

BROMODICHLOROMETHANE (CHBrCl₂)

also known as Dichlorobromomethane

Chemical Abstracts Service (CAS) Number: 75-27-4

General Information

Bromodichloromethane is a colorless, nonflammable liquid and is only slightly soluble in water. The primary use for bromodichloromethane is to make other chemicals. The most likely means of exposure to bromodichloromethane is by drinking chlorinated water. Exposure to bromodichloromethane might also occur by breathing it in the air in or near a laboratory or factory made or used bromodichloromethane. U.S. EPA has classified bromodichloromethane as a probable human carcinogen based on sufficient evidence of carcinogenicity in animals.

Sources

- Only small amounts of bromodichloromethane are manufactured.
- Most bromodichloromethane is formed as a by-product when chlorine is added to drinking water to kill bacteria.
- Bromodichloromethane is also produced by algae in the oceans.

Indiana Emissions

Bromodichloromethane emissions totals are not available from the National Emission Inventory (NEI) for the 2014 calendar year.

Measured Concentration Trends

Ambient air monitoring data most accurately represents a limited area near the monitor location. All monitors for air toxics sample every sixth day. The monitoring locations by themselves are not sufficient to accurately characterize air toxic concentrations throughout the entire state, however, results from the monitors will provide exposure concentrations with a great deal of confidence at the monitoring locations.

The ambient air monitoring results were analyzed using U.S. EPA recommended statistical methods. IDEM evaluated the data so that a 95% upper confidence limit of the mean (UCL) could be determined. A 95% UCL represents a value which one can be 95% confident that the true mean of the population is below that value.

To learn more about the current monitoring locations, please visit IDEM's Air Toxics Monitor Siting webpage at: <http://www.in.gov/idem/toxic/2337.htm>

Data analysis was performed for each monitor that operated for a significant portion of the analysis period. This analysis determined the detection rate, which is defined as the percentage of valid samples taken statewide that had a quantifiable concentration of the pollutant. The statewide detection rate of bromodichloromethane for the monitors analyzed from 2006-2015

was 9.4%. This detection rate is too low for IDEM to draw any conclusions about concentration trends of bromodichloromethane. IDEM did not perform a trend analysis for any pollutant with a detection rate less than 50%.