



HAZARD COMMUNICATION AIDE

Your “Right-to-Know” Guide



CSULB Safety & Risk Management
January 2002

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California State University, Long Beach has developed this guide as an aide to help educate and to increase employee awareness of hazardous substances in the workplace.

Overview of the Hazard Communication (HazCom) Regulation

The Hazard Communication Regulation, Title 8, California Code of Regulations, Section 5194, is intended to ensure that both employers and employees understand how to identify potentially hazardous substances in the workplace, understand the health hazards associated with these chemicals, and follow safe work practices. Employees shall also be trained in what precautions to take in order to prevent exposure and what to do if they are accidentally exposed to potentially hazardous substances or harmful physical agents. No employee shall engage in or be required to perform any task that is determined to be unsafe or unreasonably hazardous. A copy of the CSULB Hazardous Communication Aide can be obtained at:

<http://daf.csulb.edu/forms/subject.html#safetyrisk>



What is the purpose of this Program?

The purpose of this program is to improve the detection, treatment, and prevention of occupational illness and disease and to support workers' right to know. It is further intended to ensure that employees have the information necessary for them to know when they are working with or may be exposed to hazardous substances. Three questions you should be able to answer after training are:

1. What chemicals do I work with?
2. What are the hazards associated with these chemicals?
3. How do I protect myself?

The HazCom Program includes information on container and warning labels, Material Safety Data Sheets (MSDSs), and training.

When do you have to be trained?

New employees that work in departments that use, handle, or store hazardous substances must be trained initially, and whenever a new hazard is introduced to their work area. All employees, who, in the course of their regular work assignment, may be exposed to hazardous materials must be instructed in Hazard Communications by their Manager/Supervisor prior to starting their work assignments.

What do I need to know about container labels?

Read them! The original containers must be labeled with:

- ✓ the identity of the hazardous substance,
- ✓ the appropriate hazard warnings, and
- ✓ the name and address of the manufacturer.

All containers (even portable or secondary containers) of hazardous substances must be labeled, tagged or marked with the identity and appropriate warning hazards. Hazard warnings are any words, pictures, symbols, or combination thereof appearing on a label, which conveys health and physical hazards of the substance in the container.

What is a Material Safety Data Sheet (MSDS)?

Material Safety Data Sheets, or MSDSs, provide information on each hazardous chemical such as the product name, chemical name, routes of entry, health hazards and symptoms of overexposure, special chemical and physical characteristics, protective measures, precautions for safe handling, emergency and first-aid procedures, and use and storage of each chemical. Your department is required to maintain a copy of the MSDS for each

hazardous substance it uses, and ensure that this information is readily accessible to you during each work shift. You should use these data sheets to educate yourself on the hazards associated with the chemicals found in your workplace.

Some of the common terms found on the MSDS are:

- ✓ Acute effects – usually occur as a result of short-term exposures, and are of short duration.
- ✓ Chronic effects – generally occurs as a result of long-term exposure, and are of long duration.
- ✓ Corrosive – a substance that causes visible destruction of, or irreversible alterations in, living tissue by chemical action at the site of contact.
- ✓ Flammable – materials that catch fire easily burn rapidly, spread quickly, and give off intense heat.
- ✓ Irritant – a substance, which is not corrosive, but which causes a reversible inflammatory effect on living tissue by chemical action at the site of contact.
- ✓ Routes of entry – a substance may enter the body via inhalation, skin absorption or ingestion.
- ✓ Sensitizer – a substance that causes a substantial proportion of exposed people to develop an allergic reaction in normal tissue after repeated exposure to the substance.
- ✓ Incompatible – substances that should not be mixed due to the reactivity between the substances.



How to use a Material Safety Data Sheet (MSDS)

The MSDS for each hazardous chemical in your work area tells you how to use, handle, and store the chemical safely. Each MSDS may look a little different, but all give you the same basic information. A typical MSDS will include the following:

1. *PRODUCT IDENTIFICATION*

This is usually the first section of the MSDS and helps you identify the chemical. It lists the name of the chemical, any trade names, and the chemical manufacturers name and address. Physical data like appearance, odor and other characteristics may also appear here. Emergency telephone numbers are also listed.

2. *HAZARDOUS INGREDIENTS*

Sometimes referred to as "Toxicity Hazards". This section lists the chemicals that meet any of the criteria defining a hazardous material. It usually lists the concentrations of the chemical to which you can safely be exposed, often listed as the permissible exposure limit (PEL) or the threshold limit value (TLV). These safe exposure limits are figures for average exposures over a typical 8-hour work shift.

3. *PHYSICAL DATA*

This section describes the chemical's appearance, odor, and other physical characteristics.

4. *HEALTH HAZARD DATA*

This section lists symptoms of overexposure, such as a skin rash, burn, headache, or dizziness. It also tells you first aid and emergency procedures in case of overexposure, such as flushing your exposed skin with running water for 15 minutes. It may also list any medical conditions that can be aggravated by exposure to the chemical.

5. FIRE AND EXPLOSION HAZARD DATA

Here you can find at what temperature a liquid gives off enough flammable vapor to ignite, called the flash point. This section also lists extinguishing media - what will put out the fire safely - such as water, dry chemical, carbon dioxide, & halon.

6. REACTIVITY DATA

This section relates to the safe storage and handling of hazardous materials. This section will have any warning necessary due to the instability or incompatibility to common substances or circumstances. "Incompatibility" refers to materials that may cause the chemical to burn, explode, or release dangerous gases when mixed. "Instability" refers to the environmental conditions such as heat or direct sunlight that may cause a dangerous reaction.

7. SPILL OR LEAK PROCEDURES

This section describes the procedures for cleanup and disposal with an emphasis on precautions to be taken during the cleanup detail. Remember, you may clean up a small spill only if you have been trained and are familiar with the material. Notify Campus Police at 911 or Safety and Risk Management at extension 5-2378 to report large spills or leaks.

8. SPECIAL PROTECTION

This section describes the kind of hand, body, eye, and respiratory protection that could become necessary depending on the chemical used. Recommendations for ventilation systems are also included in this section.

9. SPECIAL PRECAUTIONS

This section lists any other special precautions to follow when handling the chemical. This may include what to have nearby in order for trained personnel to clean up a spill or to put out a fire, and what safety signs to post near the chemical. This section also lists any other information not covered elsewhere in other parts of the MSDS.

Where can I find a current inventory of chemicals in my department and whom should I contact to obtain an MSDS?

Your department manager/supervisor is responsible for developing and maintaining an inventory of hazardous substances present in all work areas within the department. Managers/supervisors are also responsible for maintaining a file of MSDS sheets in a location that is readily accessible to all department employees. If your manager/supervisor cannot locate a MSDS you can contact the Hazardous Materials Specialist at the office of Safety and Risk Management.

What should I know about the chemicals I work with?

Be certain that you understand the danger of chemicals and equipment with which you work. If you are not certain of the potential hazards, consult your supervisor and the Material Safety Data Sheet (MSDS). You will need to be familiar with appropriate work practices, emergency procedures and personal protective equipment to be used. Any questions should be directed to your department manager/supervisor.

Do not work with a hazardous material
until you have reviewed the MSDS!

Warning signs should be posted when hazards, such as radiation, lasers, flammable materials, biological hazards, mechanical hazards, or other special hazards exist.

What if I am requested to perform a hazardous non-routine task?

Periodically, your supervisor may request you to perform a non-routine task involving hazardous materials. Prior to starting work on such projects, every supervisor is responsible for informing the employee about hazards to which they may be exposed during such activity. This information will include:

- ✓ Specific hazards of working with the hazardous materials.
- ✓ Protective/safety measures which must be utilized.
- ✓ Measures that your supervisor has taken to lessen the hazards including ventilation, respiratory protection, the presence of another employee and emergency procedures.

What do I do if a chemical spill or release occurs?

You may clean the spill if:

- ✓ You have been properly trained.
- ✓ The amount spilled or released is a small quantity.
- ✓ There is a low hazard associated with this chemical.
- ✓ You are familiar with this chemical and its hazards.

Use personal protective apparel, including eye protection, gloves, coveralls, respirators, and other protective equipment, as the job requires.

If you have not been trained or it is a large or more dangerous spill:

- ✓ Immediately call Campus Police at 911.

If you have questions or concerns:

- ✓ Call Safety and Risk Management at extension 5-2283.

Who is responsible for informing outside contractors of chemical safety?

To ensure that outside contractors work safely at CSULB, it is the responsibility of Physical Planning and Construction to provide contractors and sub-contractors with the following information:

- ✓ Hazardous substances to which they may be exposed while on the job site.
- ✓ Precautions that the contractor's employees must take to lessen the possibility of exposure by usage of appropriate protective measures.

What are my rights as an employee?

You should personally receive information regarding hazardous substances to which you may be exposed to in your work area. This information can also be shared with your physician and collective bargaining unit representative.



When new hazardous substances are introduced in your area, your supervisor is responsible for reviewing the new item and informing you of any hazards associated with the use of the new item.

Hazard Communication Quiz

(Multiple Choice, Circle Correct Answer)

1. What is the purpose of this program?
 - A.) To help employees how to identify potentially hazardous substances in their workplace.
 - B.) To help employees how understand the health hazards associated with hazardous substances found in their workplace.
 - C.) To help employees determine what types of precautions to take when working with hazardous substances.
 - D.) All of the above.
2. All containers of hazardous substances must labeled with the identity of the hazardous substance, and the _____ .
 - A.) spill or leak procedures
 - B.) routes of entry for the substance
 - C.) appropriate hazard warnings
 - D.) expiration date
3. What does a Material Safety Data Sheet(MSDS) tell an employee?
 - A.) How much of the hazardous substance to use.
 - B.) How to report data from chemical experiments.
 - C.) How to use, handle, and store chemicals safely.
 - D.) None of the above.
4. When is your supervisor/manager required to review and inform you about specific hazardous substances?
 - A.) Once a year.
 - B.) Once every six months.
 - C.) Every other year.
 - D.) Whenever a new hazardous substance is introduced into your work area.
5. What are your rights as an employee?
 - A.) To personally receive information regarding hazardous substances located in your work area.
 - B.) To refuse to work with any hazardous substance you have not received information/training on from your supervisor/manager.
 - C.) None of the above
 - D.) All of the above
6. What should you do if you come happen to come across a large chemical spill?
 - A.) Attempt to clean it up, while holding your breath.
 - B.) Grab a fire extinguisher and wait to see if the spill catches on fire.
 - C.) Remove yourself away from the spill area and call University Police at 911.
 - D.) None of the above

Use the Ammonia, Household 3.5% Sudsy MSDS to answer the following questions.

1. Which ingredient in this product has the least % by weight? (Section 2)
2. What are the primary routes of entry into the body? (Section 3)
3. What first aid measures should be taken if this product gets into the eyes or on the skin? (Section 4)
4. What would you do if this product were inhaled? (Section 4)
5. What will you do if a small spill occurs? (Section 6 if properly trained & page 4 of guide if either trained or untrained)
6. What type of eye protection would you wear when using this product? (Section 8)
7. What is the percent of volatiles released into the air from this product? (Section 9)
8. How would you detect the presence or release of this product? (Section 9)
9. What is the pH of the product? (Section 9)
10. What types of chemicals are incompatible with ammonia? (Section 10)

Answers are after the MSDS



Ashland Chemical Co.

Date Prepared: 01/06/98
Date Printed: 06/22/99
MSDS No: 999.0030808-006.003I

AMMONIA, HOUSEHOLD 3.5% SUDSY

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Material Identity

Product Name: **AMMONIA, HOUSEHOLD 3.5% SUDSY**

General or Generic ID: ALKALI

Company	Emergency Telephone Number:
Ashland Chemical Co.	1-800-ASHLAND (1-800-274-5263)
F.O. Box 2219	24 hours everyday
Columbus, OH 43216	
614-790-3333	Regulatory Information Number: 1-800-325-3751

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient(s)	CAS Number	% (by weight)
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WATER	7732-18-5	91.0- 95.0
AMMONIUM HYDROXIDE	1336-21-6	5.0- 9.0
AMMONIA	7664-41-7	2.1

3. HAZARDS IDENTIFICATION

Potential Health Effects

Eye: Can cause severe eye irritation. Symptoms include stinging, tearing, redness, and swelling of eyes. Can injure eye tissue. Additional symptoms of eye exposure may include: blurred vision.

Skin: Can cause severe skin irritation. Symptoms may include redness and burning of skin, and other skin damage. Additional symptoms of skin contact may include: skin blistering.

Swallowing: Swallowing this material may be harmful or fatal. Symptoms may include severe stomach and intestinal irritation (nausea, vomiting, diarrhea), abdominal pain, and vomiting of blood. Swallowing this material may cause burns and destroy tissue in the mouth, throat, and digestive tract. Low blood pressure and shock may occur as a result of severe tissue injury.

Inhalation:

Breathing of vapor or mist is possible.

Symptoms of Exposure:

Cough, shortness of breath, difficult breathing, lung edema (fluid buildup in the lung tissue).

Target Organ Effects:

No data

Developmental Information:

No data

Cancer Information:

No data

Other Health Effects:

No data

Primary Route(s) of Entry:

Inhalation & skin contact.

4. FIRST AID MEASURES

Eyes If material gets into the eyes, immediately flush eyes gently with water for at least 15 minutes while holding eyelids apart. If symptoms develop as a result of vapor exposure, immediately move individual away from exposure and into fresh air before flushing as recommended above. Seek immediate medical attention.

Skin Immediately flush skin with water for at least 15 minutes while removing contaminated clothing and shoes. Seek immediate medical attention. Wash clothing before reuse and discard contaminated shoes.

Swallowing Seek immediate medical attention. Do not induce vomiting. Vomiting will cause further damage to the mouth and throat. If individual is conscious and alert, immediately rinse mouth with water and give milk or water to drink. If possible, do not leave individual unattended.

Inhalation If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen.

Note to Physicians

Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: skin, lung (for example, asthma-like conditions).

5. FIRE FIGHTING MEASURES

Flash Point

Not applicable

Explosive Limit

Not applicable

Autoignition Temperature

No data

Hazardous Products of Combustion

May form: ammonia.

Fire and Explosion Hazards

No data

Extinguishing Media

Water fog.

Fire Fighting Instructions

Water may be used to keep fire-exposed containers cool until fire is out. Wear a self-contained breathing apparatus with a full face piece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment. Refer to the personal protective equipment section of this MSDS.

NFPA Rating

Health - 3, Flammability - 1, Reactivity - 0

6. ACCIDENTAL RELEASE MEASURES

Small Spill

Absorb liquid on vermiculite, floor absorbent, or other absorbent material and transfer to hood. Flush area with water.

Large Spill

Prevent run-off to sewers, streams or other bodies of water. If run-off occurs, notify proper authorities as required, that a spill has occurred. Persons not wearing protective equipment should be excluded from area of spill until cleanup has been completed. Stop spill at source, dike area of spill to prevent spreading, pump liquid to salvage tank. Remaining liquid may be taken up on sand, clay, earth, floor absorbent, or other absorbent material and shoveled into containers.

7. HANDLING AND STORAGE

Handling

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection

Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. Consult your safety representative.

Skin Protection

Wear resistant gloves such as: neoprene, nitrile rubber, butyl rubber, To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

Respiratory Protections

If workplace exposure limit(s) of product or any component is exceeded (see exposure guidelines), a NIOSH approved air-supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH respirators (negative pressure type) under specified conditions (see your Industrial Hygienist). Engineering or administrative controls should be implemented to reduce exposure.

Engineering Controls

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:(for product) > 212.0 F (100.0 C) @ 760 mmHg

Vapor Pressure: No data

Specific Vapor Density: No data

Specific Gravity: .985 @ 60.00 F

Liquid Density: .820 lbs/gal @ 60.00 F .985 kg/l @ 15.60 C

Percent Volatiles: 100.0%

Evaporation Rate: SLOWER THAN ETHYL ETHER

State: LIQUID

Physical Form: HOMOGENEOUS SOLUTION

Color, Appearance, Odor: COLORLESS, SUDSY, PUNGENT ODOR

PH: 11.8

10. STABILITY AND REACTIVITY

Hazardous Polymerization: Product will not undergo hazardous polymerization.

Hazardous Decomposition: May form ammonia.

Chemical Stability: Stable.

Incompatibility:

Avoid contact with: alkali metals, brass, copper, hypochlorites, iron, metallic mercury, silver, strong acids, strong alkalis.

11. TOXICOLOGICAL INFORMATION: No data

12. ECOLOGICAL INFORMATION: No data

13. DISPOSAL CONSIDERATION: Waste Mgmt Info: Dispose of in accordance with all applicable local, state and federal regulations.

14. TRANSPORT INFORMATION

DOT Information - 49 CFR 172.101

DOT Description:

NON-REGULATED BY D.O.T.

Container/Mode:

55 GAL DRUM/TRUCK PACKAGE

NOS Component:

None

RQ (Reportable Quantity) - 49 CFR 172.101

Product Quantity (lbs)	Component
4789	AMMONIA
13889	AMMONIUM HYDROXIDE

15. REGULATORY INFORMATION

US Federal Regulations

TSCA (Toxic Substances Control Act) Status

TSCA (UNITED STATES) The intentional ingredients of this product are listed.

CERCLA RQ - 40 CFR 302.4(a)

Component	RQ (lbs)
AMMONIUM HYDROXIDE	1000
AMMONIA	100

SARA 302 Components - 40 CFR 355 Appendix A

Section 302 Component(s)	TPQ (lbs)	RQ (lbs)
AMMONIA	100	100

Section 311/312 Hazard Class - 40 CFR 370.2

Immediate (X) Delayed () Fire () Reactive () Sudden Release of Pressure ()

SARA 313 Components - 40 CFR 372.65

Section 313 Component(s)	CAS Number	%
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State and Local Regulations

California Proposition 65: None

16. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

Answers

1. Ammonia makes up 2.1 % of the total product. This product is mostly composed of water (91% -95%). *(Section 2, Composition/Information on Ingredients)*
2. The primary routes of entry, or how this chemical is most likely to enter your body, are by inhalation and skin contact. *(Section 3, Hazards Identification)*
3. The first aid measures that you would take if a person was to get in the eyes or on the skin is to immediately flush eyes or skin for at least 15 minutes, and then seek medical attention. *(Section 4, First Aid Measures)*
4. If this product were inhaled, you would move the individual away from the exposure into fresh air, and then seek medical attention. *(Section 4, First Aid Measures)*
5. If a small spill occurred and:
 - ✓ You have been properly trained,
 - ✓ The amount spilled or released is a small quantity,
 - ✓ There is a low hazard associated with this chemical,
 - ✓ You are familiar with this chemical and its hazards,Then you would follow instructions on the MSDS. *(Section 6, Accidental Release Measures and also Page 4 of Guide).*

If it is a large spill or more dangerous spill and/or have not been trained:

- ✓ You would immediately call University Police at 911.

If you have questions or concerns then call the Office of Safety and Risk Management at extension 2283.

6. You may wear chemical splash goggles or other safety glasses to protect your eyes. *(Section 8, Exposure Controls/Personal Protection)*
7. This product releases 100% volatiles into the air. This means that 100% of this product will evaporate into the air if the container is not properly sealed. *(Section 9, Physical and Chemical Properties)*
8. You would be able to detect a presence or release of this product by the pungent odor (smell) and also see a colorless and sudsy liquid (sight). *(Section 9, Physical and Chemical Properties)*
9. The pH of the product is 11.8. A low pH number means that this product is extremely acidic (1,2, or 3). A pH of 7 is a neutral product (water). When the pH is high, such as ammonia, then it is considered "basic". A "basic" chemical (10, 11 or 12) is very irritating and will damage tissues that it comes into contact with. *(Section 9, Physical and Chemical Properties & Section 3, Hazards Identification)*
10. Ammonia is incompatible with a variety of chemicals. This means that you do not want to mix them together because they will form a product that is potentially dangerous. Hypochlorites are listed on the MSDS as being incompatible with ammonia, and the common name for Hypochlorites is bleach. You do not want to mix ammonia and bleach because it will form a poisonous gas that could be lethal. *(Section 10, Stability and Reactivity)*

EMPLOYEE ACKNOWLEDGEMENT

HAZARD COMMUNICATION AIDE “Your Right-To-Know” Guide

California State University, Long Beach

I have read the “The Hazard Communication Aide - - Your Right to Know Guide”,
completed the quiz and reviewed the answers.

Employee Name (print) _____

Dept. _____ Ext.: _____

Signature _____ Date: ___/___/___

**THE SIGNED EMPLOYEE ACKNOWLEDGEMENT SHOULD BE GIVEN TO
YOUR MANAGER/SUPERVISOR SO IT MAY BE PLACED IN YOUR
DEPARTMENTAL PERSONNEL FILES**



THANK YOU!!