

# Recent Incidents Highlight Dangers of Chlorine Gas & Mixing Chemicals



Two recent incidents should serve as a reminder of the hazards of mixing chemicals—even simple household cleaners—and the need to educate and train workers on how to safely handle such substances.

On Aug. 9, 2016, a woman in Ontario mixed several household cleaners together, accidentally creating chlorine gas, which she inhaled. She was taken to the hospital and treated for non-life threatening injuries.

The Hamilton fire hazmat unit had to be called in to deal with the chemical mixture, because of the deadly fumes. Firefighters wearing protective gear and breathing apparatus placed the mixture into proper containers to dispose of it.

Less than a month later, a Calgary hotel had to be evacuated after a maintenance worker was overcome while mixing chemicals for the facility's pool. He'd been mixing a batch of chlorine in the hotel's basement when there was an unexpected chemical reaction.

The worker, who was in respiratory distress, was transported to the hospital.

Chlorine gas is extremely dangerous. Mild exposure can cause coughing, shortness of breath, chest pain, wheezing, nausea, watery or irritated eyes, irritation to the throat and nose, and a burning sensation in the lungs and throat. And breathing high levels of chlorine causes fluid build-up in the lungs, a life-threatening condition known as pulmonary edema.

Bleach is a form of chlorine. Although bleach has many uses, mixing it with certain cleaning products, such as ammonia, can cause a toxic gas.

So if your workers use bleach, chlorine or other chemicals, it's critical that you ensure they know how to properly handle these hazardous substances. Failing to do so can not only endanger workers and others, but also result in safety violations.

*Example:* At a city recreation complex in PEI, a worker mixed chlorine with hydrochloric acid, releasing toxic chlorine gas and sending more than 20 people to the hospital. The WCB's investigation found a number of problems, including insufficient labelling of chemical containers and inadequate training. The city

pleaded guilty to failing to ensure proper instruction and training for health and safety. The court fined it \$500 and ordered it to pay \$15,000 to be used by the WCB to promote workplace health and safety [*City of Summerside*, Govt. News Release, Dec. 20, 2011].