



Township Of West Milford

DEPARTMENT
OF BUILDING SAFETY

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New Rules for Fasteners and Flashing Use With “ACQ” Pressure Treated Wood

As of January 1, 2004, Wood treatment companies are no longer manufacturing CCA pressure treated wood for residential use in projects like decks, fences, sill plates and framing. This change was a voluntary agreement between the wood treatment companies and the U.S. EPA due to the fears about health effects of arsenic and chromium used in CCA treated wood. The majority of new pressure treated wood will contain “ACQ” (Alkaline Copper Quaternary) a copper-based preservative considered less environmentally toxic. Unlike CCA, which relies on toxic amounts of arsenic pumped into lumber to ward away pests and mold, ACQ's primary ingredient is copper, a relatively inert ingredient and an essential nutrient for human health. Quaternary, or Quat, a type of fungicide that attacks decay organisms, provides additional protection against rot and termite attacks, and is used in a wide array of consumer goods, from wood to paints to feminine hygiene products.

The Problem

While ACQ is more environmentally friendly, different techniques for fastening and flashing projects using ACQ are needed. ACQ uses copper as its main ingredient and ammonia as a vehicle to help penetration of the wood. The problem is that the high copper content of the wood when it comes in contact with other metals sets up a galvanic reaction, which causes corrosion. This seems to be aggravated by the ammonia contained in the wood when exposed to moisture.

The Solution

Special attention must be paid to the fasteners and metals used around ACQ wood.

Aluminum should never come in contact with ACQ treated wood. Flashing, which is required on deck ledger boards to prevent water from getting behind and rotting the house framing, must now be **copper, copper clad, stainless steel** or heavy **U.V. resistant plastic**. Aluminum sills of doors should not come in contact with treated wood sill plates or aprons. Aluminum coil trim should not be used to wrap treated posts or trim.

Nails, screws and bolts should be **hot dipped galvanized or stainless steel**, electro-galvanized nails and bolts will not hold up and should not be used. Most manufacturers of nail gun nails are changing to H.D. galvanized or stainless steel, but check that they are approved for use with ACQ. Lag bolts used to attach the ledger board **must be ½” in diameter**. Foundation anchor bolts should be **H.D. Galvanized** if you are using treated sills, aluminum termite shields should not be used.

Hangers and brackets must be approved for use with ACQ. Traditional galvanized joist hangers and brackets have been shown to corrode more quickly with ACQ, so most manufacturers are increasing the thickness of the galvanization of their products. Make sure all hangers and brackets are approved for use with ACQ. Simpson, one of the largest hanger manufacturers, identifies its new products with the name “Z-max”.