

New Pressure Treated Lumber: Things you really need to know

By now, all of the pressure treated lumber you will find in stores has been treated with one of the new, more “environmentally friendly” pressure treatment chemicals. Our old, long-used, but more toxic treatment known most commonly as CCA has been out of use for over a year, so stocks of lumber using that treatment process should be gone.

The “A” in CCA stood for inorganic arsenic which worked well in keeping insects and microbes from destroying the wood, but introduced a potent poison into the environment. Today’s pressure treating chemicals rely on copper alone in new formulations. You will see codes such as ACQ-C, ACQ-D, and ACQ-D Carbonate on some lumbers. These are all versions of Alkaline Copper Quaternary. Other pieces of lumber will bear codes like CBA-A or CA-B which indicate they were treated with a Copper Azole-based material. The commonality among these materials is in the use of copper as the primary decay-preventing chemical. Research so far indicates that these new materials should work to prevent decay for decades much as the old CCA treatment did.

One of the big changes you will notice when you purchase these new pressure treated woods is in the price. The new lumber is going to cost you more since the new treatments cost more. Our long-term expense as a society will probably be lower if you factor in that we will no longer be creating massively expensive to clean up toxic waste sites as we did with CCA treatment plants.

Another change is in the grades. Pay careful attention to the specific application on the end tag. Due to the higher expense of the new chemicals and the fact that we don’t always use the wood in contact with the ground, some of the wood will bear the recommendation “Above Ground.” Less chemical has been forced into the wood to save money. Be sure to use only wood labeled for ground contact as posts or retaining walls. The key for the consumer is to read the end tag on the lumber. Any lumber sanctioned by the American Wood-Preservers Association will bear their initials “AWPA” and have a fairly easy to understand tag.

The greatest change for carpenters is in the hardware required to connect these new copper-based pressure treated lumbers. This new wood is much more corrosive to fasteners than CCA. Do not use nails, screws or connectors that are labeled “galvanized” as these will start to corrode in just weeks. At a minimum, use fasteners labeled “hot-dip galvanized.” Your better choice is to use stainless steel screws and bolts Type 304 or 316. Some screw manufacturers claim their zinc galvanized coatings although not hot-dip are usable on all pressure treated woods. Be sure to ask if they

warrant their use before committing a major deck or wall project to questionable fasteners.

Polymer-coatings may be a viable alternative, but so far none have gotten the nod from the ASTM (American Society for Testing and Materials) for use in the new pressure treated lumbers. Some independent labs have confirmed the performance of these polymer coatings. Again, look for the warranty.

Joist hangers, post anchors and other hardware need to be considered as well. Look for an ASTM label that says they conform to ASTM A653. Two lines you can find on the market today are the TZ line from USP and ZMax from Simpson Strong-Tie. As stores transition to these new lumbers, finding the right connectors may take time and planning. Marine and coastal suppliers will probably have what you need as they are accustomed to selling to people building in a corrosive environment.

Lastly, you cannot use aluminum flashing. It will start to corrode immediately. Look for copper, galvanized or membrane flashing. While not specifically noted in any of the research materials used in developing this article, it should be assumed that some compatible flashing will need to be placed between any pressure treated wood and aluminum siding to prevent rapid degradation of the siding.

Many of the fasteners and other products may require special ordering, but a long-lasting outdoor project is easily worth the planning and advance ordering that go into getting the right materials.

***Note:** The information provided in this brochure was copied from an article written by Steve Bogash, Regional Horticulture Educator that was published on the <http://cumberland.extension.psu.edu> website (Cumberland County Pennsylvania extension office). The article is dated February 12, 2005. The City of Fort Atkinson takes no responsibility for the article’s content. It is merely provided for informational purposes to better educate the public of the changes in pressure treated lumber.*