

Chlorine (Cl₂)

What is Chlorine?

Chlorine is used in the production of thousands of products. It is also used for water disinfection to kill water borne diseases. Hypochlorous acid and sodium hypochlorite are two of these chemicals that disinfect the water.

Does Chlorine have any additional names?

Elemental Chlorine, Chlorine Gas, Free Chlorine, Total Chlorine, Sodium Hypochlorite, Hypochlorous Acid, Chlorine Bleach

What are the known health effects?

Using or drinking water with small amounts of chlorine does not cause harmful health effects and provides protection against waterborne disease outbreaks. Breathing chlorine gas at higher levels may result in changes in breathing rate and coughing, and damage to the lungs. In general, people who suffer from respiratory conditions such as allergies or hay fever, or who are heavy smokers, tend to experience more severe effects than healthy subjects or non-smokers.

The U.S. Centers for Disease Control and Prevention calls drinking water chlorination “one of the most significant public health advances in U.S. history.”

How does exposure occur?

Because chlorine is so reactive, it is not normally detected in the environment. You may be exposed through breathing, skin contact, and eye contact if an accident involving chlorine takes place nearby, such as a liquid chlorine spill, a leak from a chlorine tank, or a leak from a facility that produces or uses chlorine. You may also be exposed to chlorine if you mix household chemicals such as toilet cleaner with bleach.

Is this contaminant regulated?

Yes, and water supplied to Mount Laurel MUA customers is in compliance with USEPA and NJDEP requirements. The maximum residual disinfection level permitted (MRDL) is 4 ppm. MRDL is the highest level of a disinfectant allowed in drinking water. Water systems are required to maintain a minimum residual of 0.2 ppm throughout the distribution system. We maintained a chlorine residual range of 0.70-1.00 ppm.

How can I reduce exposure?

Chlorine can be removed from drinking water by using an activated charcoal filter.

Additional information regarding Chlorine, including the information referenced, can be found at:

https://www.who.int/water_sanitation_health/dwq/chlorine.pdf

<https://www.atsdr.cdc.gov/toxfaqs/tfacts172.pdf>