

To VOC or Not To VOC?

It's an important question, and the list of wood staining options is growing



Companies continue to develop new, less toxic or nontoxic stains, which perform as well as their traditional counterparts.

WHAT'S PLEASING TO THE EYE CAN sometimes be stinging to the nose — as anyone knows who has brightened up a home by slapping a fresh coat of paint on the walls, applying a rich hue to the siding or adding new luster to a worn hardwood floor.

The culprits for the unpleasant odors that accompany such projects are referred to in the home-improvement world as volatile organic compounds, or "VOCs." These carbon-based chemical compounds emit as gases from solids

or liquids — like paints, lacquers, cleaning supplies, adhesives and stains — and have the potential to cause a variety of short- and long-term health problems. VOC exposure can cause eye, nose and throat irritation, headaches, loss of coordination, damage to the liver and kidneys, central nervous system problems and even cancer.

Studies by the U.S. Environmental Protection Agency's Office of Research and Development have found that people expose themselves to very high levels of pollutants

when they use products that contain the chemicals, and elevated concentrations can persist in the air long after the work is completed.

According to the EPA, during and immediately after application of products that contain VOCs, indoor levels of the chemicals can be a thousand times higher than background outdoor levels. Levels tend to be quite high in brand new buildings, due to the cumulative effects of new carpet, adhesives, paints, stains and other products. On average,

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studies have found indoor VOC levels — in buildings new and old — to be two to five times higher than outdoor levels.

So, must we decide between a stylish home and a healthy one? Does an updated look mean sickness down the line? Thankfully, that's a choice homeowners don't have to make anymore, as companies continue to develop new, less-toxic or nontoxic versions of paints and stains that perform just as well as their traditional counterparts. These health-conscious and eco-friendly options may cost more at the outset, but the added investment can ultimately pay off in short-term respiratory comfort and long-term peace of mind.

When purchasing low-VOC stains, it's important to understand that VOCs come from two sources: the base and the tints. A low-VOC label often refers only to the base, but VOC levels can double once a colorant is added. Furthermore, third-party certifications and eco-labels pertain to the base only. So don't be afraid to ask retailers or manufacturers detailed questions to determine whether a product will still be low-VOC once a tint is added to the base.

Wood stains, in particular, have a

reputation for being especially nasty when it comes to VOCs. But a new generation of low-VOC and no-VOC stains has emerged for both indoor and outdoor applications. They

West says such low-VOC products are great for do-it-yourselfers who may be intimidated by the smell and the clean-up involved with oil-based stains.

offer all the durability, beauty and variety of oil-based stains, but without the unpleasant fumes. As a rule of thumb, water-based stains are generally lower in VOCs than solvent-based stains; they tend to be safer to handle and can be cleaned up with water.

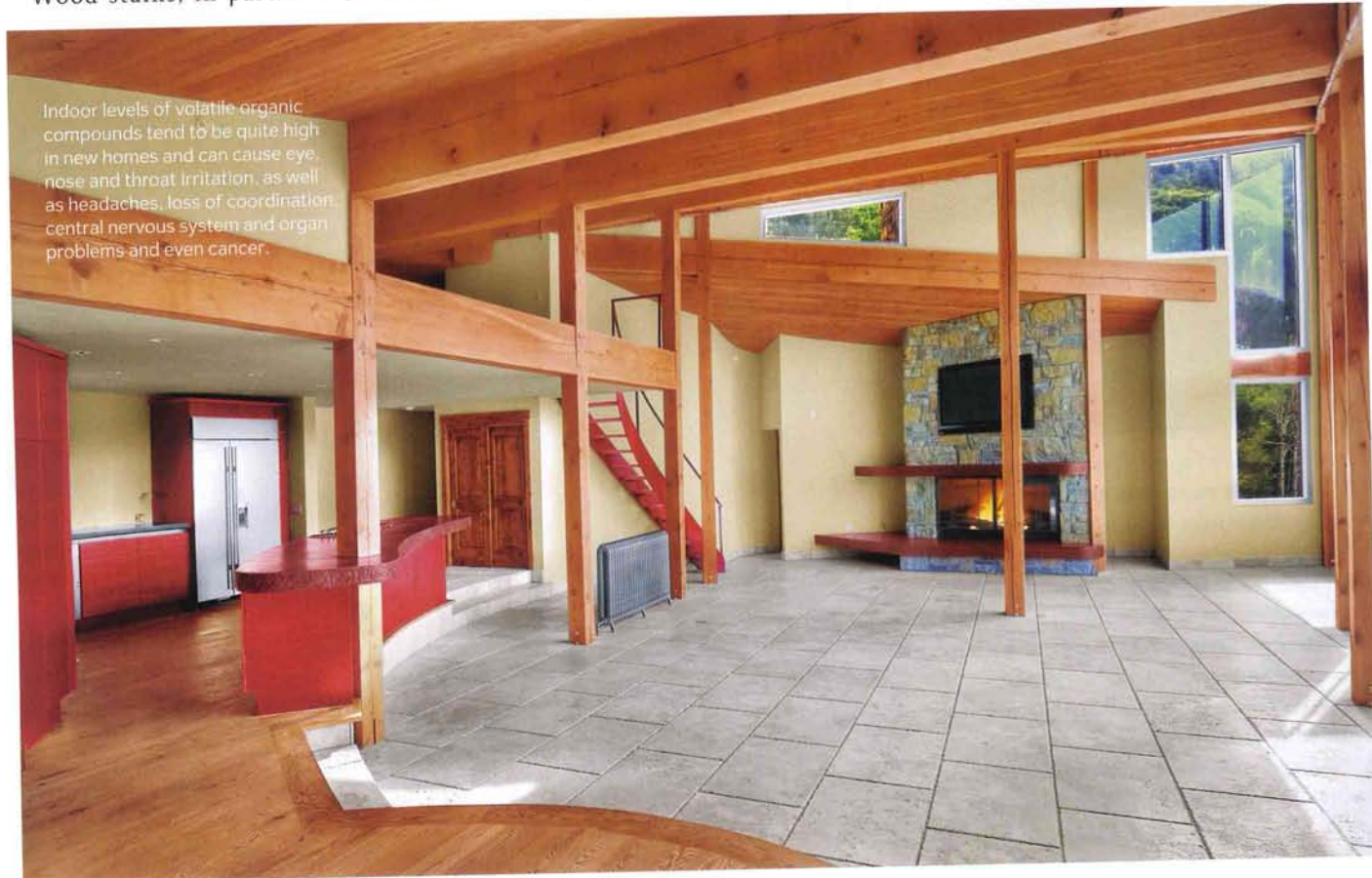
"Everybody is coming out with one lately," says Chris Kulpa, manager of Highland Lumber, just outside Winter Park in Tabernash. "You're going to pay a lot more money for something that's low-VOC, but it's a better product."

Kulpa, who used to work as a professional painter, knows firsthand how taxing it can be to breathe in fumes from paints and stains all day. Two years ago, he stained his deck using a low-VOC outdoor stain from Sansin, a Canadian company whose line Highland Lumber carries. He has been so pleased with the results that he plans to use the product on his entire house this summer.

"I've been sliding a tub full of firewood across my deck all winter, and you can't even tell. It's really durable stuff," Kulpa says.

When architect Dean Moffatt of Glenwood Springs firm Sundesigns conceived a luxury, off-the-grid retreat outside Aspen, low-VOC and no-VOC options were the only way to go, as far as paints and stains were concerned. The \$5.2 million secluded, mountaintop home features interior columns fashioned from standing-dead Douglas fir trees, enabling Moffatt to avoid cutting live trees. Staining the forest-friendly posts with a toxic product wasn't even a consideration.

"When treatments, stains and paints were concerned, we went user-friendly," Moffatt says. "We simply specified low- and zero-VOC, even in interior and exterior finishes like plaster."



Indoor levels of volatile organic compounds tend to be quite high in new homes and can cause eye, nose and throat irritation, as well as headaches, loss of coordination, central nervous system and organ problems and even cancer.

Moffatt's contractor used Olympic Low-VOC Stain and Pittsburgh Paints' Pure Performance line.

In March, the Sansin company introduced its Purity Interior Zero VOC Stain — a water-based wood stain that penetrates both soft and hard woods.

"The zero-VOC stain provides all the color benefits and clarity benefits of a traditional stain that would be more toxic and more difficult to work with," says Sansin vice president Sjoerd Bos. "It produces very good, even color throughout the wood, even without a conditioner."

The Purity Zero-VOC stain features a "water-borne" alkyd formula, thereby eliminating the fumes associated with oil-based stains. The base, however, is only half the battle: Stain colorants are also a source of VOCs. But Sansin uses finely ground, environmentally friendly pigments that serve as a "green" alternative to traditional dyes.

Harbert Lumber in Steamboat Springs carries the Sansin line of low-VOC and no-VOC stains. Harbert has additional retail locations in Glenwood Springs, Grand Junction and Aspen, where customers can order the stains.

"It's a good product — the first product I've ever smelled that has such a faint odor," Harbert's Amy West says. "And it's good for LEED-certified projects. Also, because they make it in Canada, it's proven in that harsh environment up there."

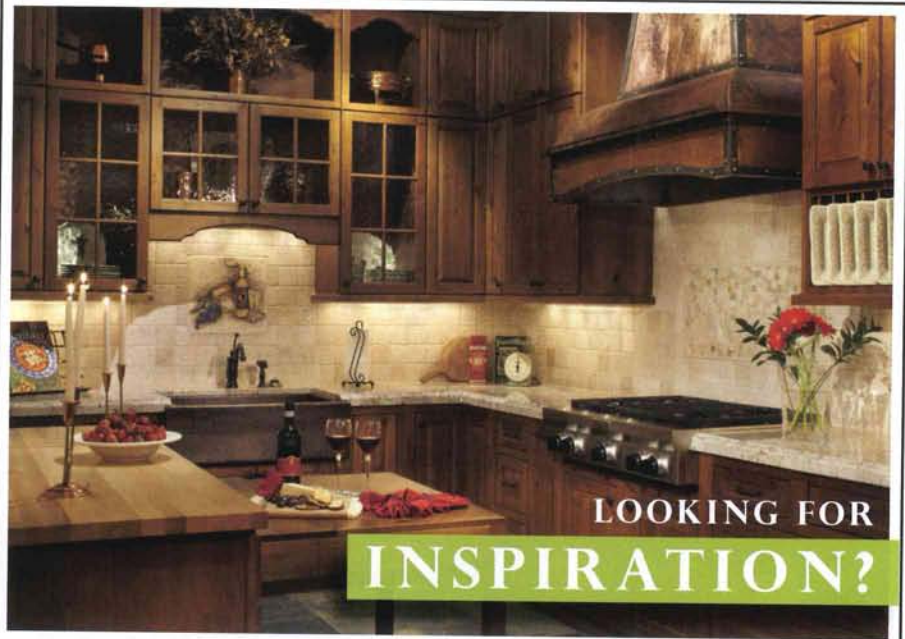
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EcoSpaces of Telluride carries the BioShield line of low-VOC and no-VOC paints and stains made in Germany and sold out of New Mexico.

"They're incredibly durable," says EcoSpaces co-owner Joanna Kanow. "Anyone we sell them to is extremely happy, and the installers really appreciate working around a product that's not toxic. With some of our clients, that's all they buy." 🏠



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