

# WOLMANIZED® CCA HEAVY DUTY™ WOOD

Protected with CCA (chromated copper arsenate) waterborne preservative

## SPECIFICATION DATA

WolmanizedWood.com

**Wolmanized®**  
HEAVY DUTY™  
WOOD



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

### Design Values

Since pressure treatment with Wolmanac® 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

North America, retention is expressed in pounds per cubic foot (pcf).

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. The preservative must penetrate 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 AWP standard M4 with a topical preservative.

6.14. 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.

### 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 AWP standards, so the Use Category system is replacing the older Commodity standards in codes. Below is a summary of AWP Use Categories.

Shown in yellow are categories in which there are ongoing uses for CCA-treated wood.

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

### AWPA Retention Requirements<sup>1</sup>

Application	Use Category	CCA (pcf)
<b>LUMBER, TIMBERS, AND PLYWOOD</b>		
Above Ground	3B	0.25
Ground/Fresh Water Contact	4A	0.40
Salt Water Splash	4B	0.60
Permanent Wood Foundation	4B	0.60
Salt Water Immersion	5A, 5B, 5C	2.50 <sup>2</sup>
<b>POLES AND PILES</b>		
Structural/Utility Poles	4A, 4B, 4C	0.60
Foundation/Fresh Water	4C	0.80, 1.00 <sup>3</sup>
Salt Water Immersion	5A	1.50 <sup>4</sup>
Salt Water Immersion	5B	2.50
Salt Water Immersion	5C	2.50 or dual Treatment 1.0 CCA & 20.0 Creosote

<sup>1</sup>Wolmanac® CCA preservative meets or exceeds AWP P23 and Federal Standard TT-W-550. The treating process and the results above meet or exceed Federal Specification TT-W-571 and AWP Use Category System Standards as applicable.

<sup>2</sup>The retention is 1.50 for Southern Yellow Pine (SYP) used in UC5A. All others are 2.50 as shown.

<sup>3</sup>Retention depends upon species.

<sup>4</sup>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).

## Recommended Hardware

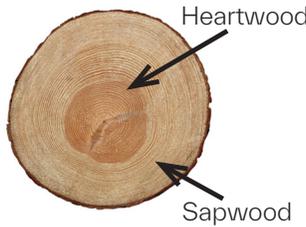


The conditions that are conducive to attack by fungal decay and termites also promote metal corrosion. Hot-dipped galvanized fasteners (meeting ASTM A 153) and connectors (ASTM A 653 Class G185 sheet), or better, are recommended for protection against the effects of moisture often present where

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.



## Protection

Once the Wolmanac® CCA is fixed in the wood cells, it is highly leach-resistant.

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. Safety Data Sheets are available from the treating companies licensed to manufacture Wolmanized® wood.



## Life Cycle Assessment

An independent life cycle assessment confirmed that CCA utility poles use less energy and resources, offset fossil fuel use, and have a reduced environmental impact when compared to concrete, steel and fiber-reinforced composite utility poles. For more information see the report at [WolmanizedWood.com](http://WolmanizedWood.com).

## Treatable Species

The following species of wood can be effectively treated with Wolmanac® CCA preservative in accordance with American Wood Protection Association standards. Although these species are listed by AWP, 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\*
- Lodgepole 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® CCA 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.

For an editable model spec, see [WolmanizedWood.com](http://WolmanizedWood.com).