



DEPARTMENT OF ENVIRONMENTAL QUALITY
POLICY AND PROCEDURE

SUBJECT: HAZARD COMMUNICATION PROGRAM
Date: June 1, 2004
Revised: October 23, 2006

Number: 07-6.13
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AUTHORITY

This Hazard Communication Policy and Procedure/Program is required by the Michigan Occupational Safety and Health Administration (MIOSHA) Standard Parts 92 and 430: Hazard Communication. Supporting requirements are outlined in the Collective Bargaining/Labor Agreements, Michigan Occupational Safety and Health Act/Public Act 154 of 1974 (amended in 1986), and the Michigan Right-To-Know Law/Bullard-Plawecki Employee Right-To-Know Act.

<<ISSUE>>

The Department of Environmental Quality (DEQ) has established the following Hazard Communication program, also known as a "Haz Com" or "Right-to-Know Program," to assist the department in achieving its overall goal of a safer work place. The anticipated benefits of this program include:

- prevention of chemical or other hazard related illnesses and injuries;
- overall improvement of the DEQ's health and safety program;
- improvement of employer-employee relationship by establishing regular lines of communication; and,
- compliance with MIOSHA regulations and applicable labor agreements.

The passage of the MIOSHA Hazard Communication Standard gives the DEQ the responsibility to establish a comprehensive program, which includes provisions for container labeling, material safety data sheets (MSDS), and employee information and training. This program must contain a list of the hazardous chemical(s) in each work area, the means used to inform employees of non-routine tasks, the hazards associated with chemicals contained in unlabeled containers in their work area, and methods used to inform employees and other employers (i.e., contractors) of known hazards to which they may be exposed.

In addition, state and federal law requires that each workplace centrally and conspicuously post a number of employment posters. The posting location should be an area frequented by employees, and minimally include documents such as "This Workplace is Covered by the Michigan Right-To-Know Law (Location of MSDS - CET 2105)," and "New or Revised MSDS (CET 2106)." The first poster (CET 2105) serves to remind employees of their rights under



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the Michigan Right-To-Know Law and to provide information as to the location of both MSDS and the Hazard Communication Program. The second poster (CET-2106) informs employees of any changes recently made to one or more MSDS.

The person responsible for maintaining the MSDS (i.e., District/Site Supervisor, Laboratory Safety Officer, and/or the Division Health and Safety Coordinator) shall be referred to as the **Chemical List Employee (CLE)**. This responsibility will be designated by the Division/Office Chief.

This program will be available for review by all employees. Employees are encouraged to provide feedback to their Division Health and Safety Coordinator after having reviewed any or all of these program materials. Such feedback shall be in writing. In addition to the above, the department or its Safety Committee shall periodically review this program (e.g. at least every three (3) years) to ensure its effectiveness, workability, and compliance with applicable state and federal regulations.

<<DEFINITIONS>>

Refer to Attachment A, "*Glossary of Terms.*"

<<PROGRAM/PROCEDURES>>

The Hazard Communication Program:

- ensures that all hazardous chemicals and physical agents used in the workplace are evaluated, and that information concerning health hazards are made available to those employees who may be exposed to known hazards under normal conditions of use, or in a foreseeable emergency;
- explains the content of the MIOSHA'S Hazard Communication Standard; and,
- informs employees of the presence of known hazards, the potential harmful effects of these hazards, and the appropriate control measures.

Further information about this program is available from the Division Health and Safety Coordinator or the Laboratory Safety Officer.



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This program does not apply to:

- articles or manufactured items (i.e., cosmetics, drugs/medications, foods, fragrances, etc.) intended for personal consumption or use by employees while in the workplace;
- general office supplies (i.e., desk and office cleaners, ink/toners, White-Out, etc.) and other consumer products unless the amount, duration, and frequency of use would exceed ordinary/typical consumer use;
- hazardous waste (i.e., spent solvents) that is subject to regulations established by the U.S. Environmental Protection Agency (<http://www.legislature.mi.gov/documents/1997-1998/publicact/pdf/1998-PA-0451.pdf>);
- tobacco or tobacco products; and,
- wood or wood products when the only hazard is flammability or combustibility. Wood or wood products that have been treated with a hazardous chemical including wood that may be subsequently sawed, sanded, cut (i.e., generating dust), or burned **are not exempt**.

Hazard Determination

The DEQ will rely on the manufacturer's instructions for all physical agents used in the workplace and applicable MSDS obtained from chemical suppliers to meet hazard determination requirements.

Material Safety Data Sheets (See Attachment B for example)

Material safety data sheets (MSDS) are the key to a successful hazard communication program. MSDS are designed to provide the information needed to handle a chemical safely. They identify necessary information used for training, hazard assessment, proper handling, emergency procedures, and employee Personnel Protective Equipment (PPE).

MSDS must be kept for each hazardous chemical to which employees may be exposed. The CLE shall record any new or revised MSDS, and post/update the "new or revised MSDS form" within five (5) days of receipt.

The CLE is required to maintain and update the list of hazardous chemicals purchased, used, or known to be present in the workplace. The purchaser shall immediately report new chemicals to the CLE.



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The CLE will record all hazardous chemical(s) on the chemical inventory list. *It is recommended this list be placed in the front of the MSDS binder or establish a file to be used as a guide to the location of the MSDS within the binder.* The MSDS may be categorized by chemical type or other logical grouping for easy reference.

Whenever the CLE receives or creates an updated MSDS, s/he must also update the poster (CET 2106) within five (5) days of receipt. Failure to comply may result in MIOSHA citations, violations, noncompliance with applicable labor agreement issues, and/or fines.

Employees should know how to read and understand MSDS. Employees should read the MSDS before starting a task where they may be exposed to a chemical or physical agent hazards.

Chemical manufacturers are required by law to provide an MSDS for all hazardous chemicals with the initial shipment and with the first shipment after an MSDS is updated.

If an employee's work is performed at more than one geographic location, the MSDS may be kept at the primary workplace facility. The DEQ shall ensure employees can immediately obtain the required information in the event of an emergency. MSDS shall also be made readily accessible during each work shift and/or upon request; instructions to request/obtain MSDS are below.

Note: The laboratory provides sampling bottles and supplies that may have chemical preservatives associated with them. Employees handling these bottles or preservatives should contact their CLE to obtain applicable MSDS information. The bureau/ division designated laboratory coordinator is responsible to ensure MSDS are properly disseminated to other employers/consultants who may be using the laboratory supplies. The laboratory will update the MSDS information as determined necessary.

Old MSDS linked to an exposure incident must be maintained for the duration of the employee's employment plus 30 years. MSDS for chemicals no longer used, and not otherwise linked to an exposure incident, may either be placed in an "old MSDS" file or make a record of the MSDS and maintain it for 30 years.



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Procurement Policy

Because DEQ has a decentralized purchasing and receiving system, the department has established the following procurement policy:

- Each time a new hazardous chemical is ordered by a bureau/division/office, an MSDS must be packaged/provided with that chemical;
- The employee making the purchase will forward copies of the MSDS to the CLE who maintains MSDS for all hazardous chemicals used at the workplace. The CLE will also provide the Division Health and Safety Coordinator who maintains a master list of data sheets and chemicals for their office or bureau/division/office.

Note: Laboratory personnel will forward copies of all MSDS to the Laboratory Safety Officer who maintains data sheets for all hazardous chemicals used on site.

- If the employee making the purchase does not receive an MSDS upon receipt of the hazardous chemicals that product should not be used until an MSDS arrives. As an alternative, the purchaser may simply return the product to that manufacturer or supplier. All attempts to obtain MSDS shall be documented; and,
- The employee making the purchase shall contact their CLE for any problems experienced in obtaining an MSDS from a manufacturer or supplier.

Requesting/Obtaining MSDS

MSDS can be obtained from the CLE (i.e., district/site supervisor, laboratory safety officer, or Division Health and Safety Coordinator) who is responsible for maintaining the MSDS for all hazardous chemicals purchased, used, or known to be present in the workplace. As an alternative, MSDS can also be obtained from the internet at <http://msds.pdc.cornell.edu/msdssrch.asp>, <http://www.ilpi.com/msds/index.html>, <http://hazard.com/msds/>, or by contacting:

Michigan Department of Labor and Economic Growth
MIOSHA Safety Standards Division
7150 Harris Drive
P.O. Box 30015
Lansing, MI 48909-8143
(517) 322-1845



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Attachment F is a sample request letter to obtain an MSDS from the Chemical Provider.

Note: Laboratory specific MSDS information is accessible through the DEQ Laboratory website [http://deqinet/divisions/dwr/lab/material_safety.htm]. U. S. Environmental Protection Agency's (EPA) List of Lists can be located at <http://130.11.53.73/ol/>, <http://www.epa.gov/ceppo/pubs/title3.pdf>, or <http://www.dem.dcc.state.nc.us/SERC/title3listoflists.pdf>.

Understanding the MSDS

MSDS is written information sheets about specific hazardous chemicals. Although federal regulations require that chemical manufacturers prepare and distribute MSDS, there is some flexibility with regard to the format and presentation of the information contained within these documents. Manufacturers are minimally required to provide the following information:

1. Section I - information on the manufacturer, importer, or distributor of the chemical:
Self-explanatory.
2. Section II - hazardous ingredients/identity information: Here the chemical and common names of all constituents should be listed. If the product's hazard determination was made as a mixture or compound then the common name of the product or chemical name of the compound will suffice.
3. Section III - physical and chemical characteristics: this section will tell you what to expect from the chemical. This is particularly important to guarantee proper handling, and appropriate procedures to address fire and spill incidents. Refer to Attachment A, "*Glossary of Terms.*"
4. Section IV - Fire And Explosion Data: this information is intended to help you in case of an emergency. Special attention should be taken to understand how to interpret the data in this section quickly and correctly. Refer to Attachment A, "*Glossary of Terms.*"
5. Section V - Reactivity Data: This information helps the user determine safe storage and use procedures. This section should provide information on material stability and reactivity and should state what other chemicals or substances to avoid when handling the material.



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- a) Stability - Tells how easily a material becomes self-reactive and under what conditions it is most likely to do so.
 - b) Incompatibility - Tells what chemicals that the material, if it were to come in contact with, could create a hazardous situation.
 - c) Hazardous Decomposition Or Byproducts - Lists hazardous chemicals that are produced if the material is burned, oxidized or heated.
 - d) Hazardous Polymerization - Usually a "yes" or "no" response is indicative of whether or not hazardous polymerization is likely to occur. If "yes" then conditions by which the reaction could take place should be listed.
6. Section VI - Health Hazard Data: This section gives pertinent health data and effects of exposure.
- a) Routes of Entry - This information tells you how the chemical is most likely to enter the body. Potential routes of entry in a foreseeable emergency situation are also indicated.
 - b) Health Hazards - Indicates what the potential health effects of exposure to the material are and whether the effects are acute or chronic.
 - c) Carcinogenicity - Tells if the material is carcinogenic or not. A material is considered carcinogenic if it is specified as such by the National Toxicology Program's Annual Report on Carcinogens, the International Agency for Research on Cancer, or Occupational Safety and Health Administration (OSHA).
 - d) Signs And Symptoms Of Exposure - The most common symptoms of exposure are described in this section. Specific allergic reactions are rarely listed so there may be other danger signs not mentioned by the MSDS.
 - e) Medical Conditions Generally Aggravated By Exposure - Those medical conditions generally recognized as aggravated or complicated by exposure to the material.
 - f) Emergency First Aid Procedures - Self-explanatory for the most part. It should be noted that these are first aid procedures only and a qualified medical person should be contacted and apprised of the situation as soon as possible.
7. Section VII - Precautions for Safe Handling and Use: This section provides specific guidelines for handling chemical spills, for storage of chemicals and for hazardous waste disposal.
- a) Steps to be Taken In Case Material is Released or Spilled - May specifically recommend materials to clean up/absorb a spill, and actions to take to protect employees following a spill.
 - b) Waste Disposal Method - Recommendations may be listed for waste disposal meeting local, state, and federal regulations.



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- c) Precautions to be Taken in Handling and Storage - This section recommends storage methods and hazards to avoid during storage (i.e., sparks, open flames).
 - d) Other Precautions - Other hazards that should be noted will be specifically addressed.
8. Section VIII - Control Measures: This section lists protective equipment to be used, types of ventilation and general precautions to consider.
- a) Respiratory Protection - Type of respirator to use.
 - b) Ventilation - Type of ventilation suggested for work with the material.
 - c) Protective Gloves - Provides glove type appropriate to work with the substance.
 - d) Eye Protection - Indicates type of eye protection.
 - e) Other Protective Clothing And/Or Equipment - Explains when special suits or protective equipment of any kind should be used.
 - f) Work/Hygienic/Maintenance Practices - Indicates personal hygienic practices for working with the material, like washing hands, etc.

List of Hazardous Chemicals

The manufacturer, the MSDS, or the EPA's List of lists (i.e., list of hazardous chemicals) dictates whether a chemical is considered hazardous. Note: *Any chemical that has ingredients listed in Hazardous Ingredients, Section II, of the MSDS shall be considered a hazardous chemical.* Chemical manufacturers and suppliers MUST provide health and safety information to their customers through the MSDS, which must be provided to the purchaser prior to or at the time of shipment.

<u>List of Hazardous Chemicals/Inventory List (Sample)</u>		
Inventory Taken By: Ana Litical		Date Inventory Initially Compiled: 05/20/04
Company: Skeeter's Laboratory		Last Revision Date: 05/20/05
Telephone Number: (800) 555-1212		Supervisor's Name: Di' Gnostics
Product/Chemical Name	Maximum Quantity	Location
Acetone	15 gallons	Warehouse - North Wing
Mineral Spirits	20 gallons	Warehouse - North Wing
Sulfuric Acid	5 gallons	Laboratory

Note: Inventory quantity and location are required under the Michigan Firefighters Right-To-Know Law, but not required for the Michigan Right-To-Know Chemical Inventory List.



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Multi-Employer Work Sites – Informing Other Employers/Contractors

Employers in a multi-employer work site, who may expose an employee of another employer, to hazardous chemicals produced, used, or stored must provide that employer with:

- the name of the hazardous chemical(s);
- measures their employees can take to control or eliminate exposure to the hazardous chemical(s);
- the container labeling system used on-site; and,
- where applicable MSDS can be reviewed or obtained.

Periodically, DEQ employees may potentially be exposed to hazardous chemicals brought into a DEQ workplace by another employer. When this occurs, the CLE will obtain the above-mentioned information from that employer.

Hazardous Non-Routine Tasks

On occasion, employees may be required to perform non-routine tasks or one-time visits in hazardous areas (i.e., enter confined spaces, perform compliance inspections, specialized sampling, or spill response) where they may be exposed to known workplace hazards. Prior to beginning such tasks or one-time visits, the immediate supervisor, if aware of the potential for hazards, shall provide employees with information and training about the known hazards. Refer to Employee Information and Training Section for more information.

Labeling/Container Labels

The DEQ will rely heavily on chemical suppliers to provide labeling on the products used within the workplace. Each product that contains a hazardous chemical(s) must be labeled, or otherwise marked with the identity of the hazardous chemical(s) within, and include the hazard warnings and the manufacturer's name. Labels and other forms of warning may be in the form of words, pictures, symbols, or combinations that convey the hazard(s) of the chemical or physical agents in the container. All labels must be legible and prominently displayed.

The CLE shall ensure that the manufacturer or supplier has observed proper labeling procedures for all incoming containers as well as periodically inspect all stored hazardous chemicals to insure the appropriate labeling of containers.



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Each employee shall be responsible for ensuring that all portable containers used in their area(s) are labeled with the appropriate identity and hazard warning. **Note:** Portable containers intended for immediate use need not be labeled.

Existing labels on incoming containers must not be removed or defaced unless the container is immediately marked with the information required above. Likewise, if the labels are missing, the employee making or receiving the purchase should not accept the container. **DO NOT ACCEPT ANY LEAKING CONTAINER.** Employees should seek and follow the advice of their immediate supervisor before handling any container with no label.

Storage of Hazardous Substances

To the maximum extent possible, poisons, acids, and flammable chemicals must be stored separately from other substances, preferably in designated storage areas or cabinets that are approved for the type of exposure possible.

Chemicals and substances that are incompatible should be stored separately. Chemicals and substances should be separated into organic and inorganic groupings and further sorted into compatible families within these same two groupings whenever possible.

EMPLOYEE INFORMATION AND TRAINING

The Hazard Communication Standard requires the DEQ to provide effective information and training to employees who may be exposed to workplace hazards at the time of their initial assignment, and whenever new hazards become known or are introduced.

Information and training shall minimally include:

- specific hazard information (supervisor-generated materials);
- protections or safety measures the employee must take to lessen risks (supervisor-generated materials). For examples, follow established work practices; read manufacturer/product labels; carefully follow the manufacturer's instructions; attend safety courses that discuss Personal Protective Equipment (PPE) used on the job; report unsafe actions, hazards, and equipment to your immediate supervisor; and use good housekeeping and personal procedures (i.e., do not eat or smoke in work areas, wash hands before eating, wash contaminated clothing separately or properly dispose of it);



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- measures the department has taken (i.e., engineering control or work practice) to minimize the hazard or potential exposure (supervisor-generated materials). Examples may include product substitution (i.e., replacing the product with a safer material); product isolation (i.e., enclosing the process so the employee does not come into contact with the materials); installation of ventilation systems (i.e., special exhaust and ventilation systems are used to remove the vapors or dust or to bring in fresh air); and, use of personal protective equipment when appropriate. Supervisors will assign equipment such as gloves, glasses, and overalls to employees. Whenever using personal protective equipment, the proper equipment must be selected for the particular material and job. The equipment must be properly fitted to the user and must be maintained. Supervisors or the Division Health and Safety Coordinator can help to select the proper equipment;
- the availability and location of DEQ's Hazard Communication Program, MSDS, and relevant training materials;
- how to interpret MSDS and prepare container labels;
- how to report work-related accidents, injuries or illnesses (Refer to DEQ Policy 3.14: Employee Accidents, Injuries, and Illnesses);

Subsequent training must be provided to employees to ensure that tasks, job specific details, and associated hazards are covered. Training can be provided through a combination of formal courses and/or on-the-job training.

Training by categories or types of hazard is acceptable provided that the hazards are similar (e.g. new training would not be required for a new solvent having similar characteristics (i.e., carcinogens, sensitizers, and acutely toxic agents)) to an existing chemical for which training has already been completed.

For those employees covered by MIOSHA Standard Part 432: Hazardous Waste Operations and Emergency Response (HAZWOPER), and OSHA 29 Standard Part 1910.120:

HAZWOPER:

HAZWOPER training reviews applicable safety and health requirements to include control methods, sanitation, medical surveillance, and PPE for employees who are involved in hazardous waste operations and response to chemical emergencies; or, when it is believed that an employee was exposed to hazardous chemicals. Refer to DEQ Policy 3.14: Employee Accidents, Injuries, and Illnesses.



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The employee's immediate supervisor shall provide the delivery of the information and training required by the hazard communication standard. (Attachments C, D and E are the Department's required forms pertaining to training and record keeping.) Each bureau/division or office shall establish and maintain a training file for each employee, as well as record such activity in the department's central database. All training files/records shall be kept for the duration of employment unless otherwise copied, loaned, or transferred to another division/office or state department, and, minimally include the employee's name, training date(s), training topic(s), facilitator/instructor's name (if known), and the number of training hours attended. Employees may review the contents of such files/records with advanced notice; picture identification may be required.

Training Exception: As per DEQ Policy 09-001: Emergency Response, those employees who are pre-approved to participate in emergency response (emergency or routine) are required to follow normal personal protection and safety precautions to prevent unacceptable exposures to known hazards. This includes, but is not limited to, evaluation of existing available information regarding the nature of a release, use of field monitoring equipment, remaining in areas not requiring PPE, and reliance on other professionals trained and equipped for investigation and other actions within "exclusion" areas. If these employees have concerns about their safety when involved in a particular incident, they should immediately remove themselves from the situation and consult with their immediate supervisor or another supervisor in their chain-of-command to determine how best to proceed.

Personal Injury or Illness Involving Hazards

Employees that experience a work-related accident, injury, or illness involving a hazard shall:

- immediately notify their supervisor;
- follow site/facility-specific safety plans and/or call for emergency medical services (911);
- obtain a copy of the MSDS form (if applicable);
- seek medical attention at an employer-directed medical facility for treatment (i.e. an approved Health Monitoring facility) whenever possible; and,
- forward corresponding accident/injury/illness reports (EQ1099E) to the Office of Human Resources (OHR) within 24 hours.



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Note: An exposure incident is to be treated as a work-related injury or illness. Corresponding accident/injury/illness reports (EQ1099E) and the Supervisor's Investigatory Report (EQ 1099-1) can be obtained from the immediate supervisor, Division Health and Safety Coordinator, Department Health and Safety Coordinator, and are located on the DEQ template (Word, File, New, General Templates, OHR). Refer to DEQ Policy 3.14: Employee Accidents, Injuries, and Illnesses for more information.

Contractual Requirements

Advance notice is required prior to the introduction or use of materials that may emit hazardous gases, fumes, and odors.

In accordance with the SEUI S&E Contract Language (Appendix C-3, Section 4: Buildings):

"The department shall make every effort to maintain buildings or facilities occupied by unit employees in accordance with the Michigan Occupational Safety and Health Act (MIOSHA) standards and reasonable efforts to maintain good housekeeping and maintenance practices.

Every reasonable effort will be made to have pesticide spraying or the use of chemical agents that may get into the ventilation system conducted after business hours and/or on weekends to allow sufficient time for the area to be ventilated. If such spraying or use of chemical agents must occur during business hours, management shall provide at least 24 hours notice to unit employees stating (when available) the activity, the location, duration, and the availability of MSDS.

When major renovation or reconstruction of a building or portion thereof is planned, potentially affected members shall receive prior notice of such work. Unit employee concerns may be addressed through the labor/management conference forum.

In addition, the DEQ Procurement Office recommends adding the following language to commodity requisitions, service requisitions, and department purchase orders:

Commodity Requisitions: "Vendor Note: if applicable, please provide Material Safety Data Sheets as required by the Michigan Right to Know Law, Public Act 154 of 1974, Act 154 Amendments (i.e., Act 80 of 1986)."



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Service Requisitions And Department Purchase Orders: "The contractor shall inform the DEQ of any material which may be brought to a State of Michigan work site which is governed by the Michigan Right to Know Law, Public Act 154 of 1974, Act 154 Amendments (i.e. Act 80 of 1986)."

Approved: _____

A handwritten signature in black ink, appearing to read 'A. H. Chest' or similar, written over a horizontal line.

Date: _____

10-20-06

GLOSSARY OF TERMS

1. **Acute** - Short-term period of action; readily apparent.
2. **Acute Effect** - An adverse effect with severe symptoms occurring very quickly because of a single excessive overexposure to a substance.
3. **Acute Health Hazard** - an illness or injury that is associated with a single or multiple short-term exposure to a chemical, element or compound.
4. **Acute Toxicity** - The adverse effects resulting from a single excessive overexposure to a substance. Usually a figure denoting relative toxicity.
5. **Administrative Controls** - methods or procedures on how the work is to be performed in an effort to reduce the duration, frequency, or severity of exposure to a hazard. The use of administrative controls is usually less expensive than work practice controls. Examples may include substitution of a less toxic product; purchasing criteria (tools, equipment, chairs, etc); policies and procedures; training; organizing and planning work; rotation of workers; or a safety plan/procedure.
6. **Article** - A manufactured item other than a fluid or particle: (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (iii) which under normal conditions of use does not release more than very small quantities, e.g., minute or trace amounts of a hazardous chemical (as determined under paragraph (d) of this section), and does not pose a physical hazard or health risk.
7. **Asphyxiate** - A gas or vapor that can cause injury, unconsciousness or death by suffocation by reducing the amount of oxygen sufficient to promote life.
8. **Atmospheric Hazard** - An environmental condition commonly associated with confined space(s), drinking water and wastewater treatment plants, groundwater cleanup sites, industrial and agricultural facilities, sewage systems, and is often the result of oxygen deficiency, flammable and combustible gases, or toxic gases, which is capable of causing illness, injury, and/or death.
9. **Biological Hazard** - A microorganism (i.e., capable of replication or of transferring genetic material), cell culture (i.e., in-vitro growth of cells derived from multicellular organisms), or human endoparasite (i.e., a parasite, such as a tapeworm), whether genetically modified or not, which may cause infection, allergy, toxicity, or otherwise pose a physical hazard or health risk. The most common biological hazards include pathogen transmittal via sewage collection systems, sewage treatment plants, septage operations, biosolids operations, and agricultural facilities).
10. **Boiling Point** - A temperature at which a liquid turns to a vapor state. This term is usually associated with the temperature at sea level pressure when a flammable liquid gives off sufficient vapors to promote combustion.
11. **"C" or Ceiling** - In terms of exposure concentrations for a substance, this concentration should never be exceeded, even for a short period.
12. **Carcinogen** - A substance or agent capable of producing cancer in mammals.
13. **Chemical** - Any element, chemical compound, or mixture of elements and/or compounds.
14. **Chemical Agent** - Any chemical element, compound, or mixture of elements and/or compounds, whether genetically modified or not, which may cause infection, allergy, toxicity, or otherwise pose a physical hazard or health risk.

ATTACHMENT A
Haz Com/RTK

15. **Chemical List Employee (CLE)** - The person (i.e., District/Site Supervisor, Laboratory Safety Officer, and/or Division Health and Safety Coordinator) responsible for maintaining the Material Safety Data Sheets and updating the list of hazardous chemicals purchased, used, or known to be present in the workplace.
16. **Chronic** - Lasting for a long period or marked by frequent reoccurrence.
17. **Chronic Effect** - An adverse effect with symptoms that develop or recur very slowly, or over long periods of time.
18. **Chronic Health Hazard** - An illness or injury that manifests itself after long-term exposure (single long duration or several short contacts) to a toxic material or substance.
19. **Combustible** - A term used to classify liquids, gases, or solids that will burn readily. This term is often associated with 'flash point', which is a temperature at which a given material will generate sufficient vapors to promote combustion.
20. **Combustible Liquid** - A liquid having a flash point at or above 1000 degrees Fahrenheit but below 2000 degrees Fahrenheit . This definition does not include mixtures containing one or more constituents with flash points outside the parameters indicated.
21. **Compressed Gas** - A gas or mixture of gases having in a container an absolute pressure exceeding 40 pounds per square inch at 700 degrees Fahrenheit; A gas or mixture of gases having in a container an absolute pressure exceeding 104 pounds per square inch at 1300 degrees Fahrenheit, regardless of the pressure at 700 degrees Fahrenheit; or A flammable liquid having a vapor pressure exceeding 40 pounds per square inch absolute pressure at 1000 degrees Fahrenheit, as determined by the American National Standard Method of Test for Vapor Pressure of Petroleum Products.
22. **Concentration** - A figure used to define relative quantity of a particular material. Such as a mixture of 5 ppm Acetone in air.
23. **Container** - Any bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, or storage tank that contains a hazardous chemical. For the purpose of this document, pipes or piping systems, engines, fuel tanks, or other operating systems in a vehicle are not considered containers.
24. **Corrosive Material** - A chemical capable of causing visible and irreversible damage to human skin tissue at the site of contact. Many acids are classified as corrosives.
25. **Decomposition** - The breakdown of materials or substances into other substances or parts of compounds. Usually associated with heat or chemical reactions.
26. **Dermal** - Used on or applied to the skin.
27. **Dermal Toxicity** - The adverse effects resulting from exposure of a material to the skin. Usually associated with lab animal tests.
28. **Engineering Controls** - Are the preferred method for controlling and eliminating a particular hazard. Examples may include workplace or tool design; ventilation (general dilution/local exhaust); storage; specialized equipment; machine guarding, lockouts, and warning devices; limitation (safety valves); isolation or enclosure; automation/material handling devices; providing adjustable equipment and furniture, shielding, and sound deadening/dampening.
29. **Evaporation Rate** - The rate, at which a liquid material is known to evaporate, usually associated with flammable materials. The faster a material will evaporate, the sooner it will become concentrated in the air, creating either an explosive/combustible mixture or toxic concentration, or both.
30. **Explosive** - A chemical that produces a sudden release of pressure, gas and/or heat when subjected to sudden shock, pressure or high temperature.

ATTACHMENT A
Haz Com/RTK

31. **Exposure** - Contact of an individual with a hazardous material during the course of employment through any route of entry.
32. **Exposure Incident** - A work-related experience in which an employee is exposed to a chemical or physical agent, or an atmospheric, biological, or physical hazard. Exposure can occur via direct contact, ingestion, inhalation, or injection and may result in illness, injury, and/or death.
33. **Extinguishing Media** - cites the appropriate fire extinguishing media for the material.
34. **Flammable Limits** - this gives the range of concentrations of a gas or vapor (percent by volume of air), which will burn or explode if exposed to an ignition source. Upper explosive limit (UEL) and lower explosive limits (LEL) are given.
35. **Flammable Material** - A substance that meets any of the following specifications: A flammable aerosol is a chemical substance or mixture, dispensed from a container as a mist, spray or foam by a propellant under pressure, which yields a flame of at least 18 inches at full valve opening, or a flashback (flame extending back through the valve) at any opening. A flammable gas is a gas which, at normal atmospheric pressure and temperature and at a concentration of 13 percent or less, forms a flammable mixture, or that forms a range of flammable mixtures with air greater than 12 percent regardless of the lower limit. A flammable liquid, for our purposes, is defined as having a flash point below 1000 degrees Fahrenheit except that this does not include any mixture where any one constituent has a flash point at or above 1000 degrees Fahrenheit and makes up 99 percent or more of the total volume of the mixture. A flammable solid is a material (other than an explosive) that causes fire through friction, absorption of moisture, spontaneous chemical change, retained heat from manufacturing or processing, or that can be readily ignited and can remain so even after the ignition source is removed.
36. **Flash Point** - The minimum temperature at which a substance produces enough vapor to promote combustion (be ignited). Generally, the lower the flash point, the greater the danger of combustion.
37. **Foreseeable Emergency** - Any potential occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment that can result in an uncontrolled release of a hazardous chemical, physical agent, or physical hazard into the workplace.
38. **General Exhaust** - A term used to define a system for exhausting or ventilating air from a general work area. Not as site specific as localized exhaust.
39. **"g" or gram** - A unit of weight. One ounce equals about 28.4 grams.
40. **Hazard** - Any atmospheric, biological, chemical, or physical hazard, or physical agent, which may subject an employee to potential danger cause an adverse health effect.
41. **Hazard Assessment** - A systematic breakdown of a job into tasks/steps in order to identify and evaluate hazards, rank the probability of injury or illness, related consequences, and apply administrative and engineering controls (which includes personal protective equipment) if the hazard cannot be eliminated or controlled. In accordance with MIOSHA Standard Parts 33 and 433: Personal Protective Equipment, all employers are required to assess the workplace to determine if hazards that would require the use of personal protective equipment are present or are likely to be present. If hazards or the likelihood of hazards are found, employers must select and have affected employees properly fitted for personal protective equipment suitable to protect against existing hazards.

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42. **Hazard Warning** - Any words, pictures, symbols, or combination thereof appearing on a label or other appropriate form of warning which convey the specific physical and health hazard(s), including target organ effects, of the chemical(s) in the container(s). See the definitions for "physical hazard" and "health hazard" to determine which hazards must be covered.
43. **Hazardous Chemical** - Is a substance considered as one or more of the following: a toxic material, a carcinogen, a corrosive material, an irritant, a strong sensitizer, a dangerously reactive material, a flammable material, a combustible liquid, a pyrophoric material, a strong oxidizer, an explosive material, or a compressed gas. Any chemical this is either a physical or health hazard or both.
44. **Health Hazard** - is any agent, situation or condition that can cause harm. A health hazard may produce serious and immediate (acute) affects or it may cause long-term (chronic) problems. All or part of the body may be affected. Someone with an occupational injury or illness may not recognize the symptoms immediately. Examples may include biological hazards (i.e., bacteria, viruses, dusts, molds), chemical hazards (i.e., carcinogens, toxins, irritants, corrosives), work design (i.e. lack of appropriate ergonomic devices), physical agents (i.e., energy sources), etc.
45. **Ignitable** - A term used to define any liquid, gas or solid, which has the ability to be 'ignited' which means having a flash point of 140 degrees Fahrenheit, or less.
46. **Immediate Use** - When a hazardous chemical will be controlled and used only by the person who transfers it from a labeled container, and will be used only within the work shift during which it is transferred.
47. **Incompatible** - Materials that could cause dangerous reactions from direct contact with one another.
48. **Ingestion** - Taking in of a substance through the mouth.
49. **Inhalation** - The breathing in of a substance in the form of a gas, liquid, vapor, dust, mist or fume.
50. **Inhibitor** - A chemical added to another substance to prevent an unwanted change from occurring.
51. **Irritant** - A chemical substance or mixture, other than a corrosive, that when contacted with the skin produces a reversible inflammatory reaction to the affected area and/or surrounding areas. Normally, irritants affect the eyes, nose, mouth and respiratory system.
52. **Label** - any written, printed, or graphic material displayed on or affixed to containers of hazardous chemicals.
53. **LC or Lethal Concentration** - In lab animal tests, this is the concentration of a substance that is sufficient to kill the tested animal.
54. **LC₅₀ or Median Lethal Concentration** - The concentration in air of gas, vapor, mist, fume or dust for a given period of time that will kill 50 percent of the test animals using a specified test procedure. Inhalation is the primary route of entry.
55. **LD₅₀ or Median Lethal Dose** - The dosage of a substance that will kill 50 percent of the test animals to which the substance is administered using a specified test procedure. Various routes of entry can be used for testing purposes.

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56. **LEL** - Lower Exposure Limit - The lowest concentration of a gas or vapor in air that will ignite or explode if an ignition source is introduced.
57. **Material Safety Data Sheet (MSDS)** - An informational document that contains relevant information about a specific chemical or mixture. This document also lists the hazardous ingredients for a chemical, its physical properties, fire and explosive hazards, information on chemical and physical health hazards such as reactivity, and applicable personal protective equipment, clothing, or other special precautions.
58. **Melting Point** - Temperature at which a solid material becomes a liquid.
59. **Mutagen** - A material that affects organisms at the genetic level and whose effects may be seen in subsequent generations. Normally associated with carcinogens.
60. **NFPA - National Fire Protection Association** - An organization that promotes fire protection/prevention and establishes safeguards against loss of property and/or life by fire. The NFPA has established a series of codes identifying hazardous materials by symbol and number for fire fighting purposes. These codes also classify materials in their order of flammability. With zero being not burnable up to four which means it will burn spontaneously at room temperature.
61. **Olfactory** - Relating to the sense of smell.
62. **Oral** - Used in or taken through the mouth into the body.
63. **Oral Toxicity** - A term used to denote the degree at which a substance will cause adverse effects when taken through the mouth. Normally associated with lab animals.
64. **Oxidizer** - A chemical that yields oxygen readily and promotes combustion in other materials. The definition does not include explosives.
65. **Oxidizing Agent** - A chemical or substance that brings on oxidation reactions, by providing the oxygen to promote oxidation.
66. **PEL - Permissible Exposure Limit** - An exposure concentration established by the Occupational Safety & Health Agency that indicates the maximum concentration for which no adverse effects will follow an 8-hour exposure.
67. **Personal Protective Equipment (PPE)** - PPE is any specialized clothing or equipment worn by an employee for protection against a particular hazard. This includes items such as safety boots or shoes, hard hats, ear muffs or plugs, dust masks or respirators, safety harnesses, aprons, laboratory coats, face shields, glasses, goggles, gloves, CPR resuscitation pocket masks, etc. General work clothes such as uniforms, pants, shirts, or blouses not intended to function as protection against a hazard are not considered PPE. PPE is not a substitute for designing a safe work environment or implementing engineering and administrative controls.
68. **Physical Agent** - An energy source strong enough to cause illness, injury, or death. Examples may include electric currents, heat, light, vibration, noise, radiation, etc.
69. **Physical Hazard** - A hazard created by a condition, occupancy, and/or use. Examples may include: improper electrical wiring, unguarded equipment or premises, slippery floors, congested traffic, extreme temperatures, excessive noise or vibrations, or direct contact with compounds such as acids, bases, solvents, oxidants, reducing agents, and pesticides (found in numerous municipal, industrial, and agricultural facilities), which is capable of causing illness, injury, and/or death.
70. **PPB - Parts per Billion** - As above, only expressed as number of parts per billion parts of air.

- 71. **PPM - Parts per Million** - A unit of measurement for the concentration of a gas or vapor in air. Usually expressed as number of parts per million parts of air.
- 72. **Pyrophoric Material** - A chemical substance or mixture that will ignite spontaneously in dry or moist air at below 1300 degrees Fahrenheit.
- 73. **Reactive Material** - A chemical substance or mixture that may vigorously polymerize, decompose, condense, or become self-reactive under conditions of shock, pressure or temperature. Includes chemical substances that can be classified as explosive, organic peroxide, a pressure generating material or a water reactive material.
- 74. **Reactivity** - The term that describes the tendency of a substance to undergo a chemical change with the release of energy, often as heat.
- 75. **Reducing Agent** - In an oxidation reaction, this is the material that combines with oxygen.
- 76. **Respiratory System** - The breathing system, including the lungs, and air passages, plus their associated nervous and circulatory components.
- 77. **Sensitizer** - A chemical substance or mixture that on first exposure causes little or no reaction; however, with repeated exposure will induce a marked response not necessarily limited to the exposure site. Usually associated with skin sensitization.
- 78. **Solubility In Water** - indicates how readily the substance will dissolve in water. Solubility is generally indicated numerically in weight percent. Solubility may also be expressed as follows:

Water Solubility Table
1. Negligible - less than 0.1 percent solubility
2. Slight - 0.1 to 1 percent solubility
3. Moderate -: 1 to 10 percent solubility
4. Appreciable - more than 10 percent solubility
5. Complete - soluble in all proportions

- 79. **Special Fire Fighting Procedures** - A list of special provisions including PPE and procedures.
- 80. **Specific Gravity** - The weight of a material compared to the weight of an equal volume of water. Usually expresses a material's heaviness. A material with a specific gravity of greater than 1.0 will sink to the bottom of water, whereas a material with a specific gravity of less than 1.0 will float on top of water. Specific Gravity may also be expressed as follows:

Specific Gravity Table
1.0 - same as water
Above 1.0 - heavier than water
Below 1.0 - lighter than water

- 81. **STEL - Short Term Exposure Limit** - The maximum allowable concentration of a substance that one can be exposed to for less than 15 minutes and not produce adverse health effects.
- 82. **Teratogen** - A substance or agent wjem exposed to a pregnant female would cause malformation of the fetus. Usually associated with lab animal.
- 83. **TLW - TWA – Threshold Limit Value/Time Weighted Average** – The maximum

airborne concentration of a material that employees working 8 hours a day, 40 hours per week can be exposed to that is unlikely to cause adverse physical effects.

84. **Toxic** - Any chemical or substance that is or may become that may become injurious to health in sufficient quantity and duration of exposure.
85. **UEL** - Upper Explosive Limit - The highest concentration of a gas or vapor in air that will sustain or support combustion, when an ignition source is present.
86. **Unstable** - A chemical or substance in a pure state (nothing added) that will readily polymerize, decompose, condense, or become self-reactive under conditions of shock, pressure or temperature.
87. **Unusual Fire and Explosion Hazards** - lists any peculiarities the material may demonstrate during fire fighting procedures. For example, this section could contain the following: "extremely flammable, water reactive, vapors heavier than air and could flow along floor to alternate ignition sources."
88. **Vapor Density** - A term used to define the weight of a vapor or gas as compared to the weight of an equal volume of air. Materials lighter than air have a vapor density of less than 1.0, whereas materials heavier than air have a vapor density greater than 1.0.
89. **Vapor Pressure** - A number used to describe the pressure that a saturated vapor will exert on top of its own liquid in a closed container. Usually, the higher the vapor pressure, the lower the boiling point, and therefore the more dangerous the material can be, if flammable.
90. **Work Area** - A room or defined space in a workplace where hazardous chemicals or physical agents are produced or used, and where employees are present.
91. **Work Practice Controls** - Procedures for safe and proper work that are used to reduce the duration, frequency, or severity of exposure to a particular hazard. They include work methods training, job rotation, and gradual introduction to work. Work practice controls are part of hazard prevention and control.
92. **Workplace** - An establishment, job site, or project at one geographical location containing one or more work areas.

SAMPLE MATERIAL SAFETY DATA SHEET

Material Safety Data Sheet

May be used to comply with Occupational Safety and Health Administration's (OSHA) Hazard Communication Standard (29 CFR 1910.1200). The Standard must be consulted for specific requirements.

U.S. Department of Labor

Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

MATERIAL IDENTITY: ABC Solvent	NOTE: Blank spaces are not permitted. If any item is not applicable or no information is available, the space must be marked.
---------------------------------------	--

SECTION I – INFORMATION ON THE MANUFACTURER, IMPORTER, OR DISTRIBUTOR OF THE CHEMICAL

Manufacturer's Name: ABC Solvent	Emergency Telephone ☎: 1-800-XXX-XXXX
Address: 2 Canary Street Somewhere, USA 12345	Telephone ☎: for information: 1-800-XXX-XXXX
	Date Prepared: July 7, 2004
	Signature of Preparer (Optional):

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components (Specific Chemical Identity and Common Name):	OSHA PEL (STEL):	ACGIH:	Other NIOSH:	%:
Acetone	750 ppm (1000 ppm)	Same as	Same as	20
Ethylene Glycol	50 ppm Ceiling	OSHA	OSHA	3
Methyl Ethyl Ketone (2-Butanone)	200 ppm (300 ppm)	PEL	PEL	2.5
Xylene	100 ppm (150 ppm)	STEL	STEL	5.8
(Inert Ingredients – non hazardous)				68.7

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: 125° F	Specific Gravity (H2O=1): 0.75
Vapor Pressure (mm Hg.): 135 mmHg	Melting Point: -150° F
Vapor Density (AIR = 1): 1.1	Evaporation Rate(Butyl Acetate = 1): 4.5
Solubility in Water: 27%	
Appearance and Odor: Clear liquid, fragrant mint-like odor	

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used): 5° F (open cup)	Flammable Limits: LEL 1/5% UEL 10%
Extinguishing Media: NFPA Class B Extinguishers	

Special Fire-Fighting Procedures: Water spray may be ineffective. Use Class B Extinguisher – Carbon Dioxide, dry chemical, or alcohol foam.			
Unusual Fire/Explosion Hazards: Closed container may explode if exposed to heat			
SECTION V - REACTIVITY DATA			
Stability:	Stable?	Conditions to Avoid: Heat, open flames, flames, electrical equipment	
	Unstable?		
	Explosive		
Incompatibility (Materials to Avoid): Unknown			
Hazardous Decomposition/byproducts: Carbon Monoxide, Carbon Dioxide			
Hazardous Polymerization:	May Occur?	Conditions to Avoid:	
	Will Not Occur? X		
SECTION VI - HEALTH HAZARD DATA			
Routes of Entry:	Inhalation? X	Skin? X	Ingestion? X
Health Hazards (Acute and Chronic) Central Nervous System; Skin irritant		Acute: Eye, nose, throat, or lung irritation Chronic: No chronic effects reported	
Carcinogenicity: <i>None Reported</i> NTP?		IARC Monographs?	OSHA Regulated?
Signs & Symptoms of Exposure: Eye, nose, throat, lung, skin irritation, headache, or dizziness			
Medical Conditions Aggravated by Exposure: Asthma			
Emergency & First Aid Procedures:		Vapor - Get to fresh air; consult the workplace physician Eye splash - Flush eye under running water for at least 15 minutes Skin Splash - Flush affected area under running water	
SECTION VII – PRECAUTIONS FOR SAFE HANDLING AND USE			
Steps to be Taken in Case of Material Release or Spill: Remove all sources of ignition, avoid breathing vapors, ventilate (non-sparking equipment)			
Waste Disposal Method: Dispose in accordance with local/state/federal regulations			
Handling and Storage Precautions: Do not store over 110° F. Store as NFPA Class 1A flammable liquid			
Other Precautions: Ensure adequate ventilation and group containers when pouring			
SECTION VIII – CONTROL MEASURES			
Respiratory Protection (Specific Type): Self-Contained Breathing Apparatus (SCBA), Supplied-Air Respirator (SAR) or Airline Respirator.			
Ventilation:	Local Exhaust - In use area Mechanical (General) - Area ventilation Special - Spills or confined areas Other - Use explosive proof electrical		
Protective Gloves: Butyl Gloves			
Eye Protection: Chemical Splash Goggles			
Other Protective Clothing or Equipment: Butyl splash apron when required to avoid splash exposure			
Work/Hygienic Practices: Do not eat, drink or smoke in the area			

Employee Name (Print)

Abbreviations commonly found on an MSDS

1. **AQTX** - Aquatic Toxicity
 2. **atm** - Atmosphere
 3. **bp** - Boiling point
 4. **ca** - (circa) about
 5. **CAR** - Carcinogenic effects
 6. **cc** - Cubic centimeter
 7. **CC** - Closed Cup
 8. **CFR** - Code of Federal Regulations
 9. **CNS** - Central Nervous System
 10. **COC** - Cleveland Open Cup
 11. **conc** - concentration
 12. **decomp** - decompose
 13. **G.I. or GI** - Gastrointestinal
 14. **g or gms** - Grams
 15. **HW** - Hazardous waste
 16. **I** - Intermittent
 17. **inhl** - Inhalation
 18. **insol** - Insoluble
 19. **IRR** - Irritant effects (systemic)
 20. **kg** - Kilogram
 21. **L** - Liter
 22. **LC₅₀** - Median lethal concentration
 23. **LD₅₀** - Median lethal dose
 24. **LEL** - Lower explosive limit
 25. **LFM** - Linear feet per minute
 26. **m³** - Cubic meter
 27. **mHg** - Milliliters of Mercury
 28. **mp** - Melting point
 29. **mg** - Milligram
 30. **ml** - Milliliter
 31. **MLD** - Mild irritation effects
 32. **MSDS** - Material Safety Data Sheets
 33. **MW** - Molecular weight
 34. **NEO** - Neoplastic effects
 35. **Nox** - Oxides of Nitrogen
 36. **PMCC** - Pensky-Martens Closed Cup
 37. **RDS** - Primary irritation dose
 38. **Ox** - Oxides of Phosphorous
 39. **ppb** - Parts per billion
 40. **TLV** - Threshold limit value
 41. **UEL** - Upper exposure limit
-

HAZARD COMMUNICATION/RIGHT-TO-KNOW QUIZ

INSTRUCTIONS: Please type or print responses in black or blue ink. Answer all questions. Attach separate sheet of paper if more space is needed. Completed quizzes are to be forwarded to your immediate supervisor with a copy to the Division Health and Safety Coordinator. Refer to the Sample Material Safety Data Sheet located in the Hazard Communication: An Employee's Right-To-Know handbook for questions 9 through 25. Note: A 15-minute quiz will follow each education and training presentation. Every employee must successfully answer 20 out of 25 questions. If an employee scores less than 20, s/he must attend an additional training session or receive remedial help.

1. What is an MSDS?
a) Material Safety Document Sheet
b) Material Sheet Documenting Safety
c) Material Safety Data Sheet

2. The information and format of all MSDS is the same. True _____ False _____

3. Only member of the senior management team should be trained to detect hazardous chemicals used in the workplace. True _____ False _____

4. Any employee can request a copy of an MSDS. True _____ False _____

5. Employee training is only required at the time of hire. True _____ False _____

6. The MSDS tells the user how to clean up spills and leaks. True _____ False _____

7. MSDS must be physically attached to a shipment containing of hazardous materials. True _____ False _____

8. The purpose of the MIOSHA's Right-To-Know Law is to make sure that needed information reaches all employees who use hazardous materials. True _____ False _____

9. What is the name of the product?

10. How many of the product's components are hazardous?

ATTACHMENT C
Haz Com/RTK

11. What are the hazardous ingredients?

12. Is this product lighter than air? Yes _____ No _____

13. Is this product a solid? Yes _____ No _____

14. What is the flashpoint of this product?

15. Is this product considered to be explosive? Yes _____ No _____

16. Does this product contain cancer-causing components? Yes _____ No _____

17. What routes of entry are of concern?

18. Is respiratory protection required while using this product? Yes _____ No _____

19. If one is required, what respirator is to be used?

20. What other personal protective equipment is to be used with this product?

21. What conditions are to be avoided when using this product?

22. When was this MSDS prepared?

23. What is the emergency phone number contact for this product?

24. Is emergency and first aid information given? Yes _____ No _____

25. What chemicals or types/categories of chemicals have been (or are being) introduced into the workplace?

Employee Name (Print)

HAZARD COMMUNICATION/RIGHT-TO-KNOW TRAINING RECORD

This is to certify that I have been trained and informed about the hazards and precautions associated with the use of hazardous chemicals at the workplace as required by the Department's Hazard Communication/Right-To-Know Program.

To confirm my understanding of such training and instructions, _____ reviewed them with me and s/he indicated her/his satisfaction by checking the box before each of the topics listed below:

1. An explanation of how MSDS will be obtained and maintained;
2. Availability and location of DEQ Policy 6.13: Hazard Communication Policy, MSDS, the list of all hazardous chemicals; and this Right-To-Know Handbook;
3. Employee safeguards and procedures management has implemented to protect employees (i.e., work practices, emergency procedures, PPE and clothing, etc.);
4. Hazardous non-routine tasks and an exchange of information when working in multi-employer/multi-state agency work sites;
5. How containers (i.e., bags, bottles, cans, cartons, drums, jars, pipes, piping systems, spray bottles, storage tanks, tubes, or other receptacles) that contain hazardous chemicals must be identified by labels, signs, color coding, placards, written operating instructions, batch tickets, process sheets, schematics, or other methods of identification;
6. How to report work-related accidents, injuries or illnesses (Refer to DEQ Policy 3.14: Employee Accidents, Injuries, and Illnesses);
7. Identification, use, and hazard recognition of chemicals used in the workplace; and,
8. Requirements of the MIOSHA Standard Parts 92 and 430: Hazard Communication.

Employee Signature

Date

Note: Please read and understand the contents of this form before signing, as it will become part of your bureau/division/office training file. Completed forms are to be forwarded to your immediate supervisor with a copy to your Division Health and Safety Coordinator.

HAZARD COMMUNICATION/RIGHT-TO-KNOW QUIZ ANSWER SHEET

1. What is an MSDS?
a) Material Safety Document Sheet
b) Material Sheet Documenting Safety
c) Material Safety Data Sheet
 2. The information and format of all MSDS is the same. True _____ False X
[Rationale: There is no specific format required for an MSDS]
 3. Only member of the senior management team should be trained to detect hazardous chemicals used in the workplace. True _____ False X
[Rationale: All individuals working with hazardous chemicals must be trained to detect a hazardous chemical's presence in the event of a leak]
 4. Any employee can request a copy of an MSDS. True X False _____
[Rationale: Copies of MSDS for hazardous chemicals or products must be readily accessible to employees at each work site and during each work shift]
 5. Employee training is only required at the time of hire. True _____ False X
[Rationale: Retraining may be required if an employee changes job duties, a new chemical/hazard is introduced into the work environment, or if it is determined that the initial training was deficient]
 6. The MSDS tells the user how to clean up spills and leaks? True X False _____
[Rationale: The information on how to handle a spill or leak is located under Section VII, Precautions for Safe Handling and Use]
 7. MSDS must be physically attached to a shipment containing of hazardous materials.
[Rationale: An MSDS will accompany a shipment but need NOT be physically attached to the item]
 8. The purpose of the MIOSHA's Right-To-Know Law is to make sure that needed information reaches all employees who use hazardous materials. True X False _____
 9. What is the name of the product?
ABC Solvent [Refer to Section I, Information on the Manufacturer, Importer, or Distributor of the Chemical]
 10. How many of the product's components are hazardous?
4 [Refer to Section II, Hazardous Ingredients/Identity Information]
-

ATTACHMENT E
Haz Com/RTK

11. What are the hazardous ingredients?
Acetone, Ethylene Glycol, Methyl Ethyl Ketone and Xylene [Refer to Section II, Hazardous Ingredients/Identity Information]
-
12. Is this product lighter than air? Yes _____ No X _____
[Refer to Section III, Physical/Chemical Characteristics]
13. Is this product a solid? Yes _____ No X _____
[Refer to Section III, Physical/Chemical Characteristics]
14. What is the flashpoint of this product?
5° F (open cup) [Refer to Section IV, Fire and Explosion Hazard Data]
-
15. Is this product considered to be explosive? Yes X _____ No _____
[Refer to Section IV, Fire and Explosion Hazard Data]
16. Does this product contain cancer-causing components? Yes _____ No X _____
[Refer to Section IV, Fire and Explosion Hazard Data]
17. What routes of entry are of concern?
Inhalation, skin or ingestion [Refer to Section V, Reactivity Data]
-
18. Is respiratory protection required while using this product? Yes X _____ No _____
[Refer to Section VIII, Control Measures]
19. If one is required, what respirator is to be used?
Self-Contained Breathing Apparatus (SCBA), Supplied-Air Respirator (SAR), or Airline Respirator [Refer to Section VIII, Control Measures]
-
20. What other personal protective equipment is to be used with this product?
Butyl Gloves, Butyl Splash Apron, and Chemical Splash Goggles [Refer to Section VIII, Control Measures]
-
21. What conditions are to be avoided when using this product?
Heat, open flames, flames, and electrical equipment [Refer to Section V, Reactivity Data]
-
22. When was this MSDS prepared?
July 7, 2004 [Refer to Section I, Information on the Manufacturer, Importer, or Distributor of the Chemical]
-
23. What is the emergency phone number contact for this product?
1-800-xxx-xxxx [Refer to Section I, Information on the Manufacturer, Importer, or Distributor of the Chemical]
-
24. Is emergency and first aid information given? Yes X _____ No _____
[Refer to Section VI, Health Hazard Data]
-
25. What chemicals or types/categories of chemicals have been (or are being) introduced into the workplace?
Answers will vary as chemicals or types/categories of chemicals are typically job or site specific.
-

SAMPLE REQUEST LETTER TO OBTAIN AN MSDS FROM THE CHEMICAL PROVIDER

Dear Chemical Manufacturer, Importer or Distributor,

As you are aware, both the Michigan Occupational Safety and Health Act and the federal Occupational Safety and Health Act require employers to provide information and training to their employees about the hazards of chemicals or other hazardous materials in the workplace. To adhere to this requirement, please provide a Material Safety Data Sheet for <<<insert name of product here>>> by <<<insert date here – 14 calendar days>>>.

Your immediate attention to this matter is appreciated as the Michigan Department of Environmental Quality relies on this information to maintain a proper level of safety for our employees.

Please feel free to contact me at <<<insert GroupWise/email address here>>>, <<<insert phone number here>>>, or fax to <<<insert fax number here>>> should you have any questions regarding this matter.

Sincerely,
