

## FACT SHEET



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

# Methyl Tertiary-Butyl Ether (MTBE)

## Office of Land Quality

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[www.idem.IN.gov](http://www.idem.IN.gov)

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### Description

Companies that make gasoline add chemicals like methyl tertiary-butyl ether (MTBE) to improve engine performance and reduce air pollution. Today, most U.S. gasoline is blended with a small amount of alcohol (ethanol) in order to save money and have less of an impact on the environment. However, MTBE accidentally released to groundwater can last a long time, which is why it's still a concern in Indiana.

### IDEM's Role and Responsibility

- The mission of the Indiana Department of Environmental Management (IDEM) is to implement federal and state law to protect human health and the environment while allowing the environmentally sound operations of industrial, agricultural, commercial, and governmental activities vital to a prosperous economy.
- IDEM's Office of Land Quality (OLQ) regulates how gasoline is stored in underground storage tanks (USTs) in order to prevent leaks and spills. They also regulate the potential cleanup of MTBE leaks and spills.
- IDEM OLQ provides cleanup recommendations for MTBE and other petroleum-related chemicals based on potential health effects (see below).
- IDEM OLQ works with the United States Environmental Protection Agency (U.S. EPA) to make sure that people are following the rules for MTBE storage, disposal and cleanup, and that they collect groundwater samples when they are cleaning up MTBE.

### Potential Sources

- Since MTBE was frequently used across Indiana, it is commonly found at old gasoline station sites.
- MTBE dissolves easily in water and does not stick well to soil. As such, it often moves quickly into underground water sources, contaminating the water that people use.
  - Because it travels farther than other chemicals found in gasoline, it can impact more people.
- MTBE can evaporate from soil and groundwater into a gas or vapor, which then can enter buildings by traveling through soil or cracks in bedrock or concrete, as well as along or inside sewer lines.
  - The movement of underground gas or vapor into a building is referred to as *vapor intrusion*.

### Routes of Exposure and Potential Health Effects

- You can be exposed to MTBE in three different ways:
  - Drinking water that contains MTBE;
  - Breathing air that contains MTBE gas or vapor; and
  - Skin contact from handling gasoline or other products that contain MTBE.
- The U.S. EPA has determined that MTBE can possibly cause cancer in humans.
- Potential health effects from MTBE depend on how much, how long, how often, and in what way(s) you are exposed.
- Young children, the elderly, and people with on-going health concerns may be more at risk for negative health effects.

- Breathing and/or drinking high levels of MTBE can cause health effects other than cancer. Please contact the Center for Disease Control's (CDC) Agency for Toxic Substances and Disease Registry (ATSDR) for additional information on benzene's potential health impacts, or visit their website (see below).

### **Reduce Exposure**

You can take steps to reduce your exposure to MTBE:

- If you use a private well for your home water supply, have the water tested regularly to make sure it is safe to drink. While IDEM does not regulate private water wells, information is available on testing and health-based recommendations (see below).
- Follow the manufacturer's label instructions when you use and get rid of products containing MTBE.

### **Additional Information:**

- For more information on MTBE, please visit the Center for Disease Control's (CDC) Agency for Toxic Substances and Disease Registry (ATSDR) website at <http://www.atsdr.cdc.gov/phs/phs.asp?id=226&tid=41> and <http://www.atsdr.cdc.gov/toxfaqs/TF.asp?id=227&tid=41>.
- Alternatively, you can call the CDC-INFO line for ATSDR's information on MTBE: 800-232-4636 (M-F 8a-8p Eastern in English or Spanish) or TTY 888-232-6348.
- For more information on USTs, MTBE and oxygenate emissions, please visit U.S. EPA's website at <https://www.epa.gov/ust>.
- For technical guidance on risk-based cleanups, including IDEM's *Remediation Closure Guide*, visit <http://www.in.gov/idem/cleanups/2329.htm>
- For more information on vapor intrusion please visit IDEM's website at <http://www.in.gov/idem/cleanups/2357.htm>
- While private wells are not regulated by IDEM, it is still important to be aware of health-based recommendations: <https://in.gov/idem/cleanwater/2452.htm>
- Visit the Indiana State Department of Health's Environmental Public Health Division's Indoor Air Quality program for more information on indoor air at <https://www.in.gov/isdh/24347.htm>
- For questions and concerns about MTBE contamination or environmental cleanup, contact IDEM's Office of Land Quality at (317) 232-3215 or (800) 451-6027, ext. 2-3215.
- To report an accidental release or spill, call IDEM's 24-Hour Spill Line at (888) 233-7745 (toll free).