



## HEXACHLOROBUTADIENE

### What is HEXACHLOROBUTADIENE?

Hexachlorobutadiene is a colorless liquid with an odor similar to turpentine. Hexachlorobutadiene evaporates easily. This chemical is also called hexachloro-1,3-butadiene, HCBd, perchlorobutadiene, 1,3-hexachlorobutadiene or Dolen-Pur.

### Where is hexachlorobutadiene found and how is it used?

Hexachlorobutadiene does not occur in nature. It has never been produced as a commercial product in the United States. It can result as a by-product from processing other chemicals. Some quantities of hexachlorobutadiene are imported, mostly from Germany.

Hexachlorobutadiene is used to manufacture rubber, chlorofluorocarbons and lubricants. It is used in fluids for transformers, hydraulics, gyroscopes and heat transfer processes. Hexachlorobutadiene is also used in solvents, in laboratory processes and in industrial processes.

### How can people be exposed to hexachlorobutadiene?

*You could be exposed to hexachlorobutadiene through:*

**Breathing** hexachlorobutadiene vapors where it is made or used, or around hazardous waste sites where it was disposed.

**Eating** fish or other food in contact with hexachlorobutadiene.

**Drinking** water polluted with hexachlorobutadiene.

**Touching** hexachlorobutadiene or water containing it.

### How does hexachlorobutadiene work and how can it affect my health?

Studies have not tested the effects of hexachlorobutadiene on humans. Mice that breathed hexachlorobutadiene for a short time showed nasal irritation. The only other effect seen in animal studies was low birth weight babies from mothers who breathed high levels.

Long-term exposure of low hexachlorobutadiene levels was also studied using animals. Rats and mice that drank low levels of hexachlorobutadiene over both the short and a long term had kidney and liver damage. Studies with rabbits found kidney and liver damage from short-term skin contact with hexachlorobutadiene.

Hexachlorobutadiene was named as a possible cancer-causing substance.

### How is hexachlorobutadiene poisoning treated?

There is no treatment for hexachlorobutadiene poisoning. A doctor will treat the symptoms.

### What should I do if exposed to hexachlorobutadiene?

**If you touch hexachlorobutadiene**, remove contaminated clothing. Wash skin with soap and water. Get medical help.

**If hexachlorobutadiene gets in your eyes**, rinse your eyes with water for 15 minutes. Get medical help.

**If you breathe hexachlorobutadiene**, move to fresh air. Get medical help.

**24/7 Emergency Contact Number: 1-888-295-5156**

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## What factors limit use or exposure to hexachlorobutadiene?

Limit occupational exposure by using engineering controls, such as enclosing processes and ensuring healthy ventilation. Follow health and safety procedures. Wear respirators, protective clothing and eye protection. People living near facilities that use or produce hexachlorobutadiene as a by-product (or who live near disposal sites contaminated with the hexachlorobutadiene) can reduce their exposure by avoiding handling contaminated soil. If the drinking water is contaminated, drink only bottled water.

## Is there a medical test to show whether I've been exposed to hexachlorobutadiene?

Tests are available to measure hexachlorobutadiene levels and its breakdown products in blood, urine or fat.

## Technical information for hexachlorobutadiene

CAS Number: 87-68-3

Chemical Formula: C<sub>4</sub>Cl<sub>6</sub>

Carcinogenicity (EPA): Group C – Possible human carcinogen.

Odor Threshold: 12 mg/m<sup>3</sup> (air); or 1.1 ppm

MCL (Drinking Water Standard): None

OSHA Standards: None

NIOSH Standards (REL): 0.02 ppm (average over an 8-hour workday)

ACGIH Standards: 0.02 ppm (average over an 8-hour workday)

## References and Sources

Agency for Toxic Substances and Disease Registry (ATSDR). 1994. *Toxic Profile for Hexachlorobutadiene*. <http://www.atsdr.cdc.gov/toxprofiles/tp42.html> - Accessed 12/2/09

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U.S. Environmental Protection Agency (EPA). Integrated Risk Information System (IRIS). Hexachlorobutadiene. <http://www.epa.gov/iris/subst/0058.htm> - Accessed 12/2/09

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