

## Copper Flashing on ACQ

I just read an article by Ted Cushman about the use of hardware with ACQ wood in coastal areas (*Soundings*, March/April 2008). I have a question about use of copper nails in ACQ wood: There is a project going on at one of our sites where copper flashing is being applied to roofing built of ACQ-treated wood. We are in a coastal environment — the site is an old fort structure alongside the Savannah River, 15 to 20 miles from its outlet to the Atlantic Ocean. The question is whether it is better to use copper or stainless steel nails. There is no doubt that copper nails to copper flashing is best. I spoke with Nature Wood/Osmose, the provider of the ACQ treatment on much of the wood we order, and I was told that copper nails would actually be better than the stainless. But a local carpenter had reservations about using copper nails in the ACQ, based on hearsay that the wood eats away at the copper. My understanding of copper is that it is pretty stable for long periods in most environments. What (if any) are the issues with copper nails in wood versus use of stainless? And which fasteners would be best to secure copper flashing to treated wood in our environment?

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**Ted Cushman responds:** *The corrosion issue associated with ACQ in contact with metals is caused by galvanic reaction — an electrical interaction between dissimilar metals in an electrolyte (electrically conductive) solution. In your case (as in an coastal environment), we have the electrolyte solution — salt-laden water — but we don't have dissimilar metals. Instead, we have just one metal: copper. So based on the science, you should not see any problem when you place copper flashing and copper*

*nails in contact with wood containing a copper-based treating solution. That is consistent with your wood treatment supplier's recommendation in favor of copper fasteners.*

*For more about the fastener selection, we turned to Roelif Loveland, president of Maze Nails ([www.mazenails.com](http://www.mazenails.com)). Maze makes hot-dipped galvanized nails, stainless steel nails, and copper*

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*nails. As Loveland pointed out, all three types of nails are code-approved for use with ACQ. IRC Section R319.3 says, "Fasteners for pressure-preservative treated wood shall be of hot-dipped galvanized steel, stainless steel, silicon bronze or copper."*

*Copper nails and copper flashing in ACQ lumber is an unusual enough application that it doesn't have much of a track record. So it may not deserve a hard-and-fast guarantee. But it does comply with code, and based on the information that is available out there, it seems like a pretty safe bet.*

## How Small Is Small?

"Storm-Water Regs Grow Up" (*Soundings*, May/June 2008) states: "Any construction project that disturbs even a half-acre of land surface falls under the requirements of the U.S. Environmental Protection Agency's National Pollutant Discharge Elimination System (NPDES), which requires you to file a federal or state permit application and implement an approved SWPPP." When or is this in effect?

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**Clayton DeKorne responds:** *The NPDES Phase II stormwater was signed into law in December 1999 and requires stormwater permitting on "small construction sites" (commonly called Phase II sites). However, we misstated the exact definition of a small site. The current EPA ruling defines small construction activity as any land disturbance on sites equal to or greater than 1 and less than 5 acres. (The Phase I ruling covers sites greater than 5 acres.) Site activities disturbing less than 1 acre are also regulated as small construction activity if they are "part of a larger common plan of development or sale with a planned disturbance equal to or greater than 1 acre."*

*At this time, only one state regulates individual sites less than one acre: South Carolina requires stormwater permits in coastal counties when the disturbance of more than half an acre lies within half a mile of a receiving waterbody (a lake, river, or ocean).*



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