



**USDA Forest Service
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Wood Technology Transfer Fact Sheet

Cedrela spp.

Spanish-cedar

Cedro

Family: Meliaceae

Other Common Names: Cedro (Central and South America), Acajou rouge (French West Indies), Cedre rouge (French Guiana), Ceder (Surinam).

Distribution: *Cedrela* occurs from Mexico to Argentina and is found in all countries except Chile. Trees make their best growth on rich, well-drained humid sites but may also compete favorably on drier hillsides; intolerant of water-logged locations.

The Tree: Under favorable conditions will reach heights over 100 ft and diameters 3 to 6 ft above the substantial buttresses. Straight cylindrical boles clear for 40 to 60 ft.

The Wood:

General Characteristics: Heartwood pinkish- to reddish brown when freshly cut, becoming red or dark reddish brown, sometimes with a purplish tinge, after exposure; sharply to rather poorly demarcated from the pinkish to white sapwood. Grain usually straight, sometimes interlocked; texture rather fine and uniform to coarse and uneven; luster medium to high and golden; distinctive cedary odor usually pronounced, some specimens with bitter taste.

Weight: Basic specific gravity (oven-dry weight/green volume) very variable ranging from 0.30 to 0.60, averaging about 0.40; air-dry density ranges from 23 to 47 pcf, averaging about 30 pcf.

Mechanical Properties: (First set of data based on 2-in. standard; second set 2-cm standard.)

Moisture content Bending strength Modulus of elasticity Maximum crushing strength

(%) (Psi) (1,000 psi) (Psi)

Green (74) 7,510 1,310 3,370

12% 11,530 1,440 6,210

Green (30) 9,100 1,200 4,080

15% 11,750 NA 5,650

Janka side hardness about 550 lb for green material and 600 lb for air dry. Forest Products Laboratory toughness average for green and dry material 106 in.- lb (5/8-in specimen).

Drying and Shrinkage: Easy to air-season or kiln-dry, slight warp with little or no checking. Kiln schedule T10-D4S is suggested for 4/4 stock and T8-D3S for 8/4. A 200o F heating for 8 to 17 hours at a relative humidity of 60 percent is suggested to control oil and gum exudates in service. Shrinkage green to ovedry: radial 4.2%; tangential 6.3%; volumetric 10.3%. Movement in service rated as small.

Working Properties: Cedro is easy to work with hand and machine tools but somewhat difficult to bore cleanly. Easy to cut into veneer but with some tendency for wooly surfaces to occur; good nailing and gluing properties; stains and finishes well but gums and oils sometimes are a problem in polishing.

Durability: Heartwood is rated as durable but there is some variability within species; resistant to both subterranean and dry-wood termites. Low resistance to attack by marine borers. Wood has excellent weathering characteristics.

Preservation: Heartwood is reported to be extremely resistant to preservation treatments. Reports on treatability of sapwood are conflicting.

Uses: Wood is favored for millwork, cabinets, fine furniture, musical instruments, boat building, patterns, sliced- and rotary-cut veneer, decorative and utility plywoods, cigar wrappers, and cigar boxes. Volatile oils may restrict use for some applications (e.g., clock cases).

Additional Reading: (24), (30), (46), (74)

24. Food and Agriculture Organization. 1970. Estudio de preinversion para el desarrollo forestal de la Guyana Venezolana. Informe final. Tomo III. Las madera del area del proyecto. FAO Report FAO/SF: 82 VEN 5. Rome.

30. Instituto de Pesquisas Tecnologicas. 1956. Tabelas de resultados obtidos para madeiras nacionais. Bol. Inst. Pesqu. tec. Sao Paulo No. 31.

46. Longwood, F. R. 1962. Present and potential commercial timbers of the Caribbean. Agriculture Handbook No. 207. U.S. Department of Agriculture.

74. Wangaard, F. F., and A. F. Muschler. 1952. Properties and uses of tropical woods, III. Tropical Woods 98:1-190.

From: Chudnoff, Martin. 1984. Tropical Timbers of the World. USDA Forest Service. Ag. Handbook No. 607.