

What are the benefits?

The benefits are obvious, for while wood is a replenishable natural resource, our forests must be carefully managed. By extending the useful service life of wood in exterior uses, preservative treatment reduces demands on our forests.

Some species of wood have natural resistance to termites and fungi. But these woods are increasingly rare and expensive. Other wood species are vulnerable to termites and fungi, and must be protected.

Termites, the most common type of wood-eating insect, subsist on the cellulose content of wood. And certain strains of fungi use wood fiber as their food supply. As a fungus feeds on the wood fibers, the wood decays and loses strength.

Therefore, since Biblical times, various preservative treatments have been applied to wood – even to Noah’s ark – to increase its durability and longevity, especially wood in contact with soil or exposed to weather.

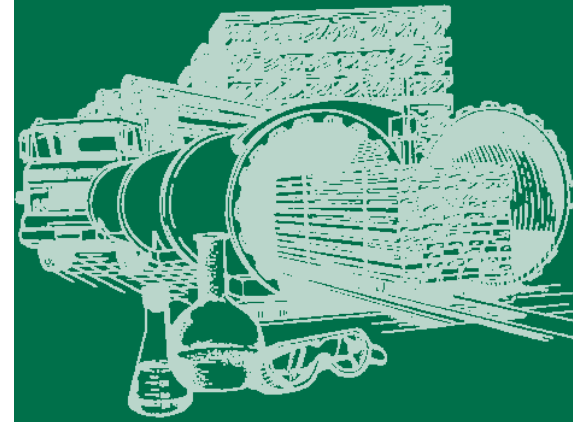
What is copper azole preservative?

This preservative is a formulation of two active ingredients.

Copper is normally associated with piping or perhaps pennies. However, in certain forms, it is an effective fungicide. It is the copper, recycled from wire and computer etchants, that lends copper azole-treated wood its greenish cast – which, over time, weathers to a driftwood gray.

Protection against copper-tolerant fungi is provided by an organic azole, which has also been used as a fungicide for fruits, peanuts, and other crops.

Wolmanized wood is not only workable, it is clean, odorless, and, used as directed, safe – safe to handle, safe to work with, and non-irritating to humans, domestic animals, wildlife, plants, and the environment.



What Goes On At Our Wood Preserving Plant?

*The
inside
story of the
production of
Wolmanized®
wood*

What do we do?

What goes on inside the plant gates? A reasonable question in a world that has become more concerned about our fragile environment.

It’s a question we welcome, because of the pride we take in what we do:

- the contribution we make to conserving our natural resources
- our dedication to protecting the environment
- the care we take to ensure the health and safety of our own people
- our good faith commitment to the welfare of the communities in which we and our families work and live.

To the uninitiated, a wood treating plant presents a confusing scene of tanks, pipelines, and large cylinders. So let’s begin our introduction to the plant with a little background information.

We pressure-treat lumber and plywood with *Wolman*® wood preservative to significantly increase their useful life by protecting them against termite attack and decay caused by fungi and microorganisms – and we do this without impairing the natural characteristics of the wood.

Just as an example, without treatment, Southern pine and Western hemlock, which are commonly used in construction, have an average life in ground contact, according to U.S. Forest Products Laboratory tests, of 1.8 to 3.6 years. In contrast, lumber treated with copper azole preservative can be expected to remain in service for over 50 years! It is for this reason that most building codes require preservative treated wood for applications that involve contact with the ground or unprotected exposure to weather.

What about safety at the plant?

So how safe is a wood treating plant?

We know that, *improperly* handled, pesticides can be nasty stuff – just as virtually any chemical, man-made or naturally occurring, can be nasty. Even life preserving medication, wrongly used, can affect health adversely. For example, aspirin can be unsafe when improperly administered. But without such chemicals, the quality of our lives would be diminished.

The long and the short of it is this: experience with copper azole has shown no adverse effects on employees working with the preservative on a daily basis.

What's involved in treating wood?

The basic treating process is simple and highly controlled.

The lumber, timbers, and plywood to be treated are loaded onto trams. Using a vehicle such as a forklift, the trams are pushed into a large horizontal treating cylinder. The cylinder door is sealed, and a vacuum is applied to remove most of the air from the cylinder and the wood cells. Preservative solution is then pumped into the cylinder and the pressure raised to about 150 pounds per square inch, forcing copper azole into the wood.

The total treating time will vary, depending on the species of wood, the commodity being treated, and the amount of preservative to be impregnated.

The treating process is a closed system; at the end of the process, excess treating solution is pumped out of the cylinder and back in to a storage tank for later reuse. The cylinder door is opened and the trams are pulled out.

The wood is wet at that time, so it is kept on a concrete pad. Any drips trickle into a containment area from which they can be either disposed of or reused.

How do we ensure health and safety?

Our treating process and our work practices ensure the health and safety of our employees and the community in a number of ways:

- Our wood treating process is accomplished in a closed system. The preservative arrives in a special tanker at our treating plant, and is unloaded directly into a receiving tank. No one comes in contact with the solution.
- The concentrated solution is then diluted with water in an automated mix system to produce the work solution we use in the wood treating process.
- At the cylinder, wood is loaded onto small trams which are pushed into the treating cylinder. There, in a sealed and locked cylinder, by vacuum and pressure, under precisely controlled conditions, the wood is injected with the diluted solution of preservative.
- When the wood is removed from the treating cylinder, no fumes or air pollutants are released to the environment.
- The treated wood comes out of the cylinder with most of the preservative already locked into the wood cells. While it cures, it remains on a drip pad, which is designed to collect excess preservative for reuse.
- The drip pad is made of impervious material, including high-strength reinforced concrete, using special water-tight construction joints, and is coated with an impermeable sealer.
- Our operation is considered a zero discharge plant. That means that we do not discharge any process water. The portion of the plant where we handle the liquid preservative is totally contained through the use of concrete

dikes around our tanks and cylinders. The floors of these areas are also impermeable and sloped toward collection points where liquids are sumped and piped to storage tanks for reuse. All rainwater, cleaning water, etc. that contact these chemical processing areas are collected for reuse in the preservative treatment.

- When cylinders are cleaned, loaded, or unloaded, or when freshly-treated wood is handled, employees wear appropriate personal protective equipment.
- Ongoing air monitoring ensures that employees breathe healthful air.
- Employees are provided with ongoing training to make sure they understand how to work safely.
- Everyone at our plant has been trained to know our spill prevention and emergency plans – and these plans, as well as the nature of the materials with which we work, have been shared with local hospital, fire department, and emergency response personnel.
- The process of pressure treating wood with pesticides is regulated throughout North America by the United States Environmental Protection Agency as well as state authorities, and, in Canada, by Environment Canada and the Code of Good Practice.
- We comply fully with both the letter and the spirit of all applicable regulatory compliance requirements.

A safe conclusion

Wood is our only renewable building material, and it saves energy when compared with other building materials. But wood is not ours for the wasting; the longer it lasts, the less the drain on our exhaustible metals and minerals – and the more we reduce the pressure on our forests.

Nature returns wood to the soil through the action of decay fungi, bacteria, and insects. To deal with such biological degraders, we must deal with them biologically – which is precisely what wood preservative has proved itself so capable of doing. By proper treatment, we not only make wood an economical material, we make one tree do the work of many.

We hope this brief introduction to what goes on inside our plant gates has been interesting and informative.

Wolmanized wood treating plants have strong commitments to their workers, to the environment, and to the community in which they operate. We welcome your interest. Please let us know if we can provide you with further information on *Wolman* wood preservative, on *Wolmanized* wood, or on our treating process.