

## **1,2,4-TRICHLOROBENZENE (C<sub>6</sub>H<sub>3</sub>Cl<sub>3</sub>)**

Chemical Abstracts Service (CAS) Number: 120-82-1

### **General Information**

1,2,4-Trichlorobenzene is a colorless liquid with an aromatic odor. No information is available on the acute (short-term) or chronic (long-term) effects of 1,2,4-trichlorobenzene in humans. Local irritation of the lungs and dyspnea have been reported in animals following acute inhalation exposure. U.S. EPA has classified 1,2,4-trichlorobenzene as a Group D, not classifiable as to human carcinogenicity.

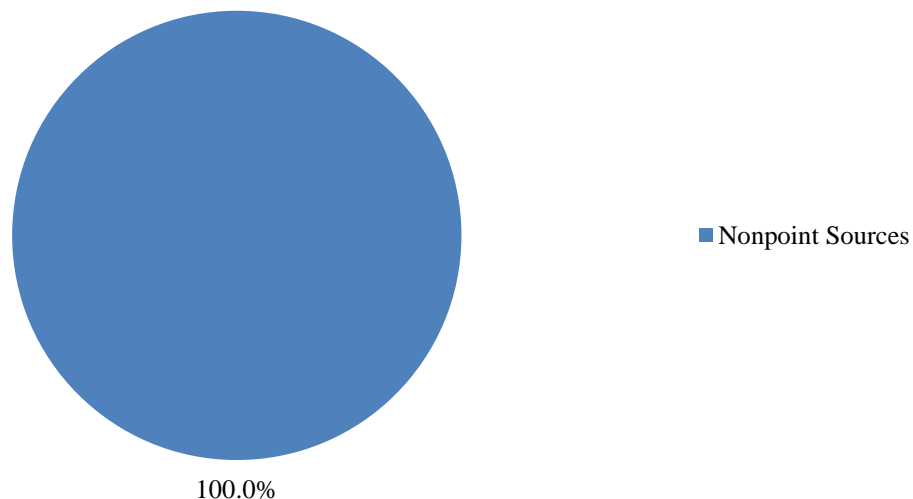
### **Sources**

- 1,2,4-Trichlorobenzene is used as a dye carrier, a herbicide intermediate, a heat-transfer medium, a dielectric fluid in transformers, a degreaser, a lubricant, in synthetic transformer oils, and as a solvent in chemical manufacturing.
- 1,2,4-Trichlorobenzene was formerly used as an insecticide against termites.
- Occupational exposure to 1,2,4-trichlorobenzene may occur from inhalation during its manufacture and use.

### **Indiana Emissions**

IDEM collects HAP emissions information for the categories of point sources (large stationary sources like power plants and factories), nonpoint sources (aka area sources - smaller stationary sources like gas stations and dry cleaners), and mobile sources (vehicles, airplanes, marine vessels, etc.).\* Estimated statewide emissions of 1,2,4-trichlorobenzene totaled 0.03 tons in the 2014 calendar year. All emissions were attributed to nonpoint sources.

## 2014 Indiana 1,2,4-Trichlorobenzene Emission Sources



\* For additional examples of types of emission sources, please visit IDEM's Hazardous Air Pollutants page at: <http://www.in.gov/idem/toxic/pages/hap/index.html>. For specific details on industrial sources of air toxics, please visit U.S. EPA's Toxics Release Inventory (TRI) page at: <https://www.epa.gov/toxics-release-inventory-tri-program>.

### 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 the majority of 2015 and each historical 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 1,2,4-trichlorobenzene for the monitors analyzed from 2006-2015 was 4.8%. This detection rate

is too low for IDEM to draw any conclusions about concentration trends of 1,2,4-trichlorobenzene. IDEM did not perform a trend analysis for any pollutant with a detection rate less than 50%.