

Maryland Square PCE

An Introduction to Indoor Air Quality

The following text is excerpted in part [from the U.S. EPA](#)

Volatile Organic Compounds (VOCs) — Volatile organic compounds (VOCs) are emitted as gases from certain solids or liquids. VOCs include a variety of chemicals, some of which may have short- and long-term adverse health effects. Studies have shown that concentrations of many VOCs are consistently higher indoors (as much as ten times higher) than outdoors. VOCs are emitted by a wide array of consumer products. Examples include paints and lacquers, paint strippers, cleaning supplies, pesticides, building materials and furnishings, office equipment such as copiers and printers, correction fluids and carbonless copy paper, graphics and craft materials including glues and adhesives, permanent markers, photographic solutions and dry-cleaned clothes or draperies.

VOCs 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 VOC vapors while you are using them, and, to some degree, when they are stored.

Steps to Reduce Exposure — Increase ventilation when using products that emit VOCs. Meet or exceed any label precautions. Do not store opened containers of unused paints and similar materials within the school. Formaldehyde, one of the best known VOCs, is one of the few indoor air pollutants that can be readily measured. Identify, and if possible, remove the source. If not possible to remove, reduce exposure by using a sealant on all exposed surfaces of paneling and other furnishings. Use integrated pest management techniques to reduce the need for pesticides.

Take the following additional steps to reduce the concentration of VOCs in your indoor air:

- Use household products according to manufacturer's directions.
- Make sure you provide plenty of fresh air 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 household care products unless directed on the label.
- Follow label instructions carefully.
- Throw away partially full containers of old or unneeded chemicals safely.

- Buy limited quantities.
- Store products in a child-proof storage container outside of the home.
- Keep exposure to emissions from products containing methylene chloride to a minimum.
- Keep exposure to benzene to a minimum.
- Minimize exposure to PCE emissions from newly dry-cleaned materials.

Also, rather than tossing unwanted products in the garbage can, find out if your local government or any organization in your community sponsors special days for the collection of toxic household wastes. If such days are available, use them to dispose of the unwanted containers safely. If no such collection days are available, think about organizing one.

Recent studies indicate that people breathe low levels of PCE in homes where dry-cleaned goods are stored and as they wear dry-cleaned clothing. Dry cleaners recapture the PCE during the dry-cleaning process so they can save money by re-using it, and they remove more of the chemical during the pressing and finishing processes. Some dry cleaners, however, do not remove as much PCE as possible all of the time.

Taking steps to minimize your exposure to this chemical is prudent. If dry-cleaned goods have a strong chemical odor when you pick them up, do not accept them until they have been properly dried. If goods with a chemical odor are returned to you on subsequent visits, try a different dry cleaner.