



Vinyl Chloride

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What is Vinyl Chloride?

Vinyl chloride (chloroethene), a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents.

Health Effects from Exposure to Vinyl Chloride

Short-term exposure to high levels of vinyl chloride in air causes central nervous system effects, such as dizziness, drowsiness, and headaches. Long-term exposure to vinyl chloride through inhalation and oral exposure causes liver damage. Cancer is a major concern from exposure to vinyl chloride via inhalation. Vinyl chloride exposure has been shown to increase the risk of angiosarcoma, a rare form of liver cancer in humans.

History of Vinyl Chloride Ambient Air Quality Standard

- In 1978, the ARB established a standard for vinyl chloride, because it is a known animal and human carcinogen. As a carcinogen, the ARB could not recommend any level of exposure to vinyl chloride, other than zero, as being safe. This standard, 0.01 ppm for a 24-hour duration, was chosen because it was the lowest level that could be detected at that time.
- In 1990, the ARB identified vinyl chloride as a toxic air contaminant, and estimated a vinyl chloride cancer unit risk factor.

For more information on Ambient Air Quality Standards please contact
Linda Smith at (916) 327-8225 or email at lsmith@arb.ca.gov.
