



# BUILDING TIPS

## For Pressure Treated Wood in Residential Uses



Wood Preservation Canada

Wood is a renewable material that is safe, strong, and yields many advantages as a construction product. Wood products are versatile, easy to work with, economical, store carbon dioxide, and provide natural beauty in the places we work, live and play.

Pressure/preservative treated wood combines the natural beauty of wood with long-lasting resistance to fungal decay and termites. It is the ideal product for all of the homeowner's outdoor wood needs.

### WORKING WITH PRESSURE TREATED WOOD

#### What is pressure/preservative treated wood?

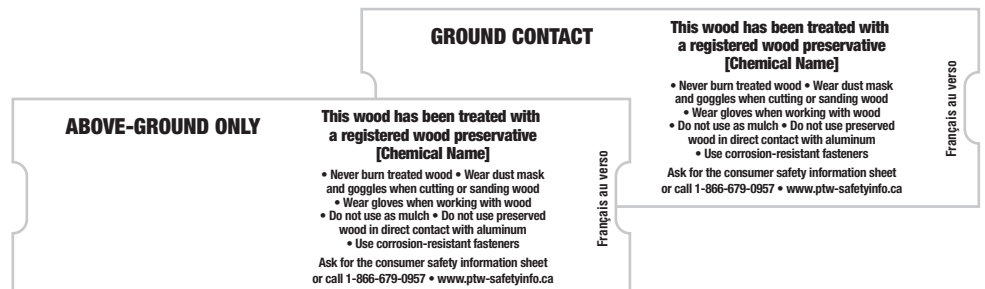
Pressure treatment is a process that is used to preserve wood. Wood is placed inside a closed cylinder and pressure is applied, which forces the preservatives into the wood cells. The process of pressure treating wood protects the wood against fungal decay and termites – increasing the longevity and durability of wood products used outdoors.

#### Where should pressure treated wood be used in residential applications?

Pressure treated wood products can be used in a variety of applications for projects that require resistance to fungal decay and termites. Pressure treated wood products can be used for above ground, in ground and in freshwater contact. Examples include decks, fences, gazebos, playground equipment, docks, raised garden beds, and landscaping.

#### What is the difference between above ground and ground contact?

Wood treated for above ground applications can be used in exterior construction where the wood is NOT in contact with the ground, e.g, soil, concrete, fresh water. Lumber treated for ground contact has a higher preservative retention level than above ground. This is to improve the performance of pressure treated wood used in direct contact with the ground (soil), fresh water or high moisture areas, where it is highly vulnerable to deterioration. The end tags attached to pressure treated lumber will identify if the wood has been treated for Above Ground Only or Ground Contact applications.



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### **What fasteners and hardware should be used with pressure treated wood?**

Use good quality, exterior, corrosion-resistant fasteners such as hot dipped galvanized (ASTM A153) and hardware (ASTM-A653 G90) that are in compliance with the manufacturer's recommendations and the building codes for their intended use. Stainless steel fasteners and hardware are recommended for pressure treated wood used in severe exterior applications such as swimming pools and greenhouses. Type 304 and 316 are recommended grades that can be used.

### **Can aluminum building products be used with pressure treated wood?**

For aluminum building products such as siding, flashing, and door and window frames:

- Micronized Copper Azole (MCA) treated wood products can be placed in contact with aluminum in code-compliant construction applications that provide proper water drainage and do not allow the wood to be exposed to standing water or water immersion.
- For Copper Azole (CA) or Alkaline Copper Quat (ACQ) treated wood used in close proximity to aluminum products, use a building code approved membrane between the aluminum and treated wood.
- Treated wood should not be encased, sealed, or wrapped with aluminum products where moisture or water can be trapped, to avoid pitting or other undesirable results.

See the end tag to identify the preservative used in the treated wood and visit the treated wood product websites for more information.

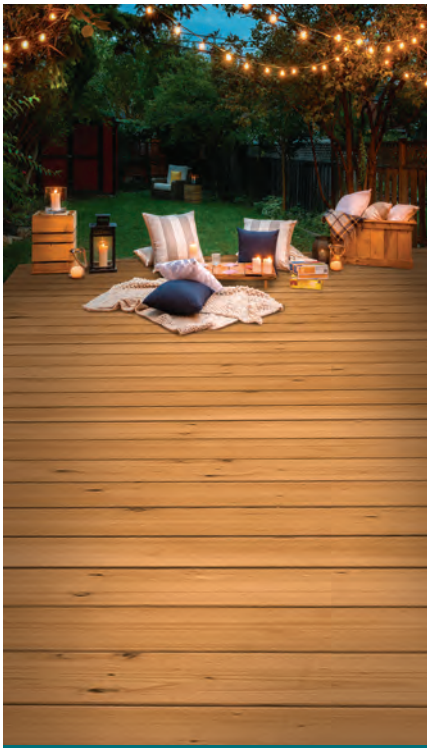
### **What is the best way to store pressure treated wood before building with it?**

Here are a few best practices that should be followed when storing pressure treated wood:

- Ensure that the lumber is unloaded in a dry place.
- Elevate the lumber on stringers to prevent absorption of ground moisture, as well as to allow air circulation. Do not store lumber in direct contact with the ground.
- Cover the lumber stored in an open area with a material that will protect it from the elements. The covering material should be porous to allow for moisture to escape. Note: if you use polyethylene or similar non-porous covers, loosely cover the wood so that there is air circulation, preventing moisture from being trapped.

### **Does an end cut product need to be applied to the cuts ends of pressure treated wood?**

For outdoor projects, it is important to protect the cut ends of pressure treated wood. All cuts and holes expose untreated wood and should be brush-coated with two applications of a registered end-cut preservative before the wood is installed (copper naphthenate for in-ground contact, and zinc naphthenate or a copper-based end cut wood preservative for above-ground contact). These products can be purchased at local retail stores. Always follow the manufacturer's recommendations.



### **How should pressure treated wood scraps and cut offs be disposed of?**

Do not burn pressure treated wood. Cut offs and scraps of pressure treated wood, approved for residential use, can be disposed of by ordinary trash collection or at a landfill. Check with local, provincial and federal regulations.

### **Can pressure treated wood be burned?**

NO. Never burn pressure treated wood. Pressure treated wood must not be burned because combustion breaks the unique bond formed between the preservative solution and the wood. When this bond is destroyed, the components of the preservative can be released in the form of ash and particulates, which can be harmful to you and the environment.

## **TIPS FOR BUILDING DECKS**

### **Is a building permit required to build a deck?**

A building permit is generally required for most home improvement projects. This not only includes new buildings and additions, but also projects like a deck, gazebo, pergola, etc. Most decks will require a building permit. Contact your local building department to see what is required for building a new deck/addition and whether a permit is needed.

### **Before you dig...**

Prior to building a deck, fence or any project that requires digging, contact your local utilities and request that they do a survey of the area to identify any public utility, telecommunication, or gas lines.

### **Before building a deck, how should the ground be prepared?**

Once the perimeter of the deck has been marked out, remove the sod and topsoil from the area and compact the ground. Next, dig the holes and set footings, if needed. Once the footings are complete, lay landscape cloth over the cleared area to discourage weeds and then lay gravel for better drainage.

### **What are some tips for building a ground level deck?**

Ensure there is good underdeck ventilation for above-ground treated wood, allowing airflow around the entire deck. All joists and beams must be off the ground and free of leaves or debris. Proper flashing or spacers should be used between all adjacent structures and the deck.

### **How far apart should deck boards be installed?**

While opinions vary, the consensus favours a spacing of 1/8" inch between deck boards on a finished deck. This will allow gaps for rain seepage and to sweep away surface debris, but is not usually wide enough to trap heels or chair legs, etc. If the decking is damp and heavy, butt the boards together as some shrinkage will occur as the wood dries. If the wood is dry and light, separate boards by 1/8" to allow for future expansion of the wood.





### What are tips for properly fastening deck boards?

A secure and properly fastened board will go a long way for your next deck project. Here are some tips to follow:

- i) use good quality exterior fasteners approved for use with treated wood
- ii) use screws for secure holding and easy removal
- iii) use enough fasteners per deck board – 2 screws at each end and 2 screws at each joist, close to the edge
- iv) use the right length of screw to hold the wood in place
- v) Avoid sinking the screws too far into the deck boards – leave screws flush or just below the top surface

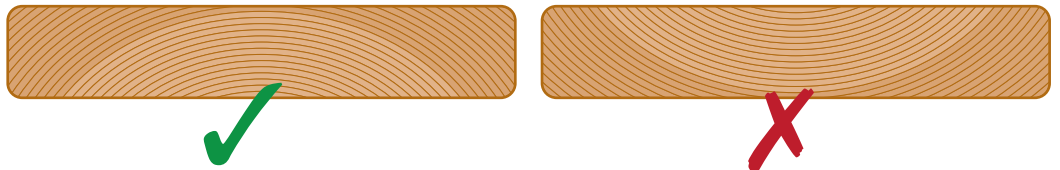
### What length of screws should be used for installing treated wood decking?

For 5/4 decking, use 2-1/2" – 3" screws.

For 2" lumber, use 3-1/4" – 3-1/2" screws.

### Which side of the deck board should be installed upwards?

When appearance permits, attach boards bark side up (annual rings arc upward). Installing boards bark side up helps to shed water. These will also be more likely to have treated sapwood on the exposed surface. However, be sure to inspect deck boards before installation and take notice of any knots or defects that could become an issue as the wood dries out and turn that side downwards. Ensure boards are securely fastened to help prevent warping.

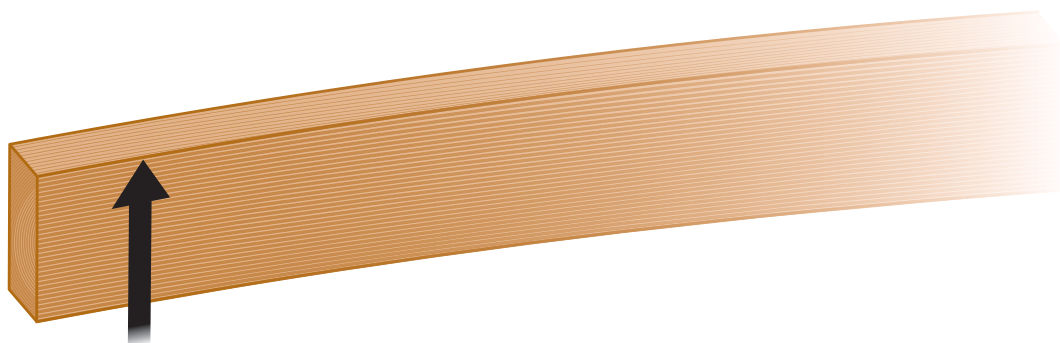


### Should pilot holes be drilled?

Yes, drilling pilot holes minimizes splitting, especially when nailing or screwing near the edge or end of a board. To reduce splitting, it is recommended to drill a pilot hole about three quarters the diameter of the screw/nail. For dense or brittle wood, grind sharpness from nails or blunt the points by striking them carefully with a hammer.

### Installing crown upwards or downwards?

A crown (also called a crook) is the natural curve on the edge/length of the board. If a board to be used for a joist is bowed, it is recommended that the crown is installed upwards. Gravity and the weight of people and furniture will flatten it over time.





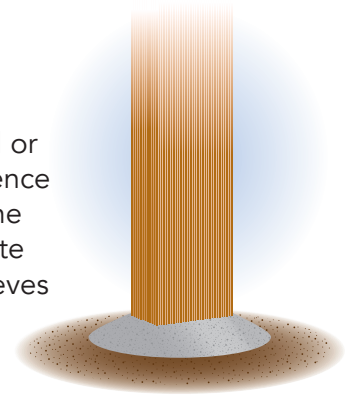
## ADDITIONAL TIPS

### **Can pressure treated wood be used to build a raised garden bed?**

Yes, pressure treated wood can be used for a raised garden bed project if the wood has been treated with one of the following three approved preservatives for this application: copper azole (CA), micronized copper azole (MCA), or alkaline copper quaternary compounds (ACQ). If desired, a suitable thin plastic material can be used as a barrier between the pressure treated wood and the raised bed garden soil. The use of a plastic barrier will also help keep the raised bed garden soil within the bed area. For proper drainage, the plastic material should not be used underneath the raised bed garden.

### **Should fence posts be installed in concrete?**

Pressure treated wood fence posts, treated to ground contact, can be installed either directly in the ground/soil or in concrete. The choice could depend on soil type and fence style. If concrete is used, slope the concrete away from the post for water runoff. Water trapped between the concrete and posts could lead to premature rot. Post wraps or sleeves can also be used for added protection.



### **Why is it important to use post caps?**

Most people think of post caps as just being decorative but they're much more than that. The end grain is the most vulnerable part of a wood post. In wet weather, the tops of your posts will absorb more water than any other part of the post leading to mildew and eventually rot. Post tops are also more exposed to sun and wind, which dries the wood and causes it to crack. Before capping, and after cutting, apply an end cut wood preservative to the ends. Allow the end cut treatment to dry prior to installing a post cap.

### **Can pressure treated wood be used indoors?**

Pressure treated wood may be used indoors for applications where protection against termites and fungal decay is needed. Pressure treated wood should not be used for indoor applications where it can come into contact with drinking water or food, such as countertops or cutting boards. Follow safety practices when working with wood products – cleanup and dispose of sawdust and construction debris after construction.

### **Do you need to apply a finishing product to a treated wood deck or fence?**

Yes. Pressure treating protects wood against structural failure due to rot, fungal decay or termite attack. However, moisture, sun, and outdoor conditions will cause wood to show signs of weathering. Any exposed wood, whether pressure treated or not, should be protected from the weather. For any application of a paint, stain, clear water repellent or other finish, consult the finishing product manufacturer's instructions for use with pressure treated wood. Prior to applying a finishing product on an entire project, it is recommended to do a test patch on a small, exposed area to ensure that it provides the intended result. Ensure that the wood is dry prior to applying the product.



### **When can a finishing product be applied to a pressure treated wood deck or fence?**

Unless the finishing product manufacturer states otherwise, you can apply a water repellent or semi-transparent stain to pressure treated wood as soon as it is dry to the touch after installation. Too much moisture in the wood may prevent the finishing product from penetrating the wood sufficiently and result in a blotchy appearance or poor adhesion. To test to see if the wood is surface dry, sprinkle water droplets on the surface. If the water droplets are absorbed into the wood, it is ready for the water repellent or semi-transparent stain.

## **CONSUMER SAFETY**

Precautions should be taken when handling pressure treated wood. Many of these precautions also apply to untreated wood and other building materials:

- When sawing, sanding, and machining wood, wear a dust mask. Avoid frequent or prolonged inhalation of sawdust from wood, be it treated or untreated wood. Whenever possible, these operations should be performed outdoors.
- Wear gloves when working with wood. Wear safety glasses to protect eyes from flying particles. Use proper techniques when lifting.
- After working with wood, and before eating, drinking, toileting, or using tobacco products, wash exposed skin areas thoroughly.
- Because preservatives or sawdust may accumulate on clothes, they should be laundered before reuse. Wash work clothes separately from other household clothing.
- Do not use treated wood under circumstances where the preservative may become a component of food or animal feed. Examples would be structures or containers for storing silage or food.
- Do not use treated wood for cutting boards or countertops.
- Only use treated wood that is visibly clean and free of surface residue for patios, decks and walkways.
- Do not use treated wood for construction of those portions of beehives that may come in contact with honey.
- Do not use treated wood where it may come in direct or indirect contact with public drinking water, except for uses involving incidental contact such as docks and bridges.
- Do not use treated wood for mulch.

### **Disposal**

- **Do not burn pressure treated wood.** Cut offs and scraps of pressure treated wood, approved for residential use, can be disposed of by ordinary trash collection or at a landfill. Check with local, provincial and federal regulations.

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