APP Timber*DuraPine* FAQ

1. What is copper azole preservative?

In the early 1990s, as questions began to be asked about CCA preservative, Arch scientists started work on alternative products. The most promising, and the one eventually brought to market, was copper azole. It has two active ingredients: copper and azole, as a co-biocide to prevent damage from copper-tolerant fungi, an organic azole.

It was introduced in Europe in 1992, and in the United States in 2001. The original formulation included borate, but that was unnecessary for typical outdoor applications in the United States and was eliminated. Now there are more than 60 North American companies treating wood with copper azole, plus others in Europe. This wood has been used in thousands of residential, commercial, agricultural, and industrial applications.

2. Is it safe to people and the environment?

Copper azole and copper azole-treated wood have been studied carefully by toxicologists and biologists as well as by wood preservation experts. Results of a human health risk assessment and other tests have shown it to be harmless when used as recommended.

A comprehensive study of occupational, residential, and playground uses of wood pressure-treated with copper azole preservative has concluded, "no adverse health effects are expected." Believed to be the first independent human health risk assessment of the new generation of treated wood products, the study was commissioned by Bayer Chemicals Corporation (now Lanxess Corporation) and conducted by Gradient Corporation, a noted environmental and toxicological consulting firm.

A number of different exposures (e.g., inhalation, incidental ingestion, exposure to the skin) were assessed and aggregated in each of these scenarios. The highest potential risk was estimated to be 17 times lower than the level that the EPA uses as a safety benchmark, thus demonstrating the safety of copper azole-treated wood.

3. I am familiar with ACQ-treated wood but not with wood treated with copper azole. Are they similar?

They are very similar. Both were developed as alternatives to CCA, and both are heavily dependent on copper as their primary preservative. Both contain a small amount of organic fungicide – azole in the case of copper azole and quaternary in the case of ACQ. Where there are differences, we think that slight advantage lies with copper azole. However, many U. S. retailers have used them interchangeably. They look and perform very similarly when produced correctly.

Regarding corrosion of metal hardware, the newer types of ACQ are very similar to copper azole – both are in the "excellent range" as defined in the Corrosion Engineering Handbook.

4. How do Copper Azole and ACQ differ?

As mentioned above, the similarities are greater than the differences. However, there are some differences, most of which affect producers rather than retailers or users.

Any direct comparison must take into account the type of ACQ. The developers of ACQ have tried to upgrade their formulations several times. Over the past 10 years they have offered ACQ type A, ACQ-B, ACQ-C, ACQ-D, ACQ-D carbo-quat, and ACQ-D with micronized copper. The two most common in the United States are ACQ-D carbo-quat and ACQ-D with micronized copper.

Copper azole is probably most like ACQ type D carbo-quat. Copper azole does not contain chlorides as did the earlier versions of ACQ, and the amount of copper azole needed to protect wood is less the amount of ACQ needed.

The main differences in the preservatives are in how they are produced and how they are shipped to treating companies. There is little difference in the end products, when they are properly produced.

5. Why should I buy APP Timber*DuraPine*?

In choosing **APP Timber*DuraPine***, a purchaser gets a dependable product and a helpful partner.

APP Timber's parent, Cox Industries has been treating wood since 1954, and has a reputation as one of the finest, most respected producers in the United States. It has always been at the forefront of developments in wood preservation.

The quality of **APP Timber*DuraPine*** material is checked internally in the mill by on-site laboratory analysis; double-checked by the preservative manufacturer, Arch Wood Protection (an international leader with global operations); and

also monitored by an independent inspection agency accredited by the American Lumber Standard Committee. Purchasers can be certain they receive wood that has been properly treated.

6. Can I paint or stain APP Timber*DuraPine*?

Yes, you can stain or paint **APP Timber*DuraPine***. You can also coat this wood with a water repellent; in fact, we highly recommend it. The best way to tackle these jobs depends on the wood you have, its exposure, and the coating you plan to use.

7. What maintenance is needed for the product?

No maintenance is needed to renew resistance to fungi and termites. **APP Timber*DuraPine*** has 20 years limited warranty against these organisms. However, protection is required to maintain the wood's appearance against weather. Sun and rain cycles cause stresses in lumber and result in swelling, shrinking, warping, and cracking.

- To help protect your project against moisture damage, apply an effective brand of water repellent as soon as your outdoor wood project is finished or, for large projects, as sections are completed. Water repellent should be applied every year or two.
- To revitalize a dingy appearance caused by dirt and mildew, use deck brightener to clean the outdoor wood. To validate the warranty in some states and for some species, apply an end-cut solution.

8. How is APP Timber*DuraPine* produced?

APP Timber*DuraPine* is made in a pressurized cylinder using a closed system that recycles excess preservative for future use and releases neither air pollutants nor wastewater. Only licensed producers who follow stringent quality control measures make Wolmanized wood. The basic treating process is simple and highly controlled.

1 — Lumber, timbers, or plywood is loaded onto small rail or tram cars. The trams are moved into a large, horizontal treating cylinder.

2 — The cylinder door is sealed and a vacuum is applied to remove air from the cylinder and the wood cells.

3 — Preservative solution is then pumped into the cylinder.

4 — The pressure is raised to about 150 pounds per square inch, forcing the preservative into the wood. Treating time varies depending on species of wood, commodity being treated, and the amount of preservative to be impregnated.

5 — At the end of the process, excess treating solution is pumped out of the cylinder and back to a storage tank for later re-use.

6 — A final vacuum removes excess preservative from wood cells. The cylinder door is opened and the trams are pulled out. The wood is wet, so it is kept on a concrete pad until any dripping ceases.

9. Does APP Timber*DuraPine* come with a water repellent?

A compatible water repellent additive to provide built-in moisture protection is available in some areas.

10. What are the environmental benefits of APP Timber*DuraPine*?

Unlike plastics, steel, and concrete, **APP Timber*DuraPine*** is made from a renewable resource grown on manage

timberlands. It requires less energy to produce than plastics and offers greater insulation value; and, because of its lighter weight, preserved wood can often be installed with lighter equipment which has less environmental impact. Wood products reduce greenhouse gasses, and preservative treatment extends their service life.

11. What are the strength properties of APP Timber*DuraPine*?

This wood has the same strength properties of untreated wood of the same species, grade, and moisture content.

12. What hardware is recommended for APP Timber*DuraPine*?

Hot-dipped galvanized fasteners (meeting ASTM A 153) and connectors (ASTM A 653 Class G185 sheet), or better, are recommended.

For Permanent Wood Foundations and corrosive environments, such as areas with saltwater spray, use 304 or 316 stainless steel. Aluminium should not be used in direct contact with this wood, unless an adequate physical barrier separates the aluminium from the wood or the manufacturer ensures the performance of the aluminium product.

For indoor applications, while galvanized fasteners are preferable, the use of non-galvanized nails or screws of sizes and types approved by the Model Code is acceptable when attaching joists, studs or other framing to **APP Timber*DuraPine*** sill plate, provided the wood will remain dry in service, protected from weather and water. Likewise, the use of standard galvanized strapping, anchor plates, or mild steel anchor bolts 1/2" diameter and larger is acceptable for fastening **APP Timber*DuraPine*** to foundations, provided that the wood will remain dry in service, protected from the weather and water.

13. How do I dispose of APP Timber*DuraPine* waste?

APP Timber*DuraPine*, such as scraps, broken boards, and sawdust, can be disposed of with ordinary trash collection. Neither the wood nor the preservative residues are considered hazardous wastes. If a particular landfill has restrictions against traditional treated wood, it may accept **APP Timber*DuraPine***. Treated sawdust and shavings are **not** recommended for composting, mulching, or animal bedding, and the wood should **not** be burned except in approved commercial incinerators.