

LOW AND NO-VOC PAINTS

A Factsheet from Austin's Green Building Program

Paints can have a major impact on the overall aesthetics of a space; sometimes more than even flooring and furnishings because of the enormous square footage of coverage.

Paints may also have a major negative impact on the healthfulness of a building, because they can contain chemicals called VOC's (Volatile Organic Compounds) and other toxic components which evaporate into the air and are harmful for the health of the occupants as well as to the environment. Despite the importance of paints, both for aesthetic and environmental health reasons, paint selection is often an afterthought – the last item on the checklist of a busy contractor or homeowner – and they are the most often substituted item in construction projects.

Understanding the Potential Health Effects of Paints

Paint is applied wet and must undergo a drying process, and sometimes a chemical reaction, in order to form a solid paint film on the wall or other surface. It is during this drying or chemical process that VOCs and other paint components are given off.

VOC refers to a class of chemicals which evaporate readily at room temperature. They are in all oil-based paints as solvents. Many latex paints (which use water as the "solvent" or carrier) also contain VOCs as part of their paint chemistry. When these VOCs off-gas, they may cause a variety of health problems like nausea, dizziness, irritation of the eyes and respiratory tract, and more serious illnesses including heart, lung or kidney damage and even cancer. Certain people are particularly susceptible to these effects, including those with weakened immune systems or chemical sensitivities, asthmatics, young children and the elderly. In the case of these sensitive occupants, be sure products are tested for possible reactions before applying.

How Low Can You Go?

Do not be fooled by what some paint store clerks may tout as "Low-VOC" Paint. These paints may meet the EPA regulations, which call for no more than 250 gm/l (grams per liter) of VOCs in "Low-VOC" latex paints and no more than 380 gm/l for "Low-VOC" oil-based paints. However these limits are based primarily on reducing ozone formation in the outside air and not on health considerations for indoor air. The Green Building Program requires buildings rated by our program to use paints with no more than 150 gm/l of VOCs. We encourage the use of paints with even lower VOC levels (0 to 100 gm/l). Best, especially for those with chemical sensitivities – is the use of zero or No-VOC paint (less than 1 gm/l per EPA Reference Test Method 24.) Most manufacturers sell paints in these Low-VOC ranges, and six major manufacturers make No-VOC paints.

VOC level doesn't tell the whole story, however. Because EPA's regulations are based on ozone reduction, toxic chemicals that do not form ozone are excluded from the required VOC calculations, as are toxic metals. Material Safety Data Sheets (MSDS) list hazardous ingredients and can be obtained by calling paint manufacturers. Be aware that additions of pigments and additives such as biocides also affect the relative toxicity of the final paint mix.

Making Good Choices

Consider using materials and systems that need minimal finishing or none at all, like ceramic tile or natural plasters. Sometimes simply washing walls and/or using a little touch up paint can make them like new. When it is necessary to paint, favor least toxic and/or Low- or No-VOC products, and water-based paints over oil; this will also eliminate the need for toxic solvents for cleanup.

Always use a quality paint. Choose colors with versatility in mind so that art changes more often than wall color. Remember that a more durable paint is less expensive in the long run. A 10-year paint may cost a little more than a 5-year, but there is only a one-time labor cost, which is the most expensive part of most paint jobs. Proper preparation is also critical for a durable paint application. All surfaces must be clean and dust free, with any visible cracking, peeling, or blistering removed. If there is existing paint, determine what it is and appropriately prepare for the next coat. Be sure to choose primers and top coats that are compatible.

Safe Handling and Disposal Considerations

Always read and follow manufacturer's instructions for safe handling of paints during application, storage, and disposal. Depending on the paint, removal, or application method, you may need to use respirators, eye protection, masks, and face or body protection. When remodeling, be aware of potential lead-based paint hazards (Please see [Lead Poisoning Factsheet](#)), and use the appropriate handling and disposal methods.

Remember that 'least toxic' does not mean completely 'non-toxic'. Apply paint when occupants are not present and always ventilate, even with water-based paints. Minimize the presence of soft materials (like fabrics, pillows, etc.) during and just after painting. If present, they will "adsorb" some of the VOCs from the paints and re-distribute them into the air later.

Finally, be sure to store or dispose of any leftover paint in a responsible manner. Minimize leftovers by ordering only what you need in the first place. Ask the manufacturer if they have a "take back" policy. Tightly seal partial containers and store the minimum necessary in a cool, dry place, ventilated to the outside. Otherwise, unused paints can be donated to a re-sale store or paint recycling program.

Resources

Eco-wise

110 W. Elizabeth
Austin, TX 78704
(512) 326-4474,
*A retail store carrying Enviro-safe, American Pride
and other non-toxic and natural paints and
finishes.*

Breed & Co. Hardware

718 W. 29th Street - (512) 474-6679
3663 Bee Caves Rd. - (512) 328-3960

Enviro-Safe Paint Company

(888) 281-6467

American Pride Paints

(888) 281-6467

Best Paint Company

(206) 783-9938

Paint Brands and Retailers

ICI / Dulux

LIFEMASTER 2000
9535 North IH-35 - (512) 837-5871
1707 W. Anderson Lane - (512) 454-2741

Pittsburgh Paints

PURE PERFORMANCE
AWC Paint & Decorating
104 E. Huntland Drive - (512) 467-7777

Kelly Moore

ENVIRO-COTE
4107 Victory Drive - (512) 442-2864
9525 Burnet Road - (512) 836-9121

Sherwin Williams

HARMONY
7 Austin locations
(800) 4-SHERWIN

Benjamin Moore

PRISTINE ECOSPEC
Low and No Biocide Formulations are available

Arrow Paint & Supply
2012 W. Koenig Lane
(512) 452-6202
No Biocide Formulations available here

Hill Country Paint and Decorating
5501 S. Congress Av.
444-6869
*Also carries Pratt and Lambert and Devoe
WonderPure*

Clements Paint & Decorating
612 Nueces St.
(512) 480-8466

Republic Paint & Decorating
3201 Bee Caves Rd.
(512) 329-8891

Disposal

City of Austin's Re-use Store and the Small Business Disposal Program - Located at the Household Hazardous Waste Collection Facility, 2514 Business Center Drive, in southeast Austin. Household waste - call 512-974-4343. Small business waste - contact Mike Van Zandt before hauling at 512-974-4334.