

Chemical Incidents in Pools

Proper storage and handling of pool chemicals are crucial to avoid harmful reactions, mixing, and spills. Employers must control substances that are hazardous to health.

Key Points

- **Risk Assessment:** Each chemical must be assessed by a competent person who understands its use and potential health impacts.
- **Training:** Employees should receive suitable information, instructions, and training for operating the pool water treatment plant and equipment.
- **Safety Systems:** Ensure the plant room has safety systems like chlorine gas detectors and fire/smoke detectors.
- **Storage:**
 - Store chemicals in separate rooms to avoid fire or overheating.
 - Keep containers securely closed, cool, and dry.
 - Store chemicals generating chlorine in cool, dry places away from organic materials.

Handling Chemicals

- **Do Not Mix Chemicals:** Never mix chemicals, even if they seem similar.
- **Use Proper Equipment:** Use chemicals only in the specific circulation feeder designed for them.

Common Incidents

- **Chlorine Gas Release:** Mixing incompatible chemicals can release chlorine gas, which is harmful.
- **Power Failure:** If power is cut, chemicals can mix and release chlorine gas when the system restarts.



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When chlorine leaks at a pool, it can lead to several issues:

- **Health Risks:** Chlorine gas is highly toxic and can cause respiratory problems, eye irritation, and skin burns. Inhaling chlorine gas can lead to coughing, shortness of breath, and even more severe respiratory issues
- **Water Quality:** A chlorine leak can disrupt the balance of chemicals in the pool, leading to poor water quality. This can result in the growth of bacteria and algae, making the pool unsafe for swimming
- **Environmental Impact:** Chlorine can damage surrounding vegetation and contaminate soil and water sources if it leaks into the environment
- **Equipment Damage:** High levels of chlorine can corrode pool equipment and surfaces, leading to costly repairs

Emergency Action Plan (EAP)

1. **Evacuate the Area:** Clear the pool and surrounding areas immediately.
2. **Identify the Chemical:** Determine the type of chemical involved.
3. **Ventilation:** Ensure proper ventilation if fumes are present.

Communication -

- **Alert Authorities:** Contact local emergency services.
- **Inform Staff and Patrons:** Use the public address system to inform everyone of the situation.



Emergency Action Plan Cont.

Spill Cleanup -

- **Personal Protective Equipment (PPE):** Ensure staff handling the cleanup wear appropriate PPE.
- **Contain and Neutralize:** Follow specific procedures for containing and neutralizing the spill.
- **Disposal:** Dispose of contaminated materials according to local regulations.

Post-Incident Procedures -

- **Documentation:** Record details of the incident and response actions.
- **Review and Revise:** Conduct a review to identify improvements in the response plan.
- **Training:** Ensure all staff are trained on updated emergency response procedures.

Additional Resources -

- **Safety Data Sheets (SDS):** Keep up-to-date SDS for all chemicals used in the pool area.
- **Emergency Response Plan:** Maintain and regularly review a comprehensive emergency response plan.

If someone is exposed to chlorine, it's important to act quickly and follow these first aid steps:

- **Move to Fresh Air:** Immediately move the person away from the source of chlorine to an area with fresh air. This helps reduce further inhalation of the gas
- **Rinse Eyes and Skin:** If chlorine has come into contact with the eyes or skin, rinse the affected areas with plenty of clean water for at least 10-15 minutes. Use mild soap and water for skin exposure
- **Remove Contaminated Clothing:** Take off any clothing that may have been contaminated by chlorine to prevent further skin exposure.
- **Seek Medical Help:** Contact emergency services or go to the nearest healthcare facility for evaluation and treatment. It's important to get professional medical assistance as soon as possible.

