

# technology transfer fact sheet



Center for Wood Anatomy Research

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## *Tilia* spp.

Family: **Tilaceae**

European Lime

Basswood (*Tilia* sp.), also known as Lime in England and Europe, consists of 30 to 35 species native to Eurasia(30) and North America(4). All species look alike microscopically. A favorite wood for carvings, such as those by Grinling Gibbons (England, 1670-1710).

*Tilia cordata*-Bass, Basswood, Bast-tree, Common Lime, English Lime, European Small-leaf Lime, European Small-leaf Limetree, European Small-leaf Linden, Europees Linden, Europeisk Lind, Kislevelu Hars, Kleinbladige Linde, Kleinblattrige Linde, Large-leaf Lime, Lime, Limetree, Lind, Linde, Linden, Lipa, Lipa Malolista, Lipa Malolistna, Littleleaf Linden, Melkoistnaya, Melkolistnaya Lipa, Niinipuu, Parklind, Shinanoki, Sinanoki, Skogs-lind, Small-leaf Lime, **Small-Leaved Lime**, Sommerlinde, Steinlinde, Teiu cu Frunza Mica, Tiel-tree, Tiglio, Tiglio a Foglie, Tiglio Selvatico, Tilleau Sauvage, Tilleul, Tilleul a Grandes Feuilles, Tilleul a Petites Feuilles, Tilleul des Bois, Tilleul Feuilles, Tilleul Sauvage, Tilo, Tilo Silvestre, Winter-linde

*Tilia grandifolia*-Grossblattrige Linde, Sommer-linde, Tiglio a Folie Grandi, Tilleul a Grandes Feuilles, Tilleul de Hollande, Tilo

*Tilia platyphyllo*-**Broad-Leaved Lime**, Storbladig Lind

*Tilia vulgaris*-**Common Lime**, English Lime, Europaische Linde, European Basswood, Europese Linde, Gemeine Linde, Hollandse Linde, Hollandsk Lind, Japanese Basswood, Limewood, Linden, Oba-shina, Parklind, Shina, Shinanoki, Tiglio Comune, Tiglio Olandese, Tilleul, Tilleul d'Europe, Tilleul Intermediaire, Tilo, Tilo Holandes, Tilo Intermediario, Vanlig Lind

### Distribution

Europe and England.

The following is for *Tilia vulgaris*:

### The Tree

European Lime reaches heights of 100 feet, with a diameter of 4 feet and with a clear bole for 50 feet.

### The Wood

#### General

The sapwood of European Lime is indistinguishable from the white to pale yellow heartwood, which turns pale brown on exposure. It has a straight grain with a fine, even texture.

#### 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	—	1.33	7,900	3,780	—	—	—
Dry	—	1.62	11,200	6,910	—	—	—

<sup>a</sup>WML = Work to maximum load.

Reference (98).

## Drying and Shrinkage

Type of shrinkage	Percentage of shrinkage (green to final moisture content)		
	0% MC	6% MC	20% MC
Tangential	-	7.5	-
Radial	-	5.0	-
Volumetric	-	12.6	-

References: 0% MC (98),  
6% and 20% MC (90).

## Kiln Drying Schedules (3)

British Schedule H.

<b>Working Properties:</b> Blunting: Sawing:	Slight
Rip-sawing:	Saw type HR54
Cross-cutting:	Satisfactory
Narrow-band:	Satisfactory
Wide-band:	Saw type A
Machining:	Good
Nailing:	Satisfactory
Gluing:	Good
Bending:	Moderate
Staining/Polishing:	Satisfactory

**Durability:** Sapwood susceptible to common furniture beetle, heartwood rated as perishable.

**Preservation:** Rated as permeable.

**Uses:** Paint brushes, turnery, hat blocks.

**Toxicity:** May produce dermatitis (7)

## Additional Reading and References Cited (in parentheses)

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