



fast facts

advancing safety, health, and workplace rights in the legislative branch

Methylene Chloride

Read the Label and Don't Trust Your Sense

July 2008

During its recent biennial inspection, the Office of Compliance (OOC) discovered the use of chemical products that contain methylene chloride (CAS number 75-09-2) in various legislative branch offices. Also known as dichloromethane or methylene dichloride, methylene chloride is a colorless, volatile liquid with an odor similar to ether or chloroform. Methylene chloride can adversely affect the central nervous system, heart, liver, kidneys, and brain. It can also increase the risk of developing cancer in the salivary gland, liver, lung, mammary gland and pancreas. This toxic solvent has been used, in many instances, without employees' knowledge of the potential adverse health effects.

Although OSHA does not prohibit methylene chloride use, it has created comprehensive health standards specifically for this chemical. Employers must comply with various parts of standard 29 CFR 1910.1052 whenever methylene chloride is present.

Consequently, the OOC issues a "Notice of Serious Deficiency Needing Prompt Attention" to offices that are not compliant with OSHA's specific standard and fail to include methylene chloride in their Hazard Communication Program.

Exposure to Methylene Chloride

Methylene chloride can be absorbed into the body directly through the skin, even penetrating many materials from which protective gloves are made. Although methylene chloride typically is not smelled until its airborne concentration reaches 200 parts per million (ppm), OSHA's full-shift exposure limit is 25 ppm. Not only does methylene chloride evaporate at a high rate, but people working with the chemical can be exposed simultaneously by inhalation and skin absorption. Accordingly, the presence of even a small quantity of methylene chloride can pose a high risk to employees.



Cans of sealant containing methylene chloride found on a recent inspection.

Effects of Methylene Chloride

Short-term effects of overexposure include headaches, nausea, feelings of lightheadedness, sluggishness, and irritability. Methylene chloride can also irritate the nose, throat and lungs, causing coughing, wheezing and shortness of breath. High doses of methylene chloride can cause confusion, slurred speech, and loss of coordination. Exposure in excess of 5000 ppm can also cause the lungs to fill with fluid, and can even result in death. Long-term exposure can cause memory loss and emotional changes. Exposures may also worsen the symptoms of heart disease, resulting in chest pains and angina. Mere contact with chemical products containing methylene chloride can irritate and burn the skin and eyes.



Bottles of methylene chloride found on a recent Office of Compliance inspection.

Methylene Chloride on Office of Compliance Inspections

In legislative branch areas, liquid products found to contain methylene chloride include certain paint and varnish removers, acrylic (Plexiglas) cement, fabric adhesives, and various products used in lithographic printing operations. These liquids may be inhaled and absorbed through the skin. Additionally, aerosol products containing methylene chloride—with the potential for inhalation—include spray paints, lubricants, several spray-on gasket and gasket remover products.

The OOC recommends replacing these hazardous, life-threatening chemicals with safer, non-toxic substitutes.



Cans of gasket stripper containing methylene chloride found on a recent Office of Compliance inspection.

fast stats

- Methylene chloride can be absorbed through the skin. It rapidly penetrates most types of protective gloves.
- Toxic concentrations of methylene chloride can be inhaled, even when the chemical cannot be smelled. Any solvent can be readily inhaled when it is dispensed from an aerosol product.
- Overexposure can cause serious health problems, including cancer.
- OSHA's Methylene Chloride Standard (29 CFR 1910.1052) requires a special written program to be created and implemented if the chemical is present in the workplace.
- During the 109th Congress, the OOC found non-compliant methylene chloride use in 17 locations. In addition, 14 "Notices of Serious Deficiency Needing Prompt Attention" were issued.



If you have any questions, please do not hesitate to contact the Office of Compliance:

Room LA 200, John Adams Building
110 Second Street, SE
Washington, D.C. 20540
t/ 202-724-9250
tdd/ 202-426-1912
f/ 202-426-1913

Peter Ames Eveleth
General Counsel

Mary-Margaret Smith
Editor

The Office of Compliance advances safety, health, and workplace rights in the U.S. Congress and the Legislative Branch. Established as an independent agency by the Congressional Accountability Act of 1995, the Office educates employees and employing offices about their rights and responsibilities under the Act, provides an impartial dispute resolution process, and investigates and remedies violations of the Act.

Download the entire *Fast Facts* suite at <http://www.compliance.gov>

This information does not constitute advice or an official ruling of the Office of Compliance or the Board of Directors and is intended for educational purposes only. For further information, please refer to the Congressional Accountability Act (2 U.S.C. 1301 et seq.) and the regulations issued by the Board, or you may contact the Office of Compliance.