

METHYL ISOCYANATE

What is methyl isocyanate?

Methyl isocyanate (MIS) is a chemical used in the manufacture of polyurethane foam, pesticides and plastics. It usually is handled and shipped as a liquid, which is easily burned and explosive. Methyl isocyanate evaporates quickly in the air. It has a strong odor but it can begin to make people sick before the chemical can be smelled. MIS was the chemical released in the Bhopal, India, disaster in 1984 that killed more than 3,800 people.

How can someone come into contact with methyl isocyanate?

A person can come into contact with methyl isocyanate by—

- Breathing in the smoke from tobacco (i.e., cigarette smoke);
- Breathing in or touching it at workplaces where the chemical is produced or used; or
- Breathing in low levels of it from living near facilities that manufacture, store or use the chemical.

Methyl isocyanate as a weapon: Methyl isocyanate can be an “agent of opportunity.” This means that someone could explode the vehicle of transportation (truck, train) that is being used to ship the chemical, or destroy tanks that store the chemical. Methyl isocyanate would then be released into the air.

Please note: Just because you come into contact with methyl isocyanate does not mean you will get sick from it.

What happens if someone gets sick from methyl isocyanate?

Signs of a poisoning include the following:

- discomfort and burning of the skin
- cough
- chest pain
- tightness in the chest
- difficulty breathing
- vomiting

How likely is someone to die from methyl isocyanate poisoning?

The effects of methyl isocyanate will depend on the concentration of exposure and length of time the person is exposed. Exposure to high concentrations could result in severe damage to the lungs and lead to death.

What is the treatment for methyl isocyanate poisoning?

- **Prevention of illness after contact:** First, leave the area where the methyl isocyanate was released and move to fresh air.
 - **Remove clothing.**
 - Then, quickly take off clothing that may have methyl isocyanate on it. If possible, any clothing that has to be pulled over the head should be cut off the body instead so the chemical does not get near the eyes, mouth or nose. If helping other people remove their clothing, try to avoid touching any contaminated areas.

(Methyl isocyanate continued)

- **Wash affected areas.**
 - As quickly as possible, wash any methyl isocyanate from the skin with lots of soap and water.
 - If the eyes are burning or vision is blurred, rinse your eyes with plain water for 10 to 15 minutes.
 - If contact lenses are worn, remove them and put them with the contaminated clothing. Do not put the contacts back in. If eyeglasses are worn, wash them with soap and water. Eyeglasses can be put back on after they are washed.
 - If you are wearing jewelry that you can wash with soap and water, wash it and put it back on. If it cannot be washed, put it with the contaminated clothing.
- **Discard contaminated items.**
 - Place the clothing and any other contaminated items inside a plastic bag. Avoid touching contaminated areas of the clothing. If you can't avoid touching contaminated areas, or you aren't sure where the contaminated areas are, wear rubber gloves or use tongs, sticks or similar objects. Anything that touches the contaminated clothing should also be placed in the bag.
 - Seal the bag, and then seal that bag inside another plastic bag.
 - Call the local county health department right away. (Visit www.idph.state.il.us//local/alpha.htm for a listing of all county health departments in Illinois or check your local phone book.)
 - When the local or state health department or emergency personnel arrive, tell them what you did with your clothes. The health department or emergency personnel will arrange for further disposal. Do not handle the plastic bags yourself.
- **Treatment of illness:** There is no specific treatment for methyl isocyanate poisoning. Supportive care (intravenous fluids, medicine to control pain) is the standard treatment.

Is there a vaccine for methyl isocyanate poisoning?

No, there is no vaccine for methyl isocyanate poisoning.

What should be done if someone comes into contact with methyl isocyanate?

If you think that you or someone you know may have come into contact with methyl isocyanate, contact the local county health department right away. (Visit www.idph.state.il.us//local/alpha.htm for a listing of all county health departments in Illinois or check your local phone book.)

If you or someone you know is showing symptoms of methyl isocyanate poisoning, call your health care provider or the Illinois Poison Center right away. The toll-free number for the poison center is 1-800-222-1222.

Where can one get more information about methyl isocyanate?

- U.S. Agency for Toxic Substances and Disease Registry www.atsdr.cdc.gov/tfacts182.html
- Illinois Department of Public Health www.idph.state.il.us
- Illinois Poison Center www.IllinoisPoisonCenter.org