

**Bureau of Environmental Health  
and Radiation Protection**

"Protect and improve the health of all Ohioans by preventing disease, promoting good health and assuring access to quality care."

# Chlorobenzene

## What is chlorobenzene?

Chlorobenzene is a colorless liquid with an almond-like odor. It is a man-made chemical that you will not find naturally in the environment.

## How is chlorobenzene used?

In the past chlorobenzene was used to make other chemicals, such as phenol and the pesticide DDT. As these chemicals were phased-out, U.S. production of chlorobenzene declined by more than 60% from its peak use in 1960 to 1987. Chlorobenzene is currently used as a solvent for pesticide formulations, a degreaser for automobile parts and to make other chemicals.

## How are you exposed to chlorobenzene?

Humans can be exposed to chlorobenzene by breathing contaminated air, by drinking contaminated water or eating food contaminated with chlorobenzene. We can also be exposed to chlorobenzene through the skin (dermal) by coming into contact with contaminated soils. These exposures are most likely to occur in the workplace where chlorobenzene is used or near a chemical waste site.

## What happens to chlorobenzene in the environment?

**Soils:** Once spilled onto soils, evaporation and vaporization is the main process chlorobenzene is removed from the surface soils. In deeper soils, chlorobenzene biodegrades (breaks down) rapidly, after one or two weeks.

**Air:** Chlorobenzene evaporates into the air and quickly breaks down by reacting with the sunlight. In the air, it usually takes about three and a half (3 ½) days to break down.

**Water:** Chlorobenzene evaporates and biodegrades quickly and takes less than one day to break down in water.



## Can chlorobenzene make you sick?

Yes, you can get sick from exposure to chlorobenzene. However, getting sick will depend on many factors such as:

- How much you were exposed to (dose).
- How long you were exposed (duration).
- How often you were exposed (frequency).
- How toxic is the chemical of concern.
- General Health, Age, Lifestyle
- Young children, the elderly and people with chronic (on-going) health problems are more at risk to chemical exposures.

## How can exposure to chlorobenzene affect my health?

Most health information about exposure to chlorobenzene comes from animal studies where lab animals were exposed to very high levels of the chemical. In animals, exposure to high levels of chlorobenzene affects the brain, liver and kidneys. Unconsciousness,

tremors and restlessness have also been observed. The chemical can cause severe injury to the liver and kidneys.

Workers exposed to high levels of chlorobenzene complained of headaches, numbness, sleepiness, nausea, and vomiting. However, it is not known if chlorobenzene alone was responsible for these health effects, since the workers were also been exposed to other chemicals at the same time.

It is important to keep in mind that most environmental exposures to chlorobenzene are at much lower levels than those in the workplace or lab studies.

### **References:**

Agency for Toxic Substances and Disease Registry (ATSDR). *Toxicological Profile for Chlorobenzene*. U.S. Public Health Service, U.S. Department of Health and Human Services, Atlanta, GA. December, 1990.

### **Where Can I Get More Information?**

Ohio Department of Health  
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