

# Paint: Key Environmental & Health Considerations

*\*\*Excerpted from StopWaste's [A Guide to Green Maintenance and Operations](#)*

The key environmental considerations when purchasing paint are:

- Volatile organic compounds (VOCs)
- Chemicals of Concern
- Recycled content (exterior applications only)

## Volatile Organic Compounds

The strong smell that paint normally emits is from evaporation of volatile organic compounds (VOCs). While smells may appear to dissipate during the first few days after painting, several US EPA studies found off gassing of VOCs can last months. VOC emissions can affect the health and comfort of painters and occupants during that period. Exposure can cause a variety of symptoms including headaches and respiratory distress. However, new paint technologies have created paints that have low to zero VOCs, and therefore reduced odor, allowing occupants to be less disturbed by paint fumes.

Generally a “low VOC” paint has less than 50 grams per liter (g/L) per the (California) South Coast Air Quality Management District Rule 113 (Feb 2016) in all sheens and use colorants that contain less than 50 g/L; “zero VOC” paint has less than 5 g/L. A product stating it is “VOC compliant” does not mean it is low VOC; it means the product does not exceed the State of California’s VOC limits. Look for the actual VOC content on the label.

## Chemicals of Concern

A wide range of antimicrobials are used in paints and coatings but their use has been questioned in recent years as to their effectiveness as well as potential health impacts. While antimicrobials have been used to prevent mold and fungal growth in the paint, and prevent mold growth in exterior paint applications, manufacturers of paint products market added antimicrobials for enhanced infection control.

A Centers for Disease Control and Prevention (CDC) 2003 study of infection control practices concluded: “No evidence is available to suggest that use of these [antimicrobial-impregnated] products will make consumers and patients any healthier or prevent disease.” In some paint, antimicrobial chemicals contain Triclosan, a chemical of concern due to its persistence and acute toxicity in the environment.

## Recycled Content

Select recycled content latex paint and primers for exteriors. Recycled paint is mixed with virgin materials to meet quality standards for consistency and color. The [U.S. EPA Comprehensive Procurement Guidelines](#) (CPG) recommend at least 20 percent post-consumer recycled content for white and light colors of latex paint and 50-99 percent for dark colors of latex paint. Recycled content paints, referred to as “reprocessed” by the U.S. EPA, are not recommended for interior use since the VOC content levels are typically higher than recommended VOC limits. For unused paints that have been consolidated, recycled content is 100 percent.

## Third-Party Certifications

Select paint certified to meet a reputable third party standard for performance and environmental benefits. Third party standards and certifications for paint emphasize product performance as well as low toxicity and VOCs.



### Green Seal

Green Seal, a non-profit certification organization, has certified paints that meet the environmental requirements of their GS-11 and GS-43 Recycled Paint standards, [greenseal.org](http://greenseal.org). There are nine paint brands certified to *Green Seal's GS-11 Standard for Paints, Coatings, Stains and Sealers*. However, seek an even more stringent VOC of less than 50 g/L if possible; Green Seal's limit is 150 g/L.



### Master Paint Institute

See Master Paint Institute (MPI) Green Performance 2 (GPS 2) and Extreme Green Paint standards and approved products list, [PaintInfo.com](http://PaintInfo.com). Over a dozen brands are certified to meet MPI GPS2 and seven brands meet the *MPI Extreme Green Standard for interior flat latex paint*.

## Action Items and Purchasing Strategies

**1. Purchase interior paints following [California's Green Building Standards Codes](#)** (see page 49 Table 5.504.4.3) that require permitted projects to use low-VOC paints which require no more than:

- ◇ Flat: 50 grams/liter
- ◇ Non-flat: 100 g/L
- ◇ High gloss: 150 g/L
- ◇ Specialty coatings must meet strict VOC limits per [CALGreen](#) (bsc.ca.gov).

Select light and moderate tints whenever possible since some manufacturers offer low or zero-VOC paints only in these lighter tints. VOC ratings are generally reported for the base paint before the product is tinted. Most tints are synthetic and add some VOCs, although a few brands have low or zero-VOC tints, while some manufacturers have developed darker colors with low or zero VOCs, generally saturated and darker colors have higher levels of volatiles than lighter colors.

**2. Look for paint without antimicrobials used for infection control**, avoiding Triclosan (contained in Microban®) and a related chemical, Triclocarban, or other added or built-in chemical antimicrobials. (This does not apply to antimicrobials added for the sole purpose of preserving the product.)

**3. Purchase water-based (latex) paint rather than oil-based** when appropriate, and check that they do not contain the following chemicals: formaldehyde, halogenated solvents, aromatic hydrocarbons, mercury and mercury compounds. Reference a label like Green Seal certified paint, which would not contain these chemicals; otherwise, view the Safety Data Sheet (SDS) for the specific product for its ingredients.

**4. Purchase paint without nonylphenol ethoxylates (NPEs)**. Most paints contain NPEs, a persistent, bio accumulative and toxic class of chemicals that are used in large amounts in products. According to several studies, the potential health effects from NPEs include hormone disruption and extreme aquatic toxicity and so US EPA has identified NPE as a high priority chemical of concern. The Green Seal GS-11 standard requires certified paints to not contain NPEs.

**5. Avoid aerosol paint** to reduce exposure to a number of health and safety concerns.

### Paint Resources

See a sample of local vendors that carry no-VOC or low-VOC paint, primers and sealers in the [Green Product Directory](#) (GreenPointRated.com/products).

[CA DGS Buying Green Guide](#) is comprehensive resource on buying paint and includes paint specifications for recycled paint.

To find **locations for paint recycling or proper disposal** of spray, acrylic, latex, lead, and oil-based paints and paint thinners, please search on [RecycleWhere.org](#) or go to [PaintCare.org](#).