



## SAFETY BRIEF: HAZARD COMMUNICATION

When people think of chemicals, they often picture scientists in white lab coats and safety glasses peering into a microscope or carefully measuring out liquids. In reality, chemicals are found in many of the products we use at home and work. Chemicals have a variety of beneficial uses, but they can also be extremely dangerous and sometimes fatal if misused or mishandled.

OSHA's Hazard Communication Standard, 29 CFR 1910.1200, requires employers to implement a hazard communication program to protect employees from hazardous chemicals used or stored in the workplace. This program must include proper labeling of hazardous chemicals, maintaining safety data sheets for all hazardous chemicals in the workplace, and training for employees. Employers must also maintain a written program explaining how they will meet the requirements of the Hazard Communication Standard in each of those areas. OSHA's implementation of the Hazard Communication Standard is estimated to prevent over 500 workplace injuries and illnesses and 43 fatalities annually in the U.S. Just think about how an effective Hazard Communication Program can prevent injuries and fatalities in your organization.

### **What is a Hazardous Chemical?**

Hazardous chemicals exist in one of three states: solid, liquid, or gas.

- Solid – chemicals have a definitive shape and form. Examples: dust particles, raw chlorine.
- Liquid – chemicals are fluid. Examples: solvents, oils.
- Gas – chemicals are generally invisible but can sometimes be detected by taste or smell. Examples: oxygen and carbon monoxide.

In order for a chemical to harm a person's health, the chemical must first come into contact with or enter the body. There are four major routes by which a chemical can enter the body:

- Inhalation (breathing) – this is the most common way workplace chemicals enter the body
- Absorption – skin or eye contact. Some chemicals have the ability to pass through the skin into bloodstream, leading to systemic problems in the organs.
- Ingestion – chemicals that accidentally get into the mouth and are swallowed may harm the gastrointestinal tract unless they are irritating or corrosive, but some chemicals can be absorbed through the gastrointestinal tract into the bloodstream where they can damage organs.
- Injection – uncommon, but can occur when a sharp object contaminated with a chemical substance punctures the skin

A hazardous chemical is one which is capable of producing harmful physical or health effects. Harmful physical effects include fire, sudden release of pressure, explosion, and other violent reactions. Harmful health effects include acute conditions and chronic conditions. Acute conditions develop shortly after over-exposure to hazardous materials and include burns, rashes, respiratory distress, convulsions, and possibly even death. Chronic conditions develop after long-term exposure to hazardous materials and include cancers, nervous system disorders, and damage to other organ systems. Many federal, state, and local agencies regulate hazardous materials in order to protect human health and the environment.

Hazardous materials that you and your employees may handle in workplaces may include:

- Chlorine; water treatment/waste water treatment or school pools
- Compressed gases; propane, oxygen, nitrogen, helium, argon
- Flammable liquids; gasoline, acetone
- Cleaning solvents; bleach, ammonia or acid based cleaners



**Case Study: HAZCOM Gone Wrong!** Buffalo Wild Wings restaurants, 2016 & 2019.

What happened? To clean the kitchen floor, a store employee mixed a chlorine bleach-based product, Super 8, and an acid-based cleaner, Scale Kleen. The bleach and acid reacted with each other creating toxic fumes. The employee was overwhelmed by the fumes and exited the building at which point the store manager began to squeegee the product out of the building before he was ultimately overcome by the deadly mixture. The manager was taken to the hospital but ultimately died—13 other people (11 employees and two patrons) were hospitalized with burning eyes and difficulty breathing.

This incident was the second one of its kind at a Buffalo Wild Wings in the past few years. An OSHA report reveals that in August of 2016, an employee at one of the chain's Florida locations died from asthma after being exposed to chemicals from work. The employee had also apparently been working in a non-ventilated environment in temperatures above 110 degrees.

Had the restaurant taken the necessary steps to identify hazardous chemicals in their facilities and implement an effective hazard communication program, these tragic accidents could have easily been prevented.

Could these accidents have been worse? *Yes.* Could they have been prevented? *Yes.*

### What is Hazard Communication?

OSHA's 1910.1200 Hazard Communication Standard, also referred to as HAZCOM, is a set of rules and regulations set in place to protect employees from injuries and illnesses associated when using hazardous chemicals in the workplace. Employees have the right-to-know and understand the hazards, identities, and properties of the chemicals they use and are exposed to in their workplaces.

Employers must prepare and implement a written HAZCOM program. This includes:

- all chemical containers are properly labeled, and
  - employees have easy access to the chemicals' corresponding Safety Data Sheets (SDSs), and
  - an effective training program is conducted for all potentially exposed employees at the time of the employee's initial work assignment, and whenever a new chemical is introduced into their work area.
- ◆ **Labels:** Chemical labels provide an immediate and conspicuous summary of the substance's hazards. Whenever you pick up a container, you should be able to readily see what dangers are present. Chemical manufacturers and importers are required to provide a label that includes the name of the chemical, a signal word ("danger" or "warning"), a pictogram or pictograms, and a hazard statement for each hazard class and category. Precautionary statements must also be provided.





- ◆ **Safety Data Sheets (SDSs):** The Safety Data Sheets provide more detailed technical information on hazardous ingredients, chemical properties, precautions for use, proper disposal, and so on. The SDSs are an important reference for exposed employees, safety professionals, industrial hygienists, emergency responders, and health care professionals. Employers may keep the SDSs in a binder or on computers as long as the employees have immediate access to the information without leaving their work area when needed and a back-up SDS is available for rapid access in the event of a power outage.
- ◆ **Training:** Inform and train ALL employees. All employees should be trained on hazardous chemicals in their work area before starting an initial assignment, and whenever there is a new chemical introduced or new chemical hazard identified. Training should include the requirements of the Hazard Communication Standard, hazards of the chemicals, appropriate protective measures, PPE, emergency actions, and where and how to obtain additional information. Workers must understand what hazardous chemicals they are exposed to at work, and how to properly recognize the labels and safety data sheets that correspond with the chemicals they work with.

### **HAZCOM—Set up & Start Using!**

**Step 1:** Prepare and implement a written hazard communication plan. The written plan should indicate how hazard communication will be addressed within your workplace or school. **TIP:** Prepare and maintain an inventory of all the hazardous chemicals used throughout the workplace. Include this inventory in the written hazard communication plan.

**Step 2:** Ensure that all containers with hazardous chemicals are labeled. This includes all secondary containers.

**Step 3:** Maintain Safety Data Sheets (SDSs). For every hazardous chemical, a corresponding Safety Data Sheet must be on file and available and readily accessible to employees.

**Step 4:** Inform and train employees. Keep documented training on file.

**Step 5:** Evaluate and update the written hazard communication plan at least annually to ensure its effectiveness and relevance to workplace operations.

Additional training is available through the AMLJIA Online University at [www.amljia.org](http://www.amljia.org). Log on to the Online University for courses related on this topic such as “Hazard Communication,” “Safety Data Sheets,” and “Safety Awareness Program for Supervisors.” For more information about the Online University, contact the AMLJIA at 800-337-3682.