Wolmanized® Heavy Duty™ Pressure-Treated Wood
protected with CCA (chromated copper arsenate) preservative

The effectiveness of preservatives at various retentions in different species is evaluated using test stakes.

Wolmanized® pressure-treated wood (poles, piles, timbers, posts, or plywood) is pressure-treated to various retention levels that are intended to protect the wood for particular applications. Retention levels indicate the amount of preservative retained in the wood in a specific assay zone. In North America, retention is expressed in pounds per cubic foot (pcf).

1Wolman® CCA preservative meets or exceeds AWPA P5 and Federal Standard TT-W-550. The treating process and the results above meet or exceed Federal Specification TT-W-571 and AWPA Commodity Standards as applicable.

For round piling used in the northern zone (Long Island and north on the East coast, north of San Francisco on the West coast), a retention of 1.50 pcf is acceptable (UC5A).

6.1.4. If lumber is not dried after treatment, or if the end use will result in a moisture content exceeding 19%, wet service factors shall be applied (see 4.1.4 and 4.3.3).

In addition, load duration factors greater than 1.6 shall not apply to structural members. The design values for all acceptable species and grades of lumber are given in the Supplement to the National Design Specification.

Design Values
Since pressure treatment with Wolman® CCA preservative does not alter the natural characteristics of wood, the design values for untreated lumber and plywood should be used in accordance with the National Design Specification for Wood Construction issued by the American Forest and Paper Association.

Wood products which have been preservative-treated are referenced in Section 4.3.13 and 6.1.4. If lumber is not dried after treatment, or if the end use will result in a moisture content exceeding 19%, wet service factors shall be applied (see 4.1.4 and 4.3.3).

Retention levels or treating quality procedures are marked on Wolmanized® wood. The accompanying table outlines CCA retention levels required by the American Wood Protection Association for various applications.

Retention varies with depth in the wood, so preservative penetration also affects wood longevity. In species with large amounts of sapwood, such as southern and red pine, the preservative must penetrate 2.5 inches or 85% of the sapwood to meet standards. In western species that are predominantly heartwood, the wood is incised to ensure a treated shell, and any cut surfaces should be field-treated in accordance with AWPA standard M4 with a topical preservative.

Use Category System
The American Wood Protection Association, which establishes the standards for preservatives and treated wood, has adopted a Use Category system, based on the service conditions for wood rather than on wood commodities. It is designed to reduce confusion among specifiers and consumers. Most building codes reference AWPA standards, so the Use Category system is replacing the older Commodity standards in codes. At right is a summary of AWPA Use Categories.

Use Category System

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>UC1</td>
<td>Interior, not in contact with ground or foundation</td>
</tr>
<tr>
<td>UC2</td>
<td>Interior, subject to dampness</td>
</tr>
<tr>
<td>UC3A</td>
<td>Exterior, above ground, coated</td>
</tr>
<tr>
<td>UC3B</td>
<td>Exterior, above ground, may be finished</td>
</tr>
<tr>
<td>UC4A</td>
<td>Exterior, ground or freshwater contact in areas with low risk</td>
</tr>
<tr>
<td>UC4B</td>
<td>Exterior, ground or freshwater contact, severe environments, high potential for deterioration</td>
</tr>
<tr>
<td>UC4C</td>
<td>Exterior, ground or freshwater contact, very severe conditions or very critical structural components</td>
</tr>
<tr>
<td>UC5A</td>
<td>Saltwater exposure — north of San Francisco and Long Island</td>
</tr>
<tr>
<td>UC5B</td>
<td>Saltwater exposure — south of San Francisco on West coast, New Jersey through Georgia on East coast</td>
</tr>
<tr>
<td>UC5C</td>
<td>Saltwater exposure — south of Georgia, Gulf Coast</td>
</tr>
<tr>
<td>UCFA</td>
<td>Fire protection, weather-shielded</td>
</tr>
<tr>
<td>UCFB</td>
<td>Fire protection, exterior</td>
</tr>
</tbody>
</table>

AWPA Retention Requirements

<table>
<thead>
<tr>
<th>Application</th>
<th>Use Category</th>
<th>CCA (pcf)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LUMBER, TIMBERS, AND PLYWOOD</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Above Ground</td>
<td>3B</td>
<td>0.25</td>
</tr>
<tr>
<td>Ground/Fresh Water Contact</td>
<td>4A</td>
<td>0.40</td>
</tr>
<tr>
<td>Salt Water Splash</td>
<td>4B</td>
<td>0.60</td>
</tr>
<tr>
<td>Permanent Wood Foundation</td>
<td>4B</td>
<td>0.60</td>
</tr>
<tr>
<td>Salt Water Immersion</td>
<td>5B</td>
<td>2.50</td>
</tr>
</tbody>
</table>

**POLES AND PILES**

<table>
<thead>
<tr>
<th>Application</th>
<th>Use Category</th>
<th>CCA (pcf)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structural Poles</td>
<td>4B</td>
<td>0.60</td>
</tr>
<tr>
<td>Foundation/Fresh Water</td>
<td>4C</td>
<td>0.80</td>
</tr>
<tr>
<td>Salt Water Immersion</td>
<td>5B</td>
<td>2.50</td>
</tr>
</tbody>
</table>

Escue Wood Preserving
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Recommended Hardware

The conditions that are conducive to attack by fungal decay and termites also promote metal corrosion. Hot-dipped galvanized fasteners (meeting ASTM A 153) and connectors (ASTM A 653 Class G185 sheet), or better, are recommended for protection against the effects of moisture often present where treated wood is used. For Permanent Wood Foundations, use 304 or 316 stainless steel. Aluminum should not be used in direct contact with this wood.

Heartwood vs. Sapwood

Typically, the heartwood – the center part of the tree – may be quite dense and less porous than the sapwood – the younger, outer portion of the tree. The heartwood is naturally more resistant to attack by pests, but it is also less accepting of preservative. Therefore, in marine conditions, for example, where wood-destroying organisms are a threat, it is wise to specify wood with a minimum of heartwood exposed (seawall grade) to be assured of adequate preservative protection.

Safety & Handling

The fixation which occurs subsequent to the treating process makes Wolmanized® wood safe for the environment and for the individual user when handled as recommended. Once the Wolman® CCA is fixed in the wood cells, it is highly leach-resistant. With more than seven decades of usage, its harmlessness to people, plants, pets, and the environment has been documented by academic and governmental researchers and agencies.

As a federally registered pesticide, Wolman® CCA preservative undergoes a formal investigation and evaluation by the Environmental Protection Agency periodically. Based on an abundance of documentary evidence, the EPA deems Wolmanized® wood to be suitable for uses described in this brochure. Other agencies also oversee aspects of the production, transportation, and use of CCA and CCA-treated wood. Material Safety Data Sheets are available from the treating companies licensed to manufacture Wolmanized® wood.

Treatable Species

The following species of wood can be effectively treated with Wolman® CCA preservative in accordance with American Wood Protection Association standards. Although these species are listed by AWPA, reaching required penetration and retention levels is very difficult in some of them. The term “treated to refusal” indicates that the wood has retained as much preservative as possible, but not enough to meet standards or ensure good performance.

- Southern Pine Group
- Ponderosa Pine
- Red Pine
- Western Red Cedar
- Hem-Fir Group*
- Jack Pine*
- Lodge Pole Pine*
- Sugar Pine*
- White Pine*
- Radiata Pine
- Caribbean Pine
- Coastal Douglas Fir*
- Western Larch*
- Redwood*
- Sitka Spruce*

*In order to secure penetration of preservative in these species, incising (puncturing the lateral surfaces of the wood) is required.

When to Specify

Specify Wolmanized® wood and plywood for applications in which conditions conducive to termites and fungal decay are present. This includes wood that will be in contact with water, soil, concrete or masonry, subject to periodic wetting, or exposed to moisture or high humidity. Wolmanized® wood is suitable for a wide variety of applications, including:

- Piling
- Poles, building & utility
- Plywood
- Highway guard & sign posts
- Agricultural fence posts (round, half-round, quarter-round)
- Lumber for salt water use
- Marine construction
- Permanent Wood Foundations
- Sawn structural timbers
- Sawn crossarms
- Structural glued laminated members
- Structural composite lumber
- Shakes and shingles
- Roller coasters
- Cooling towers

For residential and other applications requiring an alternative preservative, specify Wolmanized® Outdoor® wood.

www.WolmanizedWoodHD.com
For an editable model spec, see www.WolmanizedWoodHD.com/spec.

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