



SAFETY THROUGH KNOWLEDGE

HAZARDOUS
MATERIALS
MANAGEMENT

VIDEO HANDBOOK

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The National Resource Safety Center was established in 1989 by engineers, business professionals, and safety consultants. Our original goal was to fulfill a growing industry need for safety training by offering the widest possible range of safety & environmental training aids at the most affordable price in the industry.

Training Resources

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With over 7,000 videos in our current inventory we have the proud distinction of being the nations largest safety video lending library. We developed our unique safety video lending library concept based on annual membership and allowing our members to have full access to our library of safety and health videos without paying rental or usage fees.

We offer the following list of video programs under the Hazardous Materials Management section of our catalog. These programs are available to be borrowed for up to 28 days at no cost to our members. The best part is that a membership costs less than the purchase of 2 new quality videos.

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A161	AIR MONITORING
B138	BUILDING BLOCKS OF OUR WORLD: CHLORINE
C163	CHANGE OF HABIT
C136	CHARGING UP ON BATTERY SAFETY
C198	CHARGING UP ON BATTERY SAFETY (SPANISH)
C137	CHEMICAL BURNS
C201	CHEMICAL BURNS (SPANISH)
C187	CHEMICAL EMERGENCY PREPAREDNESS AND PROCEDURES
C138	CHEMICAL HAZARDS IN CONSTRUCTION
F112	FIRST ON SCENE
H229	HANDLING HAZARDOUS MATERIALS
H241	HAZARD COMMUNICATION TRAINING
H208	HAZARD COMMUNICATIONS FOR TODAY'S WORKPLACE
O120	OSHA INSPECTION PROCEDURES FOR HAZARD COMMUNICATION STANDARDS

HAZARDOUS MATERIALS MANAGEMENT

Waste Requirements and Awareness



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HAZARDOUS MATERIALS MANAGEMENT

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HAZARDOUS MATERIALS MANAGEMENT

Waste Requirements and Awareness

Introduction

The fact that your employer is providing this booklet to you about Hazardous Materials Management indicates his commitment to the safety and welfare of employees like yourself. Without this commitment, your health and safety would suffer.

By practicing safe work habits and insisting that those around you do the same, your company is capable of achieving one of the best safety records in the industry. Implementing and enforcing a hazard communication program is required by law for many companies. The more you know about the chemicals that can harm you, the better position you will be in when unfortunate accidents occur.



Many people think of chemicals as being liquid held in containers. Hazard Communication covers chemicals in all physical forms: liquids, solids, gases, vapors, fumes, and mists - whether they are “contained” or not. The hazardous nature of the chemical and the potential for exposure are the factors that determine where a chemical is covered under the hazard communication standard.

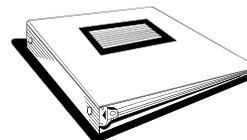
This booklet is designed to briefly walk you through the important information you need to know when it comes to the hazard communication standard. We will discuss your right-to-know about the hazardous chemicals you work with and how to protect yourself. In addition, you will learn about material safety data sheets, labeling requirements and emergency procedures.

A full comprehensive examination of these requirements is found in OSHA's Occupational Safety and Health Standards For General Industry, 29 CFR 1910.1200. If you handle hazardous materials, be sure to educate yourself about the chemicals with which you work.

Communication

One of the most frequently cited serious violations in general industry is the lack of a written hazard communication plan. Employers must develop, implement and maintain a comprehensive, written hazard communication program. This must include provisions for container labeling, material safety data sheets and an employee safety-training program.

The hazard communication plan must also contain a list of the hazardous chemicals in each work area and the means the employer will use to inform employees of the hazards associated with such chemicals.



If the workplace has multiple employers, the rule requires that information regarding hazards and protective measures be made available to those employers on-site, where appropriate.

Your company's written hazard communication program should include the following:

- Inventory of the hazardous chemicals in the workplace.
- Detailed information on the labeling or warning system used.
- Material Safety Data Sheets (MSDS) available to employees
- Employee training information

Verification of employee training must be available to prove that everyone who uses hazardous chemicals is educated on how to work with them safely at the start of their assignment or introduction into the workplace.

Employee Information and Training

Employers must establish an annual training and information program for employees who are exposed to hazardous chemicals in their work area. Employees must also be trained whenever a new hazard is introduced into their work area. New employees must be trained at the time of initial assignment.

Discussion topics of this training must include:

- The existence of the hazard communication standard and its requirements.
- The components of the hazard communication program in the employee's workplaces.
- Operations in the work areas where hazardous chemical are present.
- Location of the written hazard evaluation procedures, communications program, lists of hazardous chemicals and the required MSDS forms.

The employee-training plan must include:

- How the hazard communication program is implemented in the workplace, how to read and interpret information on labels and MSDS, and how employees can obtain and use the available hazard information.
- The hazards of the chemicals in the work area.
- Measures employees can take to protect themselves from the hazards, such as appropriate work practices, emergency procedures and personal protective equipment to be used.
- Specific procedures put into effect by the employer to provide protection, such as work practices and the use of personal protective equipment (PPE).

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Labels and Other Forms of Warning



Labels are an important form of communication. Chemical manufacturers and importers have the responsibility of evaluation the hazards of chemicals they produce or import. Using that information, they must prepare labels for containers, which identify the hazardous chemicals they contain. Labels must show hazard warnings appropriate for employee protection. Although there are no specific requirements for size, color or any specified text, labels must be in English (and any other language deemed important to correspond with your workforce). The label must be legible and prominently displayed.

If a chemical is transferred to an unlabeled container, which is intended only for the immediate use of the employee who makes the transfer, a label is not required on the container to which the substance is being transferred.

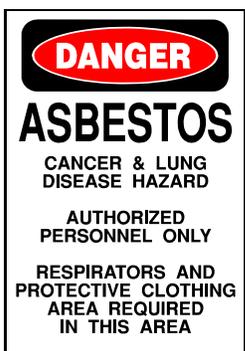


Continually and universally used in-plant containers of hazardous chemicals must be labeled, tagged, or marked with the identity of the material and appropriate hazard warnings.

With these requirements in mind, find out who is responsible for ensuring the proper labeling of in-plant containers. If you find that a label is torn or missing, notify your supervisor immediately.

Never use materials from an unlabeled container. What you don't know about the contents of an unlabeled container could be devastating to your health.

Know What You Are Handling



Did you know that the substances you may be handling on a daily basis can explode, start fires, causes skin rashes or breathing problems? Is the chemical you are handling flammable, toxic, corrosive, or reactive?

By reading container labels and the Material Safety Data Sheet (MSDS), you will be able to determine what the chemical is you are handling and how to safely use, handle, and store it. Your company makes labels and the Material Safety Data Sheets available to you, but only your good use of them can prevent illness and injury.

When employees have information about the chemicals being used, they can take steps to reduce exposure, substitute less hazardous materials, and establish proper work practices.

These efforts will help prevent the occurrence of work-related illnesses and injuries caused by chemicals.

There are four classifications of hazardous chemicals that employees will likely come into contact with. They are flammables, toxics, corrosives and reactive. Each is dangerous in their own way and must be used carefully.

Preventing accidents by knowing what you are handling is easier than dealing with accidents after they have occurred? A thorough understanding of safe chemical handling is crucial in protecting yourself, your fellow employees, and the environment around you.

What is a Material Safety Data Sheet?

The MSDS is considered the most important way in which chemical information is provided to employers and employees. The MSDS will provide you with detailed information on each hazardous chemical.



This will include its potential hazardous effects, its physical and chemical characteristics, and recommendations for appropriate protective measures.

The MSDS must be available for your review. Your company may keep the MSDS collection on file in a binder, or they have it computerized for easy access through computer terminals. As long as employees can get the information they need, any approach may be used.

Interpreting an MSDS

Although there is no specific format for the MSDS, a variety of information should be covered on the form. An MSDS will contain detailed information on the physical and chemical characteristics of the hazardous chemical, as well as known acute and chronic health effects and related health information.

The MSDS should identify exposure limits, and the carcinogenic nature of the chemical.

Most MSDS forms will outline precautionary measures, emergency and first aid procedures, and the identification of the organization responsible for preparing the sheet. A detailed summary of an MSDS is contained on the following pages.

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Material Safety Data Sheet

Section I. CHEMICAL/MATERIAL IDENTIFICATION

This section of the MSDS form will list the chemical or trade name of the product and its supplier. The manufacturer's name, address, and emergency telephone number is located in this section, along with other descriptive terms.

Section II. COMPONENTS OR INGREDIENTS

Chemical names and percentages of the chemicals that the product is comprised of are identified in this section. If companies claim their products as trade secrets, you will not find the identity of a chemical component listed in this section. However, the MSDS will still describe hazards and safety precautions of the trade secret chemicals.

Section III. PHYSICAL AND CHEMICAL DATA

Section III describes the physical and chemical characteristics of the hazardous chemical, including appearance and odor. Some of the following items may be applicable:

- a) Boiling Point
- b) Melting Point
- c) Vapor Pressure
- d) Vapor Density
- e) Evaporation Rate
- f) Specific Gravity
- g) Water Solubility
- h) PH

Section IV. PHYSICAL HAZARDS

This section gives potential flammability and explosion hazards, recommended procedures in handling these hazards, and storage considerations. Some manufacturers divide the physical hazards category into two sections entitled "Fire and Explosion Data" and Reactivity Data."



Fire and Explosion Data

The temperature at which a chemical ignites is called a flashpoint. Information such as this will be found in this section, in addition to what extinguishing media will put the fire out in a safe manner.

Reactivity Data

This area describes the incompatibilities of the chemical and whether or not the substance is stable. It is important to know the environmental concerns, such as heat or direct sunlight that could cause a dangerous reaction.

**Section V. HEALTH HAZARDS**

Symptoms such as headaches, dizziness, burns, or skin rashes could indicate overexposure to a chemical or chemicals.

First aid and emergency procedures are detailed in this section, as well as medical conditions aggravated by overexposure.

It is important to make yourself familiar with the potential health hazards involving chemicals present in your workplace. Inform your physician about your potential for exposure, so that he/she can effectively monitor your health.

Section VI. PROCEDURES AND PRECAUTIONS

There are a variety of different titles for this section including Special Protection, Personal Protective Equipment, and Safe Handling and Storage. You will find information about what forms of personal protective equipment should be worn to safely handle the hazardous material.

Certain situations will require you to wear chemically resistant clothing, gloves, headgear, respirators, footgear and/or goggles. This section would also cover engineering controls and work practices that are necessary for safely handling the products, in addition to local or general ventilation requirements.

**Section VII. SPILL AND LEAK PROCEDURES**

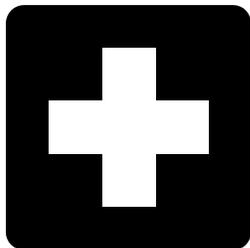
This section describes the precautions and actions that need to be taken in the event of a spill or leak. Information includes the methods of clean up and disposal.

It is important to familiarize yourself with this section so that you will be prepared in the event of an accident. You must be ready to handle any situation, which may come your way. By the time the incident becomes an emergency it may be too late.

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Section VIII. FIRST AID INFORMATION



This section will contain important first aid procedures or recommendations to follow in case of exposure. Assessing the situation and administering the proper treatment will expedite the recovery of the victim.

If necessary, do not hesitate to dial 911 for assistance. Disclosing the specific identity of a hazardous chemical to an attending paramedic, doctor, or nurse will quicken proper emergency of first aid treatment.

It would also be wise to have the Material Safety Data Sheet or labeling information available for review by medical personnel.

In addition, provide the attending medical personnel with as much information as you can about the activity of the victim at the time of exposure, as well as the amount and length of the chemical exposure.

Following the procedures outlined in this section could prove to be a lifesaver for you and your fellow employees.

Emergencies and First Aid

Once you determine you have an emergency, such as a leak or spill, it is imperative that you follow the emergency procedures outlined on the MSDS for that chemical and report it immediately to your supervisor.

He or she will take the action needed to correct the problem or evacuate the area. If there is a significant release of hazardous materials into the atmosphere, surface water or groundwater supply, notify the local emergency service agency and/or fire department.



Emergencies requiring first aid treatment must be dealt with in a critical manner. If paramedics are called to the scene, they must be given information about the nature of the injury. In order to treat the victim properly, a copy of the MSDS and label information should be provided to assist medical personnel in administering appropriate first aid techniques.

Dealing with hazardous materials is serious business. Notify your supervisor immediately when you spot something you consider to be a potential hazard.

Knowledge is power when it comes to anything affecting your safety and health at work. Staying safe and healthy is important not only to your company, but to your family as well.

Conclusion

Any safety and health program depends on commitment at every level of the organization. This is particularly true for your hazard communication program, where success may require a change in behavior. This will occur only if employees understand the program and are committed to its success.



Your company's hazard communication program is an important tool in evaluating and communicating hazards to workers and contractors at your worksite.



By communicating these hazards, steps can be taken to reduce exposures, utilize less hazardous materials, and establish proper work practices. These efforts will help prevent the occurrence of work-related illnesses and injuries by chemicals.

In the event of a chemical exposure or first aid emergency, the thoroughness of an accident investigation will be vital in determining preventive measures for use in the future. Be sure to have the proper investigation forms available to address specific concerns.

Finally, if you have any questions regarding the chemicals you use, ask your supervisor or your company's responsible safety professional. Handling hazardous materials safely requires appropriate training and constant vigilance on the part of all members of your organization.

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Test Your Knowledge

1. The Hazard Communication Standard covers chemicals that are ____.
 - a) liquids, solids, and gases
 - b) gases, vapors, solids, and liquids
 - c) liquids, solids, gases, vapors, fumes, and mists
 - d) liquids only
2. A Hazard Communication Plan must include ____.
 - a) a chemical inventory
 - b) Material Safety Data Sheets
 - c) labeling requirements
 - d) All of the above.
3. The evaporation rate of a chemical can be found in the ____ section of the MSDS.
 - a) Physical Hazards
 - b) Physical and Chemical Data
 - c) Health Hazard
 - d) Spill and Leak Procedures
4. Unlabeled containers are permitted in your workplace if ____.
 - a) everyone will use the contents safely
 - b) used by the company supervisor
 - c) the contents are disposed of at the end of the day
 - d) you put material in the container for immediate use
5. Training must be completed ____.
 - a) each year, by every employee
 - b) annually or when a new hazard is present
 - c) once every three years
 - d) at the beginning of every calendar year
6. Headaches, dizziness, burns, and skin rashes ____.
 - a) require first aid treatment for chemical exposure
 - b) do not require treatment
 - c) are symptoms of an overworked employee
 - d) can be treated with cool water.
7. Requirements for clean up and disposal of spills and leaks ____.
 - a) are outlined on the MSDS
 - b) are known only by the supplier
 - c) include administering CPR
 - d) all of the above
8. Disclosing the chemical name to medical personnel will ____.
 - a) assist in determining the type of first aid administered
 - b) take too much time to figure out
 - c) not serve as beneficial information
 - d) all of the above
9. The temperature at which a chemical ignites is called ____.
 - a) an explosion
 - b) a reaction
 - c) a flashpoint
 - d) an overexposure
10. Personal protective equipment items include ____.
 - a) gloves
 - b) respirators
 - c) chemically resistant clothing.
 - d) all of the above

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Employee Training Documentation

- I have thoroughly read the HAZARDOUS MATERIALS MANAGEMENT Handbook, which was provided to me as part of the annual training/retraining for my company.
- I have been tested on this information contained in the handbook and understand that I must ask my supervisor if I have any further questions.

Company Name _____

Employee's Signature

Date

Supervisor's Signature

Date

NOTE: This receipt shall be read and signed by the employee and included in the employee's training file. A responsible company supervisor must also sign this receipt verifying training.