



Liquidambar styraciflua

Family: Hamamelidaceae

Sweetgum

The genus *Liquidambar* contains three to four species that grow in North and Central America [1] and Asia [2]. All species look alike microscopically. The word *liquidambar* is from the Spanish common name in Mexico (indirectly from Latin liquid and amber), in reference to the fragrant resin.

Liquidambar styraciflua-alligator-tree, alligatorwood, ambarwood, american mahogany, blisted, delta redgum, figured gum, gum, gumtree, gumwood, hazel, hazel pine, hazelwood, incense-tree, liquidambar, mulberry, opossum-tree, plain redgum, quartered redgum, redgum, sapgum, sapwood hazel pine, satin walnut, satinwood, splint sapgum, splinted sapgum, starleaf gum, sycamore gum, whitegum.

Distribution

Sweetgum occurs naturally in the southeastern United States. Its range extends from New Jersey, Pennsylvania, Maryland, Virginia, West Virginia, Ohio, Indiana, and Illinois, south to Missouri, Arkansas, Oklahoma and Texas, and east to the Atlantic coast.

The Tree

Sweetgum trees grow to heights of 100 ft (30 m), with diameters of 3 ft (1 m).

The Wood

General

The sapwood of sweetgum is white to light pink, while the heartwood is reddish brown to brown. The grain is interlocked, producing an attractive grain, but causing problems in seasoning. The wood is moderately hard, stiff, and heavy.

Mechanical Properties (2-inch standard)

	Specific gravity	MOE x10 ⁶ lbf/in ²	MOR lbf/in ²	Compression		WML ^a in-lbf/in ³	Hardness lbf	Shear lbf/in ²
				Parallel lbf/in ²	Perpendicular lbf/in ²			
Green	0.46	1.20	7,100	3,040	370	10.1	600	990
Dry	0.52	1.64	12,500	6,320	620	11.9	850	1,600

^aWML = Work to maximum load.

References: (59, 98).

Drying and Shrinkage

Type of shrinkage	Percentage of shrinkage (green to final moisture content)		
	0% MC	6% MC	20% MC
Tangential	10.2	7.9	3.3
Radial	5.3	4.2	1.7
Volumetric	15.8	12.0	5.0
Sweetgum shrinks considerably in drying and does not stay in place well during use. It has a tendency to cup or check when exposed to the weather. References: 0% MC (98), 6% and 20% MC (90).			

Kiln Drying Schedules^a

Condition	Stock				
	4/4, 5/4, 6/4	8/4	10/4	12/4	16/4
Standard	T8-C4	T5-C3	T5-C2	T5-B2	–
1-in. squares	T12-F6	–	–	–	–
2-in. squares	T11-D5	–	–	–	–
^a References (6, 86).					

Working Properties: Sweetgum is above average in turning, boring, and steam bending. It is intermediate in planing, shaping, bending, splitting and holding nails and screws. It requires pretreatment before gluing.

Durability: Rated as slightly or nonresistant to heartwood decay.

Preservation: No information available at this time.

Uses: Lumber (boxes, crates, dimension stock, furniture parts and fixtures), veneer, plywood, slack cooperage, railroad ties, fuel and pulpwood.

Toxicity: No information available at this time.

Additional Reading and References Cited (in parentheses)

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