Wheaton College  
Hazard Communication Program

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Wheaton College
Hazard Communication Program

1.0 Introduction

The Hazard Communication (HazCom) Program for Wheaton College is designed to meet the requirements of OSHA Standard 1910.1200. A copy of the standard is found in Appendix A. The Wheaton College Administration is committed to providing a safe and healthful work environment to employees. It is the policy of the college to comply with all applicable sections of this standard. This Plan and all associated documents are available to employees and OSHA authorities upon request.

2.0 Purpose and Scope

Purpose
The purpose of the HazCom Program is to reduce the incidence of illness and injury due to chemical exposure. This shall be accomplished through a comprehensive program that includes container labeling, chemical inventories, Material Safety Data Sheets (MSDS), and employee training.

Scope
This program applies to all employees who use, or may be exposed to, hazardous chemicals at campus facilities and off-site operations while performing their job duties. This may include facility maintenance personnel, art studio faculty, or any other employee who encounters hazardous chemicals on the job.

Hazard communication and all its program elements may also include employees of other employers (contract employees) who may be exposed to hazardous chemicals while working at Wheaton College.

Limited coverage applies only to laboratory personnel, and warehouse/shipping and receiving personnel.

Exemptions
OSHA provides exemptions of some materials from the HazCom Standard that are subject to other regulations, may not be considered hazardous or are used as consumer products.

Materials exempt from labeling include:
- Pesticides subject to FIFRA
- Chemicals defined under TSCA
- Agricultural or vegetable seeds treated with pesticides

Materials exempt from the requirements of this standard:
- Hazardous Waste defined under RCRA
- Hazardous substances defined under CERCLA
- Tobacco products
- Wood products
- Food and alcoholic beverages
- Drugs
- Cosmetics
- Consumer products
- Nuisance particulates
- Ionizing and non-ionizing radiation
- Biological hazards

3.0 Responsibilities
Each member of the college community plays an important role in the compliance of this program. The “Summary of Responsibilities,” found in Appendix B, fully outlines tasks associated with the Business Services Office as Program Coordinator, the departments in conjunction with department coordinators, and individual employees. Highlights include:

Management
- Ensure the program is implemented and maintained
- Conduct compliance audits, and put forth corrective measures for continual improvement
- Ensure the chemical inventory list for each department is updated annually
- Obtain MSDS’s for chemicals listed on the inventory list
- Provide job specific training
- Approve the use of all new hazardous chemicals
- Identify new hazards prior to being introduced into the work area

Employees
- Comply with policies and procedures as outlined in this Plan
- Attend training and follow guidelines specified
- If conditions or work practices change and/or if new hazards are present in their work environment, they shall notify their supervisor and/or department coordinator.

Contractor Responsibilities and Coverage Under this Plan
Contract Employees: The department coordinator shall advise outside contractors of chemical hazards that may be encountered in the normal course of their work at Wheaton College. This shall include Wheaton College’s labeling procedures, appropriate protective measures, and safe handling procedures. The department coordinator shall inform contract employees of the location and availability of MSDS’s.

Contractors
Contractors/subcontractors will provide Wheaton College Physical Plant Project Managers with the following information, prior to the commencement of work activities:
- List of hazardous chemicals to which employees may be exposed while conducting work on campus
- Precautions employees should take to prevent exposure to these chemicals
- Location of MSDS’s of the chemicals being used or stored on-site. MSDS’s should be kept at the construction site and be available during work hours.

While on campus contractors will ensure:
- Chemical containers are properly labeled
- Responsible and safe handling, storage and disposal of hazardous chemical materials following ALL applicable local, state and regulatory requirements.

Wheaton College Employees with Limited Coverage Under this Plan
Laboratory Personnel: In laboratories, where chemicals are known to be present, the following shall apply:
- Labels on incoming containers will not be removed or defaced
- MSDS received with incoming shipments of hazardous materials must be maintained and readily accessible. Department coordinators should receive a copy to update the departmental inventory list. A copy of the MSDS must also be sent to the Business Services Office.
- Employees shall be provided with information and training
- If laboratory employees ship hazardous materials, they must ensure that they are properly labeled, and an MSDS is provided in the shipment and that the shipment complies with Department of Transportation standards.
Laboratory personnel should refer to OSHA Laboratory Standard 1910.1450 for safe practices when working with hazardous materials.

Shipping/Receiving & Warehouse Personnel: This section applies only when hazardous chemical containers remain sealed.

- Labels on incoming containers will not be defaced or removed.
- MSDS received with incoming shipments of hazardous materials must be maintained and readily accessible, if applicable.
- Information and training to protect personnel in the event of a spill or leak. Spill and emergency procedures are found in Appendix C.
- No other section of the HazCom standard applies except as noted above.

4.0 Program Elements

4.1 Written Hazard Communication Program

Wheaton College has developed and will maintain a written HazCom Program that describes labels and other forms of warning on chemical containers, material safety data sheets and information and training applicable to this standard. This program shall also include how lists of hazardous chemicals on site will be compiled, how employees will be informed of the hazards associated with non-routine tasks, and hazards associated with unlabeled pipes.

4.2 Labels and Other Forms of Warning

Chemical manufacturers, importers, and distributors are required to ensure every container of hazardous chemicals they ship is appropriately labeled. The label shall include, at a minimum, the identity of the material, appropriate hazard warnings and the name and address of the manufacturer. See Appendix D for an example label. Note that when purchasing chemicals, buyers can rely on the labels provided by the manufacturer.

At Wheaton College, department coordinators and employees shall both ensure that hazardous chemicals are properly labeled. When employees need to transfer chemicals from a marked container to a portable container for immediate use, no label will be necessary. If the chemical is transferred to another container that will not be used right away, the appropriate label must be affixed to the container. All labels for in-house containers are approved by the work area supervisor and/or department coordinator.

4.3 Material Safety Data Sheets (MSDS)

Chemical manufacturers and importers are required to obtain or develop a material safety data sheet for each hazardous chemical they produce or import. Distributors are responsible for ensuring that their customers are provided a copy of these MSDS’s. Employers must have an MSDS for each hazardous chemical they use.

The role of MSDS’s is to provide detailed information on each hazardous chemical, including its potential hazardous effects, its physical and chemical characteristics, and recommendations for appropriate protective measures.

The department coordinator shall be responsible for acquiring and updating MSDS’s and sending copies to the Business Services Office. Department coordinators are responsible to contact the chemical manufacturer or vendor if additional information is necessary or if an MSDS has not been supplied with an initial shipment.

MSDS’s for every hazardous chemical on the department inventory list will be located in each department. The MSDS’s will be readily accessible during each work shift to employees in their work area. OSHA does allow electronic access or other alternatives to paper copies as
long as no barriers exist by these options. A master inventory list and the MSDS’s will also be maintained in the Business Services Office.

Sometimes, chemical manufacturers may withhold information on an MSDS if a claim can be made that the material is a trade secret. However, the specific chemical identity can be made available for emergency and non-emergency issues as specified in the Standard 1910.1200(i).

4.4 Information and Training

Wheaton College employees will be provided with effective information and training on hazardous chemicals in their work area at the time of initial assignment and whenever a new physical or health hazard the employee has not been previously trained for is introduced into their work area. The information and training can cover hazard categories (i.e. flammable, toxics, carcinogens) or specific chemicals.

Information shall include:
- Requirements of the OSHA Standard 1910.1200.
- Operations in the work area where hazardous chemicals are used.
- Identity of chemicals being used and their associated hazards.
- Location and availability of the written program, the inventory list, and MSDS’s.
- Information on any non-routine tasks.

Training shall include:
- Methods and observations used to detect the presence or release of a hazardous chemical in the work area.
- Physical and health hazards of chemicals in the work area.
- Measures employees can take to protect themselves to include appropriate work practices, emergency procedures, and the use of personal protective equipment.
- Details of this plan.

Format(s) to be used:
- Classroom instruction by trainer knowledgeable in chemical safety and the requirements of this standard.
- Web-based programs.
- Hands-on training by supervisors.

Department coordinators and supervisors will also be available to provide information regarding known hazards and appropriate protective measures. They will be available to answer questions from employees, monitor safe work practices, and provide any additional training.

4.5 List of Hazardous Chemicals

A list of hazardous chemicals is a required part of this program. The list shall serve as an inventory of MSDS’s on campus. Each department coordinator shall compile the list of hazardous materials and update it as necessary, but at least annually. Lists shall include, at a minimum, the name of the material, location and quantity.

All new procurements of chemicals shall be cleared by the department coordinator. In this, the chemical inventory can remain current.

**Tips for Compiling the List**
Sometimes people think of “chemicals” as being only liquids in containers; however, chemicals come in all physical forms—liquids, solids, gases, vapors, fumes and mists—whether they are “contained” or not. The hazardous nature of the chemical and the potential for exposure are the factors which determine whether a chemical is covered. If it’s not hazardous, it’s not covered. If there is no potential for exposure (i.e., the chemical is inextricably bound and can not be released), the rule does not cover the chemical.

Identify chemicals in containers, including pipes, but also think about chemicals generated in work operations. For example, welding fumes, dusts, and exhaust fumes are all sources of chemical exposures. Read labels provided by suppliers for hazard information. Make a list of all chemicals in the workplace that are potentially hazardous. For your own information and planning, you may also want to note on the list the location(s) of the products within the workplace, and an indication of the hazards as found on the label.

4.6 Non-Routine Tasks

Supervisors shall discuss any special hazards the employees may encounter when performing non-routine duties in the course of their work before the job begins. It is the responsibility of the supervisor to ensure that employees receive necessary specialized training. Information provided shall include safe handling, personal protective equipment, exposure monitoring if necessary, and other possible control measures.

4.7 Unlabeled Pipes

Supervisors shall discuss the hazards of any unlabeled pipes with employees who may encounter them in the course of their work before the job begins. It is the responsibility of the supervisor to ensure that employees receive necessary specialized training. Information provided shall include safe practices, personal protective equipment, and other possible control measures.

5.0 Recordkeeping

In compliance with this standard, several documents need to be maintained. It may include some or all of the following:
- Written HazCom Plan
- Material Safety Data Sheets (paper copies)
- If MSDS’s are accessed electronically, instructions on how to obtain and print out copies are provided
- Chemical inventory lists
- Training records
- Correspondence with contract employees, if needed
- Correspondence with contractors, if needed
- Approved in-house labels for hazardous chemical containers
- Correspondence with chemical manufacturers regarding MSDS.

Location of these documents can be with either the department coordinators or the Business Services Office.
APPENDIX A

OSHA – Occupational Safety and Health Administration

Standard Number: 1910.1200
Standard Title: Hazard Communication
SubPart Number: Z
SubPart Title: Toxic and Hazardous Substances

(a) Purpose
   (a)(1) The purpose of this section is to ensure that the hazards of all chemicals produced or imported are evaluated, and that information concerning their hazards is transmitted to employers and employees. This transmittal of information is to be accomplished by means of comprehensive hazard communication programs, which are to include container labeling and other forms of warning, material safety data sheets and employee training.

   (a)(2) This occupational safety and health standard is intended to address comprehensively the issue of evaluating the potential hazards of chemicals, and communicating information concerning hazards and appropriate protective measures to employees, and to preempt any legal requirements of a state, or political subdivision of a state, pertaining to this subject. Evaluating the potential hazards of chemicals, and communicating information concerning hazards and appropriate protective measures to employees, may include, for example, but is not limited to, provisions for: developing and maintaining a written hazard communication program for the workplace, including lists of hazardous chemicals present; labeling of containers of chemicals in the workplace, as well as of containers of chemicals being shipped to other workplaces; preparation and distribution of material safety data sheets to employees and downstream employers; and development and implementation of employee training programs regarding hazards of chemicals and protective measures. Under section 18 of the Act, no state or political subdivision of a state may adopt or enforce, through any court or agency, any requirement relating to the issue addressed by this Federal standard, except pursuant to a Federally-approved state plan.

(b) Scope and Application
   (b)(1) This section requires chemical manufacturers or importers to assess the hazards of chemicals which they produce or import, and all employers to provide information to their employees about the hazardous chemicals to which they are exposed, by means of a hazard communication program, labels and other forms of warning, material safety data sheets, and information and training. In addition, this section requires distributors to transmit the required information to employers. (Employers who do not produce or import chemicals need only focus on those parts of this rule that deal with establishing a workplace program and communicating information to their workers. Appendix E of this section is a general guide for such employers to help them determine their compliance obligations under the rule.)

   (b)(2) This section applies to any chemical which is known to be present in the workplace in such a manner that employees may be exposed under normal conditions of use or in a foreseeable emergency.

   (b)(3) This section applies to laboratories only as follows:
   (b)(3)(i) Employers shall ensure that labels on incoming containers of hazardous chemicals are not removed or defaced;
   (b)(3)(ii) Employers shall maintain any material safety data sheets that are received with incoming shipments of hazardous chemicals, and ensure that they are readily
accessible during each work shift to laboratory employees when they are in their work areas;
(b)(3)(iii) Employers shall ensure that laboratory employees are provided information and training in accordance with paragraph (h) of this section, except for the location and availability of the written hazard communication program under paragraph (h)(2)(iii) of this section; and,
(b)(3)(iv) Laboratory employers that ship hazardous chemicals are considered to be either a chemical manufacturer or a distributor under this rule, and thus must ensure that any containers of hazardous chemicals leaving the laboratory are labeled in accordance with paragraph (f)(1) of this section, and that a material safety data sheet is provided to distributors and other employers in accordance with paragraphs (g)(6) and (g)(7) of this section.
(b)(4) In work operations where employees handle chemicals in sealed containers which are not opened under normal conditions of use (such as are found in marine cargo handling, warehousing, or retail sales), this section applies to these operations only as follows:
(b)(4)(i) Employers shall ensure that labels on incoming containers of hazardous chemicals are not removed or defaced;
(b)(4)(ii) Employers 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 as soon as possible 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 to employees when they are in their work area(s); and,
(b)(4)(iii) Employers shall ensure that employees are provided with information and training in accordance with paragraph (h) of this section (except for the location and availability of the written hazard communication program under paragraph (h)(2)(iii) of this section), to the extent necessary to protect them in the event of a spill or leak of a hazardous chemical from a sealed container.
(b)(5) This section does not require labeling of the following chemicals:
(b)(5)(i) 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;
(b)(5)(ii) Any chemical substance or mixture as such terms are defined in the Toxic Substances Control Act (15 U.S.C. 2601 et seq.), when subject to the labeling requirements of that Act and labeling regulations issued under that Act by the Environmental Protection Agency;
(b)(5)(iii) Any food, additive, color additive, drug, cosmetic, or medical or veterinary device or product, including materials intended for use as ingredients in such products (i.e. flavors and fragrances), as such terms are defined in the Federal Food, Drug and Cosmetic Act (21 U.S.C. 301 et seq.) or the Virus-Serum-Toxin Act of 1913 (21 U.S.C. 151 et seq.), and regulations issued under those Acts, when they are subject to the labeling requirements under those Acts by either the Food and Drug Administration or the Department of Agriculture;
(b)(6) This section does not apply to:
(b)(6)(i) Any hazardous waste as such term is defined by 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.), when subject to regulations issued under that Act by the Environmental Protection Agency;
(b)(6)(ii) Any hazardous substance as such term is defined by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (42 U.S.C. 9601 et seq.), when the hazardous substance is the focus of remedial or removal action being conducted under CERCLA in accordance with the Environmental Protection Agency regulations.
(b)(6)(iii) Tobacco or tobacco products;
(b)(6)(iv) Wood or wood products, including lumber which will not be processed, where the chemical manufacturer or importer can establish that the only hazard they pose employees is the potential for flammability or combustibility (wood or wood products which have been treated with a hazardous chemical covered by this standard, and wood which may be subsequently sawed or cut, generating dust, are not exempted);

(b)(6)(v) Articles (as that term is defined in paragraph (c) of this section);

(b)(6)(vi) Food or alcoholic beverages which are sold, used, or prepared in a retail establishment (such as a grocery store, restaurant, or drinking place), and foods intended for personal consumption by employees while in the workplace;

(b)(6)(vii) Any drug, as that term is defined in the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 301 et seq.), when it is in solid form for direct administration to the patient (e.g., tablets or pills); drugs which are packaged by the chemical manufacturer for sale to consumers in a retail establishment (e.g., over-the-counter drugs); and drugs intended for personal consumption by employees while in the workplace (e.g., first aid supplies);

(b)(6)(viii) Cosmetics which are packaged for sale to consumers in a retail establishment, and cosmetics intended for personal consumption by employees while in the workplace;

(b)(6)(ix) 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, where the employer can show that it is used in the workplace for the purpose intended by the chemical manufacturer or importer of the product, and the use results in a duration and frequency of exposure which is not greater than the range of exposures that could reasonably be experienced by consumers when used for the purpose intended;

(b)(6)(x) Nuisance particulates where the chemical manufacturer or importer can establish that they do not pose any physical or health hazard covered under this section;

(b)(6)(xi) Ionizing or non-ionizing radiation; and,

(b)(6)(xii) Biological hazards.

(c) Definitions

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 to employees.

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

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

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

Chemical name: the scientific designation of a chemical in accordance with the nomenclature system developed by the International Union or 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:** 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.

**Commercial account:** an arrangement whereby a retail distributor sells hazardous chemicals to an employer, generally in large quantities over time and/or at costs that are below the regular retail price.

**Common name:** 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:** (i) a gas or mixture of gases having, in a container, an absolute pressure exceeding 40 psi at 70°F (21.1°C); (ii) 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 (iii) a liquid having a vapor pressure exceeding 40 psi at 100°F (37.8°C) as determined by ASTM D-323-72.

**Container:** any bag, barrel, bottle, box, cylinder, drum, reaction vessel, storage tank, or the like that contains a hazardous chemical. For the purposes of this section, pipes or piping systems, and engines, fuel tanks, or other operating systems in a vehicle, are not considered to be containers.

**Designated representative:** 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:** the Director, National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services, or designee.

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

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

**Exposure or exposed:** an employee is subjected in the course of employment to a chemical that is a physical or health hazard, and includes potential (e.g. accidental or possible) exposure. “Subjected” in terms of health hazards includes any route of entry (e.g. inhalation, ingestion, skin contact or absorption).

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

(i) “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;

(ii) “Gas, flammable” means (A) 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; or (B) 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;
(iii) “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;

(iv) “Solid, flammable” means a solid, other than a blasting agent or explosive as defined in 1910.109(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:** the minimum temperature at which a liquid gives off a vapor in sufficient concentration to ignite when tested as follows:

(i) 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;

(ii) 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

(iii) Setaflash Closed Tester [see American National Standard Method of Test for Flash Point by Setaflash Closed Tester (ASTM D 3278-78)].

Organic peroxides, which undergo autoaccelerating thermal decomposition, are excluded from any of the flashpoint determination methods specified above.

**Foreseeable emergency:** 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:** any chemical which is a physical hazard or a health hazard.

**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 the hazards which must be covered.)

**Health hazard:** 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 provides further definitions and explanations or the scope of health hazards covered by this section, and Appendix B describes the criteria to be used to determine whether or not a chemical is to be considered hazardous for purposes of this standard.

**Identity:** 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:** 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**: 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**: any written, printed, or graphic material displayed on or affixed to containers of hazardous chemicals.

**Material Safety Data Sheet (MSDS)**: written or printed material concerning a hazardous chemical which is prepared in accordance with paragraph (g) of this section.

**Mixture**: 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**: an organic compound that contains the bivalent \(-\text{O-O}\) 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**: a chemical other than a blasting agent or explosive as defined in 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**: 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**: to manufacture, process, formulate, blend, extract, generate, emit or repackage.

**Pyrophoric**: a chemical will ignite spontaneously in air at a temperature of 130°F (54.5°C) or below.

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

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

**Trade secret**: 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. Appendix D sets out the criteria to be used in evaluating trade secrets.

**Unstable (reactive)**: 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**: to package, handle, react, emit, extract, generate as a byproduct, or transfer.

**Water-reactive**: a chemical that reacts with water to release a gas that is either flammable or presents a health hazard.

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

**Workplace**: an establishment, job site, or project, at one geographical location containing one or more work areas.
(d) **Hazard Determination**

(d)(1) Chemical manufacturers and importers shall evaluate chemicals produced in their workplaces or imported by them to determine if they are hazardous. Employers are not required to evaluate chemicals unless they choose not to rely on the evaluation performed by the chemical manufacturer or importer for the chemical to satisfy this requirement.

(d)(2) Chemical manufacturers, importers or employers evaluating chemicals shall identify and consider the available scientific evidence concerning such hazards. For health hazards, evidence which is statistically significant and which is based on at least one positive study conducted in accordance with established scientific principles is considered to be sufficient to establish a hazardous effect if the results of the study meet the definitions of health hazards in this section. Appendix A shall be consulted for the scope of health hazards covered, and Appendix B shall be consulted for the criteria to be followed with respect to the completeness of the evaluation, and the data to be reported.

(d)(3) The chemical manufacturer, importer or employer evaluating chemical shall treat the following sources as establishing that the chemicals listed in them are hazardous:

(d)(3)(i) 29 CFR part 1910, subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA); or

(d)(3)(ii) “Threshold Limit Values for Chemical Substances and Physical Agents in the Work Environment,” American Conference of Governmental Industrial Hygienists (ACGIH) (latest edition). The chemical manufacturer, importer, or employer is still responsible for evaluating the hazards associated with the chemicals in these source lists in accordance with the requirements of this standard.

(d)(4) Chemical manufacturers, importers and employers evaluating chemicals shall treat the following sources as establishing that a chemical is a carcinogen or potential carcinogen for hazard communication purposes:

(d)(4)(i) National Toxicology Program (NTP), “Annual Report of Carcinogens” (latest edition); or

(d)(4)(ii) International Agency for Research on Cancer (IARC) “Monographs” (latest edition); or

(d)(4)(iii) 29 CFR part 1910, subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration.

**NOTE:** The “Registry of Toxic Effects of Chemical Substances” published by the National Institute for Occupational Safety and Health indicates whether a chemical has been found by NTP or IARC to be a potential carcinogen.

(d)(5) The chemical manufacturer, importer or employer shall determine the hazards of mixtures of chemicals as follows:

(d)(5)(i) If a mixture has been tested as a whole to determine its hazards, the results of such testing shall be used to determine whether the mixture is hazardous;

(d)(5)(ii) 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, except that the mixture shall be assumed to present a carcinogenic hazard if it contains a component in concentrations of 0.1 percent or greater which is considered to be a carcinogen under paragraph (d)(4) of this section;

(d)(5)(iii) If a mixture has not been tested as a whole to determine whether the mixture is a physical hazard, the chemical manufacturer, importer or employer may use whatever scientifically valid data is available to evaluate the physical hazard potential of the mixture; and

(d)(5)(iv) If the chemical manufacturer, importer, or employer has evidence to indicate that a component present in the mixture in concentrations of less than one percent (or in the case of carcinogens, less than 0.1 percent) could be released in concentrations which would exceed an established OSHA permissible exposure limit or ACGIH Threshold Limit Value, or could present a health risk
Chemical manufacturers, importers, or employers evaluating chemicals shall describe in writing the procedures they use to determine the hazards of the chemical they evaluate. The written procedures are to be made available, upon request, to employees, their designated representatives, the Assistant Secretary and the Director. The written description may be incorporated into the written hazard communication program required under paragraph (e) of this section.

(e) Written Hazard Communication Program

(e)(1) Employers shall develop, implement, and maintain at each workplace, a written hazard communication program which at least describes how the criteria specified in paragraphs (f), (g), and (h) of this section for labels and other forms of warning, material safety data sheets, and employee information and training will be met, and which also includes the following:

(e)(1)(i) A list of the hazardous chemicals known to be present using an identity that is referenced on the appropriate material safety data sheet (the list may be compiled for the workplace as a whole or for individual work areas); and,

(e)(1)(ii) The methods the employer will use to inform employees of the hazards of non-routine tasks (for example, the cleaning of reactor vessels), and the hazards associated with chemicals contained in unlabeled pipes in their work areas.

(e)(2) “Multi-employer workplaces.” Employers who produce, use, or store hazardous chemicals at a workplace in such a way that the employees of other employer(s) may be exposed (for example, employees of a construction contractor working on-site) shall additionally ensure that the hazard communication programs developed and implemented under this paragraph (e) include the following:

(e)(2)(i) The methods the employer will use to provide the other employer(s) on-site access to material safety data sheets for each hazardous chemical the other employer(s)’ employees may be exposed to while working;

(e)(2)(ii) The methods the employer will use to inform the other employer(s) of any precautionary measures that need to be taken to protect employees during the workplace’s normal operating conditions and in foreseeable emergencies; and

(e)(2)(iii) The methods the employer will use to inform the other employer(s) of the labeling system used in the workplace.

(e)(3) The employer may rely on an existing hazard communication program to comply with these requirements, provided that it meets the criteria established in this paragraph (e).

(e)(4) The employer shall make the written hazard communication program available, upon request, to employees, their designated representatives, the Assistant Secretary and the Director, in accordance with the requirements of 29 CFR 1910.1020(e).

(e)(5) Where employees must travel between workplaces during a workshift, i.e., their work is carried out at more than one geographical location, the written hazard communication program may be kept at the primary workplace facility.

(f) Labels and Other Forms of Warning

(f)(1) The chemical manufacturer, importer, or distributor shall ensure that each container of hazardous chemicals leaving the workplace is labeled, tagged or marked with the following information:

(f)(1)(i) Identity of the hazardous chemical(s);

(f)(1)(ii) Appropriate hazard warnings; and

(f)(1)(iii) Name and address of the chemical manufacturer, importer, or other responsible party.

(f)(2) For solid metal (such as a steel beam or a metal casting), solid wood, or plastic items that are not exempted as articles due to their downstream use, or shipments of whole grain, the required label may be transmitted to the customer at the time of the initial shipment, and need not be included with
subsequent shipments to the same employer unless the information on the label changes;

(f)(2)(ii) The label may be transmitted with the initial shipment itself, or with the material safety data sheet that is to be provided prior to or at the time of the first shipment; and

(f)(2)(iii) This exception to requiring labels on every container of hazardous chemicals is only for the solid material itself, and does not apply to hazardous chemicals used in conjunction with, or known to be present with, the material and to which employees handling the items in transit may be exposed (for example, cutting fluids or pesticides in grains).

(f)(3) Chemical manufacturers, importers, or distributors shall ensure that each container of hazardous chemicals leaving the workplace is labeled, tagged, or marked in accordance with this section in a manner which does not conflict with the requirements of the Hazardous Materials Transportation Act (49 U.S.C. 1801 et seq.) and regulations issued under that Act by the Department of Transportation.

(f)(4) If the hazardous chemical is regulated by OSHA in a substance-specific health standard, the chemical manufacturer, importer, distributor or employer shall ensure that the labels or other forms of warning used are in accordance with the requirements of that standard.

(f)(5) Except as provided in paragraphs (f)(6) and (f)(7) of this section, the employer shall ensure that each container of hazardous chemicals in the workplace is labeled, tagged or marked with the following information:

(f)(5)(i) Identity of the hazardous chemical(s) contained therein; and

(f)(5)(ii) Appropriate hazard warnings, or alternatively, words, pictures, symbols, or combination thereof, which provide at least general information regarding the hazards of the chemicals, and which, in conjunction with the other information immediately available to employees under the hazard communication program, will provide employees with the specific information regarding the physical and health hazards of the hazardous chemical.

(f)(6) The employer may use signs, placards, process sheets, batch tickets, operating procedures, or other such written materials in lieu of affixing labels to individual stationary process containers, as long as the alternative method identifies the containers to which it is applicable and conveys the information required by paragraph (f)(5) of this section to be on a label. The written materials shall be readily accessible to the employees in their work area throughout each work shift.

(f)(7) The employer is not required to label portable containers into which hazardous chemicals are transferred from labeled containers, and which are intended only for the immediate use of the employee who performs the transfer. For purposes of this section, drugs which are dispensed by a pharmacy to a health care provider for direct administration to a patient are exempted from labeling.

(f)(8) The employer shall not remove or deface existing labels on incoming containers of hazardous chemicals, unless the container is immediately marked with the required information.

(f)(9) The employer shall ensure that labels or other forms of warning are legible, in English, and prominently displayed on the container, or readily available in the work area throughout each work shift. Employers having employees who speak other languages may add the information in their language to the material presented, as long as the information is presented in English as well.

(f)(10) The chemical manufacturer, importer, distributor or employer need not affix new labels to comply with this section if existing labels already convey the required information.

(f)(11) Chemical manufacturers, importers, distributors, or employers who become newly aware of any significant information regarding the hazards of a chemical shall revise the labels for the chemical within three months of becoming aware of the new information. Labels on containers of hazardous chemicals shipped after that time shall contain the new information. If the chemical is not currently produced or imported, the chemical manufacturer, importers, distributor or employer shall add the information to the label before the chemical is shipped or introduced into the workplace again.
(g) **Material Safety Data Sheets**

(g)(1) Chemical manufacturers and importers shall obtain or develop a material safety data sheet for each hazardous chemical they produce or import. Employers shall have a material safety data sheet in the workplace for each hazardous chemical which they use.

(g)(2) Each material safety data sheet shall be in English (although the employer may maintain copies in other languages as well), and shall contain at least the following information:

(g)(2)(i) The identity used on the label, and, except as provided for in paragraph (i) of this section on trade secrets:

(g)(2)(i)(A) If the hazardous chemical is a single substance, its chemical and common name(s);

(g)(2)(i)(B) If the hazardous chemical is a mixture which has been tested as a whole to determine its hazards, the chemical and common name(s) of the ingredients which contribute to these known hazards, and the common name(s) of the mixture itself; or

(g)(2)(i)(C) If the hazardous chemical is a mixture which has not been tested as a whole:

(g)(2)(i)(C)(1) The chemical and common name(s) of all ingredients which have been determined to be health hazards, and which comprise 1% or greater of the composition, except that chemicals identified as carcinogens under paragraph (d) of this section shall be listed if the concentrations are 0.1% or greater; and

(g)(2)(i)(C)(2) The chemical and common name(s) of all ingredients which have been determined to be health hazards, and which comprise less than 1% (0.1% for carcinogens) of the mixture, if there is evidence that the ingredient(s) could be released from the mixture in concentrations which would exceed an established OSHA permissible exposure limit or ACGIH Threshold Limit Value, or could present a health risk to employees; and

(g)(2)(i)(C)(3) The chemical and common name(s) of all ingredients which have been determined to present a physical hazard when present in the mixture.

(g)(2)(ii) Physical and chemical characteristics of the hazardous chemical (such as vapor pressure, flash point);

(g)(2)(iii) The physical hazards of the hazardous chemical, including the potential for fire, explosion and reactivity;

(g)(2)(iv) 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;

(g)(2)(v) The primary route(s) of entry;

(g)(2)(vi) The OSHA permissible exposure limit, ACGIH Threshold Limit Value, and any other exposure limit used or recommended by the chemical manufacturer, importer, or employer preparing the material safety data sheet, where available;

(g)(2)(vii) Whether the hazardous chemical is listed in the National Toxicology Program (NTP) Annual Report on Carcinogens (latest edition) or has been found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs (latest edition), or by OSHA;

(g)(2)(viii) Any generally applicable precautions for safe handling and use which are known to the chemical manufacturer, importer or employer preparing the material safety data sheet, including appropriate hygienic practices, protective measures during repair and maintenance of contaminated equipment, and procedures for clean-up of spills and leaks;

(g)(2)(ix) Any generally applicable control measures which are known to the chemical manufacturer, importer or employer preparing the material safety data sheet,
such as appropriate engineering controls, work practices or personal protective equipment;

(g)(2)(x) Emergency and first aid procedures;
(g)(2)(xi) The date of preparation of the material safety data sheet or the last change to it; and
(g)(2)(xii) The name, address and telephone number of the chemical manufacturer, importer, employer or other responsible party preparing or distributing the material safety data sheet, who can provide additional information on the hazardous chemical and appropriate emergency procedures, if necessary.

(g)(3) If no relevant information is found for any given category on the material safety data sheet, the chemical manufacturer, importer or employer preparing the material safety data sheet shall mark it to indicate that no applicable information was found.

(g)(4) Where complex mixtures have similar hazards and contents (i.e. the chemical ingredients are essentially the same, but the specific composition varies from mixture to mixture), the chemical manufacturer, importer or employer may prepare one material safety data sheet to apply to all of these similar mixtures.

(g)(5) The chemical manufacturer, importer or employer preparing the material safety data sheet shall ensure that the information recorded accurately reflects the scientific evidence used in making the hazard determination. If the chemical manufacturer, importer or employer preparing the material safety data sheet becomes newly aware of any significant information regarding the hazards of a chemical, or ways to protect against the hazards, this new information shall be added to the material safety data sheet within three months. If the chemical is not currently being produced or imported, the chemical manufacturer or importer shall add the information to the material safety data sheet before the chemical is introduced into the workplace again.

(g)(6)

(g)(6)(i) Chemical manufacturers or importers shall ensure that distributors and employers are provided an appropriate material safety data sheet with their initial shipment, and with the first shipment after a material safety data sheet is updated;

(g)(6)(ii) The chemical manufacturer or importer shall either provide material safety data sheets with the shipped containers or send them to the distributor or employer prior to or at the time of the shipment;

(g)(6)(iii) If the material safety data sheet is not provided with a shipment that has been labeled as a hazardous chemical, the distributor or employer shall obtain one from the chemical manufacturer or importer as soon as possible; and

(g)(6)(iv) The chemical manufacturer or importer shall also provide distributors or employers with a material safety data sheet upon request.

(g)(7)

(g)(7)(i) Distributors shall ensure that material safety data sheets, and updated information, are provided to other distributors and employers with their initial shipment and with the first shipment after a material safety data sheet is updated;

(g)(7)(ii) The distributor shall either provide material safety data sheets with the shipped containers, or send them to the other distributor or employer prior to or at the time of the shipment;

(g)(7)(iii) Retail distributors selling hazardous chemicals to employers having a commercial account shall provide a material safety data sheet to such employers upon request, and shall post a sign or otherwise inform them that a material safety data sheet is available;

(g)(7)(iv) Wholesale distributors selling hazardous chemicals to employers over-the-counter may also provide material safety data sheets upon the request of the employer at the time of the over-the-counter purchase, and shall post a sign or otherwise inform such employers that a material safety data sheet is available;
(g)(7)(v) If an employer without a commercial account purchases a hazardous chemical from a retail distributor not required to have material safety data sheets on file (i.e. the retail distributor does not have commercial accounts and does not use the materials), the retail distributor shall provide the employer, upon request, with the name, address, and telephone number of the chemical manufacturer, importer or distributor from which a material safety data sheet can be obtained:

(g)(7)(vi) Wholesale distributors shall also provide material safety data sheets to employers or other distributors upon request; and,

(g)(7)(vii) Chemical manufacturers, importers, and distributors need not provide material safety data sheets to retail distributors that have informed them that the retail distributor does not sell the product to commercial accounts or open the sealed container to use it in their own workplaces.

(g)(8) The employer shall maintain in the workplace copies of the required material safety data sheets for each hazardous chemical, and shall ensure that they are readily accessible during each work shift to employees when they are in their work area(s). (Electronic access, microfiche, and other alternatives to maintaining paper copies of the material safety data sheets are permitted as long as no barriers to immediate employee access in each workplace are created by such options.)

(g)(9) Where employees must travel between workplaces during a work shift, i.e. their work is carried out at more than one geographical location, the material safety data sheets may be kept at a primary workplace facility. In this situation, the employer shall ensure that employees can immediately obtain the required information in an emergency.

(g)(10) Material safety data sheets may be kept in any form, including operating procedures, and may be designed to cover groups of hazardous chemicals in a work area where it may be more appropriate to address the hazards of a process rather than individual hazardous chemicals. However, the employer shall ensure that in all cases the required information is provided for each hazardous chemical, and is readily accessible during each work shift to employees when they are in their work area(s).

(g)(11) Material safety data sheets shall also be made readily available, upon request, to designated representatives and to the Assistant Secretary, in accordance with the requirements of 29 CFR 1910.1020(e). The Director shall also be given access to material safety data sheets in the same manner.

(h) Employee Information and Training

(h)(1) Employers shall provide employees with effective information and training on hazardous chemicals in their work area at the time of the initial assignment, and whenever a new physical or health hazard the employees have not previously been trained about is introduced into their work area. Information and training may be designed to cover categories of hazards (e.g., flammability, carcinogenicity) or specific chemicals. Chemical specific information must always be available through labels and material safety data sheets.

(h)(2) “Information.” Employees shall be informed of:

(h)(2)(i) The requirements of this section;
(h)(2)(ii) Any operations in their work area where hazardous chemicals are present; and
(h)(2)(iii) The location and availability of the written hazard communication program, including the required list(s) of hazardous chemicals, and material safety data sheets required by this section.

(h)(3) “Training.” Employee training shall include at least:

(h)(3)(i) Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area (such as monitoring conducted by the employer, continuous monitoring devices, visual appearance or odor of hazardous chemicals when being released, etc.);
(h)(3)(ii) The physical and health hazards of the chemicals in the work area;
(h)(3)(iii) The measures employees can take to protect themselves from these hazards, including specific procedures the employer has implemented to protect employees from exposure to hazardous chemicals, such as appropriate work practices, emergency procedures, and personal protective equipment to be used; and

(h)(3)(iv) The details of the hazard communication program developed by the employer, including an explanation of the labeling system and the material safety data sheet, and how employees can obtain and use the appropriate hazard information.

(i) Trade Secrets
   (i)(1) 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, provided that:
   (i)(1)(i) The claim that the information withheld is a trade secret can be supported;
   (i)(1)(ii) Information contained in the material safety data sheet concerning the properties and effects of the hazardous chemical is disclosed;
   (i)(1)(iii) The material safety data sheet indicates that the specific chemical identity is being withheld as a trade secret; and
   (i)(1)(iv) The specific chemical identity is made available to health professionals, employees, and designated representatives in accordance with the applicable provisions of this paragraph.

   (i)(2) 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, the chemical manufacturer, importer, or employer shall 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 or a confidentiality agreement. The chemical manufacturer, importer, or employer may require a written statement of need and confidentiality agreement, in accordance with the provisions of paragraph (i)(3) and (4) of this section, as soon as circumstances permit.

   (i)(3) In non-emergency situations, a chemical manufacturer, importer or employer shall, upon request, disclose a specific chemical identity, otherwise permitted to be withheld under paragraph (i)(1) of this section, to a health professional (i.e. physician, industrial hygienist, toxicologist, epidemiologist or occupational health nurse) providing medical or other occupational health services to exposed employee(s), and to employees or designated representatives, if:
   (i)(3)(i) The request is in writing;
   (i)(3)(ii) The request describes with reasonable detail one or more of the following occupational health needs for the information:
   (i)(3)(ii)(A) To assess the hazards of the chemicals to which employees will be exposed;
   (i)(3)(ii)(B) To conduct or assess sampling of the workplace atmosphere to determine employee exposure levels;
   (i)(3)(ii)(C) To conduct pre-assignment or periodic medical surveillance of exposed employees;
   (i)(3)(ii)(D) To provide medical treatment to exposed employees;
   (i)(3)(ii)(E) To select or assess appropriate personal protective equipment for exposed employees;
   (i)(3)(ii)(F) To design or assess engineering controls or other protective measures for exposed employees; and
   (i)(3)(ii)(G) To conduct studies to determine the health effects of exposure.
   (i)(3)(iii) The request explains in detail why the disclosure of the specific chemical identity is essential and that, in lieu thereof, the disclosure of the following information to the health professional, employee, or designated representative, would not satisfy the purposes described in paragraph (i)(3)(ii) of this section:
(i)(3)(iii)(A) The properties and effects of the chemical; 
(i)(3)(iii)(B) Measures for controlling workers’ exposure to the chemical; 
(i)(3)(iii)(C) Methods of monitoring and analyzing worker exposure to the chemical; 
and 
(i)(3)(iii)(D) Methods of diagnosing and treatment harmful exposures to the chemical; 
(i)(3)(iv) The request includes a description of the procedures to be used to maintain 
the confidentiality of the disclosed information; and 
(i)(3)(v) The health professional and the employer or contractor of the services of the 
health professional (i.e. downstream employer, labor organization, or 
individual employee), employee or designated representative, agree in a 
written confidentiality agreement that the health professional, employee, or 
designated representative, will not use the trade secret information 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 
paragraph (i)(6) of this section, except as authorized by the terms of the 
agreement or by the chemical manufacturer, importer or employer. 

(i)(4) The confidentiality agreement authorized by paragraph (i)(3)(iv) of this section: 
(i)(4)(i) May restrict the use of the information to the health purposes indicated in the 
written statement of need; 
(i)(4)(ii) May provide for appropriate legal remedies in the event of a breach of the 
agreement, including stipulation of a reasonable pre-estimate of likely 
damages; and 
(i)(4)(iii) May not include requirements for the posting of a penalty bond. 

(i)(5) Nothing in this standard is meant to preclude the parties from pursuing non-contractual 
remedies to the extent permitted by law. 

(i)(6) If the health professional, employee, or designated representative receiving the trade 
secret information decides that there is a need to disclose it to OSHA, the chemical 
manufacturer, importer, or employer who provided the information shall be informed by 
the health professional, employee, or designated representative prior to, or at the same 
time as, such disclosure. 

(i)(7) If the chemical manufacturer, importer, or employer denies a written request for 
disclosure of a specific chemical identity, the denial must: 
(i)(7)(i) Be provided to the health professional, employee or designated 
representative within thirty days of the request; 
(i)(7)(ii) Be in writing; 
(i)(7)(iii) Include evidence to support the claim that the specific chemical identity is a 
trade secret; 
(i)(7)(iv) State the specific reasons why the request is being denied; and 
(i)(7)(v) Explain in detail how alternative information may satisfy the specific medical 
or occupational health need without revealing the specific chemical identity. 

(i)(8) The health professional, employee, or designated representative whose request for 
information is denied under paragraph (i)(3) of this section may refer the request and the 
written denial of the request to OSHA for consideration. 

(i)(9) When a health professional, employee, or designated representative refers the denial to 
OSHA under paragraph (i)(8) of this section, OSHA shall consider the evidence to 
determine if: 
(i)(9)(i) The chemical manufacturer, importer, or employer has supported the claim 
that the specific chemical identity is a trade secret; 
(i)(9)(ii) The health professional, employee, or designated representative has 
supported the claim that there is a medical or occupational health need for 
the information; and 
(i)(9)(iii) The health professional, employee, or designated representative has 
demonstrated adequate means to protect the confidentiality. 

(i)(10) If OSHA determines that the specific chemical identity requested under 
paragraph (i)(3) of this section is not a “bona fide” trade secret, or that it is a
trade secret, but the requesting health professional, employee, or designated representative has a legitimate medical or occupational health need for the information, has executed a written confidentiality agreement, and has shown adequate means to protect the confidentiality of the information, the chemical manufacturer, importer, or employer will be subject to citation by OSHA.

(i)(10)(ii) If a chemical manufacturer, importer, or employer demonstrates to OSHA that the execution of a confidentiality agreement would not provide sufficient protection against the potential harm from the unauthorized disclosure of a trade secret specific chemical identity, the Assistant Secretary may issue such orders or impose such additional limitations or conditions upon the disclosure of the requested chemical information as may be appropriate to assure that the occupational health services are provided without an undue risk of harm to the chemical manufacturer, importer or employer.

(i)(11) If a citation for a failure to release specific chemical identity information is contested by the chemical manufacturer, importer or employer, the matter will be adjudicated before the Occupational Safety and Health Review Commission in accordance with the Act's enforcement scheme and the applicable Commission rules of procedure. In accordance with the Commission rules, when a chemical manufacturer, importer or employer continues to withhold the information during the contest, the Administrative Law Judge may review the citation and supporting documentation "in camera" or issue appropriate orders to protect the confidentiality of such matters.

(i)(12) Notwithstanding the existence of a trade secret claim, a chemical manufacturer, importer or employer shall, upon request, disclose to the Assistant Secretary any information which this section requires the chemical manufacturer, importer or employer to make available. Where there is a trade secret claim, such claim shall be made no later than at the time the information is provided to the Assistant Secretary so that suitable determinations of trade secret status can be made and the necessary protections can be implemented.

(i)(13) Nothing in this paragraph shall be construed as requiring the disclosure under any circumstances of process or percentage of mixture information which is a trade secret.

(j) Effective Dates
Chemical manufacturers, importers, distributors, and employers shall be in compliance with all provisions of this section by March 11, 1994.

NOTE: The effective date of the clarification that the exemption of wood and wood products from the Hazard Communication standard in paragraph (b)(6)(iv) only applies to wood and wood products including lumber which will not be processed, where the manufacturer or importer can establish that the only hazard they pose to employees is the potential for flammability or combustibility, and that the exemption does not apply to wood or wood products which have been treated with a hazardous chemical covered by this standard, and wood which may be subsequently sawed or cut generating dust has been stayed from March 11, 1994 to August 11, 1994.

OSHA – Occupational Safety and Health Administration

Standard Number: 1910.1200AppA
Standard Title: Health Hazard Definitions (Mandatory)
SubPart Number: Z
SubPart Title: Toxic and Hazardous Substances

Although safety hazards related to the physical characteristics of a chemical can be objectively defined in terms of testing requirements (e.g. flammability), health hazard definitions are less precise and more subjective. Health hazards may cause measurable changes in the body—such as decreased pulmonary function. These changes are generally indicated by the occurrence of signs and symptoms in the exposed employee—such as shortness of breath, a non-measurable, subjective feeling. Employees exposed to such hazards must be apprised of both the change in body function and the signs and symptoms that may occur to signal that change.

The determination of occupational health hazards is complicated by the fact that many of the effects or signs and symptoms occur commonly in non-occupationally exposed populations, so that effects of exposure are difficult to separate from normally occurring illnesses. Occasionally, a substance causes an effect that is rarely seen in the population at large, such as angiosarcomas, caused by vinyl chloride exposure, thus making it easier to ascertain that the occupational exposure was the primary causative factor. More often, however, the effects are common, such as lung cancer. The situation is further complicated by the fact that most chemicals have not been adequately tested to determine their health hazard potential, and data do not exist to substantiate these effects.

There have been many attempts to categorize effects and to define them in various ways. Generally, the terms “acute” and “chronic” are used to delineate between effects on the basis of severity or duration. “Acute” effects usually occur rapidly as a result of short-term exposures, and are of short duration. “Chronic” effects generally occur as a result of long-term exposure, and are of long duration.

The acute effects referred to most frequently are those defined by the American National Standards Institute (ANSI) standard for Precautionary Labeling of Hazardous Industrial Chemicals (Z129.1-1988)—irritation, corrosivity, sensitization and lethal dose. Although these are important health effects, they do not adequately cover the considerable range of acute effects which may occur as a result of occupational exposure, such as, for example, narcosis.

Similarly, the term chronic effect is often used to cover only carcinogenicity, teratogenicity, and mutagenicity. These effects are obviously a concern in the workplace, but again, do not adequately cover the area of chronic effects, excluding, for example, blood dyscrasias (such as anemia), chronic bronchitis and liver atrophy.

The goal of defining precisely, in measurable terms, every possible health effect that may occur in the workplace as a result of chemical exposures cannot realistically be accomplished. This does not negate the need for employees to be informed of such effects and protected from them. Appendix B, which is also mandatory, outlines the principles and procedures of hazard assessment.

For purposes of this section, any chemicals which meet any of the following definitions, as determined by the criteria set forth in Appendix B, are health hazards. However, this is not intended to be an exclusive categorization scheme. If there are available scientific data that involve other
animal species or test methods, they must also be evaluated to determine the applicability of the HCS.

1. “Carcinogen.” A chemical is considered to be a carcinogen if:
   (a) It has been evaluated by the International Agency for Research on Cancer (IARC), and found to be a carcinogen or potential carcinogen; or
   (b) It is listed as a carcinogen or potential carcinogen in the Annual Report on Carcinogens published by the National Toxicology Program (NTP) (latest edition); or
   (c) It is regulated by OSHA as a carcinogen.

2. “Corrosive.” A chemical that causes visible destruction of, or irreversible alterations in, living tissue by chemical action at the site of contact. For example, a chemical is considered to be corrosive if, when tested on the intact skin of albino rabbits by the method described by the U.S. Department of Transportation in Appendix A to 49 CFR part 173, it destroys or changes irreversibly the structure of the tissue at the site of contact following an exposure period of four hours. This term shall not refer to action on inanimate surfaces.

3. “Highly Toxic.” A chemical falling within any of the following categories:
   (a) A chemical that has a median lethal dose \([LD(50)]\) of 50 milligrams or less per kilogram of body weight when administered orally to albino rats weighing between 200 and 300 grams each.
   (b) A chemical that has a median lethal dose \([LD(50)]\) of 200 milligrams or less per kilogram of body weight when administered by continuous contact for 24 hours (or less if death occurs within 24 hours) with the bare skin of albino rabbits weighing between two and three kilograms each.
   (c) A chemical that has a median lethal concentration \([LD(50)]\) in air of 200 parts per million by volume or less of gas or vapor, or 2 milligrams per liter or less of mist, fume, or dust, when administered by continuous inhalation for one hour (or less if death occurs within one hour) to albino rats weighing between 200 and 300 grams each.

4. “Irritant.” A chemical, which is not corrosive, but which causes a reversible inflammatory effect on living tissue by chemical action at the site of contact. A chemical is a skin irritant if, when tested on the intact skin of albino rabbits by the methods of 16 CFR 1500.41 for four hours exposure or by other appropriate techniques, it results in an empirical score of five or more. A chemical is an eye irritant if so determined under the procedure listed in 16 CFR 1500.42 or other appropriate techniques.

5. “Sensitizer.” A chemical that causes a substantial proportion of exposed people or animals to develop an allergic reaction in normal tissue after repeated exposure to the chemical.

6. “Toxic.” A chemical falling within any of the following categories:
   (a) A chemical that has a median lethal dose \([LD(50)]\) of more than 50 milligrams per kilogram but not more than 500 milligrams per kilogram of body weight when administered orally to albino rats weighing between 200 and 300 grams each.
   (b) A chemical that has a median lethal dose \([LD(50)]\) of more than 200 milligrams per kilogram but not more than 1,000 milligrams per kilogram of body weight when administered by continuous contact for 24 hours (or less if death occurs within 24 hours) with the bare skin of albino rabbits weighing between two and three kilograms each.
   (c) A chemical that has a median lethal concentration \([LC(50)]\) in air of more than 200 parts per million by volume or less of gas or vapor, or more than two milligrams per liter but not more than 2,000 parts per million by volume of gas or vapor, or more than two milligrams per liter but not more than 20 milligrams per liter of mist, fume, or dust, when administered by continuous inhalation for one hour (or less if death occurs within one hour) to albino rats weighing between 200 and 300 grams each.

7. “Target Organ Effects.” The following is a target organ categorization of effects which may occur, including examples of signs and symptoms and chemical which have been found to cause such
effects. These examples are presented to illustrate the range and diversity of effects and hazards found in the workplace, and the broad scope employers must consider in this area, but are not intended to be all inclusive.

(a) **Hepatotoxins:** Chemicals which produce liver damage.
   - Signs and Symptoms: Jaundice, liver enlargement.
   - Chemicals: Carbon tetrachloride, nitrosamines.

(b) **Nephrotoxins:** Chemicals which produce kidney damage.
   - Signs and Symptoms: Edema, proteinuria.
   - Chemicals: Halogenated hydrocarbons, uranium.

(c) **Neurotoxins:** Chemicals which produce their primary toxic effects on the nervous system.
   - Signs and Symptoms: Narcosis, behavioral changes, decrease in motor functions.
   - Chemicals: Mercury, carbon disulfide.

(d) **Agents which act on the blood or hematopoietic system:** Decrease hemoglobin function. Deprive the body tissue of oxygen.
   - Signs and Symptoms: Cyanosis, loss of consciousness.
   - Chemicals: Carbon monoxide, cyanides.

(e) **Agents which damage the lung:** Chemicals which irritate or damage pulmonary tissue.
   - Signs and Symptoms: Cough, tightness in the chest, shortness of breath.
   - Chemicals: Silica, asbestos.

(f) **Reproductive toxins:** Chemical which affect the reproductive capabilities including chromosomal damage (mutations) and effects on fetuses (teratogenesis).
   - Signs and Symptoms: Birth defects, sterility.
   - Chemicals: Lead, DBCP.

(g) **Cutaneous Hazards:** Chemicals which affect the dermal layer of the body.
   - Signs and Symptoms: Defatting of the skin, rashes, irritation.
   - Chemicals: Ketones, chlorinated compounds.

(h) **Eye Hazards:** Chemical which affect the eye or visual capacity.
   - Signs and Symptoms: Conjunctivitis, corneal damage.
   - Chemicals: Organic solvents, acids.
The quality of a hazard communication program is largely dependent upon the adequacy and accuracy of the hazard determination. The hazard determination requirement of this standard is performance-oriented. Chemical manufacturers, importers, and employers evaluating chemicals are not required to follow any specific methods for determining hazards, but they must be able to demonstrate that they have adequately ascertained the hazards of the chemicals produced or imported in accordance with the criteria set forth in this Appendix.

Hazard evaluation is a process which relies heavily on the professional judgment of the evaluator, particularly in the area of chronic hazards. The performance-orientation of the hazard determination does not diminish the duty of the chemical manufacturer, importer or employer to conduct a thorough evaluation, examining all relevant data and producing a scientifically defensible evaluation. For purposes of this standard, the following criteria shall be used in making hazard determinations that meet the requirements of this standard.

1. “Carcinogenicity.” As described in paragraph (d)(4) of this section and Appendix A of this section, a determination by the National Toxicology Program, the International Agency for Research on Cancer, or OSHA that a chemical is a carcinogen or potential carcinogen will be considered conclusive evidence for purposes of this section. In addition, however, all available scientific data on carcinogenicity must be evaluated in accordance with the provisions of this Appendix and the requirements of the rule.

2. “Human Data.” Where available, epidemiological studies and case reports of adverse health effects shall be considered in the evaluation.

3. “Animal Data.” Human evidence of health effects in exposed populations is generally not available for the majority of chemicals produced or used in the workplace. Therefore, the available results of toxicological testing in animal populations shall be used to predict the health effects that may be experienced by exposed workers. In particular, the definitions of certain acute hazards refer to specific animal testing results (see Appendix A).

4. “Adequacy and Reporting of Data.” The results of any studies which are designed and conducted according to established scientific principles, and which report statistically significant conclusions regarding the health effects of a chemical, shall be sufficient basis for a hazard determination and reported on any material safety data sheet. In vitro studies alone generally do not form the basis for a definitive finding of hazard under the HCS since they have a positive or negative result rather than a statistically significant finding.

The chemical manufacturer, importer, or employer may also report the results of other scientifically valid studies which tend to refute the findings of hazard.
The following is a reprint of the “Restatement of Torts” section 757, comment b (1939):

b. “Definition of Trade Secret.” A trade secret may consist of any formula, pattern, device or compilation of information which is used in one’s business, and which gives him an opportunity to obtain an advantage over competitors who do not know or use it. It may be a formula for a chemical compound, a process of manufacturing, treating or preserving materials, a pattern for a machine or other device, or a list of customers. It differs from other secret information in a business (see §759 of the Restatement of Torts, which is not included in this Appendix) in that it is not simply information as to single or ephemeral events in the conduct of the business, as, for example, the amount or other terms of a secret bid for a contract or the salary of certain employees, or the security investments made or contemplated, or the date fixed for the announcement of a new policy or for bringing out a new model or the like. A trade secret is a process or device for continuous use in the operations of the business. Generally it relates to the production of goods, as, for example, a machine or formula for the production of an article. It may, however, relate to the sale of goods or to other operations in the business, such as a code for determining discounts, rebates or other concessions in a price list or catalogue, or a list of specialized customers, or a method of bookkeeping or other office management.

“Secrecy.” The subject matter of a trade secret must be secret. Matters of public knowledge or of general knowledge in an industry cannot be appropriated by one as his secret. Matters which are completely disclosed by the goods which one markets cannot be his secret. Substantially, a trade secret is known only in the particular business in which it is used. It is not requisite that only the proprietor of the business know it. He may, without losing his protection, communicate it to employees involved in its use. He may likewise communicate it to others pledged to secrecy. Others may also know if it independently, as, for example, when they have discovered the process or formula by independent invention and are keeping it secret. Nevertheless, a substantial element of secrecy must exist, so that, except by the use of improper means, there would be difficulty in acquiring the information. An exact definition of a trade secret is not possible. Some factors to be considered in determining whether given information is one’s trade secret are: (1) the extent to which the information is known outside of his business; (2) the extent to which it is known by employees and others involved in his business; (3) the extent of measures taken by him to guard the secrecy of the information; (4) the value of the information to him and his competitors; (5) the amount of effort or money expended by him in developing the information; and (6) the ease or difficulty with which the information could be properly acquired or duplicated by others.

“Novelty and Prior Art.” A trade secret may be a device or process which is patentable; but it need not be that. It may be a device or process which is clearly anticipated in the prior art or one which is merely a mechanical improvement that a good mechanic can make. Novelty and invention are not requisite for a trade secret as they are for patentability. These requirements are essential to patentability because a patent protects against unlicensed use of the patented device or process even by one who discovers it properly through independent research. The patent monopoly is a reward to the inventor. But such is not the case with a trade secret. Its protection is not based on a policy of rewarding or otherwise encouraging the development of secret processes or devices.
protection is merely against breach of faith and reprehensible means of learning another’s secret. For this limited protection it is not appropriate to require also the kind of novelty and invention which is a requisite of patentability. The nature of the secret is, however, an important factor in determining the kind of relief that is appropriate against one who is subject to liability under the rule stated in this Section. Thus, if the secret consists of a device or process which is a novel invention, one who acquires the secret wrongfully is ordinarily enjoined from further use of it and is required to account for the profits derived from his past use. If, on the other hand, the secret consists of mechanical improvements that a good mechanic can make without resort to the secret, the wrongdoer’s liability may be limited to damages, and an injunction against future use of the improvements made with the aid of the secret may be in appropriate.
Appendix B  
Summary of Responsibilities

In accordance with OSHA Standard 29 CFR 1910.1200, Wheaton College has developed a comprehensive compliance program. The written policies and procedures in the Plan put forth the essential elements for individuals to safely manage chemicals in the workplace. This document summarizes the responsibilities of individuals and departments in compliance with this program.

<table>
<thead>
<tr>
<th>Business Services (Program Coordinator)</th>
<th>Public Safety</th>
<th>Departments (Department Coordinators)</th>
<th>Employees</th>
<th>Project Managers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensure the program is developed and implemented.</td>
<td>Post information on right-to-know and MSDS on bulletin boards.</td>
<td>Ensure compliance with the program.</td>
<td>Attend trainings and follow guidelines.</td>
<td>Coordinate required program elements with contractors.</td>
</tr>
<tr>
<td>Provide administrative assistance to departments.</td>
<td>Provide 24/7 emergency contact with college personnel.</td>
<td>In conjunction with Business Services, coordinate and ensure training for affected employees and retain records.</td>
<td>Comply with all applicable policies and procedures.</td>
<td></td>
</tr>
<tr>
<td>Identify consultant to provide technical assistance.</td>
<td>Provide 24/7 spill response and emergency procedure.</td>
<td>Update chemical inventory list, at least annually.</td>
<td>If conditions change, or new hazards exist, notify their supervisor.</td>
<td></td>
</tr>
<tr>
<td>Procure funding.</td>
<td>Provide access to current MSDS list.</td>
<td>Maintain MSDS for chemicals purchased and listed on inventory.</td>
<td>Obtain and properly use PPE when handling hazardous chemicals.</td>
<td></td>
</tr>
<tr>
<td>Files master inventory list and MSDS’s.</td>
<td>Ensure chemical containers are properly labeled.</td>
<td>Report any chemical spill or exposure immediately to supervisor.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conduct annual audit of program.</td>
<td>Communicate to employees emergency procedures in the event of a spill or exposure.</td>
<td>Ensure chemical containers are properly labeled.</td>
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</tr>
<tr>
<td></td>
<td>Provide PPE and ensure its proper use.</td>
<td>Use chemicals properly and consistent with college policy and manufacturer recommendations.</td>
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</tr>
<tr>
<td></td>
<td>Approve use of all new chemicals.</td>
<td>Update the Program Coordinator on all aspects of the program.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Update the Program Coordinator on all aspects of the program.</td>
<td>Advise contract employees of chemical hazards and provide them with required information.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Train employees on non-routine tasks and unlabeled pipes.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix C

Spill and Emergency Procedures

Emergency Telephone Number – Public Safety – x3333

Report chemical spills, fire, injuries and incidents immediately to Public Safety.

Spill Procedures:
1. Spill is observed or identified.
2. Public Safety is notified and responds.
3. Hazard area is identified and secured. Program Coordinator is notified to respond.
4. If possible, spill material is identified by Program Coordinator considering present hazards.
5. If the Program Coordinator determines the spill is minor and can be cleaned up safely, the spill will be remediated according to OSHA and EPA guidelines.
6. If the spill material cannot be identified, or if the spill presents hazards beyond minor clean up procedures, then Public Safety will notify Business Services and/or EMS as necessary.
7. The Program Coordinator will provide as much information as possible about the spill material and the surrounding conditions as accurate information can be relayed to the clean up contractor, EMS, regulatory agencies, etc.
8. Wheaton College’s Public Safety will contact an outside contractor to perform clean up procedures, if it is deemed necessary by the Program Coordinator and in consultation with Business Services.
9. Public Safety will contact a member of Wheaton College’s Critical Incident Response Team if hazards or conditions are beyond minor response parameters.

No one outside their areas of responsibility or expertise will be required to respond to any chemical spills. The Program Coordinator for a designated area or the faculty/staff member assigned to that laboratory has the responsibility to respond and assist in spill remediation procedures as trained.

Public Safety’s role will follow OSHA’s First Responder Awareness procedures; identification of the hazard area, securing the site (evacuation if needed), and proper notifications to include the Program Coordinator, EMS, spill contractor and a member of the Critical Incident Response Team.
Appendix D
Sample MSDS – J.T. Baker Chemical Company

JT BAKER CHEMICAL – ACETONE-ACETONE, REAGENT
MATERIAL SAFETY DATA SHEET
NSN: 6810013246306
Manufacturer’s CAGE: 70829
Part No. Indicator: B
Part Number/Trade Name: ACETONE

General Information

Item Name: ACETONE, REAGENT
Company’s Name: J.T. BAKER CHEMICAL CO
Company’s Street: 222 RED SCHOOL LANE
Company’s City: PHILLIPSBURG
Company’s State: NJ
Company’s Country: US
Company’s Zip Code: 08865
Company’s Emergency Phone Number: 201-859-2151/800-424-9300 (CHEMTREC)
Company’s Information Phone Number: 800-JTBAKER (5822537)
Record No. for Safety Entry: 006
Tot Safety Entries This Stk#: 006
State: SE
Date MSDS Prepared: 12JUL95
Safety Data Review Date: 17APR96
Supply Item Manager: CX
MSDS Serial Number: BYTLZ
Hazard Characteristic Code: F2
Unit of Issue: LI
Unit of Issue Container Qty: 1 LITER
Type of Container: BOTTLE
Net Unit Weight: 1.7 LBS

Ingredients/Identity Information

Proprietary: NO
Ingredient: ACETONE (SARA III)
Ingredient Sequence Number: 01
Percent: 99-100
NIOSH (RTECS) Number: AL3150000
CAS Number: 67-64-1
OSHA PEL: 1000PPM
ACGIH TLV: 750PPM/1000STEL; 9293
Other Recommended Limit: NOT ESTABLISHED N/K

Physical/Chemical Characteristics

Appearance and Odor: CLEAR, COLORLESS LIQUID. SWEET ODOR.
Boiling Point: 132F, 56C
Melting Point: -139F, -95C
Vapor Pressure (MM Hg/70 F): 184 MM
Vapor Density (Air=1): 2.0
Specific Gravity: 0.79
Decomposition Temperature: UNKNOWN
Evaporation Rate and Ref: 14.4 (BUTYL ACETATE=1)
Solubility in Water: COMPLETE (100%)
Percent Volatile by Volume: 100
pH: N/A
Corrosion Rate (IPY): UNKNOWN
Autoignition Temperature: 464C
Fire and Explosion Hazard Data

Flash Point: -2°F, -18°C
Flash Point Method: CC
Lower Explosive Limit: 2.2%
Upper Explosive Limit: 13%
Extinguishing Media: USE ALCOHOL FOAM, DRY CHEMICAL OR CARBON DIOXIDE (WATER MAY BE INEFFECTIVE).

Special Fire Fighting Procedure: WEAR PROPER PROTECTIVE EQUIPMENT AND SCUBA W/ FULL FACEPIECE OPERATED PRESSURE DEMAND MORE. USE WATER TO KEEP FIRE-EXPOSED CONTAINERS COOL.

Unusual Fire and Explosive Hazards: VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL ALONG GROUND OR FLOOR, THEN ‘FLASH BACK’ FROM A DISTANT IGNITION SOURCE. CONTACT WITH STRONG OXIDIZERS MAY CAUSE FIRE.

Reactivity Data

Stability: Yes
Cond to Avoid (Stability): HEAT, FLAME, OTHER SOURCES OF IGNITION.
Materials to Avoid: STRONG OXIDIZERS, STRONG ACIDS & BASES, HALOGEN COMPOUNDS, AMINES & AMMONIA, CHLORINE & CHLORINE COMPOUNDS, CAUSTICS.

Health Hazard Data

Precautions for Safe Handling and Use

Control Measures

Transportation Data

Trans Data Review Date: 96108
DOT PSN Code: ABF
DOT Proper Shipping Name: ACETONE
DOT Class: 3
DOT ID Number: UN1090
DOT Pack Group: II
DOT Label: FLAMMABLE LIQUID
IMO PSN Code: ADF
IMO Proper Shipping Name: ACETONE
IMO Regulations Page Number: 3102
IMO UN Number: 1090
IMO UN Class: 3.1
IMO Subsidiary Risk Label: -
IATA PSN Code: ACM
IATA UN ID Number: 1090
IATA Proper Shipping Name: ACETONE
IATA UN Class: 3
IATA Label: FLAMMABLE LIQUID
API PSN Code: ACM
API Proper Shipping Name: ACETONE
API Class: 3
API ID Number: UN1090
API Pack Group: II
API Label: FLAMMABLE LIQUID
API Basic Pac Ref: A7.3
MMAC Code: NR

Disposal Data

Label Data

Label Required: YES
Technical Review Date: 17APR96

Revised 10/13/10
Label Status: F
Common Name: ACETONE
Chronic Hazard: YES
Signal Word: DANGER!
Acute Health Hazard-Slight: X
Contact Hazard-Slight: X
Fire Hazard-Severe: X
Reactivity Hazard-Moderate: X
Special Hazard Precautions: DANGER! EXTREMELY FLAMMABLE. HARMFUL IF SWALLOWED OR INHALED. IN CASE OF SPILL: WEAR SUITABLE PROTECTIVE CLOTHING. ELIMINATE ALL IGNITION SOURCES. STOP LEAK IF POSSIBLE WITHOUT RISK. USE H2O SPRAY TO REDUCE VAPORS. TAKE UP WITH SAND/OTHER NON-COMBUSTIBLE ABSORBANT. INGESTION-CALL A PHYSICIAN. IF CONSCIOUS, GIVE LARGE AMOUNTS OF WATER. INDUCE VOMITING. INHALATION-REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS HARD, GIVE OXYGEN. SKIN-FLUSH SKIN WITH WATER. EYE-IMMEDIATELY FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES.
Protect Eye: Y
Protect Skin: Y
Protect Respiratory: Y
Label Name: J.T. BAKER CHEMICAL CO
Label Street: 222 RED SCHOOL LANE
Label City: PHILLIPSBURG
Label State: NJ
Label Zip Code: 08865
Label Country: US
Label Emergency Number: 201-859-2151/800-424-9300 (CHEMTREC)