

Why I Don't Use Cellulose or Blue-Jean Insulation

Just because it's recycled doesn't mean it's green. Let me explain why I don't use cellulose or blue-jean insulation:

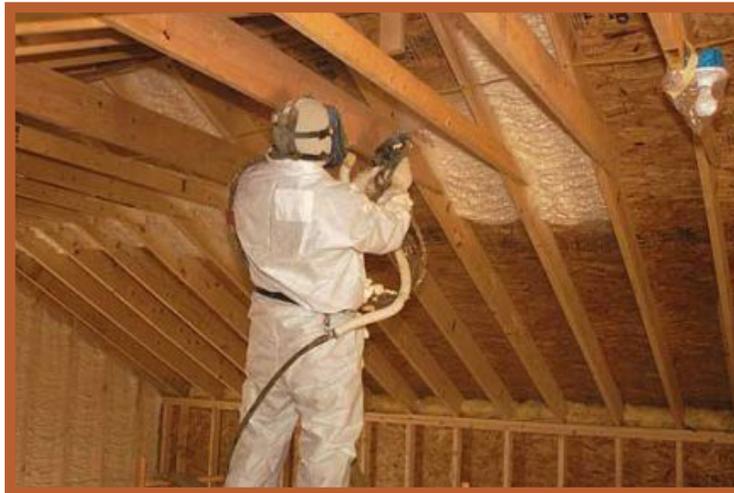
It happened again yesterday, a young builder came up to me after my talk at the **Atlantic Green conference** here in Charleston SC and he started to talk to me about the new green house he wanted to get verified that had no-VOC paint and bamboo flooring and blue-jean insulation in it. And it just came out of my mouth with no diplomacy-check engaged, "so what's so green about blue jean insulation?" The poor kid was expecting a pat on the back and what he got was a kick in his assumptions.

The whole idea about using a third party green building verification system is to force designers and builders to look at the big picture and to separate the "green-ness" of a product from it's cost and marketing publicity. The popular press is all in a tizzy about recycled-content building products, anything bamboo, and uber-groovy countertops but the bulk of the things that make up a well integrated green home are conventional products used with an unconventional attention to detail. It's not about the silver

bullets, it's about getting the details right.

So what's wrong with blue-jean insulation? Well, I have to drive past conventional cotton fields here in NC and they give me

a strong incentive to choose organic cotton whenever I buy clothes. Even the **work pants I wear** are organic. Cotton is brutal on the land to produce, far worse than wood fiber in every way, and processed cotton is a high-value commodity. Denim scraps diverted from the landfill? I think more likely they are diverted from a



I still use fiberglass in my walls and I spray 8" of foam in my roofs. But you won't see me using cellulose or blue-jean insulation in my homes.

commodity stream that was already using them for an alternative purpose, which still needs to be filled. It would be fine if denim insulation was actually more economical and a better insulator than the alternative but it doesn't cut easily, it's therefore more difficult to install correctly, and it doesn't expand well to fill the cavities leading to an unacceptable gap ratio in many cases. It needs to be treated with fire and insect treatments and it can hold moisture. No wonder you won't get a lot of green points for using it in your homes. It's just not that green.

So let's switch to cellulose, it's just recycled

newspaper; that's got to be green right? Well that's what I used to think too, and you will get more green points for cellulose than for cotton. But I have seen what happens when cellulose gets wet inside a wall. On two occasions, homes I have built with cellulose insulation had plumbing leaks. The moisture was absorbed and spread by the cellulose and took days to be noticed by the home owner. By the time we located and repaired the leaks the water had wicked throughout and saturated the affected insulation and, while the cellulose hadn't mildewed itself, the studs, exterior sheathing and drywall were covered with mold. We removed the sheetrock and cleaned the wood and set the cellulose aside to dry and it was remarkable how long it stayed wet.

I've seen small water accumulation in homes during periods of wind driven rain and snow and most insulation products allow that moisture to either enter the home and alert the occupant to the problem or accumulate and dry quickly. I have had trees fall on my roofs many, many times during ice storms as well as hurricanes and fiberglass or spray foam don't hold on to the moisture, it just flows right through, lets us know we have a problem, we fix the leak and move on.

In homes with cellulose insulation I'm concerned about closing up a bunch of wet newspaper in my attic after an ice storm related leak. I'm much more concerned with cellulose in walls than attics because most attics are both hot and well ventilated and foster better drying but a winter ice storm could really lead to some problems.



Blue-jean insulation doesn't cut easily, it's difficult to install, and it doesn't expand well. It's just not that green.

Photo: Courtesy of Amy Gahrn.

“Green building is about durability and performance more than about recycled content.”