

## SPECIFYING WOOD UTILITY POLES

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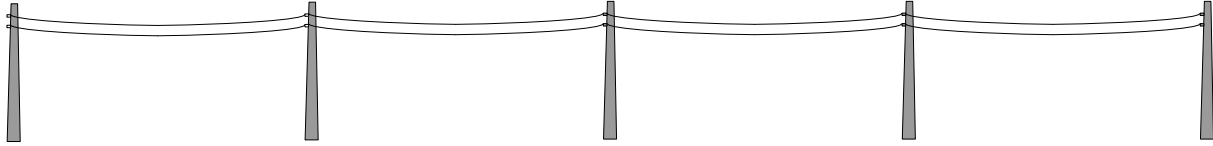
### Product Introduction

Pressure Treated Wood Utility Poles are used to support overhead power lines as well as various other public utilities such as fibre optic, television cables, transformers and street lights. Wood Utility Poles are typically designed as single member cantilever structures. Specifications for Wood Utility Poles including manufacturing, class dimensions, quality of work and finishing, marking, handling, storage and inspection are published in the Canadian Standards Association (CSA) Standard O15-05, Wood Utility Poles and Reinforcing Stubs. The information in this guide will identify the requirements for Wood Utility Poles as specified in the CSA O80 Standard.

### Allowable Wood Species and Related Use Categories

Treated Wooden Utility Poles are used in contact with the ground and freshwater. These conditions can be favourable to deterioration and Utility Poles are classified as critical structural (or safety) components. Treated utility poles have a Use Category rating of 4, 4.1 or 4.2. The processing and treatment of Utility Poles shall be done in accordance with CSA O80.2-08, section 9.4. Many of the species and treatment combinations allowed in the CSA Standard are not necessarily commercially available. In order to assist the purchaser and/or user, check with local suppliers for product availability prior to issuing tender document. ACZA is not treated in Canada and can be sourced and imported from the United States.

| <b>Pressure Treatment of Utility Poles - Preservative usage by Species</b> |                  |     |     |      |      |     |       |       |
|--|------------------|-----|-----|------|------|-----|-------|-------|
| UC4.1 - Distribution, Transmission and Laminated - General                 |                  |     |     |      |      |     |       |       |
| UC4.2 - Distribution, Transmission and Laminated - Important               |                  |     |     |      |      |     |       |       |
| Species Group  | Preservative Use |     |     |      |      |     |       |       |
|  | CR               | CuN | PCP | ACZA | CA-B | CCA | ACQ-C | ACQ-D |
| Eastern and Western White Pine   | Yes              | Yes | Yes | Yes  | No   | Yes | No    | No    |
| Jack and Lodgepole Pine  | Yes              | Yes | Yes | Yes  | No   | Yes | No    | No    |
| Ponderosa, Red and Southern Pine   | Yes              | Yes | Yes | Yes  | Yes  | Yes | Yes   | Yes   |
| Western Hemlock  | Yes              | No  | Yes | Yes  | No   | Yes | No    | No    |
| Coastal Douglas Fir  | Yes              | Yes | Yes | Yes  | No   | Yes | No    | No    |
| Interior Douglas Fir   | Yes              | No  | Yes | Yes  | No   | Yes | No    | No    |
| Red Spruce   | Yes              | No  | Yes | Yes  | No   | Yes | No    | No    |
| Western White Spruce   | Yes              | No  | Yes | Yes  | No   | Yes | No    | No    |
| Western Larch  | Yes              | No  | Yes | Yes  | No   | Yes | No    | No    |
| Western Red Cedar  | Yes              | Yes | Yes | Yes  | Yes  | Yes | No    | No    |
| Yellow Cypress   | Yes              | Yes | Yes | Yes  | No   | Yes | No    | No    |



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| <b>Thermal Butt and Full-Length Treatment of Utility Poles - Preservative usage by Species</b> |                  |     |       |       |
|--|------------------|-----|-------|-------|
| UC4 – Distribution and Transmission - General  |                  |     |       |       |
| Species Group  | Preservative Use |     |       |       |
|  | CR               | CuN | PCP-A | PCP-C |
| Lodgepole Pine*  | Yes              | No  | Yes   | Yes   |
| Eastern White Cedar**  | Yes              | Yes | Yes   | Yes   |
| Western Red Cedar  | Yes              | Yes | Yes   | Yes   |
| Yellow Cypress   | Yes              | Yes | Yes   | Yes   |

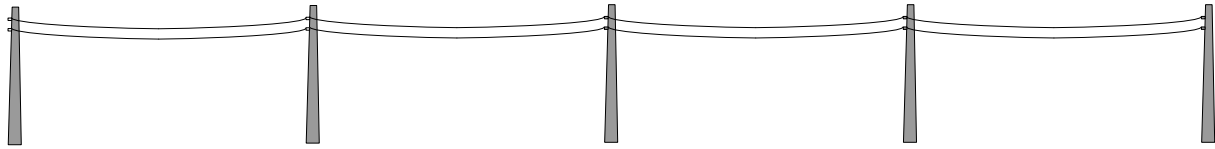
\* Thermal full-length process only

\*\* Thermal butt process only

### Allowable Treatment Preservatives

All allowable species may be treated with one of the following preservatives. Wood preservatives require registration under the Federal Pest Control Act. Only preservatives that are currently registered are listed. A number of wood preservative additives are available to improve the climbability of Wood Utility Poles.

| Preservative                     | Preservative Abbreviation | Pressure | Thermal | Relevant Standards      |
|----------------------------------|---------------------------|----------|---------|-------------------------|
| Copper Naphthenate               | CuN                       | √        | √       | CSA O80.4, AWPA P8 & P9 |
| Creosote                         | CR                        | √        | √       | AWPA P1 and P13         |
| Creosote-Petroleum Solution      | CR-PS                     | √        |         | AWPA P3                 |
| Pentachlorophenol, Solvent A     | PCP-A                     | √        | √       | CSA O80.4, AWPA P8 & P9 |
| Pentachlorophenol, Solvent C     | PCP-C                     | √        | √       | CSA O80.4, AWPA P8 & P9 |
| Ammoniacal Copper Zinc Arsenate  | ACZA                      | √        |         | AWPA P5                 |
| Alkaline Copper Quat, Type C     | ACQ-C                     | √        |         | AWPA P5                 |
| Alkaline Copper Quat, Type D     | ACQ-D                     | √        |         | AWPA P5                 |
| Copper Azole                     | CA-B                      | √        |         | AWPA P5                 |
| Chromate Copper Arsenate, Type C | CCA                       | √        |         | AWPA P5                 |



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| Preservative   | Preservative Abbreviation | Pressure | Thermal | Relevant Standards |
|--|---------------------------|----------|---------|--------------------|
| Chromated Copper Arsenate type C in an oil emulsion system, CCA-oil              | CCA-oil                   | √        |         | CSA O80.5          |
| Chromated Copper Arsenate type C with polyethylene glycol, CCA-PEG               | CCA-PEG                   | √        |         | CSA O80.5          |
| Chromated Copper Arsenate type C with polyethylene glycol dimethacrylate, CCA-PA | CCA-PA                    | √        |         | CSA O80.5          |