



## ***Ostrya* spp.**

**Family: Betulaceae**

### **Hophornbeam**

The genus *Ostrya* is composed of about 8 species native to: Mexico [1], Eurasia [1], eastern Asia/Japan [3] and the USA & Canada [3]. The name *ostrya* is Latinized from the Greek *ostrua*, a tree with very hard wood and most likely the European Hornbeam (*Carpinus betulus*).

*Ostrya carpinifolia*-European Hophornbeam

*Ostrya chisosensis*-Big Bend Hophornbeam, **Chisos Hophornbeam**

*Ostrya knowltonii*-Ironwood, **Knowlton Hophornbeam**, Western Hophornbeam, Wolf Hophornbeam

*Ostrya virginiana*\*-American Hophornbeam, Deerwood, **Eastern Hophornbeam**, Hardhack, Hornbeam, Ironwood, Leverwood, Ostria

\* commercially important

The following is for Eastern Hophornbeam:

#### **Distribution**

North America, from Nova Scotia to Maine, Quebec, Ontario, Michigan, Minnesota, Manitoba and North Dakota south to South Dakota, Nebraska, Kansas, Oklahoma Texas and Mexico east to Florida.

#### **The Tree**

Hophornbeams are small deciduous trees with scaly rough bark. The leaves are double toothed and of alternate arrangement. The male flowers are borne on upright catkins, while the female flowers and fruits are grouped in clusters, resembling hops. They reach heights of 60 feet and 2 feet in diameter. It prefers upland soils in hilly country.

#### **The Wood**

##### **General**

The sapwood of Hophornbeam is wide and whitish, while the heartwood is light brown with red streaks. It has no characteristic odor or taste. It is very heavy and hard. It is sometimes confused with birch.

## Mechanical Properties (2-inch standard)

	Specific gravity	MOE x10 <sup>6</sup> lbf/in <sup>2</sup>	MOR lbf/in <sup>2</sup>	Compression		WML <sup>a</sup> in-lbf/in <sup>3</sup>	Hardness lbf	Shear lbf/in <sup>2</sup>
				Parallel lbf/in <sup>2</sup>	Perpendicular lbf/in <sup>2</sup>			
Green	0.63	1.15	8,500	3,570	730	13.3	1,170	1,370
Dry	0.70	1.70	14,100	7,760	1,500	14.0	1,860	1,790

<sup>a</sup>WML = Work to maximum load.  
Reference (59).

## Drying and Shrinkage

Type of shrinkage	Percentage of shrinkage (green to final moisture content)		
	0% MC	6% MC	20% MC
Tangential	9.6	8.0	3.3
Radial	8.2	6.8	2.8
Volumetric	18.6	15.5	6.5

Seasoning is difficult, as a result of the high density, which lengthens the drying period.  
References: 0% MC (59),  
6% and 20% MC (90).

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

Condition	Stock				
	4/4, 5/4, 6/4	8/4	10/4	12/4	16/4
Standard	T6-B3	T3-B1	-	-	-

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

**Working Properties:** Very difficult to work.

**Durability:** No information available at this time.

**Preservation:** No information available at this time.

**Uses:** Furniture, axles, handles, levers, mallets, splitting wedges, canes, wooden wares, novelties, fuel wood.

**Toxicity:** No information available at this time.

## Additional Reading and References Cited (in parentheses)

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