

**College Misericordia Science Division Occupational Health and
Safety Program**

Division Policy Statement

The Occupational Safety and Health Act of 1970 clearly states our common goal of safe and healthful working conditions. The safety and health of our faculty, staff and students continues to be the first consideration in the operation of this division.

Safety and health in our business must be a part of every operation. Without question it is every employee's responsibility at all levels.

It is the intent of this division to comply with all laws. To do this we must constantly be aware of conditions in all work areas that can produce injuries. No employee is required to work at a job he or she knows is not safe or healthful. Your cooperation in detecting hazards and, in turn, controlling them is a condition of your employment. Inform the laboratory manager or department chairperson immediately of any situation beyond your ability or authority to correct.

The personal safety and health of each employee of this division is of primary importance. The prevention of occupationally-induced injuries and illnesses is of such consequence that it will be given precedence over operating productivity whenever necessary. To the greatest degree possible, the college will provide all mechanical and physical facilities required for personal safety and health in keeping with the highest standards.

We will maintain a safety and health program conforming to the best management practices of organizations of this type. To be successful, such a program must embody the proper attitudes toward injury and illness prevention not only on the part of faculty and staff, but also between each employee and his or her co-workers. Only through such a cooperative effort can a safety program in the best interest of all be established and preserved.

Our objective is a safety and health program that will make all faculty and staff aware of the inherent dangers of laboratory work through training and communication. Our goal is nothing less than zero accidents and injuries.

Leo V. Carr, MS, NRCC-CHO
Mathematical and Natural Science Division

STANDARD PRACTICE INSTRUCTION

DATE: January 5, 2005

SUBJECT: Hazard Communication Program (General Industry)

REGULATORY STANDARD: OSHA - 29 CFR 1910.1200

BASIS: About 32 million workers are potentially exposed to one or more chemical hazards on a daily basis. There are an estimated 575,000 existing chemical products, and hundreds of new ones being introduced annually. This poses a serious problem for exposed workers and their employer. The OSHA Hazard Communication Standard establishes uniform requirements to make sure that the hazards of all chemicals imported into, produced, or used in U.S. workplaces are evaluated, and that this hazard information is transmitted to all affected workers.

GENERAL: The Mathematical and Natural Science Division will ensure that the hazards of all chemicals used within our facility are evaluated, and that information concerning their hazards is transmitted to all employees. This standard practice instruction is intended to address comprehensively the issues of; evaluating the potential hazards of chemicals, communicating information concerning these hazards, and establishing appropriate protective measures for employees.

RESPONSIBILITY: The division HAZCOM Coordinator is Leo V. Carr. The Science Division Chairperson, Dr. Frank DiPino, has sole responsible for all facets of this program and has authority to make necessary decisions to ensure success of the program. The HAZCOM Coordinator will develop written detailed instructions covering each of the basic elements in this program, and is the sole person authorized to amend these instructions.

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College Misericordia's Mathematical and Natural Science Division Hazard Communication Program

1. Written Program. This standard practice instruction will be maintained in accordance with 29 CFR 1910.1200 which is the US Department of Labor (OSHA) Hazardous Communication and updated as required. Where no update is required this document will be reviewed annually. Effective implementation of this program requires support from all levels of management within this company. This written program will be communicated to all personnel that are affected by it. This includes: faculty and staff. This program does not include students. It encompasses the total workplace, regardless of number of workers employed or the number of work shifts. It is designed to establish clear goals, and objectives. The Science Division shall:

1.1 Annually review and revise this written hazard communication program based on company operational requirements or, as required by the OSHA Hazard Communication Standard.

1.2 Provide a program for proper labeling of containers, describe other needed forms of warning, and detail the use and purpose material safety data sheets (MSDS). Describe how employee information and training requirements will be met, to include the following:

1.2.1 Generate a list of the hazardous chemicals known to be present in each department using an identity that is referenced from the appropriate material safety data sheet. This list will be available to all employees in the facility, and located in a centralized location that will be available to all faculty and staff as needed.

1.2.2 Detail the method the Science Division will use to inform employees of the hazards of non-routine tasks Immediate supervisors of affected employees will oversee this requirement. The Safety Coordinator may be consulted to provide any task hazard analysis assistance required.

1.2.3 The hazards associated with chemicals contained in process in their work area. Immediate supervisors of affected employees will oversee this requirement. The Safety Coordinator may be consulted to provide any hazard analysis assistance required.

1.2.4 The methods that the Science Division will use to inform employee(s) of any precautionary measures that need to be taken to protect employees during normal operating conditions and in foreseeable emergencies. Immediate supervisors of affected employees will oversee this requirement. The Director of Safety and Security and/or the Safety Coordinator may be consulted to provide any task hazard analysis assistance required.

1.2.5 The Science Division shall make the written hazard communication program available to all employees. It is vested in each faculty member to ensure that the students working under their direction are totally informed on the hazards of their respective workplace.

2. Training Program. The Science Division will provide employees with information and training on hazardous chemicals in their work area at the time of their initial assignment, annually, and whenever a new chemical is introduced into their work area that could present a potential hazard.

2.1 Information. Science Division employees shall be informed of:

2.1.1 Any operations in their work area where hazardous chemicals are present.

2.1.2 The location and availability of the written hazard communication program, including a list(s) of hazardous chemicals used in their department, and the associated material safety data sheet (MSDS). This information will be:

- Centrally located outside the laboratory manager's office, Room 115, in a "Worker Right-To-Know Center". All employees will have convenient access to this location and materials during the hour of operation dictated by the college.

2.2 Training. Employee hazard communication training in the Science Division shall be conducted annually by the laboratory manager. This training will be conducted by an approved training instructor. Newly hired personnel will be briefed on the general requirements of the OSHA hazard communication standard within three months of start date, as well as duty specific hazards by their department chairperson before they begin any duties within the department. Intradepartmentally transferred personnel will also be briefed on the duty specific hazards by their immediate supervisor before they begin any duties within the department. This training will include at least the following:

2.2.1 Methods (subjective and objective) that may be used to detect the presence or release of a hazardous chemical in the work area. This will include; any monitoring conducted by the division, continuous monitoring devices, visual appearance, or odor of hazardous chemicals when being released, etc. Material Safety Data Sheets (MSDS) will be used augment this requirement where ever possible.

2.2.2 The physical and health hazards of the chemicals present in the work area (MSDS).

2.2.3 The measures employees can take to protect themselves from these hazards. Specific procedures the Science Division has implemented to protect employees from exposure to hazardous chemicals, to include; appropriate work practices, Standard Practice Instructions, emergency procedures, and personal protective equipment; to include fume hoods, and respirators.

2.2.4 An explanation of the labeling system used in the Science Division, the material safety data sheet, and how employees can obtain and use the appropriate hazard information.

2.2.5 The chemical (formal) and common name(s) of products used, and all ingredients which have been determined to be health hazards.

2.2.6 Physical and chemical characteristics of the hazardous chemical including, vapor pressure, and flash point.

2.2.7 The physical hazards of the hazardous chemical, including the potential for fire, explosion, and reactivity.

2.2.8 The health hazards of the hazardous chemical, including signs and symptoms of exposure, and any medical conditions which are generally recognized as being aggravated by exposure to the chemical.

2.2.9 The primary route(s) of entry; inhalation, absorption, ingestion, injection, and target organs.

2.2.10 The OSHA permissible exposure limit, ACGIH Threshold Limit Value, including any other exposure limit used or recommended by the chemical manufacturer.

2.2.11 Whether the hazardous chemical has been found to be a potential carcinogen by the International Agency for Research on Cancer (IARC).

2.2.12 Any generally applicable precautions for safe handling and use which are known including appropriate hygienic practices, protective measures during repair and maintenance of contaminated equipment, and procedures for clean-up of spills and leaks.

2.2.13 Any generally applicable control measures which are known appropriate engineering controls, work practices, or personal protective equipment.

2.2.14 Emergency and first aid procedures.

2.2.15 How to determine the date of preparation of the material safety data sheet concerned, and or the last change to it.

2.2.16 Specific chemical identity such as the chemical name, Chemical Abstracts Service (CAS) Registry Number, synonyms, or any other information pertinent to the training session.

2.3 Documentation. All training will be documented using a standard attendance roster. A copy of the completion certificate will be maintain as part of the employees permanent record. This documentation will be kept in the laboratory manager's office and in the Safety and Security office.

3. Labeling Requirements. Labeling requirements of containers of chemicals used in the Science Division, as well as of containers of chemicals and hazardous materials being shipped off-campus. The following procedures apply:

3.1 Unmarked Containers. No unmarked container containing chemicals may be used in conjunction with any duties or operations in the Science Division. Unless the container is a portable container in the control of a specific person for their immediate use. Container means any bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, storage tank, or the like that contains a hazardous chemical. For purposes of this standard practice instruction, pipes or piping systems, and engines, fuel tanks, or other operating systems in a vehicle, are not considered to be containers. Immediate use means that the hazardous chemical will be under the control of and used only by the person who transfers it from a labeled container and only within the standard laboratory allotted time frame in which it is transferred.

3.2 Container Labeling. The Science Division will maintain and provide a container labeling kit to any department requesting its use. Employees shall ensure that labels on incoming containers of hazardous chemicals are not removed or defaced. Containers containing hazardous chemicals will be properly disposed of and the labels defaced after use. Once they are emptied, chemical containers can never be used in the place of any other container (for example, trash receptacles). Empty, triple-rinsed used chemical containers can be used for chemical storage. The label must be removed and properly labeled with the contents of the new chemical.

3.3 Label Information for a single chemical (non-mixture). The Science Division will provide the appropriate hazard rating and chemical compatibility charts to label containers. The division follows the NFPA (National Fire Protection Association) labeling system. This international organization sets standards to protect against fire. Many individuals know it as the color coded triangle that establishes chemical safety in terms of health, reactivity, and flammability. Charts are available in the chemistry labs with more information regarding each category and number. This labeling system will be used on all chemicals that are

permanently stored. Bottles of non-mixture chemicals can be labeled as listed above with the approved labeling tape provided in every lab/prep. area. The MSDS will be consulted first to determine labeling requirements. The label as a minimum will contain:

3.3.1 Information concerning the personal protective equipment (PPE) required to use or handle the chemical.

3.3.2 The DOT hazard class i.e., whether the chemical is Flammable, Toxic, Irritating, Corrosive, Water Reactive, or is an oxidizer.

3.3.3 The chemical name **as reflected on the MSDS.**

3.3.4 The normal operational use of the chemical.

3.3.5 Name, address, and emergency phone number of the chemical manufacturer, importer, or other responsible party.

3.4 Label Information (mixtures). The Science Division will provide the appropriate hazard rating and chemical data to label containers. The MSDS's of the chemicals used to create the mixture will be consulted first to determine labeling requirements, see para 3.3.

3.4.1 If a mixture has been tested by an approved laboratory as a whole to determine its hazardous characteristics, the results of such testing shall be used to determine whether the mixture is hazardous and to provide the appropriate labeling information.

3.4.2 If a mixture has not been tested as a whole to determine whether the mixture is a health hazard, the mixture shall be assumed to present the same health hazards as do the components which comprise one percent (by weight or volume) or greater of the mixture. Scientifically valid data such as that provided on the MSDS to evaluate the physical hazard potential of the mixture must be used. The Safety Coordinator may be consulted to provide any hazard analysis assistance required.

3.5 Where Labels are not required. Questions concerning any of the exceptions listed below should be directed to the laboratory manager for clarification. The Science Division generally should not be affected by these requirements, however they are provided for information and because they are included in the Hazard Communication Standard. The Hazard Communication Standard does not require labeling of the following chemicals:

3.5.1 Any pesticide as such term is defined in the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 136 et seq.), when subject to the

labeling requirements of that Act and labeling regulations issued under that Act by the Environmental Protection Agency.

3.5.2 Any food, food additive, color additive, drug, cosmetic, or medical or veterinary device, including materials intended for use as ingredients in such products (e.g. flavors and fragrances), as such terms are defined in the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 301 et seq.) and regulations issued under that Act, when they are subject to the labeling requirements under that Act by the Food and Drug Administration;

3.5.3 Any distilled spirits (beverage alcohols), wine, or malt beverage intended for nonindustrial use, as such terms are defined in the Federal Alcohol Administration Act (27 U.S.C. 201 et seq.) and regulations issued under that Act, when subject to the labeling requirements of that Act and labeling regulations issued under that Act by the Bureau of Alcohol Tobacco, and Firearms.

3.5.4 Any consumer product or hazardous substance as those terms are defined in the Consumer Product Safety Act (15 U.S.C. 2051 et seq.) and Federal Hazardous Substances Act (15 U.S.C. 1261 et seq.) respectively, when subject to a consumer product safety standard or labeling requirement of those Acts, or regulations issued under those Acts by the Consumer Product Safety Commission.

3.6 Labeling of containers of chemicals and hazardous materials being shipped off site designated as hazardous waste. Where these materials are classified as hazardous waste they fall under the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6901 et seq.), and the provisions of 40 CFR. And as such will be subject to regulations issued under that Act by the Environmental Protection Agency. Consult with the laboratory manager where this determination is unclear or assistance is required. The Science Division's hazardous waste storage area is located on the 3rd floor, in the organic storeroom. The labeling system follows a standard red bordered label (3" X 5") which lists contents, start date.

4. Evaluation and Distribution of Material Safety Data Sheets to Employees.

4.1 The Science Division shall maintain copies of any material safety data sheets that are received with incoming shipments of the sealed containers of hazardous chemicals, shall obtain a material safety data sheet for sealed containers of hazardous chemicals received without a material safety data sheet if an employee requests the material safety data sheet, and shall ensure that the material safety data sheets are readily accessible during each work shift. In addition, the Director of Safety and Security will also maintain an MSDS for each chemical in the division.

4.2 Master copies of each MSDS will be maintained in outside the lab manager's office.

4.3 Right-To-Know (worker) copies will be available to all employees in the building, Additionally, a list of the hazardous chemicals known to be present in each department using an identity that is referenced from the appropriate material safety data sheet will be located in the lab manager's office.

4.4 MSDS copies will be maintained for all chemicals abandoned for use for a period of 30 years.

4.5 MSDS requests. A request letter will be forwarded to any vender who does not provide an MSDS with a product received by this company. The letter will be forwarded within 14 days of receipt of the material. The format will be the same as the sample letter located at the back of this instruction.

4.7 Employees must be familiar with the various sections of the MSDS.

<u>Section</u>	<u>Contents</u>
Section I	- Product Identity
Section II	- Hazardous Ingredients
Section III	- Physical/Chemical Characteristics
Section IV	- Fire and Explosion Hazard Data
Section V	- Reactivity Data
Section VI	- Health Hazards Data
Section VII	- Precautions for Safe Handling and Use
Section VIII	- Control Measures/Protection Info
Section IX	- Additional Information

5. Non-Company Employees Program. Visitors, Contract Employees, Contractor Personnel and In-House Representatives. The principle college escort or contact will advise visitors, contract employees, contractor personnel, and in-house representatives of any chemical hazards that may be encountered in the normal course of their work on the premises, the labeling system in use, the protective measures to be taken, the safe handling procedures to be used, and availability of MSDS's. Any contractor bringing chemicals on-site must provide the Science Division with the appropriate hazard

information on these substances, including the labels used and the precautionary measures to be taken in working with these chemicals. Consult with the laboratory manager where this determination is unclear or assistance is required.

6. Trade Secrets. To protect trade secrets, the chemical manufacturer, importer, or employer may withhold the specific chemical identity, including the chemical name, and other specific identification of a hazardous chemical, from the material safety data sheet. To ensure the safety of our faculty and staff, the Science Division will obtain any information not shown on a MSDS from a supplier, when such information is needed to determine the hazardous constituents of chemicals used within our facility or by our employees. Division employees will not use a specific chemical, if they cannot determine from the MSDS (or other approved source) proper protective measures to be used. The following conditions apply:

6.1 Emergency situations. Where a treating physician or nurse determines that a medical emergency exists and the specific chemical identity of a hazardous chemical is necessary for emergency or first-aid treatment, Science Division suppliers are required by law to immediately disclose the specific chemical identity of a trade secret chemical to that treating physician or nurse, regardless of the existence of a written statement of need of a confidentiality agreement.

6.2 Non-emergency situations. The following OSHA guidelines apply when requesting information designated as a trade secret from a MSDS. Requesters of trade secret information will:

6.2.1 Provide the request in writing.

6.2.2 Explain in detail why the disclosure of the specific chemical identity is essential.

6.2.3 Agree (when required) in a written confidentiality agreement that the information will not be used for any purpose other than the health need(s) asserted and agree not to release the information under any circumstances other than to OSHA, as provided in 29 CFR 1910.1200.

6.2.4 Use the information for the following reasons:

6.2.4.1 To assess the hazards of the chemicals to which employees will be exposed.

6.2.4.2 To conduct or assess sampling of the workplace atmosphere to determine employee exposure levels.

6.2.4.3 To conduct pre-assignment or periodic medical surveillance of exposed employees.

6.2.4.4 To provide medical treatment to exposed employees.

6.2.4.5 To select or assess appropriate personal protective equipment for exposed employees.

6.2.4.6 To select or improve engineering controls or other protective measures for exposed employees, and to conduct studies to determine the health effects of exposure.

7. Unlabeled Process Piping. Process piping containing hazardous materials will identify the material present, the direction of flow and the maximum pressure achieved in the system.

8. Non Routine Tasks. No employee will be allowed to perform tasks that they are not fully trained to accomplish. Non routine tasks will be evaluated prior to accomplishment of work and the related hazard(s) assessed to develop protective measures. This process will be documented on the company "non-routine assessment form".

9. Definitions Commonly Found in the OSHA Hazard Communication Standard or that Relate to the Contents of the Standard.

Article means a manufactured item:

1. Which is formed to a specific shape or design during manufacture.
2. which has end use function(s) dependent in whole or in part upon its shape or design during end use.
3. which does not release, or otherwise result in exposure to, a hazardous chemical, under normal conditions of use.

Assistant Secretary means the Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, or designee.

Chemical means any element, chemical compound or mixture of elements and/or compounds.

Chemical manufacturer means an employer with a workplace where chemical(s) are produced for use or distribution.

Chemical name means the scientific designation of a chemical in accordance with the nomenclature system developed by the International Union of Pure and Applied Chemistry (IUPAC) or the Chemical Abstracts Service (CAS) rules of nomenclature, or a name which will clearly identify the chemical for the purpose of conducting a hazard evaluation.

Combustible liquid means any liquid having a flashpoint at or above 100 F (37.8 C), but below 200 F (93.3 C), except any mixture having components with flashpoints of 200 F (93.3 C), or higher, the total volume of which make up 99 percent or more of the total volume of the mixture.

Common name means any designation or identification such as code name, code number, trade name, brand name or generic name used to identify a chemical other than by its chemical name.

Compressed gas means:

1. A gas or mixture of gases having, in a container, an absolute pressure exceeding 40 psi at 70 F (21.1 C); or
2. A gas or mixture of gases having, in a container, an absolute pressure exceeding 104 psi at 130 F (54.4 C) regardless of the pressure at 70 F (21.1 C); or
3. A liquid having a vapor pressure exceeding 40 psi at 100 F (37.8 C) as determined by ASTM D-323-72.

Designated representative means any individual or organization to whom an employee gives written authorization to exercise such employee's rights under this section. A recognized or certified collective bargaining agent shall be treated automatically as a designated representative without regard to written employee authorization.

Director means the Director, National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services, or designee.

Distributor means a business, other than a chemical manufacturer or importer, which supplies hazardous chemicals to other distributors or to employers.

Employee means a worker who may be exposed to hazardous chemicals under normal operating conditions or in foreseeable emergencies. Workers such as office workers or bank tellers who encounter hazardous chemicals only in non-routine, isolated instances are not covered.

Employer means a person engaged in a business where chemicals are either used, distributed, or are produced for use or distribution, including a contractor or subcontractor.

Explosive means a chemical that causes a sudden, almost instantaneous release of pressure, gas, and heat when subjected to sudden shock, pressure, or high temperature.

Exposure or exposed means that an employee is subjected to a hazardous chemical in the course of employment through any route of entry (inhalation, ingestion, skin contact or absorption, etc.), and includes potential (e.g. accidental or possible) exposure.

Flammable means a chemical that falls into one of the following categories:

1. **Aerosol**, flammable means an aerosol that, when tested by the method described in 16 CFR 1500.45, yields a flame projection exceeding 18 inches at full valve opening, or a flashback (a flame extending back to the valve) at any degree of valve opening.
2. **Gas, flammable** means:
 - 2.1 A gas that, at ambient temperature and pressure, forms a flammable mixture with air at a concentration of thirteen (13) percent by volume or less.
 - 2.2 A gas that, at ambient temperature and pressure, forms a range of flammable mixtures with air wider than twelve (12) percent by volume, regardless of the lower limit.
 - 2.3 Liquid, flammable means any liquid having a flashpoint below 100 °F (37.8 °C), except any mixture having components with flashpoints of 100 °F (37.8 °C) or higher, the total of which make up 99 percent or more of the total volume of the mixture.
 - 2.4 Solid, flammable means a solid, other than a blasting agent or explosive as defined in § 190.109(a), that is liable to cause fire through friction, absorption of moisture, spontaneous chemical change, or retained heat from manufacturing or processing, or which can be ignited readily and when ignited burns so vigorously and persistently as to create a serious hazard. A chemical shall be considered to be a flammable solid if, when tested by the method described in 16 CFR 1500.44, it ignites and burns with a self-sustained flame at a rate greater than one-tenth of an inch per second along its major axis.

Flashpoint means the minimum temperature at which a liquid gives off a vapor in sufficient concentration to ignite when tested as follows:

1. Tagliabue Closed Tester (See American National Standard Method of Test for Flash Point by Tag Closed Tester, Z11.24-1979 (ASTM D 56-79)) for liquids with a viscosity of less than 45 Saybolt Universal Seconds (SUS) at 100 °F (37.8 °C), that do not contain suspended solids and do not have a tendency to form a surface film under test; or

2. Pensky-Martens Closed Tester (See American National Standard Method of Test for Flash Point by Pensky-Martens Closed Tester, Z11.7-1979 (ASTM D 93-79)) for liquids with a viscosity equal to or greater than 45 SUS at 100 °F (37.8 °C), or that contain suspended solids, or that have a tendency to form a surface film under test; or
3. Setaflash Closed Tester (see American National Standard Method of Test for Flash Point by Setaflash Closed Tester (ASTMD 3278-78)). Organic peroxides, which undergo autoaccelerating thermal decomposition, are excluded from any of the flashpoint determination methods specified above.

Foreseeable emergency means any potential occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment which could result in an uncontrolled release of a hazardous chemical into the workplace.

Hazardous chemical means any chemical which is a physical hazard or a health hazard.

Hazard warning means any words, pictures, symbols, or combination thereof appearing on a label or other appropriate form of warning which convey the hazard(s) of the chemical(s) in the container(s).

Health hazard means a chemical for which there is statistically significant evidence based on at least one study conducted in accordance with established scientific principles that acute or chronic health effects may occur in exposed employees. The term health hazard includes chemicals which are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, neurotoxins, agents which act on the hematopoietic system, and agents which damage the lungs, skin, eyes, or mucous membranes. Appendix A, to 29 CFR 1910.1200 provides further definitions and explanations of the scope of health hazards covered by this section, and Appendix B, 29 CFR 1910.1200 describes the criteria to be used to determine whether or not a chemical is to be considered hazardous for purposes of this standard practice instruction.

Identity means any chemical or common name which is indicated on the material safety data sheet (MSDS) for the chemical. The identity used shall permit cross-references to be made among the required list of hazardous chemicals, the label and the MSDS.

Immediate use means that the hazardous chemical will be under the control of and used only by the person who transfers it from a labeled container and only within the work shift in which it is transferred.

Importer means the first business with employees within the Customs Territory of the United States which receives hazardous chemicals produced in other countries for the purpose of supplying them to distributors or employers within the United States.

Label means any written, printed, or graphic material, displayed on or affixed to containers of hazardous chemicals.

Material safety data sheet (MSDS) means written or printed material concerning a hazardous chemical which is prepared in accordance with 29 CFR 1910.1200, paragraph (g).

Mixture means any combination of two or more chemicals if the combination is not, in whole or in part, the result of a chemical reaction.

Organic peroxide means an organic compound that contains the bivalent -O-O- structure and which may be considered to be a structural derivative of hydrogen peroxide where one or both of the hydrogen atoms has been replaced by an organic radical.

Oxidizer means a chemical other than a blasting agent or explosive as defined in 29 CFR 1910.109(a), that initiates or promotes combustion in other materials, thereby causing fire either of itself or through the release of oxygen or other gases.

Physical hazard means a chemical for which there is scientifically valid evidence that it is a combustible liquid, a compressed gas, explosive, flammable, an organic peroxide, an oxidizer, pyrophoric, unstable (reactive) or water-reactive.

Produce means to manufacture, process, formulate, or repackage.

Pyrophoric means a chemical that will ignite spontaneously in air at a temperature of 130 F (54.4 C) or below.

Responsible party means someone who can provide additional information on the hazardous chemical and appropriate emergency procedures, if necessary.

Specific chemical identity means the chemical name, Chemical Abstracts Service (CAS) Registry Number, or any other information that reveals the precise chemical designation of the substance.

Trade secret means any confidential formula, pattern, process, device, information or compilation of information that is used in an employer's business, and that gives the employer an opportunity to obtain an advantage over competitors who do not know or use it.

Unstable (reactive) means a chemical which in the pure state, or as produced or transported, will vigorously polymerize, decompose, condense, or will become self-reactive under conditions of shocks, pressure or temperature.

Use means to package, handle, react, or transfer.

Water-reactive means a chemical that reacts with water to release a gas that is either flammable or presents a health hazard. Often when the water is heated it goes into a gaseous state allowing oxygen to be released which can help feed a fire.

Work area means a room or defined space in a workplace where hazardous chemicals are produced or used, and where employees are present.

Work place means an establishment, job site, or project, at one geographical location containing one or more work areas.

10. Sample Letter Requesting an MSDS.**SAMPLE LETTER REQUESTING AN MSDS**

XYZ Manufacturing Company
1234 Street
Anytown, USA 11222

Dear Sir:

The Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200) requires employers be provided Material Safety Data Sheets (MSDS's) for all hazardous substances used in their facility, and to make these MSDS's available to employees potentially exposed to these hazardous substances.

We, therefore, request a copy of the MSDS for your product listed as Stock Number _____. We did not receive an MSDS with the initial shipment. We also request any additional information, supplemental MSDS's, or any other relevant data that your company or supplier has concerning the safety and health aspects of this product.

Please consider this letter as a standing request to your company for any information concerning the safety and health aspects of using this product that may become known in the future.

The MSDS and any other relevant information should be sent to us within 10, 20, 30, days (select appropriate time). Delays may prevent use of your product. Send the information to the address listed below.

Please be advised that if we do not receive the MSDS on the above chemical by _____, we may have to notify OSHA of our inability to obtain this information.

Your cooperation is greatly appreciated. Thank you for your timely response to this request. If you have any questions please contact me at (123) 456-7891.

Sincerely

11. Attachments:

College Misericordia's Hazardous Communication Program

National Fire Protection Association Code #704 (NFPA #704)



COLLEGE
MISERICORDIA
1924-1999 75

Safety and Security

To: HAZCOM Coordinators
From: Paul Murphy, Director of Safety & Security
Date: February 2, 2000
Subject: Hazard Communication Program

Attached is your copy of the Hazard Communication Program signed by John Risboskin, Vice President of Finance & Administration. This copy must be available along with MSDS for any chemicals used in your area. A copy will also be available in the Security Office for 24 hour a day availability.

The Security Office will also maintain a complete list of MSDS for all chemicals on the college campus. I will be contacting you in the near future to verify the MSDS for your particular area to insure accuracy. If you have changed or intend to change chemicals in the future, please forward to me a copy of the new MSDS and a copy of the old MSDS. You need to file and store the MSDS for chemicals no longer used on the college campus.

Once the MSDS have been verified in your particular area, training of your staff should commence. If you have any question or concerns, please contact me at ext. 6272.

cc: John Risboskin
Vice President of Finance & Administration

COLLEGE MISERICORDIA (CM)
HAZARD COMMUNICATION PROGRAM

COLLEGE MISERICORDIA: HAZARD COMMUNICATION PROGRAM

1. General Regulatory Information:

To ensure that information regarding the dangers of all hazardous chemicals used by Misericordia employees, contractors and subcontractors are known by all affected employees, the following Hazard Communication and Right-to-Know (R2K) program has been established:

All employees will participate in the Hazard Communication Program. This written program will be available in the following locations:

- Security Office, McAuley Walsh, first floor
- Science Building - Biology Area, second floor
- Science Building - Chemistry Area, third floor
- Health Center - Anderson Center, Nursing Office
- Anderson Center - Pool Area
- Medical Imaging Department, Administration Building, ground floor
- Facility Print Shop, Facilities Annex
- Copy Center - Administration Building, ground floor
- Facilities Annex (Maintenance Area)

This program adopts by reference all sections of:

29CFR1910.1200 of the U.S. Department of Labor, Safety Standards "Hazard Communication" and

34 PA Code 301-326: "Right-to-Know".

The Director of Safety/Security will have overall responsibility for operation and implementation of the CM Hazard Communication Program. Additionally, HAZCOM Coordinators are identified in each major work location or work function (e.g. areas listed above) to assist with the implementation of the CM HAZCOM Program.

2. Container Labeling:

HAZCOM Coordinators at Misericordia work sites will verify that all containers received for use are properly labeled as to the contents, contain the appropriate hazard warning and list the name and address of the manufacturer.

HAZCOM Coordinators will ensure that all secondary containers are labeled with either an extra copy of the original manufacturer's label or with labels that have the identity of the substance and the appropriate hazard warning. CM utilizes the National Fire Protection Association (NFPA) 704 marking system for this purpose (See Appendix A). This system uses a combination of numbers and colors arranged in a diamond shape. The system identifies the hazards of a material in terms of three principle categories: "Health Hazard", "Flammability", and "Reactivity". This system also indicates the degree of severity by a numerical rating that ranges from four (4) indicating a severe hazard, to zero (0) which indicates no hazard. Each position is assigned a color. Blue is assigned for Health hazard, red is assigned for flammability, and yellow is assigned for reactivity hazard. The fourth section indicates any other unusual hazards if it is not needed to indicate reactivity with water, symbolized by the letter "W" with a line through the center. Further information concerning the NFPA 704 system is appended to this plan.

3. Material Safety Data Sheets (MSDS):

The Director of Safety/Security, in conjunction with area HAZCOM Coordinators are responsible for establishing and monitoring the MSDSs program. MSDSs will be requested/provided with the initial shipment of materials. Chemical use will not occur until the MSDS is received by The Director of Safety /Security and HAZCOM supervisors and approved for use. They will insure that any new information is passed on to affected employees. When an MSDS is not received at the time of the initial shipment, the HAZCOM Coordinator will request an MSDS from the manufacturer in writing or by telephone (See Appendix B). MSDSs for hazardous substances in use in areas will be kept in:

- Security Office, McAuley Walsh, first floor
- Science Building - Biology Area, second floor.
- Science Building - Chemistry Area, third floor
- Health Center - Anderson Center, Nursing Office
- Anderson Center - Pool Area
- Medical Imaging Department, Administration Building, ground floor
- Facility Print Shop, Facilities Annex
- Copy Center - Administration Building, ground floor
- Facilities Annex (Maintenance Area)

Copies of MSDS's for ALL hazardous substances will be maintained at:

The Safety/Security Office
Anderson Health Center, Nursing Office

Material Safety Data Sheets will be readily available to all employees during each work shift, at work locations (see above).

When revised MSDSs are received the old MSDSs will be replaced by the new revised MSDSs and old MSDSs will be kept and placed into an inactive file maintained at each location.

4. Employee Training and Information:

CM establishes procedures for initial employee HAZCOM training provided by the Director of Safety & Security or area HAZCOM Coordinators.

Prior to starting work, each new employee will attend a health and safety orientation that includes the following information and training:

- An overview of the requirements contained in the U.S. Department of Labor, Hazard Communication standard and the applicable provisions of the Pennsylvania Right-to-Know Act.
- Hazardous chemicals present in his/her work places.
- Physical and health risks of the hazardous chemicals.
- The symptoms of overexposure.
- How to reduce or prevent exposure to hazardous chemicals through the use of engineering controls, work practices and personal protective equipment.
- Steps taken to reduce or prevent exposure to hazardous chemicals.
- Procedures to follow if employees are overexposed to hazardous chemicals.
- How to read labels and review MSDSs to obtain hazard information.
- Location of the MSDS file and written Hazard Communication Program and how to acquire additional information about hazardous chemicals in the work place.
- The above training and information will be conveyed to employees. A written record of training will be maintained according to CM human resource and training documentation procedures.
- As new chemicals and MSDSs are received, retraining by HAZCOM Coordinators shall occur. The lesson plan for this training is appended (See Appendix C).



5. Hazardous Non-Routine Tasks:

- Periodically, employees are required to perform hazardous non-routine tasks with hazardous substances. Prior to starting work on such projects, each affected employee will be given information by the appropriate HAZCOM Coordinator. This information will include specific chemical hazards, safety measures and personal protective equipment, as well as emergency procedures, relative to the hazardous substances used in the non-routine tasks.

6. Informing Contractors:

- It is the responsibility of all HAZCOM Coordinators in coordination with the Director of Safety and Security and the CM Purchasing/Contract Officer to provide contractors with information about hazardous chemicals their employees may be exposed to at a job site and require precautionary procedures for the contractor's employees.
- Contractors will be contacted before work is started to gather and distribute information concerning any chemical hazard that they may bring to the job. This information will be conveyed to contractors in all specifications and at pre-job conferences. Written Hazard Communication Program and MSDS for hazardous substances to be used on CM sites/projects will be requested from all contractors/subcontractors. Work will not occur until these are provided.

7. Informing Other Employers:

The following methods will be used to inform other employers who have employees who may be exposed to hazardous chemicals used by employees of CM:

- a. Materials Safety Data Sheets will be provided (See Informing Contractors Section 6).
- b. Appropriate precautionary methods will be relayed to other employers to safeguard their employees from Hazardous Substances and Hazardous Non-Routine Tasks.
- c. Other employers will be informed of the labeling system in use.
- d. If requested by the Pennsylvania Department of Labor and Industry, an Environmental Hazard Survey form for current products on site will be completed and forwarded through the appropriate administrative procedures. Information requested by community emergency responders (police, fire, emergency management, emergency medical) shall be forwarded upon request.

8. Inventory of Hazardous Chemicals:

A list of all known hazardous substances used by CM employees in work locations is located with Material Safety Data Sheets (See Section 3).

A Pennsylvania Department of Labor and Industry Hazardous Substance survey form (MSDS master list) for materials which contain 1% hazardous substances, or .1% special or environmentally hazardous substances, will be complied by April 1 of each year for materials on site during the prior calendar year, and maintained in the CM Safety & Security Department and the Anderson Health Center, Nursing Office.

9. Program Availability:

Information concerning this program will be provided to all employees and their representatives through training, and is available at all times for review in the locations where Material Safety Data Sheets are maintained (See Section 1 and 3).

10. Appendices:

Appendix A: NFPA 704: Labeling System

Appendix B: CM MSDS Request Form

Appendix C: CM HAZCOM Training Outline

This policy was approved and implemented on January 10, 2000 by John Risboskin

John Risboskin
Vice President of Finance & Administration
College Misericordia

ACTIVITY (STABILITY) DI

Assignment of degrees in the 4-point system upon the stability

NFPA 704 SYSTEM



HEALTH (BLUE)

In general, health hazard in firefighting is that of a single exposure which may vary from a few seconds up to an hour. The physical exertion demanded in firefighting or other emergency conditions may be expected to intensify the effects of any exposure. Only hazards arising out of an inherent property of the material are considered. The following explanation is based upon protective equipment normally used by firefighters.

- 4** Materials too dangerous to health to expose firefighters. A few whiffs of the vapor could cause death or the vapor or liquid could be fatal on penetrating the firefighter's normal full protective clothing. The normal full protective clothing and breathing apparatus available to the average fire department will not provide adequate protection against inhalation or skin contact with these materials.
- 3** Materials extremely hazardous to health but areas may be entered with extreme care. Full protective clothing, including self-contained breathing apparatus, coat, pants, gloves, boots, and bands around legs, arms and waist should be provided. No skin surface should be exposed.
- 2** Materials hazardous to health, but areas may be entered freely with full-faced mask self-contained breathing apparatus which provides eye protection.
- 1** Materials only slightly hazardous to health. It may be desirable to wear self-contained breathing apparatus.
- 0** Materials which on exposure under fire conditions would offer no hazard beyond that of ordinary combustible material.

FLAMMABILITY (RED)

Susceptibility to burning is the basis for assigning degrees within this category. The method of attacking the fire is influenced by the susceptibility factor.

- 4** Very flammable gases or very volatile flammable liquids. Shut off flow and keep cooling water streams on exposed tanks or containers.
- 3** Materials which can be ignited at almost all normal temperature conditions. Water may be ineffective because of the low flash point.
- 2** Materials which must be moderately heated before ignition will occur. Water spray may be used to extinguish the fire because the material can be cooled below its flash point.
- 1** Materials that must be preheated before ignition can occur. Water may cause frothing if it gets below the surface of the liquid and turns to steam. However, water fog generated by applying water to the surface will cause frothing which will extinguish the fire.
- 0** Materials that will not burn.

REACTIVITY (STABILITY) (YELLOW)

The assignment of degrees in the reactivity category is based upon the susceptibility of materials to release energy either by themselves or in combination with water. Fire exposure was one of the factors considered along with conditions of shock and pressure.

4 Materials which (in themselves) are readily capable of detonation or of explosive decomposition or explosive reaction at normal temperatures and pressures. Includes materials which are sensitive to mechanical or localized thermal shock. If a chemical with this hazard rating is in an advanced or massive fire, the area should be evacuated.

3 Materials which (in themselves) are capable of detonation or of explosive decomposition or of explosive reaction which require a strong initiating source or which must be heated under confinement before initiation. Includes materials which are sensitive to thermal or mechanical shock at elevated temperatures and pressures or which react explosively with water without requiring heat or confinement. Firefighting should be done from an explosive-resistant location.

2

Materials which (in themselves) are normally unstable and readily undergo violent chemical change but do not detonate. Includes materials which undergo chemical change with release of energy at normal temperatures and pressures. Materials can undergo violent chemical change at elevated temperatures and pressures. Also includes the materials which may react with water or which may form a potentially explosive mixture with water. In advance or massive fire, firefighting should be done from a protected distance or from a protected location.

1

Materials which (in themselves) are normally stable but which become unstable at elevated temperatures and pressures or which may react with water with some release of energy, but not violently. Caution must be exercised in approaching the fire and applying water.

0

Materials which (in themselves) are normally stable even under fire exposure conditions and which do not react with water. Normal firefighting procedures may be used.

NOTES