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What Are VOCs and How Can You Avoid Them?



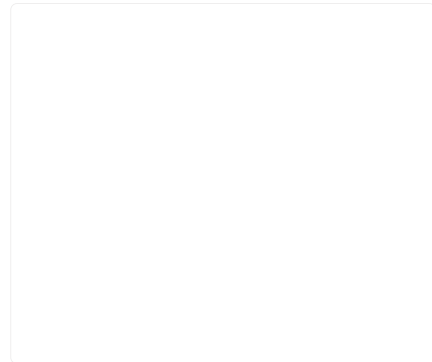
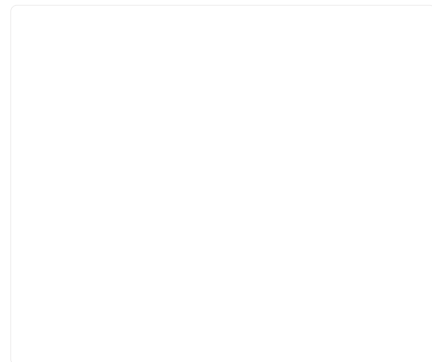
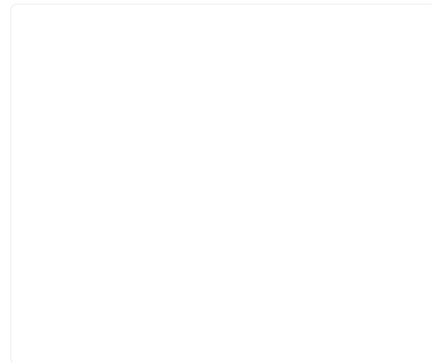
By [Gemma Alexander](#)

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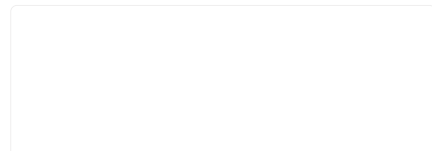


Somewhere around the turn of the century, people began to realize that **new car smell** is actually an unhealthy combination of 50-60 VOCs off-gassing from plastics, vinyl, and glues. For a while, environmentalists paid a lot of attention to avoiding VOCs, but it's hard to maintain attention these days.

The Federal Trade Commission is responsible for handling false advertising claims, but they have filed only **two to five environmental marketing cases** per year since 2015, which means that very few greenwashers are ever held accountable. Unfortunately, some companies have taken advantage of the



[Westlake Home - Luxury Organic Bedding](#)



lack of scrutiny to greenwash their products, as evidenced by one of those rare FTC legal actions. The FTC took action against [YOLO Colorhouse](#) for advertising their paints as no-VOC when that wasn't true at all. Here's why that's a bigger problem than just false advertising.

What Are VOCs

VOC stands for "volatile organic compound." [Volatile organic compounds](#) include a wide variety of chemicals that share two key characteristics. First, they are all emitted as gases from solids or liquids that contain them in a process called "off-gassing." Second, they are all organic. In environmental circles, "organic" is usually a positive term that implies natural origin. But in chemistry, "organic" is a neutral term that refers to carbon-based compounds.

Organic chemicals include most of the compounds that make up living matter. Relatively few of them are volatile, but some such as methane and benzene are naturally occurring. But many other VOCs are manufactured chemicals that are rare in nature if they exist there at all. Regardless of their origin, VOCs work as industrial solvents, fuels, paint thinners, and [dry-cleaning](#) agents. They are also present in thousands of commercial products, from paints and paint strippers to cleaning supplies, pesticides, glues and permanent markers.

What's Wrong With VOCs

VOCs, including [formaldehyde](#), a variety of compounds found in paints and finishes, and some [flame retardants](#), are on the [Red List](#) of materials green builders try to avoid. When released outdoors, VOCs react with nitrogen oxides in the air to form [ozone pollution](#). Organic compounds in myriad chemical products become pollutants in [groundwater](#), and volatile organics in many [home products](#) contribute significantly to indoor air pollution.

Organic pollutants can have short- and long-term adverse [health effects](#). Because VOCs comprise such a widely varied group of compounds, their health impacts are also varied, but can include irritation of eyes, nose, and throat; difficulty breathing and nausea; central nervous system and other organ damage; and even cancer. The [Agency for Toxic Substances and Disease Registry Toxic Substances Portal](#) identifies specific health effects from different kinds of VOCs.

Indoor air quality can be [two to five times worse](#) than outside air quality. Concentrations of many harmful VOCs are [up to 10 times higher](#) indoors than outdoors. There are several remedies for [indoor air quality](#) at home, but one of the most important is source control.



Before you start a house painting project, make sure you buy no-VOC or low-VOC paint to minimize adverse health effects.

Avoiding VOCs

Choose cleaning products, solvents, glues, and paints that are labeled low-VOC or no-VOC. To avoid the kind of **greenwashing** revealed in the Colorhouse case, look for third-party certification. Unfortunately, there is no single certification system for VOCs. Paints and finishes may have one of **several types** of certification, including GreenGuard, Green Seal, and Indoor airPLUS. Green Seal also looks at the safety of cleaning products. Numerous other certification systems, such as MADESAFE, consider the safety or **toxicity of ingredients** in a wide variety of consumer products.

You can also avoid VOCs by choosing different types of products. Avoid anything made from vinyl (also known as PVC). Choose solid wood furnishings instead of upholstered ones and bare wood or tile floors instead of carpet to avoid the VOCs in foams.

Most off-gassing takes place when products are new and decreases over time. Buying second-hand is one way to avoid VOCs in soft furnishings and other products where VOCs may be unavoidable. When you must buy new products – for example, engineered woods bound with adhesives that contain VOCs – let the materials off-gas outdoors or in the garage before bringing them into the home.

Time remodeling and craft projects for summer so that you can keep doors and windows open while working. Completely avoiding VOCs in products is impossible when even computers and mattresses contain them. So, try to maintain good ventilation in your home at all times to remove any VOCs released. Off-gassing is more severe in high temperatures and

high humidity, so keeping your home cool and dry is also helpful. Finally, communicate with the manufacturers of the products you buy and [encourage them](#) to offer low and no-VOC products.

advertising



Reading time: 3 mins

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By [Gemma Alexander](#)

Gemma Alexander has an M.S. in urban horticulture and a backyard filled with native plants. After working in a genetics laboratory and at a landfill, she now writes about the environment, the arts and family. See more of her writing [here](#).

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