

Volatile Organic Compounds

Volatile organic compounds (VOCs) are organic chemical compounds that off-gas from either a solid or a liquid substance into the surrounding atmosphere. Most VOCs are not harmful, but some have been linked to adverse human health issues and environmental damage.

There are two types of VOCs.

Biogenic

Biogenic VOCs are naturally occurring, and are not harmful to humans and/or the environment. These VOCs generally come from plants. Other biogenic VOC producers include animals, fungi, mold, and bacteria.

Anthropogenic

Anthropogenic VOCs are man-made, and can be harmful to humans and/or the environment. These VOCs come from fossil fuels, benzene (cigarettes, lubricants, dyes), perchloroethylene (dry cleaning, paint strippers, metal degreasers), chlorofluorocarbons (refrigerants, propellants, solvents), formaldehyde, paints, and coatings (including wood flooring finishes). Safety equipment should be used when working with these kinds of products.

Potential health risks from anthropogenic VOCs include eye, ear, nose and throat irritation; dizziness; drowsiness; birth defects; bone marrow abnormalities; Parkinson's disease; leukemia; cancer; and even death. Potential risks to the environment include global warming and ozone depletion.

Some types of VOCs are highly regulated in the United States. The two main organizations that regulate VOC emissions include the Environmental Protection Agency (EPA) and the Occupational Safety and Health Administration (OSHA).



Compliance with VOC regulations is dependent on where you are working, not where your business is located. In addition, these regulations can change for every jobsite. In the state of California, for example, regulations can change in different counties. Jobsites just a few miles apart may be subject to completely different regulations. It is your responsibility to know the laws that are applicable for the area in which you are working.

Failure to comply with VOC regulations can result in huge fines that can put you out of business. Fines also are assessed for every business in the supply chain (contractor, distributor, manufacturer, importer, etc.).

More-detailed information about VOC regulations is available at www.osha.gov, and www.epa.gov.