Hazard Communication

'Employee's Right to Know'

INSTRUCTOR'S TRAINING MANUAL

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TABLE OF CONTENTS

TRAINING REQUIREMENTS

All Employees within a given facility where Hazardous Chemicals are used are subject to the Hazard Communication (HAZCOM) Program. This includes employees who do not have direct contact with chemicals, such as an office employee or sales representative. The fact that they are in the same building potentially exposes them to Hazardous Chemicals.

Employees should be 'effectively' trained to know the hazards of the chemicals they work with and how to protect themselves. This includes knowing where material safety data sheets are located and how to read them.

It is imperative that all employees be given thorough training prior to their first work day, especially since the HAZCOM Standard is often the number one most often cited regulation.

Although thorough training is only required once, OSHA says the training must be effective and that all good faith efforts should be taken to ensure compliance. OSHA recognizes Annual Training as 'good faith efforts'. Therefore, your company should strive to train on an annual basis.

Furthermore, to ensure effective training, employees should be tested and required to sign certificates attesting to the fact that they truly understand the hazards of the chemicals they work with and how to protect themselves.

For non-English speaking employees, they need to be instructed in a way they understand, i.e. if they speak Spanish, then they should receive training in Spanish. However, one fact can complicate this and that is MSDS sheets are not required to be in any language except English. Therefore, the information on the MSDS must be relayed to the employee through a translator.

TRAINING CHECKLIST

1. Ensure all appropriate employees are identified for training.

2. Identify anyone of the above employees who may have learning disabilities or may have difficulty with English, and make arrangements for their training.

3. Designate where training will take place and make sure everyone knows time/place.

4. Ensure you have enough training materials for all participants. You will need the following training materials:

    a. Student Guides
    b. Tests/Answer Sheets
    c. Training Certificates
    d. Hazard Communication Program
    e. MSDS Book
    f. Sample Labels
    g. Ink pens for taking test and signing certificates. (not pencils!)
    h. Class sign-in sheet.

Training Sequence

1. **Review checklist to make sure everything is ready.**
2. **Have employees sign the Class Sign-In sheet.**
3. **Pass out training guides to employees.**
4. **Give them a brief introduction and cover section 1.**
5. **Review the remainder of the training guides with them. Encourage discussion or questions.**
6. **Following your teaching in the student guide, ask for any remaining questions.**
7. **Give out test and instructions.**
8. **Following the test, have employees trade tests and grade. Answer any questions.**
9. **Pass out Training Certificates to be filled out and signed.**
10. **Collect tests and certificates.**

Class Introduction to Hazard Communication

'Employees Right to Know'

Introduction

My name is.....

Today we are going to talk about one of the most important safety programs as it relates to preventing serious accidents, and that is Hazard Communication also known as the "Employee's Right To Know".

Approximately 2.8 million serious non-fatal workplace injuries or illnesses occur each year. Furthermore, on average, 17 workers die each day from injuries sustained in the workplace. While these statistics are sobering, many of these injuries could have been reduced or eliminated had these employees known the hazards of the chemicals they worked with and the knowledge of how to protect themselves. This brief class will give you a good overview of the basics of what kind of chemicals are considered hazardous and what steps should be taken to protect yourself.

Student Guide Instruction

You will be instructed on the key aspects of Hazard Communication. Topics we will cover include areas such as Background of HAZCOM, Material Data Safety Sheets (MSDS), Labeling Requirements, Hazardous Materials Definitions, etc.

Test

Following the guidebook instruction, I will administer a 32-question test. You may use any notes you take, as well as the student guide.

Following the test you will trade papers and I will review the answers. Also, this is your last opportunity in class for you to ask questions, especially for those questions on the test you may have answered incorrectly. You can of course ask questions later outside of class!

Certification

Following the test, you will fill out certifications and return along with the test.

HAZARD COMMUNICATION

"Employee Right to Know"

Class Outline

- Introduction
- MSDS Review
- Questions and Answers
- Test
- Sign Certificates

Table of Contents

Hazard Communication Student Guide

Section:

I. What is Hazard Communication or Employee Right to Know?

A. There are various **'Right to Know'**-type regulations, requiring that different groups of people be guaranteed the "Right to Know" about the chemicals used or processed in their communities. In this case the ***"Employee's Right to Know"*** is based on the **Hazard Communication Standard**.

B. **Hazard Communication (HAZCOM)** is a regulatory requirement based on the Federal Regulation CFR 1910.1200 and its purpose is to ensure employees who use/handle hazardous chemicals do so, in a safe manner. This is accomplished by effectively instructing employees in the potential hazards of the chemicals they work with as well as how to protect themselves from those hazards. **Hazardous Chemicals** are defined as any chemical/material/substance that poses a threat to human health and/or the environment if they were to come into contact with them.

II. Regulatory Background

A. Back in the mid-1980's there was a lot of concern about how to prevent a ***'Bhopal, India'*** -type of environmental disaster where large amounts of toxic gases were released and subsequently killed several hundred unsuspecting people around a Union Carbide plant. In this country, the fear of this type of disaster led to a series of laws known as **"Community Right to Know"**. These laws eventually evolved into various forms one of which is, the Employee's Right to Know, based on the HAZCOM Standard mentioned above.

III. Basic Hazard Communication Program Requirements.

A. The HAZCOM Standard requires that your company provide you with the necessary knowledge and training to inform you of the hazards of the chemicals you work with (or are exposed to) and how to protect yourself from those hazards. Employees must be trained on how to locate and read **Material Safety Data Sheets (MSDS)**. MSDSs (which will be described in greater detail in the next section) must be made available to employees at all times for those chemicals they may be exposed to. In fact, your company must have a MSDS for every hazardous chemical/substance in your facility.

B. Employees are required to read the specific MSDS for those chemicals they work with or are exposed to and to ensure that all containers are labeled properly. Also, the law requires that companies specifically inform employees about the hazardous chemicals they work with in terms of those chemical's ***"Acute" or "Chronic" Health Hazards*** (short-term and long-term hazards respectively).

C. Furthermore, the law requires that someone in your company is designated as the HAZCOM Program Administrator. In fact our company's administrator is; _____.

D. Employees are to know the location of the HAZCOM Program and MSDSs. Our company's program is in _____, and our MSDS are located at _____.

IV. What are MSDSs?

A. As mentioned above, the acronym MSDS stands for **M**aterial **S**afety **D**ata **S**heet. MSDSs are informational bulletins that detail the various hazards of a given chemical. These hazards basically fall into two categories, ***Physical*** and ***Health Hazards***.

B. **Physical Hazards** are whether or not a chemical is explosive, reactive, unstable or flammable. **Health Hazards** are expressed in terms of the chemical's short-term or long-term potential hazards to the health of an employee. The terms describing short-term/long-term hazards are, (as mentioned previously) ***Acute*** and ***Chronic Health Hazards***.

V. Example of Hazardous Materials or Substances.

A. Based on the definition of Hazardous Materials in Section I what are some examples of Hazardous Chemicals in your work areas?

1. _____
2. _____
3. _____
4. _____
5. _____

B. These chemicals include but are not limited to solvents, cleaners, lubricants, office products such as toners, typewriter ribbons, white-out, janitorial chemical supplies, etc.

VI. Labeling Requirements

A. All chemical containers are required to be properly and legibly labeled. The law states that labels must identify the following three items.

1. Manufacturer's Name
2. Product Name or Common Name
3. Appropriate Hazard Warning

Example: Southwest Graphic, Speedy Clean, "Dangerous", Flammable, Volatile, or explosive.

B. **NOTE:** We will be discussing in greater detail your company's labeling system, when the sample MSDS is reviewed. Normally, the labels on primary or original containers have the required items. However, when secondary containers like plastic spray bottles are used, then your company (through you) must ensure that they are labeled properly. *If you find an unknown (unlabeled) material leaking from a container don't handle it!* Instead, ask your supervisor for the proper procedures for handling. How to find a Specific Material Safety Data Sheet

VII. How to find a Specific Material Safety Data Sheet

A. Go to the location mentioned in Section III and find the HAZCOM Program and/or MSDS Book. Locate the **Chemical List Tab** in the binder. There you will find an index of all the chemicals your company uses in alphabetical order by manufacturer as well as where they are located. On the left-hand side of the page you will see index numbers. These index numbers indicate which numbered MSDS has the information for the chemical you need to look up..

B. Therefore, all you have to do is find the manufacturer's name for any chemical you need information for, and locate it on the list. Once you've done that, go to the MSDS indicated by the index number. This is a fairly simple process. The difficult part is reading an MSDS, especially if you have never done this in the past. Below is a sample excerpt of a generic chemical list.

List of Hazardous Substances

Customer No. 1234

ABC Graphics, Inc.
Peter Parker
123 Right Way Ave.
Anywhere, AZ, 85044
(800) 123-4567

5/23/2004

Index Number	Manufacturer	Product	Area Used	MSDS
7	Sanford	Sharpie Black Marker	Ship/Rec.	Yes
11	Shell	Isopropyl Alcohol	Press	Yes
21	Southwest Graphic	Film Clean	Pre-Press	Yes
99	**Southwest Graphic**	**Speedy Clean**	**Press**	**Yes**
13	Spectrum Ink Co.	Black Ink	Press	Yes
86	WD-40	WD-40 Aerosol	Bindery	Yes

VIII. Sample Material Safety Data Sheet

A. The following MSDS is for a fictitious product called ***Speedy Clean***. This is a solvent that is very similar to what you are using. By reviewing this MSDS, you will get a better idea of how to educate yourself on the hazardous materials you work with and how to protect yourself.

MATERIAL SAFETY DATA SHEET

1.

PRODUCT NAME: Speedy Clean
PRODUCT CODE: SGC275

HMIS CODES: H F R P
1. ***H=Health (blue)*** 2 3 0 X
F= Flammability (red)
R=Reactivity (yellow)
P=Personal Protective Equipment (white)

2. ***MSDSs from other manufacturers may have different formats!***

========== SECTION 1 MANUFACTURER IDENTIFICATION ==========

3. MANUFACTURER'S NAME: Southwest Graphic Chemical
ADDRESS: 1010 Industrial Parkway
Cactus, AZ 85285

4. EMERGENCY PHONE: (800) 424-9300
INFORMATION PHONE: (800) 123-7654
DATE REVISED: February 1, 2000
NAME OF PREPARER:

5. REASON REVISED: Update; supersedes all previous revisions.

========== SECTION 2 - HAZARDOUS INGREDIENTS/SARA III INFORMATION ==========

REPORTABLE COMPONENTS	CAS NUMBER	VAPOR PRESSURE mm Hg	@ TEMP	WEIGHT PERCENT
Petroleum Naphtha	64742-89-8	60	68° F	86
* Toluene Hazardous Air Pollutant	108-88-3			14

6. OSHA PEL: 50 ppm ACGIH TLV: N/E
PPM = Parts per Million—the lower the listed PPM the more dangerous

* Indicates toxic chemical (s) subject to the reporting requirements of Section 313 of Title III and of 40 CFR 372. All ingredients are listed on the EPA TCSA Inventory.

6. ***PEL = Permissible Exposure Limit: OSHA's airborne contamination limit that if exceeded could cause injury to an employee. (Based on a Time Weighted Average (TWA) of 8 hours)***

→ **7.**

May 5, 2006
RECEIVED
A.C.S.

========== SECTION 3 - PHYSICAL/CHEMICAL CHARACTERISTICS ==========

BOILING RANGE/POINT: 213 º F
SPECIFIC GRAVITY (H2O=1): 0.75
8. VAPOR DENSITY: Heavier than air.
EVAPORATION RATE: Faster than n-Butyl Acetate.
1.0 = Air
→ ***<1.0 = Lighter than air***
>1.0 = Heavier than air
V.O.C. (EPA METHOD 24): 6.27 lb/gl
VAPOR PRESSURE (mm Hg @ 20ºC): 60.0
SOLUBILITY IN WATER: Negligible
9. APPEARANCE AND ODOR: Clear Liquid – Petroleum Odor → ** ***Unusually strong odors are possible indications of leaks/spills.***

==========SECTION 4 - FIRE AND EXPLOSION HAZARD DATA ==========

10. FLASH POINT: 20º F
METHOD USED: TAG CC
FLAMMABLE LIMITS IN AIR BY VOLUME-LOWER: 1.0%
UPPER: 7.0%

12. EXTINGUISHING MEDIA: Foam, CO2 Dry Chemical →

Types of Fires:
A=Solid Combustibles i.e. paper, wood, cardboard
B=Chemical fires i.e. solvent, IPA, etc.
C=Electrical Fires i.e. processors, presses, etc.
D=Combustible Metals/Molten Metals

13. SPECIAL FIREFIGHTINJG PROCEDURES:
As in any fire, wear self-contained breathing apparatus (MSHA/NIOSH approved) and full protective gear. Water may not be effective to extinguish fire. Use water spray to cool fire exposed containers and to protect personnel.
→→ ***DO NOT ATTEMPT TO FIGHT/EXTINGUISH A LARGE CHEMICAL FIRE!***

UNUSUAL FIRE AND EXPLOSION HAZARDS:
Treat as a petroleum fire. Vapors can travel to source of ignition and flash back.

11. → ***FLAMMABLE = Chemicals that have a flashpoint of less than 100 degrees Fahrenheit. Ex.: Gasoline***

→ ***COMBUSTIBLE = Chemicals that have a flashpoint of greater than 100 degrees Fahrenheit Ex: Diesel Fuel***

99

Item Number

1. **HMIS Chart** (See Appendix for full HMIS Chart) HMIS= **H**azardous **M**aterial **I**dentification **S**ystem

HEALTH *(Blue)*
4 Deadly
3 Extreme Danger
2 Dangerous
1 Slight Hazard
0 No Hazard

FLAMMABILITY *(Red)*
4 Flash point below 73 degrees F.
3 Flash point below 100 degrees F.
2 Flash point below 200 degrees F.
1 Flash point above 200 degrees F.
0 Will not burn

REACTIVITY *(Yellow)*
4 Danger
3 Danger
2 Unstable
1 Normally Stable
0 Stable

PERSONAL PROTECTIVE EQUIP. *(White)*
A. Safety Glasses
B. Safety Glasses, Gloves
C. Safety Glasses, Gloves, Apron
D. Face Shield, Gloves, Apron
E. Safety Glasses, Gloves Dust Respirator
F. Safety Glasses, Gloves, Apron, Vapor Respirator
G. Safety Glasses, Gloves, Vapor Respirator
H. Splash Goggles, Gloves, Apron, Vapor Respirator
I. Safety Glasses, Gloves, Dust and Vapor Respirator
J. Safe. Glass., Gloves, Apron, Dust &Vapor Respirator
K. Airline, Hood or Mask, Gloves, Full Suit, boots
X. Ask your supervisor for guidance.

2. **Product Name**
3. ***Manufacturer's Name***: Required for all MSDSs. *MSDSs have many various possible formats*.
4. ***Emergency Phone***: Number for *Chemtrec*.
5. ***Information Ph***: Call if you need more information.
6. **Section 2 Hazardous Ingredients/SARA III**
   This section basically covers when or if a company needs improved ventilation or needs to require employees to use respiratory protection. Respirators would be required if the air is contaminated above a permissiblr exposure limit (PEL). For example, if the air tested 100 ppm for Petroleum Naphtha, then that would mean that the employees working in this contaminated area would have to wear respirators since the PEL for Naphtha as you can see is 50 ppm.
7. Time/Date Stamp: ACS dates the MSD sheets to confirm the date received from the manufacturer.
8. **Section 3 Physical/Chemical Characteristics**
   Vapor Density: This is important for flammable/combustible liquids, since they normally have heavier than air vapors. These heavier than air vapors have a greater tendency to concentrate and seek out ignition sources, therefore become an explosion hazard. Example: gasoline vapors around a hot water heater, or press wash vapors to an arcing electric motor.
9. ***Appearance and Odor***: The MSDS will give a brief description as to what the chemical looks like and smells like. In this case, a strong petroleum odor could indicate that a leak or spill has occurred.
10. **Section 4 Fire and Explosion Hazard Data**
    Flashpoint: 20 degrees F. Flashpoint is the minimum temperature at which a liquid would ignite if the vapors came into contact with an ignition source. The lower the flashpoint, the more flammable the chemical.
11. Terms Flammable/Combustible. (See MSDS definitions)
12. ***Extinguishing Media***: i.e. What type of fire extinguisher should you use to put out a small fire. If you do use a general purpose dry chemical extinguisher remember the P.A.S.S. Method Acronym.
    P = Pull the pin to unlock extinguisher handle.
    A = Aim nozzle at base of flame.
    S = Squeeze the handle firmly.
    S = Sweep nozzle side to side (while aiming at base of flame)
    NOTE: If you have electronic fires especially on expensive equipment use a Halon extinguisher. Halon extinguishers emit a gas that removes oxygen from a fire without leaving a foam or any other type residue.
13. ***Special Fire Fighting Procedures***. Do not attempt to fight a large chemical fire because of the danger of breathing in toxic smoke. Furthermore, do not attempt to fight a fire when:
    a. You are not trained or do not know how to use a fire extinguisher.
    b. The fire is spreading beyond the spot where it started.
    c. The fire can block your only escape route.
    d. You don't have adequate fire fighting equipment or training.
    e. There is a possibility that the substance burning could be producing toxic smoke or fumes.

========== SECTION 5 - REACTIVITY DATA ==========

14 STABILITY: Stable → ***STABLE= Substance which will remain stable when exposed to heat or temp. extremes, shock, pressure, air or water. (Will not react violently)***

CONDITIONS TO AVOID: Avoid heat, sparks, flame and other sources of ignition.

15 INCOMPATIBILITY (MATERIALS TO AVOID): → ***OXIDIZERS= Chemicals that may give off/release oxygen as a by-product of a reaction.***

Avoid mixing with strong oxidizing agents. ***NOTE: Most photographic chemicals and acids are oxidizers.***

→ ***Example: Mixing Bleach and Ammonia creates Chorine Gas!***

HAZARDOUS DECOMPOSITION OR BYPRODUCTS:
Burning will produce oxides of carbon and dense smoke.

16 HAZARDOUS POLYMERIZATION: Will Not Occur.

→ ***"Reaction of molecules to form larger molecules"***
(Or in other words, it could cause a rapid chemical reaction resulting in a severe hazard.)

========== SECTION 6 - HEALTH HAZARD DATA ==========

17 INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE:
Excess vapor concentrations are attainable. Overexposure will cause irritation of the nose and throat and cause signs of nervous system depression such as headache, drowsiness, dizziness and unconsciousness.

→ ***NOTE: These symptoms will occur if employees work in contaminated atmospheres that exceed the PELs in Section 11 !!***

18 SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE:
Skin contact may cause irritation and burning. Eye contact will cause stinging, tearing, redness and swelling.

19 SKIN ABSORPTION HEALTH RISKS AND SYMPTONS OF EXPOSURE: → ***NOTE: Chemicals can be absorbed into bloodstream in as little as 15 – 20 seconds!***

There is potential for exposure by absorption through the skin, mucous membranes and eyes which could contribute to the overall exposure to the chemical Toluene which has been shown to be a developmental toxicant.

→ ***CORROSIVES = Chemicals that destroy living tissue upon contact! (I.e. acids and Alkalis)***

20 INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE:
Ingestion of this product will cause nausea, gastro-intestinal irritation, diarrhea and possible damage to vital organs. Follow first aid procedures.

→ ***DO NOT EAT OR DRINK AROUND HAZARDOUS CHEMICALS!***

21 HEALTH HAZARDS (ACUTE AND CHRONIC): → ***The two types of Health Hazards!***
Repeated or abusive breathing of concentrated vapors may affect pulmonary, cardiovascular, and central nervous systems. Repeated skin contact will dry out and crack skin. ASPIRATION HAZARD IF SWALLOWED: aspiration of product into the lungs can cause chemical pneumonitis.

→

ACUTE HEALTH HAZARD=Immediate reaction with short-term effect CHRONIC HEALTH HAZARDS=Long-term reactions with more permanent lasting effects.

22 CARCINOGENICITY= NTP CARCINOGEN: No IARC MONOGRAPHS: No OSHA REGULATED: No

→ ***CARCINOGEN = A substance which has been known to cause cancer.***

This product contains no known carcinogens.

23 MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:
Skin contact may aggravate pre-existing dermatitis. Inhalation of vapors may aggravate pre-existing asthma-like conditions.

→ ***NOTE: Some MSDSs have warnings for women using those chemicals during pregnancy!***

24 EMERGENCY AND FIRST AID PROCEDURES:

INHALATION: Remove victim to fresh air. Give oxygen if breathing is labored. Apply artificial respiration if not breathing. Seek medical help. SKIN: Remove all contaminated clothing and shoes. Wash with soap and water. Do not reuse clothing and shoes until cleaned. **EYES: Flush** with plenty of water while removing any contact lenses. Hold eyelids open and continue **flushing for at least 15 minutes**. **INGESTION: Do NOT INDUCE vomiting**. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Seek medical attention immediately.

14. Section 5 Reactivity Data

Stability: **Stable**. Remember the terms ***Stability*** and ***Reactivity*** refer to the same concept and that is, whether or not a chemical will react under normal environmental conditions, i.e. contact with air, water, temperature extremes, shock and pressure. If this chemical does react, then you would have to consider special storage considerations such as air tight containment, temperature control, water-tight, etc.

15. ***Incompatibility (Materials to Avoid)***: Sometimes mixing certain chemicals together can create adverse reactions or produce a toxic fume or smoke. Therefore, if you are unsure if mixing chemicals you work with can cause these types of reactions, then ask your supervisor. **DON'T TAKE A CHANCE!** NOTE: Some signs such as the National Fire Protection Association's (NFPA) Color Coded sign (Diamond Shaped) would have an ***"OX" for Oxidizers*** in the white square or diamond.
16. ***Hazardous Polymerization***: Will Not Occur. This is good since polymerization could release enough energy to become a potential explosion hazard.

17. Section 6 Health Hazard Data (Perhaps the most important section to you!)

Inhalation Health Risks and Symptoms of Exposure: If you work with chemicals you obviously will want to know if there are any hazards to breathing in vapors, particularly if you should happen to breath in large amounts. This paragraph will detail the vapor hazards if any.

18. ***Skin and Eye Contact Health Risks and Symptoms of Exposure***. This section details what would happen possibly, if this chemical came into contact with your skin and eyes. Therefore, to prevent these types of exposures you need to use proper eye, hand and skin protection. (To be discussed in more detail in Section 8.)
19. ***Skin Absorption Health Risks and Symptoms of Exposure***: One of the least recognized routes of exposure is skin absorption. This is why it is imperative for you to use the proper hand protection. It may be possible to be exposed to skin absorption and not realize it because the chemical may be soaking through the glove in small amounts. Be careful with Corrosives. Corrosives are chemicals that have pH factor values of 2.5 or lower (Acidic) or greater than 12.5 (Alkalis) and will destroy living tissue upon contact. The closer to 7 the better.
20. ***Ingestion Health Risks and Symptoms of Exposure***: This section explains what would happen if you accidentally ingested this chemical. Be sure to not eat close to hazardous chemicals! Remember to consider that harmful vapors can be absorbed into your food or beverage.
21. ***Health Hazards (Acute and Chronic)***: Remember chemicals have two basic categories of hazards, Physical Hazards (explosive, unstable etc.) and Health Hazards (short-term-acute and long-term-chronic). This section will tell you what if any, are the long-term and short-term health hazards associated with working with this particular chemical.
22. ***Carcinogenicity***: This section will basically indicate whether or not this chemical is carcinogenic (cancer-causing). Keep in mind that getting cancer from environmental conditions normally requires exposure to this chemical in large quantities over long periods of time. For example; tobacco. Smoking over long periods of time could lead to lung cancer.
23. ***Medical Conditions Generally Aggravated by Exposure***: Sometimes people have preexisting health conditions that make them more susceptible to exposure to chemicals than other people. These conditions can include asthma, dermatitis etc.
24. ***Emergency and First Aid Procedures***: If a chemical somehow comes into contact with your eye(s) wash both eyes and area around eyes for no less than 15 minutes. (Be sure to hold your eyelids open!) If you know that you have had a severe exposure, continue to wash your eyes until paramedics arrive. For accidental ingestion, do not induce vomiting! It is important to remember for example that if a child swallows something; to read the label on the container of the chemical they ingested to see if it says "to induce" or "not induce" vomiting. Sometimes the thing to do is to "induce vomiting", therefore be sure to follow the proper procedures! Always have the phone number for **Poison Control** at your disposal. **Note:** Sometimes inducing vomiting can cause breathing passages i.e. esophagus etc. to swell thereby cutting off breathing.

ROUTES OF EXPOSURE: Chemicals have a variety of ways of getting into the body. They can enter through inhalation of vapors, absorption through the skin or mucous membranes, eyes, or ingestion.

========== SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE ==========

25 STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: **(FOLLOW COMPANY'S EMERGENCY RESPONSE PLAN!)**
Eliminate all ignition sources. Spills should be diked and must be kept from entering the sewer. Soak up with absorbent or transfer liquid into a closed container for later disposal. Use spark-proof tools and explosion proof equipment.

26 WASTE DISPOSAL METHOD:
→ ***COMPANIES ARE FOREVER POTENTIALLY LIABLE FOR HAZARDOUS WASTE! I.e. "Cradle to Grave" responsibility.***
If this product becomes a waste, it is regulated by RCRA as spent Non-Halogenated solvent, EPA I.D. #F005. Suitable methods of disposal include reclamation or fuel blending. Contact a licensed hazardous waste hauler for more information.
→ ***DO NOT PUT HAZARDOUS WASTE DOWN THE DRAIN!!!***

27 PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:
Containers should be grounded and bonded before transferring product. Store in the original closed container away from sunlight, excess heat, sparks, flames and other sources of ignition. Avoid skin or eye contact. Avoid breathing vapors. When transferring or using this product, wear proper personal protective equipment. STORE AND HANDLE AS A FLAMMABLE LIQUID.
→ ***GROUNDING AND BONDING WILL PREVENT THE BUILDUP OF STATIC ELECTRICITY!***

OTHER PRECUATIONS/DOT INFORMATION:
California Proposition 65: The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986: WARNING: This product contains a chemical known to the state of California to cause birth defects and other reproductive harm.
DOT Proper Shipping Name: COMPOUNDS, CLEANING LIQUID (NAPHTHA), HAZARD CLASS: 3, UN NUMBER: NA1993, PACKING GROUP: II, RQ TOLUENE: 1000 LBS. Product is classified as an OSHA Class IB Flammable Liquid.

========== SECTION 8 - CONTROL MEASURES ==========

28 RESPIRATORY PROTECTION:
The use of respiratory protection is advised when concentrations exceed the established exposure limits in SECTION 2. Depending on the airborne concentration, use a respirator with appropriate **organic vapor cartridge** (NIOSH approved).

29 VENTILATION:
If current ventilation is inadequate to maintain concentrations below the established exposure limits in SECTION 2, additional ventilation or local exhaust system is required. Explosion proof electrical systems must be used.

30 PROTECTIVE GLOVES: Wear solvent resistant gloves made of **nitrile or butyl rubber**.

31 EYE PROTECTION: **Wear safety glasses with side shields**. → ***USE OF GOGGLES EVEN BETTER!***

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:
A personal protective rating of X means you must see your supervisor for guidance. OSHA regulations (29CFR Part 1910, Subpart I) require employers to evaluate Personal Protective Equipment requirements in the workplace.

WORK/HYGIENIC PRACTICES: Wash with soap and water after product contact with skin.

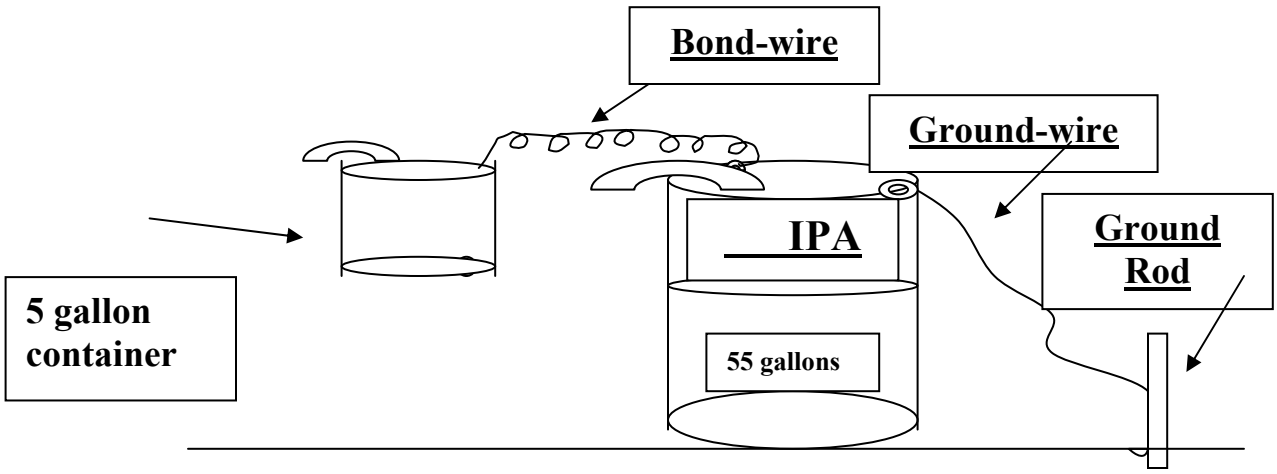
========== SECTION 9 - DISCLAIMER ==========

The information on this MSDS is believed to be accurate as of the date shown in SECTION 1. Since the use of this product is not under the control of SGC, it is the user's responsibility to determine what constitutes safe usage for a particular product. This form may be reproduced in quantities necessary to meet your requirements.

25. Section 7 Precautions for Safe Handling and Use

Steps to be taken if material is released or spilled: Consult MSDS before cleaning up any leaks or spills. Know what your company's procedures are for cleaning up spills. ***For any large leak or spill notify your supervisor***! Also, be sure to know where your company's Evacuation Assembly Area is located and the route you need to take to get there.
Our Company's Evacuation Assembly Area is located at: _____

26. ***Waste Disposal Method***: When a company produces a hazardous waste it is forever responsible for that waste. Also, if anyone knowingly mishandles a hazardous waste, they would be guilty of a felony. So be sure to handle waste properly. Do not pour anything down the drain unless authorized by your supervisor!
27. ***Precautions to be taken in Handling and Storing***: When transferring chemicals, especially flammable and combustible liquids from one container to another, always be sure to ***Ground*** and ***Bond*** those containers. **Grounding** refers to electrically connecting the primary container to the ground through a wire. This will prevent the buildup of static electricity that could ignite the vapors. **Bonding** refers to electrically connecting the dispensing container and the container being dispensed into, by way of a wire as well. Please see diagram.



Note: California companies must comply with **Proposition 65,** which is the *Safe Drinking Water and Toxic Enforcement Act of 1986*. This "Prop 65" requires that companies inform employees of any Cancer causing substances or any Reproductive Harm or Birth-defect causing chemicals they may use or come into contact with. Furthermore, the law requires that companies provide the "Prop 65" list of all the chemicals known to the state of California to cause cancer or reproductive harm. **This list is in the Right to Know Binder behind the 'Introduction' tab.**

28. Section 8 Control Measures (What type of Personal Protective Equipment you should be using.)

Respiratory Protection: If you did need to use a respirator, this is where you would find out what type of respirator to use. In this case, for this chemical, (or any other organic solvents) you would use a respirator with an "Organic Vapor Cartridge". Remember, the only time an employee would need to use a respirator is if they worked in an area in which the air was contaminated above a Permissible Exposure Limit (PEL).

29. ***Ventilation:*** Most MSDSs will tell you if there are any special ventilation requirements. However, always pour or mix chemicals in a well ventilated area!
30. ***Protective Gloves***: Always consult the MSDS to determine exactly what kind of glove to use. Because, using the wrong glove could cause harm through skin absorption, skin burns, etc.
31. ***Eye Protection***: At a minimum, use safety glasses with side-shields that are American National Standards Institute Approved (ANSI)! Also, it is even better to use goggles (if available)!

Right To Know
Training Certification

I __John Doe__, hereby certify that on _9/10/03___, the company provided me with training as prescribed by the OSHA Hazard Communication Standard 29 CFR 1910.1200.

I fully understand the material provided and I intend to follow the instruction for the safe handling of the toxic and hazardous materials that are in my work area and wear all protective clothing required.

EMPLOYEE NAME	DATE EMPLOYED	DEPT.
___John Doe_____	__1/1/95____	__Press___

_____John Doe_____

Employee Signature

_____Suzy Smith _____

Program Coordinator

_____

Class Instructor