

Cedar Spanish

(*Cedrela odorata*)



Common Names:

Brazilian cedar, British Guiana cedar, British Honduras cedar, Cedar, Cedre rouge, Cedro, Cedro oloroso, Cedro red, Central American cedar, Cigar box cedar, Epi, Guyana cedar, Honduras cedar, Jamaican cedar, Kapere, Mexican cedar



Mechanical Values

Category	Green	Dry	Units
Weight		30	lbs/cu.ft.
Density (air-dry)		26	lbs/cu.ft.
Specific Gravity	0.37	0.4	
Hardness		568	lbs
Stiffness	872	1006	1000 psi
Bending Strength	5234	8545	psi
Shearing Strength		950	psi
Max. Crushing Strength	2724	4389	psi
Work to Maximum Load	7	6	in-lbs/in ³
Radial Shrinkage (G->OD)		4	%
Tangential Shrink. (G->OD)		6	%
Volumetric Shrink (G->OD)		10	%

Environmental Profile

This species is reported to be relatively secure within its natural growth range in most areas including French Guiana, Guyana, and Surinam, but it is classified as either Extinct, Endangered, Vulnerable, or Rare in the Dominican Republic and Panama, and is also reported to be Vulnerable in Peru and Endangered in Colombia. The environmental status of the species in the wild in the Caribbean Islands, Costa Rica, El Salvador, Guatemala, Mexico, Nicaragua, Argentina, Bolivia, Brazil, Ecuador, and Venezuela is currently listed as unknown because of inadequate information (Source - World Conservation Monitoring Center - 1992). Although it may be rare in some parts of its range, the species is reported to be rather widespread and abundant within the remainder of its range (Source - The Nature Conservancy - Rank of relative endangerment based primarily on the number of occurrences of the species worldwide).

Distribution

C. odorata produces the famous Spanish Cedar, a timber of great commercial interest for over 200 years. Today, its distribution is reported to be greatly diminished due to excessive exploitation, and large trees of good form and size are reported to be rare. The geographical range of the species is reported to include the Cape Verde Islands, and although its natural range has been obscured by exploitation, forestry plantings, and trees which have escaped cultivation, it has been cultivated from Sinaloa and Tamaulipas, Mexico to Argentina and on most of the Caribbean islands. It occurs in both dry and moist lowland deciduous forests up to an elevation of 3900 feet (1200 m). The species is a strong light demander and is reported to appear as a fast growing pioneer species in secondary forests. It is often protected, and is seen growing in cultivated fields, orchards and plantations, and sometimes as a shade tree for coffee plants. The species is also reported to be widely planted in many tropical regions, including Nigeria because of its valuable timber, rapid growth, ease of establishment in taungya plantations, and relative freedom from shoot-borer attack.

Product Sources

Some material from this species is reported to be available from environmentally responsible or sustainably managed sources. The International Tropical Timber Organization (ITTO) reports that the species is a very important source of timber. The timber is reported to be exported regularly, especially as square-edged timber and veneer. The following species in the database is reported to be similar to Central American cedar in color, weight, and hardness: Cedrillo (*Huertea cubensis*).

Tree Data

Cedrela trees are reported to attain heights of 100 feet (30 m) and over, under optimum growing conditions. The buttressed trees usually have long and clear cylindrical boles up to 40 to 60 feet (12 to 18 m) and trunk of diameters 36 to 72 inches (90 to 180 cm). Timber produced by most species in the genus *Cedrela* are reported to contain volatile oils which limit their use for certain applications, such as clock cases. Timber from young or fast-grown trees is reported to be generally less resinous than that from mature or more slowly-grown trees. Sawdust from machining operations has been associated with nose and throat irritation in some individuals.

Sapwood Color

The sapwood is pale in color and is not sharply demarcated from the heartwood.

Heartwood Color

The heartwood usually ranges from pale pinkish-brown to dark reddish-brown in color, and darkens upon exposure. Timber from younger or fast-grown trees is reported to be generally paler in color.

Grain

The grain is straight or shallowly interlocked.

Texture

The wood has moderately coarse texture. The wood varies from lustrous to highly lustrous.

Odor

Natural oil in the wood gives off a distinctive fragrant scent.

Ease of Drying

The timber is reported to kiln dry fairly rapidly and satisfactorily.

Drying Defects

The material has a tendency to distort and collapse. Individual pieces may distort or collapse appreciably. Knots tend to split badly, but surface-checking is usually slight.

Movement in Service

The timber is reported to be dimensionally stable, and holds its shape very well after seasoning.

Natural Durability

The heartwood is reported to have high natural resistant to decay. The sapwood is liable to attack by powder-post beetles. The wood is reported to be highly resistant to termites in the West Indies, and moderately resistant in West Africa.

Resistance to Impregnation

The heartwood is reported to be extremely resistant to impregnation, while the sapwood is moderately resistant.

Blunting

The wood exerts slight blunting effect on cutters.

Resistance to Cutting

The timber responds satisfactorily to cross-cutting and bandsawing.

Planing

A good finish can be obtained in planing if cutting angles are reduced to 20 degrees.

Turning

Turning characteristics are reported to be good.

Boring

The wood is characteristically difficult to bore.

Routing and Recessing

The wood responds readily to routing.

Mortising

The wood has exceptional mortising properties.

Moulding

The wood is reported to have excellent moulding qualities. A French head is reported to produce the most satisfactory moulding results.

Carving

The wood carves rather easily.

Gluing

The wood glues well, although some prior surface preparation may be required.

Nailing

The wood has satisfactory to excellent nailing characteristics.

Screwing

The wood has excellent screwing characteristics.

Polishing

Polishing properties are reported to be very good.

Staining

Painting

The wood has good staining characteristics. The wood has excellent painting characteristics

Response to Hand Tools

The wood responds well to hand tools.

Strength Properties

The bending strength of the species is considered medium, being much weaker than White oak or Teak in the air-dry condition (about 12 percent moisture content). It is weak in compression parallel to grain (maximum crushing strength), and is inferior to Mahogany. Surfaces may dent or scratch easily since the wood is soft. Weight and density are about average. Strength properties are reported to be generally high, relative to weight.