Safe Chlorine Use Stats and Facts

FACTS

1. At high concentrations chlorine exposure

- Can be fatal within 30 minutes, even if you've only taken a few breaths of it

2. At low concentrations chlorine exposure results in:

- Mild discomfort to eyes, nose, and throat
- As concentration increase this becomes more severe, with stinging and burning

3. Since chlorine is heavier than air, the gas will settle in low places and begin to fill a room. If exposed to the gas, workers should get out of the area immediately and seek first aid.

4. Chlorine is used in the pulp and paper industries, pool chemical products, cleaning products, mining products, bleach and plastics manufacturing.

5. Chlorine exposure has its most serious effects on the lungs when it is inhaled. This can cause the airways to close up or fluid to develop in the lungs. Chlorine can also be ingested, or eaten, with chlorine contaminated food or water and it can be absorbed into the blood stream if it comes in contact with the eyes and skin.

STATS

- According to Scientific American, 40-60 ppm produces lung injury; 430 ppm usually causes death in 30 minutes, and 1,000 ppm is fatal within a few minutes. Under federal standards, workers are never supposed to be exposed to concentrations exceeding 1 ppm.

- The U.S. produces over 13 million tons of chlorine each year, most of it shipped by rail. The worst chlorine accident in the U.S. happened in Graniteville, S.C., when 18 freight train cars derailed and released 120,000 pounds of chlorine gas, killing 9 people. 1,400 people were exposed, resulting in 550 hospitals visits, many with serious lung injuries and 5,000 people were evacuated from the surrounding area.
- According to Scientific American, there were 865 chlorine-related accidents in the U.S.
- Over 13 million tons of chlorine is produced in the United States each year.
- According to a U.S. Department of Transportation (DOT) found that chlorine was the cause of 83 major injuries and nine fatalities in traffic and rail accidents during this time period.