technology transfer fact sheet



Center for Wood Anatomy Research USDA Forest Service • Forest Products Laboratory • One Gifford Pinchot Drive • Madison, Wisconsin 53705–2398

# **Acer negundo** Boxelder

# **Family: Aceraceae**

Boxelder is a member of the Maple Family. The word *acer* is the classical Latin name of maple. The word *negund* is from the Malayan common name of *Vitex negund*., negundo chastetree, later applied to this species.

Acer negundo: acecincle, acero Americano, acero negundo, acezintle, arce, arce fresno, arce negundo, ashleaf maple, ash-leaved maple, ash maple, asklonn, aune-buis, black ash, boxelder maple, California boxelder, Californian boxelder, californische esdoorn, cutleafed maple, erable a feuilles de frene, erable aux feuilles de frene, erable negundo, eschenblattriger ahorn, inland boxelder, manitoba maple, maple ash, negundo, negundo maple, palo de venagre, plaine a guiger, raxoch, red river maple, soft maple, stinking ash, sugar ash, threeleafed maple, veder-esdoorn, western boxelder.

## Distribution

Lower elevations in North America, extending through Mexico into Guatemala, excluding Pacific Coast states and south central Canada.

## The Tree

Boxelder is a maple which can reach a height of 70 ft (21 m) and a diameter of 3 ft (1 m). The trunk can be short and poorly formed, dividing into several main branches. Boxelder is fast growing, short lived and easily transplanted. The tree is prone to injury from wind, heart rot and insects. It has green twigs and compound leaves (ash-like), separating it from other maples. It grows best in lowland areas along rivers and grows with cottonwood, willow, maple, sycamore and tupelo.

# The Wood

#### General

The heartwood is yellowish brown, while the sapwood is greenish yellow to creamy white. Red streaks are composed of a pigment from a fungus (*Fusarium negundi*). The wood is light, soft, porous, close-grained and weak. It is susceptible to heart rot. It can contain a curly figure.

				Compression				
	Specific gravity	MOE X10 <sup>6</sup> lbf/in <sup>2</sup>	MOR lbf/in <sup>2</sup>	Parallel lbf/in <sup>2</sup>	Perpendicular lbf/in <sup>2</sup>	WML <sup>a</sup> in-lbf/in <sup>3</sup>	Hardness lbf	Shear lbf/in²
Green	0.416	0.87	5,220	2,370	340	0.90	540	940
Dry	0.457	-	_	4,950	780	_	720	1,360
<sup>a</sup> WML = Work to maximum load. <sup>b</sup> Reference (90).								

# **Mechanical Properties**<sup>b</sup> (2-inch standard)

#### **Drying and Shrinkage**

Shrinkage (% of green)	Green, 0% MC	Green, 6% MC	Green, 12% MC*
Tangential	7.4	-	-
Radial	3.9	-	_
Volumetric	14.8	-	9.4

#### Kiln Drying Schedule<sup>a</sup>

	Stock						
Condition	4/4, 5/4, 6/4	8/4	10/4	12/4	16/4		
Standard	T8-D4	T6-C3	T5-C2	_	-		

<sup>a</sup>References (6, 86).

Working Properties: Boxelder is workable with both hand tools and machine tools.

**Durability:** Boxelder is nonresistant to heartwood decay, being susceptible to heart rot and insects.

Preservation: No information available at this time.

**Uses:** Boxelder is currently used for inexpensive furniture, wooden ware, boxes, crates, wood pulp, charcoal, fuel and cooperage.

**Toxicity:** Suspected to cause allergic bronchial asthma and rhinitis (Acer spp.) (40).

#### Additional Reading and References Cited (in parentheses)

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