

Methyl Isocyanate

By Aryan Goswami

Kind of Like Poison: What is Methyl Isocyanate?

Methyl isocyanate (MIC) is a highly lethal and dangerous gas when it is exposed to skin or eyes. It is colorless and extremely flammable and explosive when in air. It has a reaction to water; it gives off thermal energy, and carbon dioxide and methylamine. When it is inhaled, it causes irritation to the eyes and respiratory system, which results in constantly coughing, pain, difficulty in breathing, eye bags, eye swelling and irritation, and even passing out. This makes you question, “Why do we use this?” For rubbers, of course!

What is This?: Methyl Isocyanate Chemical Information

The chemical formula is C_2H_3NO or CH_3NCO . That means 2 carbon, 3 hydrogen, and 1 nitrogen and oxygen, and the second one is the same, but put in a different way. It is the most toxic of the isocyanate family. It is colorless, and has a pungent odor. It boils at 39.1 degrees celsius; it melts at -80 degrees celsius; the vapor density (if air was 1) is 1.97; the flash point is -7.2 degrees celsius.

The Railway Men: The Bhopal Gas Leak

In 1984, the Union Carbide India Limited plant released 40 tons of methyl isocyanate. The Union Carbide India Limited plant was right next to Bhopal Junction, a train station, and the lethal gas released into the area of Bhopal, and at the time, trains were coming to Bhopal Junction. This would lead to the Bhopal Gas Leak, one of the most dangerous gas leaks of all time. It was recorded that 20-30 thousand people died, and the people who were having babies had their babies have a lot of birth defects. The people that made it so help arrived, and the main help, were known as, “The Railway Men” and they were one of the bravest people at Bhopal.

Bring Up Time: Bhopal Aftermath

After the leak, the Union Carbide India Limited plant paid US\$470 Million for damages. In the first 6 months, people experienced their eyes watering and red all the time, pain, diarrhea, and anxiety. After 6 months, people experienced watery eyes, restrictive airway disease, pregnancy loss, and decreased fetal weight. Overall, Bhopal still seems to struggle a bit, but right now, they are still managing to stay up strong and keep trains running.

You Were Brave: My Opinion

I think that this gas is not something I would want to be near. It seems very complex, and very dangerous when not handled correctly. I would not want to breathe this in. I also think that the railway men were very brave, and strong for basically saving all of Bhopal, and even maybe all of India. Some of them died, but they died helping the people.

Thank you for reading. Stay strong.

Sources:

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