The Commonwealth of Massachusetts
Executive Office of Public Safety and Security
Department of Fire Services
P.O. Box 1025 ~ State Road
Stow, Massachusetts 01775
(978) 567~3100 Fax: (978) 567~3121

DEVAL L. PATRICK
GOVERNOR

TIMOTHY P. MURRAY
LT. GOVERNOR

KEVIN M. BURKE
SECRETARY

STEPHEN D. COAN
STATE FIRE MARSHAL

THOMAS P. LEONARD
DEPUTY STATE FIRE MARSHAL

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Contact: Jennifer Mieth-DFS (978) 567-3381
Ed Coletta-MassDEP (617) 292-5737

Don't Jump Into The Pool Just Yet

Fire Marshal and MassDEP Warn Residents About Handling of Pool Chemicals

With summer rapidly approaching, many people start hopping into pools, but don't jump just yet. State Fire Marshal Stephen D. Coan wants pool owners to take a moment to make a pool chemical safety plan and share it with family members. State Fire Marshal Coan said, "This summer dive into the depths of pool chemical safety and prevent painful burns and costly clean-ups."

Every year more than 5,000 people nationwide are sent to the hospital with pool chemical related injuries. Last year, a woman in Maryland was mixing two pool chemicals -bleach and shock- in her kitchen when it caused an explosion. The blast was so strong that it broke the plastic container and caused severe burns on both her face and arms.

"Pool chemicals may become a hazard when they get damp or wet with a small quantity of water or when they are improperly mixed with other chemicals or reactive materials," said Laurie Burt, Commissioner of the Massachusetts Department of Environmental Protection (MassDEP). "It is important to keep pool chemicals dry. Store them in separate containers with lids in a locked shed away from the house and pool."

Residents should take care and follow these safety tips:

- Read and follow the manufacturer's instructions very carefully. Make sure when you dispose of chemicals that you follow the directions provided.
- Children should never handle pool chemicals, and even teenagers should not be allowed to do so without constant adult supervision.
- Put a lid on chemical containers every time. When containers are left open, water can get in and react with the chemicals. **Remember: powder in the water, not water in the powder.**
- Clean tools and equipment used to handle one chemical properly before using them with a different chemical.

- Spilled substances (e.g., from damaged containers or from sloppy handling) must be cleaned up and disposed of properly to avoid creating an inadvertent mixing or chemical reaction.

Liquid chemicals, such as sodium hypochlorite (bleach), if spilled, can leak into other containers or seep into cracks in the floor. Liquids, because of their properties, can create hazards not associated with solid or granular products and must be carefully handled.

Mixing chemicals can lead to a chemical reaction that may generate temperatures high enough to ignite nearby combustible materials. Mixing can also lead to the release of highly toxic and corrosive chlorine gas. Coan said, "Recently, a man mixing pool chemicals in his attached garage created a chlorine gas cloud in his family's home that took firefighters several hours to dissipate."

Reactions have also been traced to the mixing of old (partially decomposed) and new chemicals of the same type. The mixing of pool chemicals with completely unrelated materials, such as swept material from the floor, oily rags, and other miscellaneous materials, have been known to cause strong reactions with the potential for a resulting fire.

Proper pool chemical storage is a must in a household; make sure to take all of the necessary precautions. Pool owners should conduct a review of how they store their pool chemicals and especially look for and correct situations where chemicals could be intentionally or accidentally mixed. Make sure to:

- Separate incompatible substances; avoid storing containers of liquids above containers of other incompatible substances. The most common pool chemicals are inherently incompatible with each other, so be sure to keep them apart.
- Avoid mixing old chemicals with fresh chemicals, even if they are the same type.
- Use separate, designated scoops for each chemical. Handle only one chemical at a time and make sure that tools used with one substance are not used with another unless all residues are removed.
- Use separate, designated containers for cleanup of spilled materials to avoid inadvertent mixing of spilled substances. Consult your local hazardous waste disposal facility for more detailed information on proper waste disposal.
- Lock your storage area to keep children, pets and unauthorized users out.
- Keep your storage area free of rags, trash, debris, or other materials that could clutter the hazardous material area. Keep combustible and flammable substance away from the area.

Coan said, "Local fire departments and hazardous materials teams often respond to emergencies involving swimming pool and hot tub/whirlpool chemicals. The costs incurred by the pool owner for emergency measures can be extremely expensive. Take the necessary measures to prevent or address any injury to people or harm to the environment."

The Department of Fire Services includes the Hazardous Materials Response division that coordinates six regional hazardous materials teams across the state. MassDEP also has emergency response units in each of its four regional offices across the Commonwealth.

Chemicals are put into the pool to help keep the water clean, but there are still things to be concerned about. In May 2008, two New Hampshire children received burns from chlorine that was in the water at a Danvers water park. Although the chlorine levels were within the Department of Public Health's standards, prolonged exposure can cause chemical burns. Some things that you can do to prevent injuries are: never swallow the water; shower with soap both before and after being in a pool; and check young children's diapers often.

Also, do not dispose of old pool chemicals in the trash or down the drain. Take old chemicals to a household hazardous waste collection day in your community or to a commercial hazardous waste facility. Since sodium hypochlorite (bleach) is the same chemical used in most water treatment facilities, check to see if your local plant will accept the chemical.

For more information about how to store and use pool chemicals safely, turn to: the MassDEP web site (www.mass.gov/dep/recycle/hazardous/hhwhome.htm) or the U.S. Environmental Protection Agency (http://www.epa.gov/oem/docs/chem/spalert.pdf). Pool chemical manufacturers' websites would also be helpful.