

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

*also known as trans-1,3-Dichloropropene*

Chemical Abstracts Service (CAS) Number: 10061-02-6

### **General Information**

t-1,3-Dichloropropene is a clear colorless liquid that is denser than water and insoluble in water. Acute (short-term) inhalation exposure of humans to t-1,3-dichloropropene can cause mucous membrane irritation, chest pain, and breathing difficulties. Acute exposure has also caused effects on the lung in rodents. Chronic (long-term) inhalation exposure caused damage to the nasal mucosa and urinary bladder in rodents. Information on the carcinogenic effects of t-1,3-dichloropropene in humans is limited; two cases of histiocytic lymphomas and one case of leukemia have been reported in humans accidentally exposed by inhalation to concentrated vapors during cleanup of a tank truck spill. U.S. EPA has classified t-1,3-dichloropropene as a Group B2, probable human carcinogen.

### **Sources**

- t-1,3-Dichloropropene is used to make other chemicals and as a soil fumigant.
- Exposure to t-1,3-dichloropropene may occur by inhaling the vapors, ingestion, or contact with skin.

### **Indiana Emissions**

t-1,3-Dichloropropene 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 t-1,3-dichloropropene for the monitors analyzed from 2006-2015 was 0.8%. This detection rate is too low for IDEM to draw any conclusions about concentration trends of t-1,3-dichloropropene. IDEM did not perform a trend analysis for any pollutant with a detection rate less than 50%.