

Working with

MicroPro SPEC Treated Wood

MicroPro SPEC wood products are treated with MicroPro® Micronized Copper Azole (MCA) preservative technology, a revolutionary way to pressure treat wood to provide long-term protection for wood exposed in exterior applications from fungal decay and termite attack. MicroPro SPEC treated wood products can be used in non-residential construction, i.e., agricultural and commercial applications, in above ground, in ground contact and in freshwater contact. Examples include decks, boardwalks, freshwater docks, building posts and poles, round fence and landscaping.

Above Ground

Wood treated for above ground applications can be used in exterior construction where the wood is NOT in contact with soil, placed on or over soil using a synthetic barrier, subject to frequent wetting, or continually exposed to heavy vegetation, mulch products or other conditions that could simulate a ground contact exposure. Examples of above ground treated products include decking, fence boards, railing components, and elevated walkways.

Ground Contact

Ground contact shall be taken to mean permanent and direct contact with soil. Lumber treated for ground contact has a higher preservative retention level than above ground. This is to improve the performance of the treated wood when it comes in direct contact with the ground (soil), fresh water, high moisture areas, etc., where it is highly vulnerable to deterioration. Treated wood used as structural elements in or on the ground, continuously wetted or immersed in fresh water is more vulnerable to rot and therefore requires a higher level of preservative protection for better long-term performance.

In addition, wood treated to ground contact is needed in the following applications:

- Decks / walkways built close to or on the ground
- Decks / walkways enclosed with solid skirting, preventing air circulation
- Raised garden beds or planter boxes
- Freshwater docks

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Design and Installation – proper design and installation of MicroPro SPEC Treated Wood is important to maximize its service life. Limiting moisture is the single most important factor to minimize decay in wood structures. The potential for deterioration can be reduced by designing details of construction to minimize entrapment and retention of moisture. The key to durable structures, sometimes referred to as Durability by Design or the 4 Ds, are Deflection, Drainage, Drying, and Durability. As much as practical, wood structures should be designed and installed to minimize moisture accumulation by deflecting water away from the structure. Where this is unavoidable, structures should be designed to allow drainage so that water is not trapped and the wood is allowed to dry between rainfall events. If this is unavoidable, proper design of the structure combined with the best treatment options possible need to be considered.

Orientation of boards – when using MicroPro SPEC Treated Wood in horizontal applications (decking, boardwalks, retaining walls, etc.) special care should be taken to avoid water accumulating. In decking or walkway applications, water can be trapped under the deck boards between the supporting joists or beams or on the ground itself. Dirt and water collect in these joints and provide an ideal environment for fungal spores to germinate. To reduce the likelihood of decay developing in these areas, wood should be installed with the best treated face (e.g. highest sapwood content) facing up. Large timbers should be installed with the pith face down because large timbers tend to check on the pith face. If the check extends into the untreated wood, decay and/or insect infestation can develop. See Figure 1 for examples of proper orientation.



Material size – for decking surfaces in non-residential applications such as docks, boardwalks, and commercial decks, full 2" or even 3" thick decking material should be used for extra durability.

Field treatment of exposed wood – MicroPro SPEC Treated Wood products are treated to meet the CSA Standards for both penetration and retention. However, treated wood products are seldom completely penetrated leaving an untreated core exposed during cutting, boring or machining. If left untreated, decay fungi and insects may degrade the wood quickly especially if used in ground contact. If MicroPro SPEC Treated Wood is cut or machined during installation, the exposed wood must be treated with two coats of a copper naphthenate end cut preservative. If possible, all boring, cutting, drilling and machining should be completed prior to treatment.

Spacing – space deck boards on boardwalks, patios, wharves, boat docks, etc., to permit water to drain, allow dirt and debris to fall through, and provide good air circulation to allow proper drying. A minimum spacing of 6mm should be considered for these applications.

Fastener installation – where practical, avoid installing fasteners through the top of the treated wood. This includes drilling holes vertically through the wood, and installing nails, screws or lag bolts from the top of the wood. Instead, alternative fastening methods should be used to prevent water accumulation, such as fastening from the side or below. This is especially important where long service life is desired.

Capping and flashing – capping the top or cutting the top of posts / timbers on a slope allows the water to run off. If possible, cuts should be made before the wood is treated. Otherwise, two coats of copper naphthenate should be used on the cut ends. The use of metal flashings is another method to prevent direct contact of water with timbers. If designed and installed correctly, flashings will help to extend the life expectancy of timbers. Critical to the installation of flashings is a connection design that prevents moisture from being trapped beneath the flashing and allows the timber to breathe (i.e., provide air flow to encourage drying).

Maintenance and Inspection – in Canada, outdoor structures are subject to UV exposure, constant wetting and drying, and extreme temperature variations. Treated structures should be inspected at regular intervals to check for decay and insect activity and to determine if additional treatment is required.



Fastener & Hardware Information

MicroPro® technology offers many benefits including significantly improved corrosion performance. MicroPro SPEC Treated Wood with MicroPro technology exhibits corrosion rates on metal products similar to untreated wood. Use fasteners and hardware that are in compliance with the manufacturer's recommendations and the building codes for their intended use.

Aluminum building products may be placed in direct contact with MicroPro SPEC Treated Wood products used in above ground exterior applications where the wood is not exposed to frequent and prolonged wetting.

For more information see the *Fastener and Hardware Information Sheet*.

Environmental Certifications

MicroPro SPEC Treated Wood is processed using patented MicroPro micronized copper azole preservative. This technology reduces the environmental footprint of MicroPro SPEC to less than half that of traditional treated wood products.

- The MicroPro treated wood process was the first, and is the only, wood treatment process to be certified as an Environmentally Preferable Product (EPP), by Scientific Certification Systems (SCS), based on Life-Cycle Assessment.
- UL GREENGUARD GOLD Certification indicates that MicroPro preservative technology has undergone rigorous testing and has met stringent standards for low volatile organic compound (VOC) emissions. Products certified to this criteria are suitable for use in schools, offices, and other sensitive environments.
- Wood products treated with MicroPro technology are eligible for more green building points toward NGBS Green Certification than any other treated wood products.
- MicroPro Wood Treatment Technology has achieved excellent ratings after undergoing two rigorous, independent third-party assessments by Global GreenTag International. As a result, MicroPro Wood Treatment Technology is recognized by Canada's leading health-focused International WELL Building Standard.





Important Information

MicroPro SPEC Treated Wood products are pressure treated with MicroPro® Micronized Copper Azole (MCA) to protect the wood against fungal decay and termite attack. The main ingredient in the preservative system is copper, which has long been known as an effective wood preservative. MicroPro SPEC uses micronized copper coupled with micronized azole for long-term protection of wood exposed in exterior applications.

- **Do not burn treated wood.**
- Wear a dust mask and goggles when cutting or sanding wood.
- Wear gloves when working with wood.
- Some preservative and/or pigment colour may migrate from the treated wood into soil, water and other surfaces. It may also dislodge from the treated wood surface upon contact with skin. Wash exposed skin areas thoroughly.
- All sawdust and construction debris should be cleaned up and disposed of after construction. Wash work clothes separately from other household clothing before reuse.
- Treated wood should not be used where it may come into direct or indirect contact with drinking water, except for uses involving incidental contact such as freshwater docks and bridges.
- Do not use treated wood under circumstances where the preservative may become a component of food, animal feed, or beehives.
- Do not use treated wood as mulch.
- Only treated wood that is visibly clean and free of surface residue should be used.
- If the wood is to be used in an interior application and becomes wet during construction, it should be allowed to dry before being covered or enclosed.
- Projects should be designed and installed in accordance with federal, provincial, and local building codes and ordinances governing construction in your area.
- Dispose of treated wood scraps and cut offs in accordance with local, provincial and federal regulations.
- Use wood preservatives safely. Always read the label and product information before use.

Important Application Information

Cut ends / Field cuts – When building your outdoor project with pressure treated wood it is important to protect the cut ends, drill holes, and other field cuts. Two applications of a brush-on copper naphthenate based end-cut preservative must be applied to all saw cuts, drill holes and other field cuts at the time of construction before the wood is installed. Follow the manufacturer's directions for proper application.

Fasteners – Wood treated with MicroPro technology exhibits corrosion rates on metal products similar to untreated wood. Use fasteners and hardware designed for exterior construction that are in compliance with the manufacturer's recommendations and the building codes for their intended use. For more information, see the *Fastener and Hardware Information sheet* online.

Contact with aluminum – Aluminum building products may be placed in direct contact with MicroPro SPEC Treated Wood products used in above ground exterior applications where the wood is not exposed to frequent and prolonged wetting. For more information, see the *Fastener and Hardware Information sheet* online.

Appropriate usage – Above Ground treated wood should not be used in ground contact applications, as this can adversely affect the performance of the entire project. The appropriate usage is noted on the mark on the treated wood.

Pilot holes – Drill pilot holes to minimize splitting especially when nailing or screwing near the edge or end of a board.

Covering / enclosing – MicroPro SPEC Treated Wood should be allowed to properly dry before it is covered or enclosed with another building material, i.e., composite boards. Trapped moisture could lead to colour migration from MicroPro SPEC. To test for dryness, sprinkle water on the surface of the treated wood. If the water beads, the wood is too wet for enclosure. Wait until the water droplets soak into the wood, this indicates the wood is dry and can be enclosed.

Apply a weather-resistant finish – Any exposed wood, pressure treated or not, should be protected with a high quality water repellent or exterior stain to help reduce warping, checking, and splitting. The application of a clear water repellent will allow the colour of the wood to fade naturally over time. The addition of pigments or colour in a stain/finishing product help to protect the wood surface from UV damage and colour fading. Follow the manufacturer's instructions and label of the finishing product. Before you start, we recommend you apply the finishing product to a small exposed test area before finishing the entire project to insure it provides the intended result before proceeding.

Mold growth – Mold growth can and does occur on the surface of many products, including untreated and treated wood, during prolonged surface exposure to excessive moisture conditions. To remove mold from the treated wood surface, wood should be allowed to dry. Typically, mild soap and water can be used to remove remaining surface mold.

For more information, visit www.MicroProSPEC.com.

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Actual product colour may vary from colour shown in photos.

MicroPro SPEC Treated Wood products are produced by independently owned and operated wood preserving facilities.

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