



Wood Preservation Canada
Préservation du bois Canada

PRESSURE TREATED STRUCTURAL BARN POSTS

A SPECIFIER'S GUIDE

2024

WHAT IS PRESSURE TREATED WOOD?

As the name suggests, pressure treated wood is wood that has been treated with preservatives while under pressure in a cylinder. In Canada, all treating facilities are certified through Wood Preservation Canada's Canadian Wood Preservation Certification Authority (CWPCA) program. CWPCA certified plants endorse a set of principles that govern their actions to assess, plan, construct and operate facilities in compliance with all applicable environmental regulations.



RESIDENTIAL & COMMERCIAL/INDUSTRIAL - WHAT'S THE DIFFERENCE?

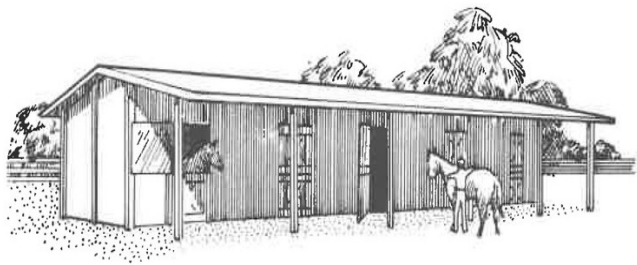
The pressure treated wood sold at local retailers is for residential applications such as decks, fences, pergolas. For commercial/industrial applications such as barn posts, please note that pressure treated wood must be purchased through a special order, either at the retail location or directly from the treating facility.

There's a difference between residential and commercial products and specifying the right product is important!

Preservative retention levels for commercial/industrial pressure treated wood are higher as these members are often part of the structural components of the project. Depending on the wood species being used, commercial/industrial pressure treated wood can also be incised. Incising is the process of piercing the surface of the wood with small slits prior to treatment. These slits allow more preservative to penetrate deep into the wood, ultimately extending the service life of the product.

**CANADA'S TRUSTED SOURCE FOR INFORMATION & RESOURCES ON
PRESERVED WOOD**

WWW.WOODPRESERVATION.CA



WATERBORNE PRESERVATIVES LISTED IN CSA O80 SERIES: 21 FOR USE AS STRUCTURAL BARN POSTS (SAWN FOUR SIDES)

PRESERVATIVES	UC4.1	UC4.2
ACQ*	✓	✓
ACZA*		✓
CA-B	✓	✓
CCA	✓	✓
MCA	✓	✓

OIL-BORNE PRESERVATIVES LISTED IN CSA O80 SERIES: 21 FOR USE AS STRUCTURAL BARN POSTS (SAWN FOUR SIDES)

PRESERVATIVES	UC4.1	UC4.2
Creosote	✓	✓
Pentachlorophenol*	✓	✓

Source: **CSA O80 Series: 21, Wood Preservation**
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Notes: *Not currently being used in Canada.

There are preservatives used for specific wood species as well as for specific applications. These specifics are outlined by the Canadian Standards Association in the CSA-O80 Series – 21 Wood Preservation.

COMMERCIAL/INDUSTRIAL PRESERVATIVES - A BREAKDOWN

In Canada, wood preservatives are regulated by Health Canada's Pest Management Regulatory Agency. There are waterborne and oil-borne preservatives:

- **Waterborne preservatives** contain metallic salts e.g. copper in combination with other compounds such as tebuconazole or quaternary ammonium compounds.
 - Alkaline Copper Quaternary (ACQ)
 - Ammoniacal Copper Zinc Arsenate (ACZA)
 - Copper Azole Preservative (CA-B)
 - Chromated Copper Arsenate (CCA)
 - Micronized Copper Azole (MCA)

- **Oil-borne preservatives** use chemicals that are insoluble in water and that are dissolved in petroleum or other organic solvents in order to penetrate the wood.
 - Creosote
 - Pentachlorophenol (Penta)

CHECK LIST

The longevity of your project is dependent on properly specifying the correct product for the intended application. Please consider these points when placing an order for commercial/industrial preserved wood for your next project.

Points to consider communicating to the supplier:

STRUCTURAL:

- Whether the project is a new build, remodel, or addition
- The size (dimensions) of the project
- The intended end-use of the project
- Whether the pressure treated wood is being used for structural purposes (load bearing) for the project
- Was the land for the project vacant or inhabited prior to this build?
- The type of foundation being used
- If the structure has a roof - will it be flat or pitched?
- If there will be anything affixed to the pressure treated wood, such as barn equipment
- If you require round, half-round, quarter round or square posts, as well as the required dimensions

CLIMATE:

- The general climate for the final location of the project
- The soil conditions
 - is the soil free draining or is it frequently waterlogged?
 - is the soil a mix of clay and sand or does it contain a lot of organic matter?
- Whether the project will be located near a body of fresh or salt water

QUESTIONS TO CONSIDER ASKING THE SUPPLIER:

- What species of wood is being used?
- Will the wood need be incised?
- What preservative treatment will be used to treat the wood?
- What fasteners or screws should be used to ensure no corrosion reaction with the preservative in the wood?
- Do you have experience treating to UC4.1 and/or UC4.2?
- Based on the structural and climate points communicated to you that outline the scope of this project, which Use Category do you recommend and why?
- What is the anticipated shipment date for the pressure treated wood?
- What is the quote for this order?
- Are third party inspections available and if so, at what stage in the order should they be initiated?

LIST OF STRUCTURAL BARN POST SUPPLIERS

Consult with the following Canadian treating facilities for your project needs for pressure treated wood barn posts for structural purposes.

Please note that this list of suppliers does not include all the treating facilities within Canada. For a complete list of treating facilities, please visit the 'Plant Certification' section on Wood Preservation Canada's website www.woodpreservation.ca.

NAME	CITY
BRITISH COLUMBIA	
Brisco Wood Preservers Ltd.	Brisco
Envirofor Preservers (BC) Ltd.	Langley
North American Wood Preservers LP	Abbotsford
Northwest Wood Treaters, LP	Prince George
Princeton Wood Preservers Ltd.	Princeton
Stella Jones Inc.	New Westminster
Stella-Jones Inc.	Prince George
ALBERTA	
Armor Wood Products Ltd.	Edmonton
Brisco Wood Preservers Ltd.	Peers
West Fraser Cochrane	Cochrane
SASKATCHEWAN	
Northwind Wood Treatment Inc.	Glaslyn
Vermette Wood Preservers	Spruce Home
ONTARIO	
Eastern Wood Preservers LP	Cambridge
Pastway Planing Ltd.	Combermere
Stella-Jones Inc.	Gormley
Total Forest Industries LP	Hagersville
QUEBEC	
Goodfellow Inc.	Delson
NOVA SCOTIA	
Marwood Ltd.	Fredericton
Marwood Ltd.	Truro
Stella-Jones Inc.	Truro

USE CATEGORY SYSTEM

The Use Category System (UCS) places wood uses into one of five primary use categories that describe the exposure conditions that wood products can be subjected to during their service-life. These UCS are outlined in detailed in the CSA O80. Barn posts for structural purposes can be either Use Category (UC) 4.1 or 4.2.

UC4.1

This category covers wood and wood-based materials that are in contact with the ground or freshwater, subject to significant saltwater splash, or used in above-ground critical situations favourable to deterioration. Ground contact examples include fence posts, deck posts, guardrail posts, structural lumber, timbers, and utility or building posts and poles located in regions of low natural potential for wood decay and insect attack. Above ground examples include bridge beams, pile caps, and bridge cross ties.

UC4.2

This category covers wood and wood-based materials that are in contact with the ground or freshwater in severe environments such as horticultural sites or climates with a high potential for deterioration or are used in permanent wood foundations or critically important components such as utility poles, building poles, and foundation and freshwater piling.

Source: **CSA O80 Series: 21, Wood preservation** © 2021 Canadian Standards Association.

REGIONAL CONSIDERATIONS

Consult with your supplier should you need clarity on which Use Category to use. It is important to consider regional differences in the potential deterioration of wood when specifying products. This is where wood species and retention levels will be considered by your supplier. Suppliers treating products for industrial or commercial applications are familiar with all of the CSA requirements including species selection, conditioning, incising, preservative penetration, retentions and fixation.

PRESERVATIVE RETENTIONS

The preservative retention values for each wood species and the various preservatives are outlined in the CSA O80. These retention values vary for each wood species, preservative used, and the dimensions for the wood product being treated. The kilogram per cubic metre (symbol: kg/m³) is an International System of Units derived unit of density, defined by mass in kilograms divided by volume in cubic metres.

THIRD-PARTY INSPECTION AGENCIES

When in doubt, check it out! Below is a list of third-party agencies that can double check that your product is for the appropriate application. It is recommended that you inform your supplier of your desire to do a third-party inspection on the product you are purchasing, so that they can recommend the best 'next steps':

- Canadian Mill Services Association 604.230.2661
- Canadian Softwood Inspection Agency 1.855.714.2090
- Canadian Lumber Standards Accreditation Board 1.613.482.2480