technology transfer fact sheet

Halesia spp. Family: Styracaceae Silverbell

The genus Halesia is composed of about 4 species native to: the United States [3] and China [1]. The word halesia is named after Stephen Hales (1677-1761), British clergyman and author of Vegetable Staticks (1722).

Halesia carolina-Bell-tree, Bell Olivetree, Bellwood, Box-elder, **Carolina Silverbell**, Catbell, Florida Silverbell, Four-winged Halesia, Little Silverbell, No-name-tree, Opossum, Opossumwood, Mountain Silverbell, Rattle-box, Silverbell-tree, Silver-tree, Snowdrop-tree, Tisswood, Wild Olivetree

Halesia diptera-Cowlicks, Silverbell-tree, Snowdrop-tree, Southern Silverbell-tree, Two Wing Silverbell

Halesia parviflora-Florida Silverbell, Little Silverbell.

Distribution

Southeastern United States and China.

The Tree

Silverbells are shrubs or trees with scaly reddish brown bark. The leaves and small branches are covered with stellate (star shaped) hairs. The showy white flowers are produced in small, pendulous clusters. They produce dry, winged fruits (samara). Silverbells can reach a height of 100 feet, although they normally grow to 40 feet. The bark is thin, separating into slightly ridged, reddish brown scales.

The Wood

General

The wood of Silverbell is brown, strong, dense and close grained. It has a wide white sapwood and a pale brown heartwood. The luster is medium and it has no odor or taste. The texture is fine and uniform, with a straight grain.

Mechanical Properties (2-inch standard)

				Compression				
	Specific gravity	${\rm MOE}\atop x10^6\ lbf/in^2$	MOR lbf/in²	Parallel lbf/in²	Perpendicular lbf/in²	$\begin{array}{c} WML^a\\ in-lbf/in^3 \end{array}$	Hardness lbf	Shear lbf/in²
Green	.42	1.2	6500	2800	430	8.8	470	930
Dry	.48	1.3	8600	5100	680	6.9	590	1200

^aWML = Work to maximum load.

Drying and Shrinkage

	Percentage of shrinkage (green to final moisture content)				
Type of shrinkage	0% MC	6% MC	20% MC		

^bReference (98).

^cReference (59).

Tangential	7.6	-	-			
Radial	3.8	-	-			
Volumetric	12.6	-	-			
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 $^{^{\}rm a}\textsc{Birch}$ shrinks considerably during drying. References: 0% MC (98), 6% and 20% MC (90).

Kiln Drying Schedules^a

No information available at this time

Working Properties: Good

Durability: Not highly resistant to decay.

Preservation: No information available at this time

Uses: Paneling, cabinetwork

Toxicity: No information available at this time.

Additional Reading and References Cited (in parentheses)

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- 4. Markwardt, L.J. and T.R.C. Wilson. 1935. Strength and related properties of woods grown in the United States. USDA Forest Service, Tech. Bull. No. 479. USGPO, Washington, DC.
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- 7. Simpson, W.T. 1991. Dry kiln operator's manual. USDA Forest Service, FPL Ag. Handbook 188.
- 8. Summitt, R. and A. Sliker. 1980. CRC handbook of materials science. Volume 4, wood. CRC Press, Inc., Boca Raton, FL. 459 pp. Harry A. Alden, 1994