in countries such as Vietnam.

## Availability

Readily available.

# BUBINGA

*Guibourtia demeusei*



## Appearance

**COLOR:** Pink, red or red/brown with purple streaks or veins; changes from pinkish rose when freshly milled to burgundy red when aged.

**GRAIN:** Fine; straight or interlocked, can be highly figured.

**VARIATIONS WITHIN SPECIES AND GRADES:** Quartered exhibits flame figure; flatsawn has rosewood graining.

## Properties

**HARDNESS (JANKA):** 2690 (109% harder than Northern red oak).

**DIMENSIONAL STABILITY:** Average (8.4; 2% more stable than Northern red oak).

## Workability

**SAWING/MACHINING:** Saws and planes well.

**NAILING:** Tends to split tongues. Pre-drilling and hand-nailing may be preferred.

**SANDING:** Sands satisfactorily if correct sanding sequence is followed.

## Suggested Sequence

**First Cut:** 50 at a 7-15 degree angle with the grain

**Second Cut:** 60 or 80 straight with the grain

**Third Cut:** 100

**Hard Plate:** 100

**First Screen:** 80

**Second Screen:** 100 or 120

**FINISHING:** Test all products before using them on the actual floor. Oil-modified finished will require a lengthy dry time. **(See finishing comments on page 6.)**

**COMMENTS:** Dust has been known to cause contact dermatitis.

## Origin

Africa.

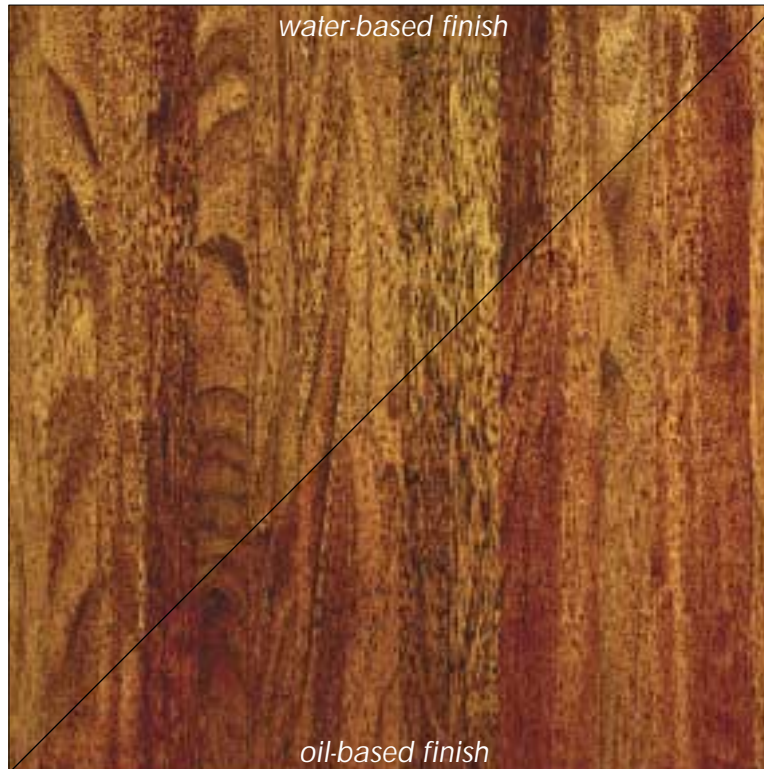
## Availability

Limited availability.

# CHERRY, BRAZILIAN

Jatoba

*Hymenaea courbaril*



## Appearance

**COLOR:** Sapwood is gray-white; heartwood is salmon red to orange-brown when fresh and becomes russet or reddish brown when seasoned; often marked with dark streaks.

**GRAIN:** Mostly interlocked; texture is medium to rather coarse.

**VARIATIONS WITHIN SPECIES AND GRADES:** Moderate to high color variation.

## Properties

**HARDNESS (JANKA):** Average of 2820 (119% harder than Northern red oak).

**DIMENSIONAL STABILITY:** Average (8.5; 1% more stable than Northern red oak). However, actual installations have shown significant movement. Longer-than-normal acclimation time is recommended.

## Workability

**SAWING/MACHINING:** Sawing is difficult due to high density; requires frequent resharpening of tools. Planing is difficult due to interlocked grain. Can be machined to a smooth surface. Carbide tooling recommended.

**NAILING:** Due to hardness it is very important that the

angle of penetration be adjusted carefully. If using a pneumatic nailer, the air pressure should be adjusted.

**SANDING:** Scratches are easily seen—each sanding must carefully remove the scratches from the previous cut, or sanding marks will be visible in the finish.

### *Suggested Sequence*

**First Cut:** 50 at a 7-15 degree angle with the grain

**Second Cut:** 60 or 80 straight with the grain

**Third Cut:** 100

**Hard Plate:** 100

**First Screen:** 80

**Second Screen:** 100 or 120

**FINISHING:** Coating with oil-modified polyurethane may occasionally cause white spots or specks, as well as white end joints, to appear. This may be avoided by buffing in a clear oil sealer or neutral stain, then buffing on satin polyurethane. **(See finishing comments on page 6.)**

## Origin

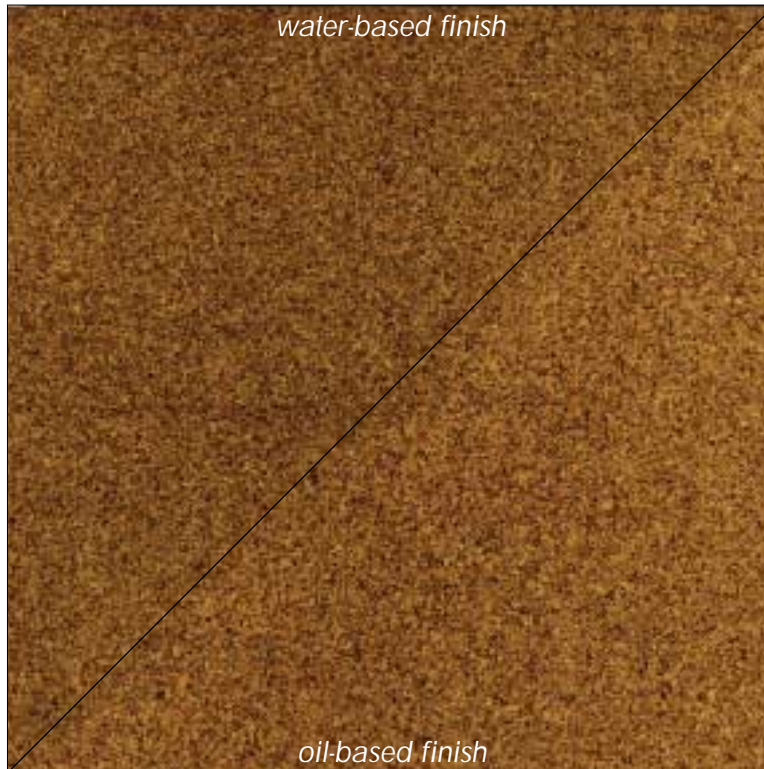
South America.

## Availability

Easily available.

# CORK

*Quercus suber*



## Appearance

**COLOR:** Varies from light to dark; many colors available depending on manufacturer.

**GRAIN:** Distinctive look unlike wood—cork is actually the bark of a type of oak.

**VARIATIONS WITHIN SPECIES AND GRADES:** Many patterns available depending on manufacturer.

## Properties

**HARDNESS (JANKA):** Varies.

**DIMENSIONAL STABILITY:** Cork reacts quickly, sometimes within hours, to changes in moisture. (Typical dimensional stability measurements do not apply to cork's composite construction.)

## Workability

**SAWING/MACHINING:** Cork may be cut with a utility knife.

**NAILING:** Cork is installed using adhesive.

**SANDING:** Use the finest grit possible to flatten the floor. The following sequences are recommended for use only with a multi-disc sander or a hardplate on a buffer. If the edger is used, fine sandpaper

(100/120/150) should be backed with a maroon pad. Small orbital sanders or hand-sanding are recommended for corners and wall lines, as hand-scrapers may gouge the cork.

*Suggested Sequence*

**First Cut:** 100

**Second Cut:** 120

**Third Cut:** Not recommended

**Hard Plate:** 120 or 150

**First Screen:** 120

**Second Screen:** 120

**FINISHING:** All surface-type finishes are successfully used on cork (choose a finish that will bend as the cork compresses). Oil-and-wax also is used frequently.

**COMMENTS:** Pay particular attention to subfloor preparation, as cork is very sensitive to moisture, and also transfers any imperfections in the subfloor to the surface appearance.

## Origin

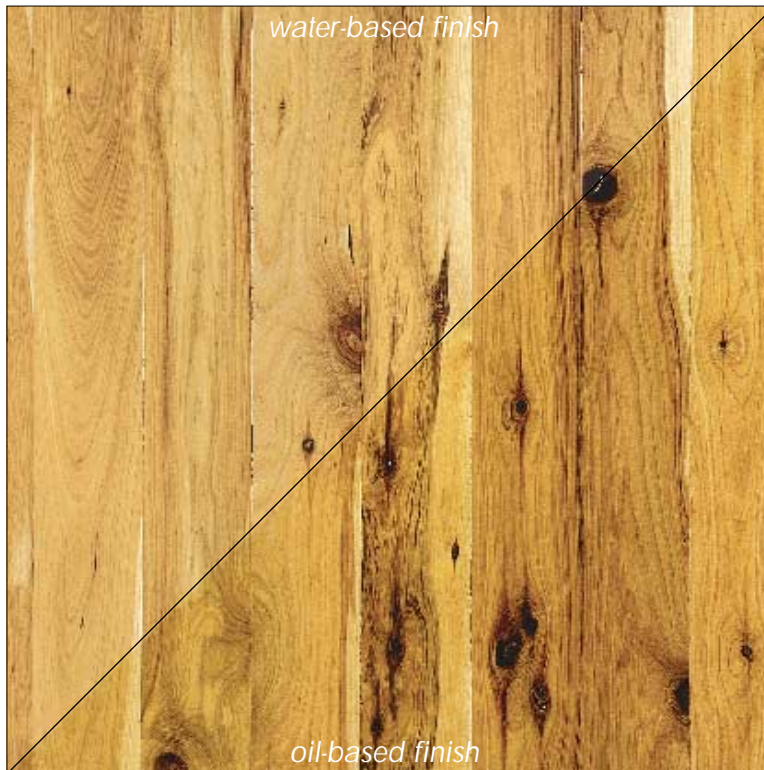
Spain and Portugal.

## Availability

Readily available.

# CYPRESS, AUSTRALIAN

*Callitris glauca*



## Appearance

**COLOR:** Cream-colored sapwood; heartwood is honey-gold to brown with darker knots throughout.

**GRAIN:** Closed.

**VARIATIONS WITHIN SPECIES AND GRADES:** High degree of color variability.

## Properties

**HARDNESS (JANKA):** 1375; (7% harder than Northern red oak).

**DIMENSIONAL STABILITY:** Excellent (2.8; 67% more stable than Northern red oak). However, actual installations have demonstrated significant movement.

## Workability:

**SAWING/MACHINING:** Good machining qualities.

**NAILING:** Can be brittle (like Brazilian cherry); splits tongues easily.

**SANDING:** Tendency to clog paper due to high resin content. Hardplating and screening may leave swirls; screening more than twice may be necessary. The knots are extremely hard and may cause wave in the floor. A 12-by-18-inch oscillating sander is recom-

mended as the final screening to minimize the scratch pattern.

### *Suggested Sequence*

**First Cut:** 50 at a 7-15 degree angle with the grain

**Second Cut:** 60 straight with the grain

**Third Cut:** 80 or 100

**Hard Plate:** 100 or 120

**First Screen:** 100

**Second Screen:** 120 or 150

**FINISHING:** Knots may cause drying problems with some finishes. **(See finishing comments on page 6.)**

**COMMENTS:** Potential for respiratory/allergic reactions.

## Origin

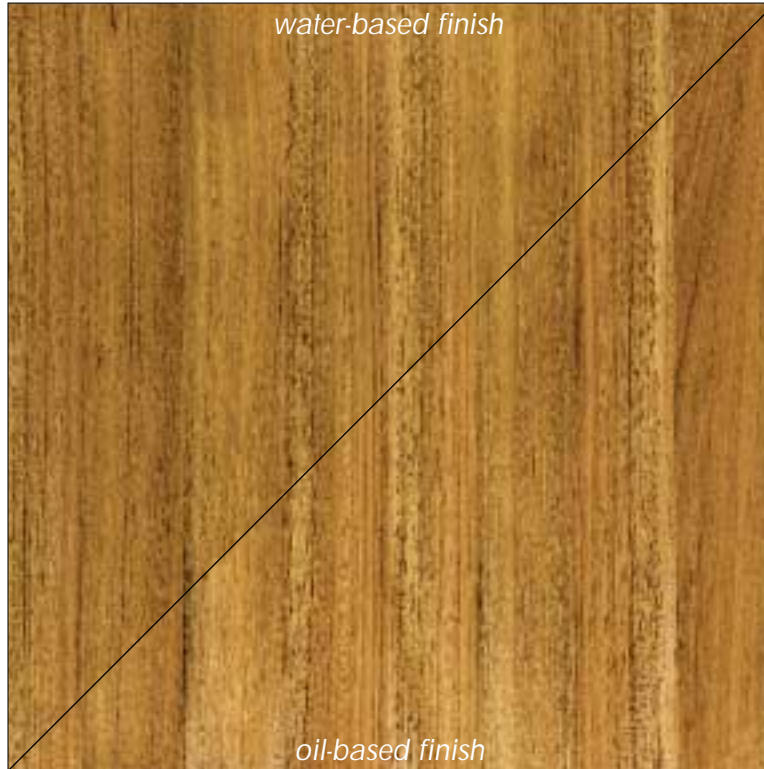
Australia.

## Availability

Readily available.

# GUM, SPOTTED

*Corymbia maculata (formerly Eucalyptus maculata)*



## Appearance

**COLOR:** Heartwood is light to dark brown, sapwood is pale and may be as wide as 3.12 inches (8 cm).  
**GRAIN:** Interlocked, moderately coarse. Frequent presence of wavy grain produces “fiddleback” grain. Slightly greasy; gum veins are common.

## Properties

**HARDNESS (JANKA):** 2473 (92% harder than Northern red oak).  
**DIMENSIONAL STABILITY:** Data not available.

## Workability

**SAWING/MACHINING:** Good.  
**NAILING:** Pre-drilling and hand-nailing may be preferred.  
**SANDING:** No known problems.

### *Suggested Sequence*

**First Cut:** 50 at a 7-15 degree angle with the grain  
**Second Cut:** 60 or 80 straight with the grain  
**Third Cut:** 100  
**Hard Plate:** 120  
**First Screen:** 100

**Second Screen:** 120

**FINISHING:** No known problems.

## Origin

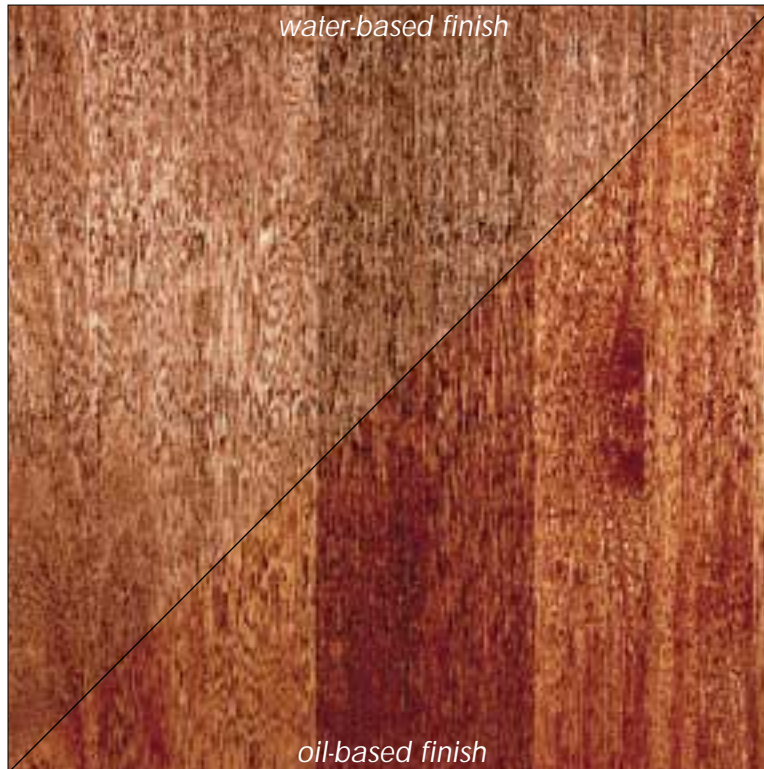
Australia.

## Availability

Moderately available.

# GUM, SYDNEY BLUE

*Eucalyptus saligna*



## Appearance

**COLOR:** Wide range from pinks to burgundy reds; regrowth timber may be a pale straw color with pink highlights. Colors mute over time and darken to a medium brown-red.

## Properties

**HARDNESS (JANKA):** 2023 (57% harder than Northern red oak).

**DIMENSIONAL STABILITY:** Data not available.

## Workability

**SAWING/MACHINING:** Very hard—carbide blades and bits required.

**NAILING:** Pre-drilling and hand-nailing may be preferred.

**SANDING:** No known problems.

### *Suggested Sequence*

**First Cut:** 50 at a 7-15 degree angle with the grain

**Second Cut:** 60 or 80 straight with the grain

**Third Cut:** 100

**Hard Plate:** 120

**First Screen:** 100

**Second Screen:** 120

**FINISHING:** No known finishing problems.

## Origin

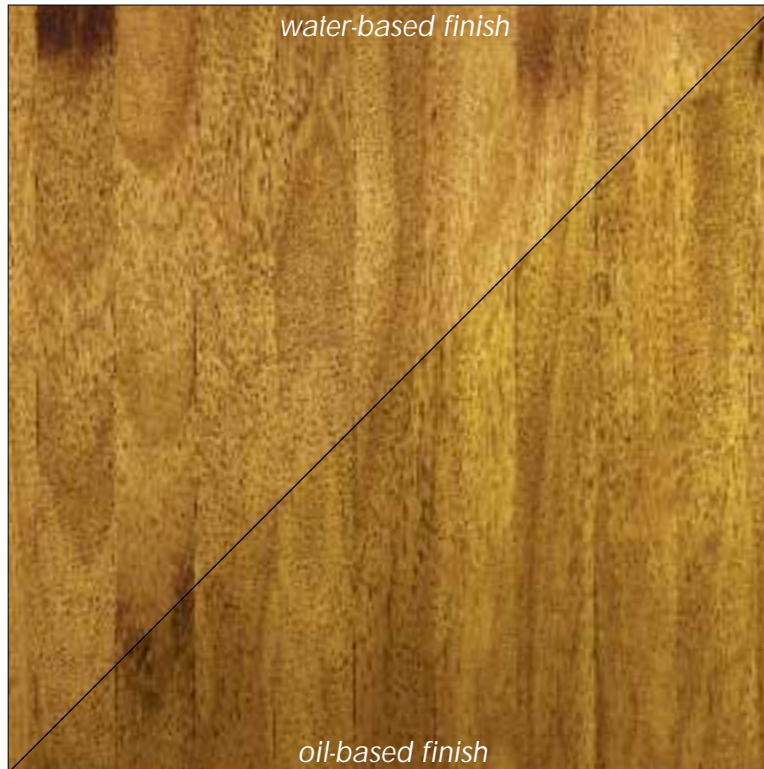
Australia.

## Availability

Moderately available.

# IROKO

Kambala  
*Chlorophora excelsa*



## Appearance

**COLOR:** Light to medium brown when newly installed; has a significant color change and turns to brown/dark brown over time.

**GRAIN:** Interlocked medium to coarse texture.

**VARIATIONS WITHIN SPECIES AND GRADES:** Dramatic difference between quartersawn and flatsawn products.

## Properties

**HARDNESS (JANKA):** 1260 (2% softer than Northern red oak).

**DIMENSIONAL STABILITY:** Excellent (3.8; 66% more stable than Northern red oak).

## Workability

**SAWING/MACHINING:** Somewhat stringy—may split and splinter when resanding or ripping.

**NAILING:** No known problems.

**SANDING:** No known problems.

*Suggested Sequence*

**First Cut:** 50 at a 7-15 degree angle with the grain

**Second Cut:** 60 or 80 straight with the grain

**Third Cut:** 100

**Hard Plate:** 120

**First Screen:** 100

**Second Screen:** 120

**FINISHING:** Staining and/or bleaching this species may be difficult. No finish compatibility problems are known.

**COMMENTS:** Dust is known to cause both contact dermatitis and respiratory reactions.

## Origin

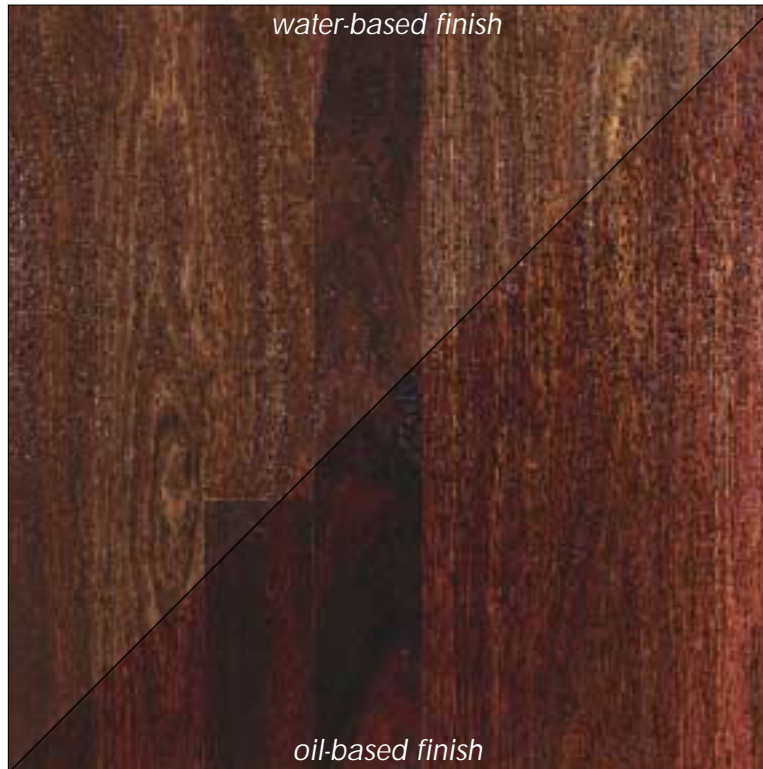
Africa.

## Availability

Moderately available.

# JARRAH

*Eucalyptus marginata*



## Appearance

**COLOR:** Heartwood is uniformly pinkish to dark red, often a rich, dark red mahogany hue, turning a deep brownish red with age and exposure; sapwood is pale. Frequent black streaks with occasional in-grown grain.

**GRAIN:** Frequently interlocked or wavy. Texture is even and moderately coarse.

**VARIATIONS WITHIN SPECIES AND GRADES:** Moderate to high color variation.

## Properties

**HARDNESS (JANKA):** 1910 (48% harder than Northern red oak).

**DIMENSIONAL STABILITY:** Below average (11.0; 28% less stable than Northern red oak).

## Workability

**SAWING/MACHINING:** Difficult to work because of high density and irregular grain; carbide tooling recommended.

**NAILING:** No known problems.

**SANDING:** Sands well, but dust can stain fabric and

wall treatments.

### *Suggested Sequence*

**First Cut:** 50 at a 7-15 degree angle with the grain

**Second Cut:** 60 or 80 straight with the grain

**Third Cut:** 100

**Hard Plate:** 120

**First Screen:** 100

**Second Screen:** 120

**FINISHING:** Red color can bleed into some finishes—a problem when mixing species.

**COMMENTS:** Resistant to termites and fungus.

## Origin

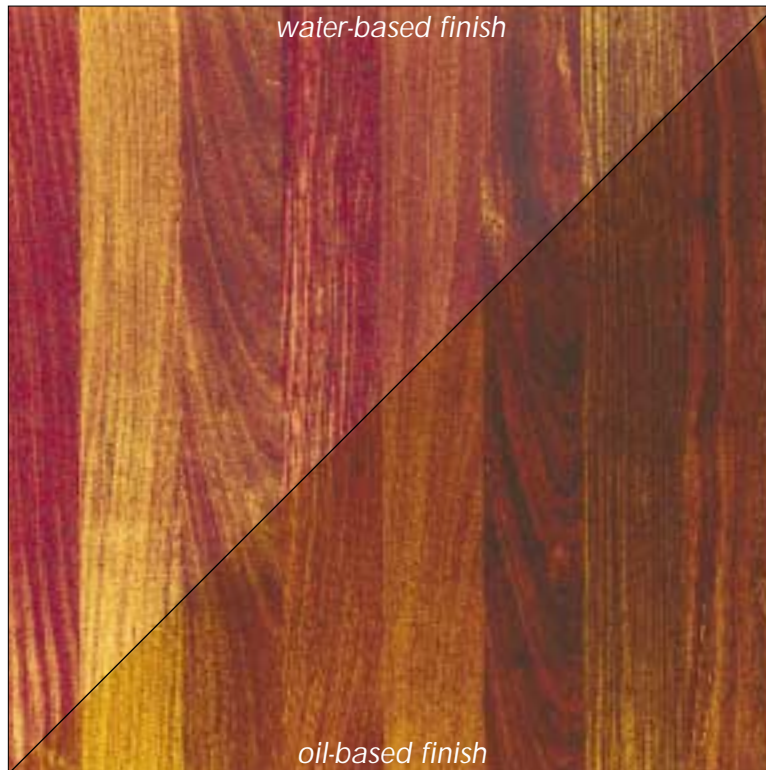
Australia.

## Availability

Moderately available.

# MAHOGANY, SANTOS

*Myroxylon balsamum*



## Appearance

**COLOR:** Dark reddish brown.

**GRAIN:** Striped figuring in quartersawn selections; texture is even and very fine.

**VARIATIONS WITHIN SPECIES AND GRADES:** Moderate color variation.

## Properties

**HARDNESS (JANKA):** 2200 (71% harder than Northern red oak).

**DIMENSIONAL STABILITY:** Above average (6.2; 28% more stable than Northern red oak).

## Workability

**SAWING/MACHINING:** Moderately difficult due to hardness; carbide tooling recommended.

**NAILING:** No known problems.

**SANDING:** Sands satisfactorily.

*Suggested Sequence*

**First Cut:** 40 or 50 at a 7-15 degree angle with the grain

**Second Cut:** 60 or 80 straight with the grain

**Third Cut:** 100

**Hard Plate:** 100

**First Screen:** 80

**Second Screen:** 100 or 120

**FINISHING:** Oil residue may be a problem. This can be eliminated by wiping with the appropriate 100 percent pure (not recycled) solvent before the sealer is applied. **(See finishing comments on page 6.)**

**COMMENTS:** Some respiratory/allergic reaction potential.

## Origin

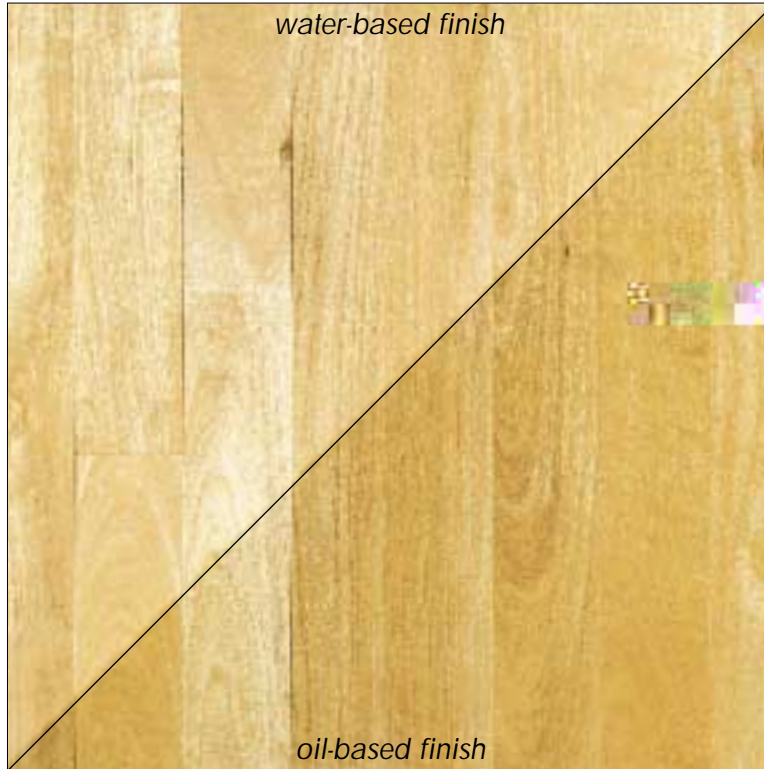
South America.

## Availability

Readily available.

# MAPLE, BRAZILIAN

Pau marfim, Guatambu  
*Balfourodendron riedelianum*



## Appearance

**COLOR:** Pale cream to yellow cream; no contrast between sapwood and heartwood.

**GRAIN:** Straight, fine, uniform.

**VARIATIONS WITHIN SPECIES AND GRADES:** Lower grades may have darker tan/brown colors.

## Properties

**HARDNESS (JANKA):** 1500 (16% harder than Northern red oak).

**DIMENSIONAL STABILITY:** Average (8.8; 2% less stable than Northern red oak). Very sensitive to moisture fluctuations.

## Workability

**SAWING/MACHINING:** Works cleanly; requires a wide set for ripping; very hard on router bits.

**NAILING:** No known problems.

**SANDING:** Sands satisfactorily if correct sanding sequence is followed.

*Suggested Sequence*

**First Cut:** 50 at a 7-15 degree angle with the grain

**Second Cut:** 60 or 80 straight with the grain

**Third Cut:** 100

**Hard Plate:** 100

**First Screen:** 100

**Second Screen:** 120 or 150

**FINISHING:** Takes finish well. May be difficult to stain.

## Origin

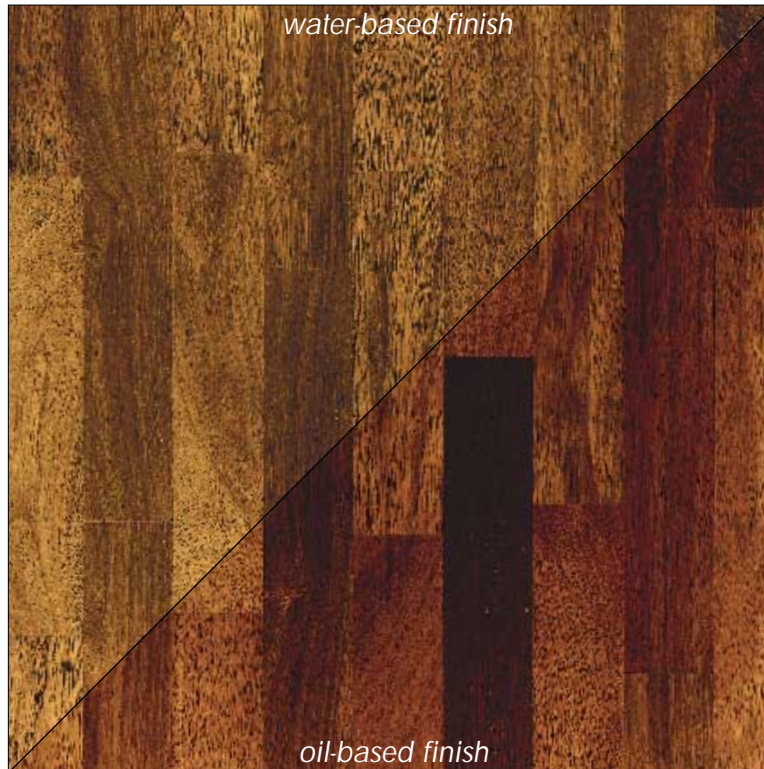
South America.

## Availability

Moderately available.

# MERBAU

Ipil, Kwila  
*Intsia spp.*



## Appearance

**COLOR:** Heartwood is yellowish to orange-brown when freshly cut, turning brown or dark red-brown upon exposure.

**GRAIN:** Straight to interlocked or wavy; coarse texture.

**VARIATIONS WITHIN SPECIES AND GRADES:** Moderate to high variation in color.

## Properties

**HARDNESS (JANKA):** 1925 (49% harder than Northern red oak).

**DIMENSIONAL STABILITY:** Excellent (4.6; 47% more stable than Northern red oak). However, actual installations have shown significant movement in use.

## Workability

**SAWING/MACHINING:** Sawing is difficult; wood gums saw teeth and dulls cutting edges; carbide tooling recommended.

**NAILING:** No known problems.

**SANDING:** Sands satisfactorily if correct sanding sequence is followed.

## Suggested Sequence

**First Cut:** 60 at a 7-15 degree angle with the grain

**Second Cut:** 60 or 80 straight with the grain

**Third Cut:** 100

**Hard Plate:** 120

**First Screen:** 100

**Second Screen:** 120

**FINISHING:** Takes neutral finish well. May be difficult to stain.

**COMMENTS:** High resistance to termites.

## Origin

Southeast Asia.

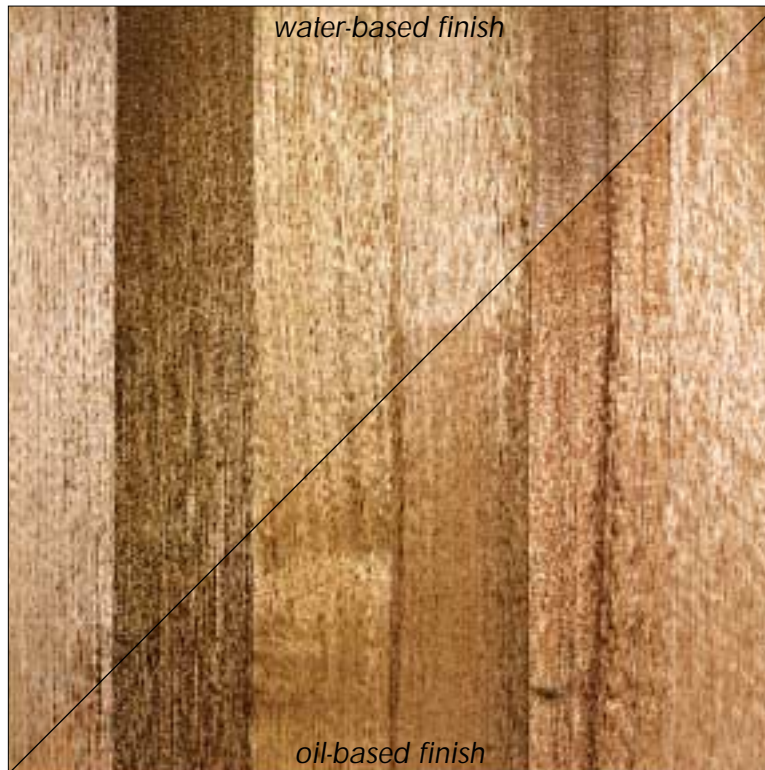
## Availability

Moderately available.

# OAK, TASMANIAN

Victorian ash

*Eucalyptus regnans/obliqua/delegatensis*



## Appearance

**COLOR:** Pale straw with occasional pinkish highlights, tan colors, some medium gray/brown colors; over time overall color variation is muted with an ambering of the straw colors to darker tan.

**GRAIN:** All riftsawn.

**VARIATIONS WITHIN SPECIES AND GRADES:** Even range of color shadings.

## Properties

**HARDNESS (JANKA):** 1350 (5% harder than Northern red oak).

**DIMENSIONAL STABILITY:** Data not available.

## Workability

**SAWING/MACHINING:** Cuts easily; some splintering when routing.

**NAILING:** No known problems.

**SANDING:** Sands satisfactorily if correct sanding sequence is followed.

*Suggested Sequence*

**First Cut:** 50 or 60 at a 7-15 degree angle with the grain

**Second Cut:** 60 or 80 straight with the grain

**Third Cut:** 80 or 100

**Hard Plate:** 80 or 100

**First Screen:** 80

**Second Screen:** 100 or 120

**FINISHING:** No known finishing problems.

**COMMENTS:** Has been known to cause contact dermatitis.

## Origin

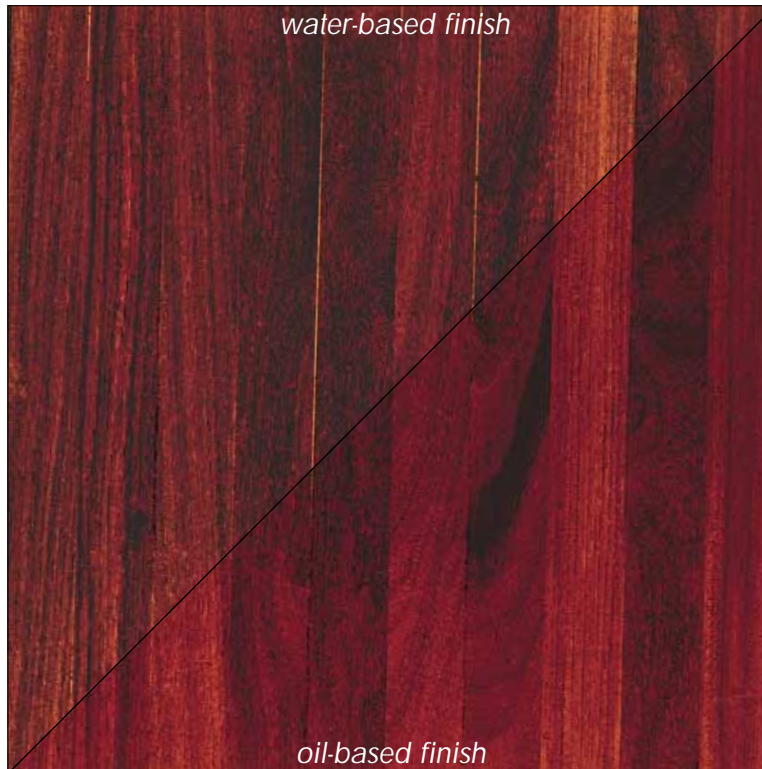
Australia.

## Availability

Moderately available.

# PADAUK

*Pterocarpus soyauxii*



## Appearance

**COLOR:** Heartwood is vivid reddish orange when freshly cut, darkening to reddish- or purple-brown or black over time. Sapwood is cream-colored. Very uniform in color.

**GRAIN:** Straight to interlocked; coarse texture.

**VARIATIONS WITHIN SPECIES AND GRADES:**

Slight variation in color.

## Properties

**HARDNESS (JANKA):** 1725 (34% harder than Northern red oak).

**DIMENSIONAL STABILITY:** Excellent (5.2; 40% more stable than Northern red oak).

## Workability

**SAWING/MACHINING:** Saws well, but requires a slow feed rate; carbide tooling recommended. Machines easily, with some tearing of the interlocked grain.

**NAILING:** No known problems.

**SANDING:** Sands satisfactorily. Job site furniture, walls, etc., should be protected from the fine red powder produced when sanding.

## Suggested Sequence

**First Cut:** 40 at a 7-15 degree angle with the grain

**Second Cut:** 60 or 80 straight with the grain

**Third Cut:** 80 or 100

**Hard Plate:** 100

**First Screen:** 80

**Second Screen:** 100 or 120

**FINISHING:** Because of the oil in the wood, oil-modified finishes may require long dry times. Waterborne finishes are often recommended. Has a tendency to bleed. Conversion varnishes also have been known to work well. **(See finishing comments on page 6.)**

**COMMENTS:** Dermatological and respiratory allergic potential.

## Origin

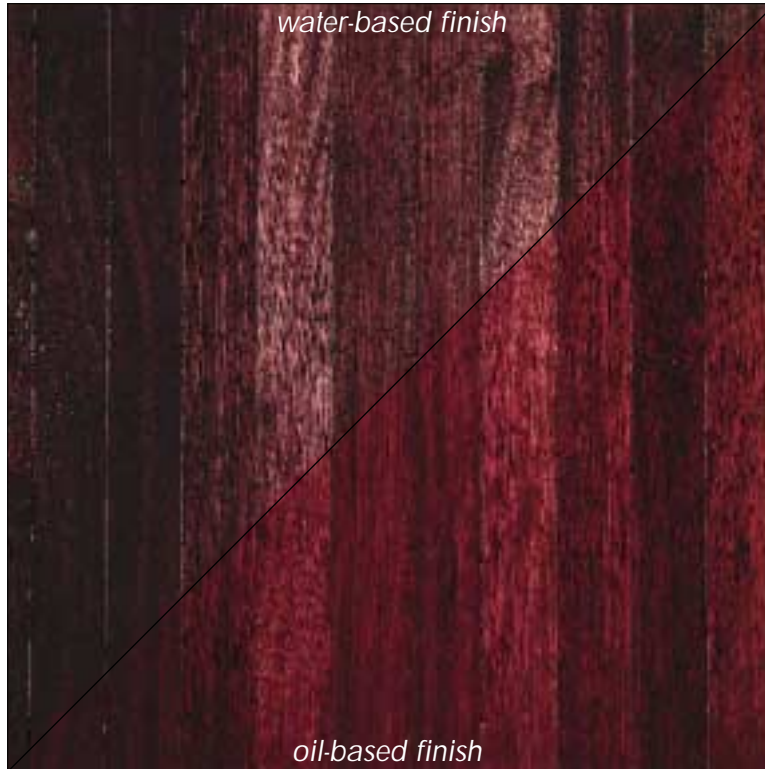
Africa.

## Availability

Moderately available.

# PURPLEHEART

Amaranth  
*Peltogyne spp.*



## Appearance

**COLOR:** Heartwood is brown when freshly cut, turning deep purple to purplish-brown over time. Sapwood is a lighter cream color.

**GRAIN:** Usually straight; medium to fine texture. Presence of minerals in some boards may cause uneven coloration.

**VARIATIONS WITHIN SPECIES AND GRADES:** Moderate to high color variation.

## Properties

**HARDNESS (JANKA):** 2890 (124% harder than Northern red oak).

**DIMENSIONAL STABILITY:** Above average (6.1; 29% more stable than Northern red oak).

## Workability

**SAWING/MACHINING:** Moderately difficult due to hardness; frequent sharpening of tools required; slow feed rate and carbide tooling recommended.

**NAILING:** Good holding ability.

**SANDING:** Moderately difficult.

## Suggested Sequence

**First Cut:** 50 at a 7-15 degree angle with the grain

**Second Cut:** 60 or 80 straight with the grain

**Third Cut:** 80 or 100

**Hard Plate:** 100

**First Screen:** 80

**Second Screen:** 100 or 120

**FINISHING:** Takes finishes well; some have found that water-based finishes hold color better. Tendency to bleed with some finishes. **(See finishing comments on page 6.)**

**COMMENTS:** Often used as a feature strip or as part of an inlay.

## Origin

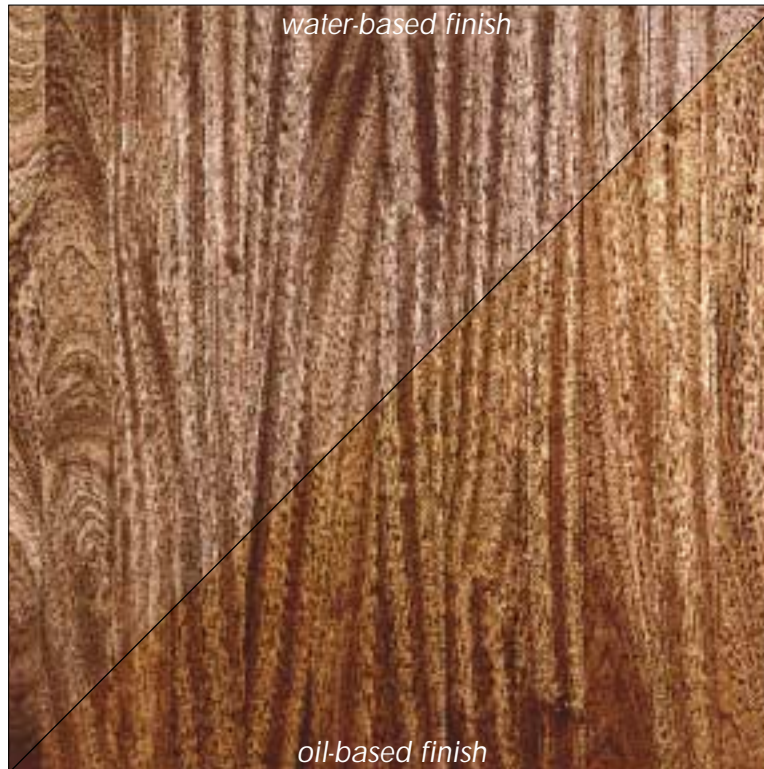
Mexico, Central and South America.

## Availability

Limited availability.

# SAPELE

*Entandrophragma cylindricum*



## Appearance

**COLOR:** Medium to dark red-brown; darkens over time.

**GRAIN:** Fine, interlocked.

**VARIATIONS WITHIN SPECIES AND GRADES:** Quarter-sawn material has a ribbon-striped effect.

## Properties

**HARDNESS (JANKA):** 1500 (16% harder than Northern red oak).

**DIMENSIONAL STABILITY:** Above average (7.4; 14% more stable than Northern oak).

## Workability

**SAWING/MACHINING:** Saws easily.

**NAILING:** No known problems.

**SANDING:** Sands satisfactorily if correct sanding sequence is followed.

*Suggested Sequence*

**First Cut:** 50 at a 7-15 degree angle with the grain

**Second Cut:** 80 straight with the grain

**Third Cut:** 100

**Hard Plate:** 100 or 120

**First Screen:** 100 or 120

**Second Screen:** 150

**FINISHING:** Staining may over-darken the wood. No known finishing problems.

## Origin

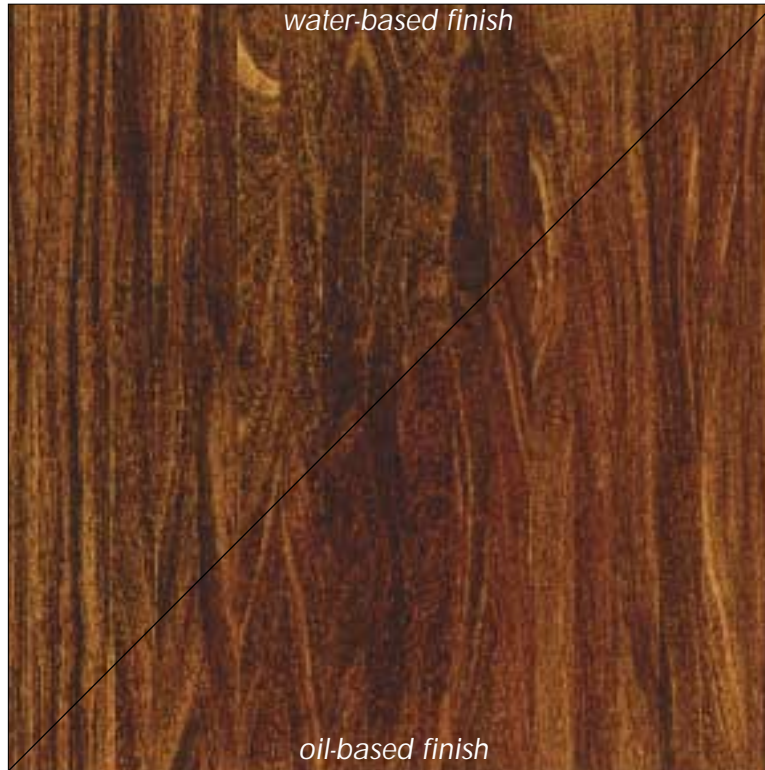
Africa.

## Availability

Moderately available.

# TEAK, BRAZILIAN

Cumaru, Tonka, Southern Chestnut, Brazilian Chestnut  
*Dipteryx odorata*



## Appearance

**COLOR:** At first, red-brown or purple-brown with light yellow-brown or purple streaks; after exposure, uniform light brown or yellow-brown.

**GRAIN:** Fine texture, interlocked, waxy or oily feel.

**VARIATIONS WITHIN SPECIES AND GRADES:** Dramatic shading that mellows as the floor matures.

## Properties

**HARDNESS (JANKA):** 3540 (174% harder than Northern red oak).

**DIMENSIONAL STABILITY:** Average (7.6; 12% more stable than red oak).

## Workability

**SAWING/MACHINING:** Works well, but is very hard—use carbide blades and bits.

**NAILING:** Pre-drilling and hand-nailing are preferred.

**SANDING:** Difficult. Scratches are easily seen—each sanding must carefully remove the scratches from the previous cut, or sanding marks will be visible in the finish.

## Suggested Sequence

**First Cut:** 50 at a 7-15 degree angle with the grain

**Second Cut:** 60 or 80 straight with the grain

**Third Cut:** 100

**Hard Plate:** 100

**First Screen:** 80

**Second Screen:** 100 or 120

**FINISHING:** Test all products before using them on the actual job site. Oil-modified finishes may not dry when applied over this wood if standard procedures are followed. Moisture-cure urethane, conversion varnish and waterborne finishes are generally more successful with this species. **(See finish comments on page 6.)**

**COMMENTS:** Has been known to cause contact dermatitis.

## Origin

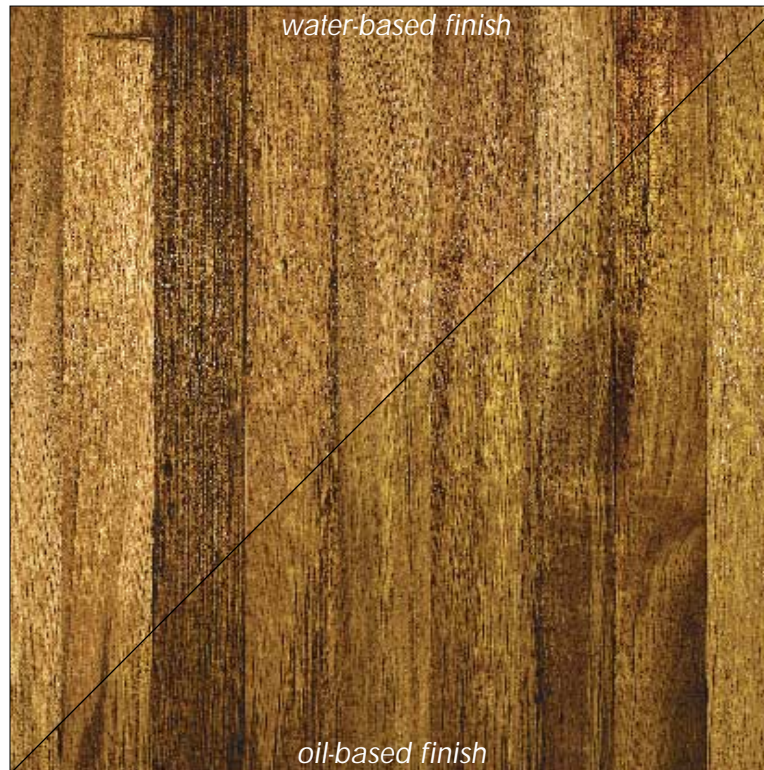
South America.

## Availability

Moderately available.

# TEAK, THAI/BURMESE

*Tectona grandis*



## Appearance

**COLOR:** Heartwood varies from yellow-brown to dark golden brown; turns rich brown under exposure to sunlight. Sapwood is a lighter cream color.

**GRAIN:** Straight; coarse, uneven texture.

**VARIATIONS WITHIN SPECIES AND GRADES:** Moderate to high color variation.

## Properties

**HARDNESS (JANKA):** Average of 1000 (16% softer than Northern red oak).

**DIMENSIONAL STABILITY:** Excellent (5.8; 33% more stable than Northern red oak).

## Workability

**SAWING/MACHINING:** Moderate ease in working with hand and machine tools; silica in wood dulls tools quickly; carbide tooling is recommended.

**NAILING:** No known problems.

**SANDING:** Clogs abrasives; frequent sandpaper changes are required. Generally difficult to sand—it may dish out if screened too much with a dull screen, and the edger digs easily.

## Suggested Sequence

**First Cut:** 50 or 60 at a 7-15 degree angle with the grain

**Second Cut:** 60 or 80 straight with the grain

**Third Cut:** 100

**Hard Plate:** 100 or 120

**First Screen:** 100

**Second Screen:** 120 or 150

**FINISHING:** Natural oils may interfere with adhesion and drying of some finishes. To reduce the wood's tendency to repel finish coats, surface resins may be removed with a 100-percent pure (not recycled) solvent that is compatible with the finish to be used.

**(See finish comments on page 6.)**

**COMMENTS:** Has an oily feel. Respiratory and dermatological allergic potential.

## Origin

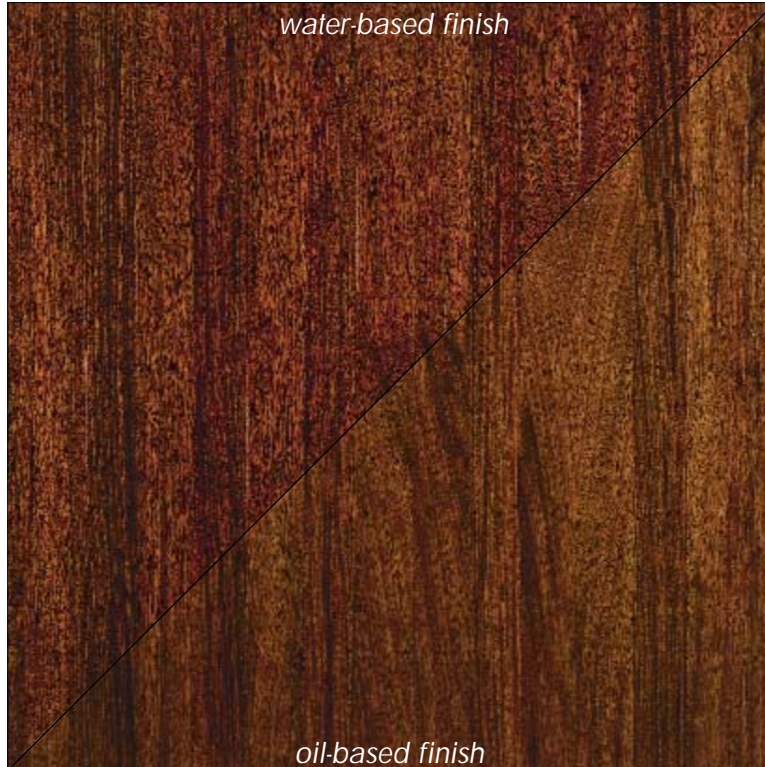
Asia.

## Availability

Readily available.

# WALNUT, BRAZILIAN

Ipé  
*Tabebuia spp*



## Appearance

**COLOR:** Can vary from light yellowish tan with green overtones to almost blackish brown; exhibits a large range of coloration when freshly milled; darkens over time to medium to dark brown.

**GRAIN:** Fine to medium, straight to very irregular.

## Properties

**HARDNESS (JANKA):** 3680 (185% harder than Northern red oak).

**DIMENSIONAL STABILITY:** Average (8.0; 7% more stable than Northern red oak).

## Workability

**SAWING/MACHINING:** Difficult, especially with hand tools.

**NAILING:** Predrilling and hand-nailing may be preferred.

**SANDING:** Difficult. The wood is dense and oily. Scratches are easily seen—each sanding must carefully remove the scratches from the previous cut, or sanding marks will be visible in the finish.

## Suggested Sequence

**First Cut:** 40 or 50 at a 7-15 degree angle with the grain

**Second Cut:** 60 or 80 straight with the grain

**Third Cut:** 80 or 100

**Hard Plate:** 100 or 120

**First Screen:** 100

**Second Screen:** 120 or 150

**FINISHING:** Test all products before using them on the actual floor. Oil-modified finish will require a lengthy dry time. Successful techniques include using a moisture-cure urethane sealer and a waterborne topcoat, or burnishing and sealing with a shellac-based sealer, then applying wax or oil and wax. **(See finish comments on page 6.)**

**COMMENTS:** Often used as a decking material. Has been known to cause contact dermatitis.

## Origin

South America.

## Availability

Readily available.