**Salix nigra**  
**Family: Salicaceae**  
**Black Willow**

Willow (*Salix* sp.) is composed of 170 to 400 species native to: Eurasia [60], South America [1], Central America [19] and North America [87]. All species look alike microscopically.

**Salix nigra** - Dudley Willow, Goodding Willow, Southeastern Black Willow, Swamp Walnut, Tall Black Willow, Western Black Willow

**Distribution**
Throughout the eastern United States, from the Atlantic coast west to Minnesota, Iowa, Nebraska, Kansas, Oklahoma and Texas.

**The Tree**
Black Willow trees reach heights of 140 feet, with a diameter of 4 feet.

**The Wood**

**General**
The sapwood of Black Willow is light tan, while the heartwood is pale reddish brown to grayish brown. It has no characteristic odor or taste. It is soft, but does not splinter when dented. It is uniform in texture, and weak in bending and crushing. It rates moderately high in shock resistance, low in nail holding ability, but does not split readily due to its interlocked grain.

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

<table>
<thead>
<tr>
<th></th>
<th>Specific gravity</th>
<th>MOE x10^6 lbf/in^2</th>
<th>MOR lbf/in^2</th>
<th>Parallel lbf/in^2</th>
<th>Perpendicular lbf/in^2</th>
<th>WML^a in-lbf/in^3</th>
<th>Hardness lbf</th>
<th>Shear lbf/in^2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td>0.36</td>
<td>0.79</td>
<td>4,800</td>
<td>2,040</td>
<td>180</td>
<td>11.0</td>
<td>–</td>
<td>680</td>
</tr>
<tr>
<td>Dry</td>
<td>0.39</td>
<td>1.01</td>
<td>7,800</td>
<td>4,100</td>
<td>430</td>
<td>8,800</td>
<td>–</td>
<td>1,250</td>
</tr>
</tbody>
</table>

^aWML = Work to maximum load. Reference (98).

**Drying and Shrinkage**

<table>
<thead>
<tr>
<th>Type of shrinkage</th>
<th>Percentage of shrinkage (green to final moisture content)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0% MC</td>
</tr>
<tr>
<td>Tangential</td>
<td>8.7</td>
</tr>
<tr>
<td>Radial</td>
<td>3.3</td>
</tr>
<tr>
<td>Volumetric</td>
<td>13.9</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Condition</th>
<th>Stock</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>T10-F4 T8-F3 - - -</td>
</tr>
</tbody>
</table>

*References (6, 86).

Working Properties: Black Willow is classed as one of the most difficult woods to machine. It glues very well and readily accepts finishes.

Durability: The wood is not durable under conditions favorable to decay, rating poorly.

Preservation: No information available at this time.

Uses: Factory lumber, veneer, box lumber, pulpwood, furniture, paneling, interior trim, cabinetry, artificial limbs, fiber board, slack cooperage, excelsior, novelties, toys, wooden shoes, polo balls and carvings.

Toxicity: No information available at this time.

Additional Reading and References Cited (in parentheses)
Black Willow Salix nigra Willow family (Salicaceae). Description: This tree is 30-90' tall at maturity, forming one to several trunks and an irregular crown that is usually more wide than tall. When there is a single trunk on a tree, it is usually short and stout; when multiple trunks are present, they are more narrow and lean away from each other. The bark trunk of old trees is mostly gray to nearly black and coarsely textured; it is covered with deep curving furrows. For younger trees, the bark trunk is grayish brown with shallow furrows and flattened ridges. The bark trunk is often dis