



Building Air Quality

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Volatile Organic Compounds - VOCs

Organic chemicals are widely used as ingredients in household products. Paints, varnishes, and wax all contain organic solvents, as do many cleaning, disinfecting, cosmetic, degreasing, and hobby products. Fuels are made up of organic chemicals. All of these products can release organic compounds while you are using them, and, in many cases, even when they are stored.

An EPA exposure study found levels of about a dozen common organic pollutants to be 2 to 5 times higher inside homes than outside, regardless of whether the homes were located in rural or highly industrial areas. Additional studies showed that while people are using products containing organic chemicals, they can expose themselves and others to very high pollutant levels, and elevated concentrations can persist in the air long after the activity is completed.

Health Effects of Some Organic Compounds

Organic chemicals can cause a variety of health effects varying greatly from those that are highly toxic, to those with no known health effect. As with other pollutants, the extent and nature of the health effect will depend on many factors including level of exposure and length of time exposed. Eye and respiratory tract irritation, headaches, dizziness, visual disorders, and memory impairment are among the immediate symptoms that some people have experienced soon after exposure to some organics. At present, not much is known about what health effects occur from the levels of organics usually found in homes. Many organic compounds are known to cause cancer in animals; some are suspected of causing, or are known to cause, cancer in humans.

Reducing Exposure to Organic Compounds

Follow label instructions carefully. If a label says to use the product in a well-ventilated area, go outdoors or in areas equipped with an exhaust fan to use it. Otherwise, provide the maximum amount of outdoor air possible, whenever working with potentially hazardous products.

Throw away partially full containers of old or unneeded chemicals safely. Gases can leak even from closed containers. This single step could help lower potential exposures to VOCs.

Buy limited quantities. If you use products only occasionally or seasonally, such as paints, paint strippers, and kerosene for space heaters or gasoline for lawn mowers, buy only as much as you will use right away.

Sources: Chemical products including: paints, paint strippers, and other solvents; wood preservatives; aerosol sprays; cleansers and disinfectants; moth repellents and air fresheners; stored fuels and automotive products; hobby supplies; dry-cleaned clothing.

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Health Effects

Eye, nose, and throat irritation; headaches, loss of coordination, nausea; damage to liver, kidney, and central nervous system. Some organics can cause cancer in animals; some are suspected or known to cause cancer in humans.

Steps to Reduce Exposure:

- Use chemical products according to manufacturer's directions.
- Make sure you provide plenty of outside air to work spaces when using these products.
- Throw away unused or little-used containers safely; buy in quantities that you will use soon.
- Keep out of reach of children and pets.

Never mix chemical products unless directed on the label.