**Liriodendron tulipifera**  
**Family:** Magnoliaceae  
**Yellow Poplar**

Yellow Poplar (Liriodendron spp.) contains 2 species, the Yellow Poplar of North America (L. tulipifera) and a Chinese species (L. chinensis). Both species look alike microscopically. The name liriodendron is derived from the Greek lily and tree, because of the showy “lilylike” flowers (the flowers look more like tulips).

Liriodendron tulipifera—American whitewood, basswood, blue poplar, canar poplar, canarywood, canoe wood, cucumbertree, hickory poplar, liriodendron, old wives shirt, poplar, popple, saddle-tree, sap poplar, secoya, southern yellow poplar, tulipia, tulip poplar, tuliptree, tulipwood, white poplar, whitewood

**Distribution**

Most of the eastern United States, from Massachusetts west to Illinois, Arkansas and Louisiana, south to the Gulf Coast and central Florida.

**The Tree**

Yellow Poplar trees reach heights of 160 feet with a diameter of 8 feet. It is probably the tallest hardwood tree in the eastern US.

**The Wood**

**General**

Yellow Poplar sapwood is white, sometimes with stripes, while the heartwood is usually tan, but can range from greenish brown to dark green, purple, black, blue and yellow. The wood is straight grained, uniform in texture and moderate to light weight. Among commercially important hardwoods in the US, it ranks in the lower third of the range of the following properties: specific gravity, bending strength, toughness, impact resistance, work to maximum load, crushing strength, fiber stress at proportional limit, shear strength, tensile strength and side hardness.

**Mechanical Properties (2-inch standard)**

<table>
<thead>
<tr>
<th></th>
<th>Specific gravity</th>
<th>MOE GPa</th>
<th>MOR MPa</th>
<th>Parallel MPa</th>
<th>Perpendicular MPa</th>
<th>WML a kJ/m²</th>
<th>Hardness N</th>
<th>Shear MPa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td>0.40</td>
<td>8.4</td>
<td>41.4</td>
<td>18.3</td>
<td>1.86</td>
<td>52</td>
<td>1,957</td>
<td>5.45</td>
</tr>
<tr>
<td>Dry</td>
<td>0.42</td>
<td>10.9</td>
<td>69.6</td>
<td>38.2</td>
<td>3.45</td>
<td>61</td>
<td>2,402</td>
<td>8.20</td>
</tr>
</tbody>
</table>

aWML = Work to maximum load.

Reference (98).

Reference (59).
### Drying and Shrinkage

<table>
<thead>
<tr>
<th>Type of shrinkage</th>
<th>0% MC</th>
<th>6% MC</th>
<th>20% MC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tangential</td>
<td>8.2</td>
<td>5.7</td>
<td>2.4</td>
</tr>
<tr>
<td>Radial</td>
<td>4.6</td>
<td>3.2</td>
<td>1.3</td>
</tr>
<tr>
<td>Volumetric</td>
<td>12.7</td>
<td>9.8</td>
<td>4.1</td>
</tr>
</tbody>
</table>

Yellow Poplar wood is intermediate in its tendency to warp, with initial shrinkage being large. It stays in place well after drying and dries quickly, with minimal loss of quality in all conditions.

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

### Kiln Drying Schedules

<table>
<thead>
<tr>
<th>Stock</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>T11-D4</td>
<td>4/4, 5/4, 6/4</td>
</tr>
<tr>
<td>T10-D3</td>
<td>8/4</td>
</tr>
<tr>
<td>T9-C3</td>
<td>10/4</td>
</tr>
<tr>
<td>T7-C2</td>
<td>12/4</td>
</tr>
<tr>
<td>T5-C2</td>
<td>16/4</td>
</tr>
</tbody>
</table>

References (6, 86).

### Working Properties

Yellow Poplar has the reputation of being one of the easiest of all hardwoods to work with hand and machine tools. It works well in planing, turning, gluing and boring. It is average in mortising and nail and screw holding abilities. It is poor in shaping and sanding. It holds stain and paint well.

Durability: No information available at this time.

Preservation: No information available at this time.

Uses: Lumber, veneer, pulpwod, furniture, plywood, interior finish, dimension stock, gunstocks, musical instruments, toys, novelties, hatblocks, sporting goods, pallets, shipping crates, slack cooperage, particle board.

Toxicity: It may cause allergic reactions or dermatitis. (3, 6 & 13)

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