



WORDS TO THE WISE

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Insulation Goes Natural

As home and commercial builders and buyers push the envelope to go green, many natural and eco-friendly insulations have come onto the market. When it comes to a home's insulation, you might not be thinking about wool, denim, hemp or a flax-based product, but these products are making their way into the building insulation market.

Some of the reasons builders and consumers are opting for these choices include ease of installation, higher insulation values and better indoor air quality, to name a few.

The Coler Company in New York is experimenting with a spray-in product created from a soybean-oil based polyurethane compound. This semi-rigid foam contains no formaldehyde and emits no VOCs (volatile organic compounds) or CFCs (chlorofluorocarbons).

Coconut fiber board is an insulation product made from the outer husks of coconuts with no other additives. The fibers from the coconut husks can store up to sixty-five percent of their weight in air, providing a good insulation value. Coconuts are a sustainable and renewable resource, non-toxic and naturally resistant to rot, bacteria and mildew, making this a material well-suited to breathable construction.

How about recycling old blue jeans under the eaves? Cotton mill scraps and recycled cotton is mixed with

other fibers such as hemp or polyester to create insulation slabs or rolls. These products are recycled, biodegradable and kept out of landfills. The material is certified as low toxicity and treated with non-volatile additives for pest, fungal and combustion control.

The same features that make cork an effective sound barrier makes it an effective thermal insulator as well. Cork insulation comes from the outer bark of cork oak trees grown in the Mediterranean, India and California. Cork is first harvested from the tree when the tree has reached 20 to 30 years of growth. It can be stripped again every eight to fourteen years as the bark grows back, making it a renewable and sustainable product. In addition, the trees are effective carbon "sinks," capturing and storing CO2.

To produce insulation, cork is processed into granules that are subjected to high pressure and temperature. The natural resins produced when the cork is treated fuse the granules together. This structure creates cell-like compartments which hold pockets of air, providing thermal and acoustic insulation.

Cork's other benefits include non-toxicity, naturally anti-microbial, resistant to rot, fire and termites. It also needs no special equipment to be worn during installation.

Along with cork, hemp and flax are other natural alternatives to traditional

insulation building materials. The fibers of a flax plant's stem are bound together with potato starch then treated with borax to make it fire and insect resistant. Hemp works in a similar manner. Both hemp and flax are sustainable, renewable and require no protective equipment to be worn during installation.



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