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Information

Non Toxic Paint

by Christi Graham

The problem with conventional paint

Most paint contains chemicals and compounds that are harmful to the environment and potentially harmful to you and your family. Even "latex" paint, which is considered a safe alternative by most, contains some detrimental compounds.

All paint has three major components: a pigment for color and hiding powder; a binder that holds the pigment to the surface; and a carrier to maintain the pigment and binder in liquid form. Often chemicals are utilized to perform these functions and include: petrochemicals, solvents, mercury, formaldehyde, and benzene. Additionally, lead, cadmium and chromium can often be found in pigments. That distinctive smell of paint is actually dibutyl and diethyl phthalate - two very volatile compounds!

This chemical concoction releases Volatile Organic Compounds (VOC's) into the air we breathe. VOC's are actually a class of carbon based chemicals that have the capacity to rapidly evaporate. Once airborne, many VOC's have the ability to combine with each other, or with other molecules in the air to create new chemical compounds. Some are of natural origin and are relatively benign. For example a freshly cut orange releases VOC's. Usually, however, when the term VOC is used in conjunction with indoor air quality, it generally refers to VOC's derived from manufactured products, such as the common solvents toluene, xylene and lacquer thinner. The American Lung Association reports that VOC's can produce a number of physical problems such as: eye and skin irritation, lung and breathing problems, headaches, nausea, muscle weakness and liver and kidney damage. VOC's are consistently ten times higher indoors than outdoors, with numbers rising to 1,000 times higher after a new coat of paint...something to be avoided if possible!

Outside, VOC's released into the atmosphere produce ground level ozone. According to the Environmental Protection Agency, nine percent of the airborne pollutants creating ground level ozone come from the VOC's in paint.

What are non toxic paints?

Fortunately, there's something you can easily do to avoid generating pollution and unsafe living spaces. You can still have beautiful, colorful walls without poisoning yourself or the environment by using "non toxic" paint, also referred to as "low or no VOC" paint.

Large paint companies such as Benjamin Moore, Glidden, Kelly Moore, and Sherwin Williams have boarded the environmental bandwagon and now offer zero-VOC, low-VOC or odor free paints. While these paints are certainly a step in the right direction, according to Environmental Building News, (February 1999), "it is virtually impossible for a paint to eliminate VOC emissions entirely. These large paint companies still utilize colorants with some solvents, so tinting the paint introduces a small amount of solvent."

Alternative paint companies however, offer a broader color selection that are low or zero VOC. American Formulating and Manufacturing has developed a line of paints that are formaldehyde free, emit minimal VOC's (mostly naturally occurring), and contain additional sealing properties that reduce outgassing. Other alternative paint companies offer lines of paints that are derived from milk protein, lime clay and earth pigments. Please use our resource directory to obtain information about these products.

When selecting a paint

Investigate paint choices thoroughly. Be aware of dangerous ingredients and

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- ▶ [CBS MarketWatch, Healthy Home Movement Gains Momentum](#)
- ▶ [Pacific Sun: Build it Green](#)
- ▶ [Blueprint for a Healthy Home](#)
- ▶ [SF Chronicle: Going for the Green](#)

Recommended Reading

- ▶ [Natural, Green and Healthy Building](#)
- ▶ [Alternative Construction & Natural Building](#)
- ▶ [General Building Ecology](#)

Online Resources

- ▶ [Green Building Guidelines, \(for remodels and new construction\)](#)

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request Materials Safety and Data Sheets (MSDS) from the manufacturer if there is any question.

Here are just a few trade names for formaldehyde: Formalin, Formol, dimethyloldimethylhydantoin, Methanol, Methyl aldehyde, and Methylene oxide.

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Application

Apply paint with adequate ventilation. If ventilation is not sufficient, wear a respirator with a filter that captures gasses.

Carefully ventilate newly painted areas- preferably with large fans placed in an open window with windows open to exhaust fumes. Outgassing is at it's highest during the first four days after painting with smaller amounts emitted over time. VOC's also cling to fabrics and carpeting, multiplying the problem - so its' best to ventilate a freshly painted room immediately.

Green versus Health attributes

Recycled paint - often found at recycling centers, provides the environmental benefit of keeping existing paint from the landfill. Paint recycling centers oftentimes consolidate similar colored paints to produce a larger quantity. This process increases the likelihood that the paint obtained from such centers has a high chemical content. While recycled paint may be an excellent option for one location - it may prove to be unhealthy for another. Avoid using recycled paint for interior surfaces

Performance

Choose a paint with high washability for bathrooms, kitchens and high traffic areas.

Price Range / Comps:

Price is comparable to conventional mid to high quality paint. Price ranges from \$17/ gallon to \$30/ gallon.

Considerations:

- Elderly, pregnant women, small children, and those with compromised immune systems or environmental allergies are especially sensitive to the effects of paint.
- When repainting an older building, be sure to test for the presence of lead in the existing paint before sanding or other prep work.

Manufacturers / Distributors

Safe Coat primers, paints and sealers - by American Formulating and manufacturing (AFM)

www.afmsafecoat.com

Auro Natural paints - by Sinan Company

www.dcn.davis.ca.us/go/sinan

Pristine Eco-Spec Paint - by Benjamin Moore & Co.

www.benjaminmoore.com

Bio Shield paints and stains - by Bioshield

www.bioshieldpaint.com

Genesis odor-free paint - by Duron

www.duron.com

Milk-based (casein) paints and natural pigments - by the Old Fashioned Milk Paint Company

www.milkpaint.com

ProMaster paint - by Glidden/ICI

www.icipaintstores.com

Livos non-toxic paint and thinners - by Livos Phytochemistry

www.livos.com

Tempo paint - by McCormick Paint

www.mccormickpaints.com

Low biocide paint - by Miller Paint Company

www.millerpaint.com

Sources not quoted:

The Healthy Household - Lynn Marie Bower,

Architectural Resource Guide - David Kibbey

The Consumers Dictionary of Cosmetic Ingredients - Ruth Winter M.S

The New Natural House Book - David Pearson Natural Home Magazine

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