

City of Fort Atkinson

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Pressure Treated Lumber

New requirements for pressure treated wood

A change has developed in how pressure treated wood is being manufactured for residential uses. For years the wood industry has used a product called CCA to produce treated lumber products. As of December 2003, CCA will no longer be sold for any residential use.

Some of the new product pressure treatments are:

- ACQ - Alkaline Copper Quarternary
- CBA - Copper Azole
- SBX - Sodium Borate
- ACZA- Ammoniacal Copper Zinc Arsenate

-Note: Sodium Borate may not be used for outdoor applications. It may be used in areas protected from the elements, i.e, sill-plates, joists completely protected from direct moisture, etc.

New fastening devices necessary

These new wood treatments are more corrosive in nature and must have a heavier galvanized or stainless steel product used for all the fastening devices, such as the bolts, nails, screws, brackets and joist hangers. Lumber suppliers are taking a pro-active stance and posting notifications of the changes by the lumber and fastener sections in their businesses. Some of the fastener designations you should look for are:

- Triple zinc
- G-185
- G-90
- Post hot-dip galvanized - HDG.
- 304 and 316 stainless steel.

The following chart from Simpson Strong Tie, a fastener manufacturer, shows the types of uses and associated fasteners.

Connector Coating Recommendation - Structural Applications

Environment	Untreated Wood	SBX/DOT & Zinc Borate	ACQ-C, ACQ-D (Carbonate), CA-B & CBA-A			ACZA	Other or Uncertain
			No Ammonia	With Ammonia	Higher Chemical Content ¹		
Interior Dry	Low	Low	Med	Med	High	High	High
Exterior - Dry	Low	N/A ²	Med	High	High	High	High
Exterior - Wet	Med	N/A ²	Med ^{3,4}	High	High	High	High
Higher Exposure	High	N/A ²	High	High	High	High	High
Uncertain	High	N/A ²	High	High	High	High	High

Interior Dry Use: Includes wall and ceiling cavities, and raised floor applications of enclosed buildings that have been designed to ensure that condensation and other sources of moisture do not develop.

Exterior - Dry: Includes outdoor installations in low rainfall environments and no regular exposure to moisture.

Exterior - Wet: Includes outdoor installations in higher moisture and rainfall environments.

Higher Exposure Use: Includes exposure to ocean salt air, large bodies of water, fumes, fertilizers, soil, some preservative treated woods, industrial zones, acid rain, and other corrosive elements.

Low = Use Simpson standard painted and G90 galvanized connectors as a minimum.

Med = Use ZMAX/HDG galvanized connectors as a minimum. Use fasteners galvanized per ASTM A153.

High = Use Type 304 or 316 Stainless Steel connectors and fasteners.

1. Woods with actual retention levels greater than 0.40 pcf for ACQ, 0.41 pcf for CBA-A, or 0.21 pcf for CA-B (Ground Contact level).
2. Borate treated woods are not appropriate for outdoor use.
3. Test results indicate that ZMAX/HDG will perform adequately, subject to regular maintenance and periodic inspection. However, the nationally-approved test method used, AWWPA E12-94, is an accelerated test, so data over an extended period of time is not available. If uncertain, use Stainless Steel.
4. Some treated wood may have excess surface chemicals making it potentially more corrosive. If you suspect this or are uncertain, use Stainless Steel.

Aluminum should not be in contact with the new treated woods. This means the flashing between your house and the deck should be galvanized, stainless steel or vinyl. Also provide a barrier between any aluminum siding and treated woods. Do not mix and match metal products. If your joist hangers are stainless steel, then your nails must be stainless steel. The same would apply to any galvanized products.