

Bureau of Land Management Alaska

Hazard Communication & Chemical Safety Program

2015

I. Purpose

This document serves as the Bureau of Land Management – Alaska, Hazard Communication Program. It provides detailed safety guidelines and instructions for receipt, use and storage of chemicals at our facility by employees and contractors. Reference: OSHA Standard 1910.1200

II. Responsibilities

Management

- Ensure compliance with this program
- Conduct immediate corrective action for deficiencies found in the program
- Maintain an effective Hazard Communication training program
- Make this plan available to employees or their designated representative

Safety & Occupational Health Specialist/Manager

- Maintain a list of hazardous chemicals using the identity that is referenced on the Material Safety Data Sheets (MSDS), or Safety Data Sheets (SDS)
- Monitor the effectiveness of the program
- Conduct annual audit of the program
- Monitor employee training to ensure effectiveness
- Keep management informed of necessary changes
- Ensure MSDS/SDSs are available as required
- Monitor facility for proper use, storage and labeling of chemicals or hazardous materials (HAZMAT)
- Ensure MSDS/SDS are available for emergency medical personnel when treating exposed employees
- Provide information, as requested, concerning health effects and exposure symptoms listed on MSDS/SDSs

Supervisors

- Comply with all specific requirements of the program
- Provide specific chemical safety training for assigned employees
- Ensure chemicals are properly used stored & labeled
- Ensure only the minimum amount necessary is kept at work stations
- Ensure up to date MSDS are readily accessible to all employees on all shifts

Purchaser of Product [Purchasing Agent, Shipping/Receiving Manager, or Employee Purchasing with Credit Card]

- Ensure all received containers are properly labeled and that labels are not removed or defaced
- Ensure all shipped containers are properly labeled
- Ensure shipping department employees are properly trained in spill response
- Ensure received MSDS/SDS are properly distributed
- Obtain, from the manufacturer, MSDS/SDS for chemicals purchased from retail sources

Employees

- Comply with chemical safety requirements of this program
- Report any problems with storage or use of chemicals
- Immediately report spills or suspected spills of chemicals
- Use only those chemicals for which they have been trained
- Use chemicals only for specific assigned tasks in the proper manner
- Keep a copy of the MSDS/SDS for any chemical product stored in your work area

Contractors

- Comply will all aspects of this program
- Coordinate information with the Hazmat Coordinator or Safety Manager
- Ensure Contractor employees are properly trained
- Notify the Hazmat Coordinator Safety & Occupational Health Specialist/Manager before bringing any chemicals into company property of facilities

- Monitor and ensure proper storage and use of chemicals by Contractor employees

III. General Program Information

This written Hazard Communication Plan (HAZCOM) has been developed based on OSHA Hazard Communication Standard and consists of the following elements:

- Identification of Hazardous Materials
- Product Warning Labels
- Material Safety Data Sheets (MSDS) Safety Data Sheets (SDS)
- Written Hazard Communication Program
- Effective Employee Training

Some chemicals are explosive, corrosive, flammable, or toxic. Other chemicals are relatively safe to use and store but may become dangerous when they interact with other substances. To avoid injury and/or property damage, persons who handle chemicals in any area of the BLM-AK State Office (AKSO) must understand the hazardous properties of the chemicals. Before using a specific chemical, safe handling methods and health hazards must always be reviewed. Supervisors are responsible for ensuring that the equipment needed to work safely with chemicals is accessible and maintained for all employees on all shifts.

IV. Employee Training

Initial Orientation Training

All new employees shall receive safety orientation training covering the elements of the HAZCOM and Right to Know Program. This training will consist of general training covering:

- Location and availability of the written Hazard Communication Program
- Location and availability of the List of Chemicals used in the workplace
- Methods and observation used to detect the presence or release of a hazardous chemical in the workplace.
- The specific physical and health hazard of all chemicals in the workplace
- Specific control measures for protection from physical or health hazards
- Explanation of the chemical labeling system
- Location and use of MSDS/SDS

Job Specific Training

Employees will receive on the job training from their supervisor. This training will cover the proper use, inspection and storage of necessary personal protective equipment and chemical safety training for the specific chemicals they will be using or will be working around.

Training Frequency

Training should be conducted at the time of their initial assignment, and whenever a new physical or health hazard the employee has not previously been trained on is introduced into their work area. (Periodic refresher training may be included as determined by your facility or Risk Assessment/Management Worksheet)

Immediate On-the-Spot Training

This training will be conducted by supervisors for any employee that requests additional information or exhibits a lack of understanding of the safety requirements.

Informational Placards

All cabinets, buildings, or rooms used for the storage of flammable liquids, incendiary devices, or caustic chemicals will be placarded with appropriate guidelines for storing chemicals in them, including a list of the types of chemicals that are prohibited from being stored in them. [See examples in Appendix A – “Placards for Chemical Storage Areas”]

V. Non-Routine Tasks

Non-routine tasks are defined as working on, near, or with unlabeled piping, unlabeled containers of an unknown substance, confined space entry where a hazardous substance may be present and/or a one-time task using a hazardous substance differently than intended (example: using a solvent to remove stains from tile floors).

Steps for Non-Routine Tasks

Step 1: Hazard Determination

Step 2: Determine Precautions

Step 3: Specific Training & Documentation

Step 4: Perform Task

All non-routine tasks will be evaluated by the Department Supervisor and Safety Department before the task commences, to determine all hazards present. This determination will be conducted with quantitative/qualitative analysis (air sampling, substance identification/analysis, etc., as applicable).

Once the hazard determination is made, the Department Supervisor and Safety Department will determine the necessary precautions needed to either remove the hazard, change to a non-hazard, or protect from the hazard (use of personal protective equipment) to safeguard the Employees present. In addition, the Department Supervisor or Safety Department will provide specific safety training for employees present or affected and will document the training using the *Chemical Safety Training Checklist* form which shall be marked "***Non-Routine Task Training.***"

VI. Off-Site Use or Transportation of Chemicals

An MSDS will be provided to employees for each chemical and each occurrence of use or transport away from the AKSO facilities. All State and Federal DOT Regulations will be followed including use of certified containers, labeling & marking, securing of containers and employee training.

VII. General Chemical Safety

Assume all chemicals are hazardous. The number of hazardous chemicals and the number of reactions between them is so large that prior knowledge of all potential hazards cannot be assumed. Use chemicals in as small quantities as possible to minimize exposure and reduce possible harmful effects.

The following general safety rules shall be observed when working with chemicals:

- Read and understand the Material Safety Data Sheets.
- Keep the work area clean and orderly.
- Use the necessary safety equipment.
- Do not remove container labels or transfer products into unlabeled storage containers.
- Carefully label every container with the identity of its contents and appropriate hazard warnings.
- Store incompatible chemicals in separate areas.
- Substitute less toxic materials whenever possible.
- Limit the volume of volatile or flammable material to the minimum needed for short operation periods.
- Provide means of containing the material if equipment or containers should break or spill their contents.

VIII. Task Evaluation

Each task that requires the use of chemicals should be evaluated to determine the potential hazards associated with the work. This hazard evaluation must include the chemical or combination of chemicals that will be used in the work, as well as other materials that will be used near the work. If a malfunction during the operation has the potential to cause serious injury or property damage, a Safe Operational Procedure (SOP) should be prepared and followed using a Risk Management Worksheet (or Risk Assessment). Operations must be planned to minimize the generation of hazardous wastes.

IX. Chemical Storage

The separation of chemicals (solids or liquids) during storage is necessary to reduce the possibility of unwanted chemical reactions caused by accidental mixing. Explosives should be stored separately outdoors. Use either distance or barriers (e.g., trays) to isolate chemicals into the following groups:

- Flammable Liquids: store in approved flammable storage lockers.
- Acids: treat as flammable liquids
- Bases: do not store bases with acids or any other material
- Other liquids: ensure other liquids are not incompatible with any other chemical in the same storage location.
- Lips, strips, or bars are to be installed across the width of storage shelves to restrain the chemicals in case of earthquake.

Chemicals will not be stored in the same refrigerator used for food storage. Refrigerators used for storing chemicals must be appropriately identified by a label on the door.

X. Container Labels

It is extremely important that all containers of chemicals are properly labeled. This includes every type of container from a 5000 gallon storage tank to a spray bottle of degreaser. The following requirements apply:

- All containers will have the appropriate label, tag or marking prominently displayed that indicates the identity, safety and health hazards.
- Portable containers which contain a small amount of chemical need not be labeled if they are used immediately that shift, but must be under the strict control of the employee using the product.
- All warning labels, tags, etc., must be maintained in a legible condition and not be defaced. Facility weekly supervisor inspections will check for compliance of this rule.
- Incoming chemicals are to be checked for proper labeling.

XI. Emergencies and Spills

In case of an emergency, implement the proper Emergency Action Plan

1. Evacuate people from the area.
2. Isolate the area.
3. If the material is flammable, turn off ignition and heat sources.
4. Only personnel specifically trained in emergency response are permitted to participate in chemical emergency procedures beyond those required to evacuate the area.
5. Call for Emergency Response Team assistance if required.

XII. Housekeeping

- Maintain the smallest possible inventory of chemicals to meet immediate needs.

- Do not retain products that are over three years old unless 1) they are absolutely necessary to your operations and 2) they're not easily replaceable commercial products.
- Periodically review stock of chemicals on hand.
- Ensure that storage areas, or equipment containing large quantities of chemicals, are secure from accidental spills.
- Make sure that all flammables are secured properly in an approved flammables cabinet.
- Keep all chemical product storage areas, sheds, or cabinets clean and free of spilled products
- Rinse emptied bottles that contain acids or inflammable solvents before disposal.
- Recycle unused laboratory chemicals wherever possible.
- **DO NOT** Place hazardous chemicals in salvage or garbage receptacles.
- **DO NOT** Pour chemicals onto the ground.
- **DO NOT** Dispose of chemicals through the storm drain system.
- **DO NOT** Dispose of highly toxic, malodorous chemicals down sinks or sewer drains.

XIII. Contractors

All outside contractors working inside AKSO Facilities (approved by General Services Administration (GSA)) are required to follow the requirements of this program. The AKSO will provide Contractors (as required by GSA) information on:

- Location of MSDS
- Precautions to be taken to protect contractor employees
- Potential exposure to hazardous substances
- Chemicals used in or stored in areas where they will be working
- Location and availability of Material Safety Data Sheets
- Recommended Personal Protective Equipment
- Labeling system for chemicals

XIV. Definitions

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

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

Compressed gas: any compound that exhibits:

- (i) A gas or mixture of gases having, in a container, an absolute pressure exceeding 40 psi at 70 deg. F.

(ii) A gas or mixture of gases having, in a container, an absolute pressure exceeding 104 psi at 130 deg. F. regardless of the pressure at 70 deg. F.

(iii) A liquid having a vapor pressure exceeding 40 psi at 100 deg. F.

Container: any bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, storage tank, or the like that contains a hazardous chemical. For 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.

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 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 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 flash point below 100 deg. F., except any mixture having components with flash points of 100 deg. F. 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 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.

Flash point: the minimum temperature at which a liquid gives off a vapor in sufficient concentration to ignite.

Hazardous chemical: any chemical, which is a physical hazard or a health hazard.

Hazard warning: any words, pictures, symbols, or combination 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 evidence 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, and neurotoxins, agents which act on the hematopoietic system and agents which damage the lungs, skin, eyes, or mucous membranes.

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.

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

Material safety data sheet (MSDS) Safety Data Sheet (SDS): written or printed material concerning a hazardous chemical which is prepared in accordance with OSHA Standard 1910.1200 requirements.

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

Oxidizer: means 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 that it is a combustible liquid, a compressed gas, explosive, flammable, an organic peroxide, an oxidizer, pyrophoric, unstable (reactive) or water-reactive.

Pyrophoric: a chemical that will ignite spontaneously in air at a temperature of 130 deg. F. or below.

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.

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.

XV. MSDS/SDS Information

MSDS/SDS's are provided by the chemical manufacturer to provide additional information concerning safe use of the product. Each MSDS provides:

1. Common Name and Chemical Name of the material
2. Name, address and phone number of the manufacturer
3. Emergency phone numbers for immediate hazard information
4. Date the MSDS/SDS was last updated
5. Listing of hazardous ingredients
6. Chemical hazards of the material
7. Information for identification of chemical and physical properties

MSDS/SDS Information Chemical Users Must Know

Fire and/or Explosion Information

1. Material Flash Point, auto-ignition temperature and upper/lower flammability limits
2. Proper fire extinguishing agents to be used
3. Fire fighting techniques
4. Any unusual fire or explosive hazards

Chemical Reaction Information

1. Stability of Chemical
2. Conditions and other materials which can cause reactions with the chemical
3. Dangerous substances that can be produced when the chemical reacts

Control Measures

1. Engineering Controls required for safe product use
2. Personal protective equipment required for use of product
3. Safe storage requirements and guidelines
4. Safe handling procedures

Health Hazards

1. Permissible Exposure Limit (PEL) and Threshold Limit Value (TLV)
2. Acute or Chronic symptoms of exposure
3. Main routes of entry into the body
4. Medical conditions that can be made worse by exposure
5. Cancer causing properties if any
6. Emergency and First Aid treatments

Spill & Leak Procedures

1. Clean up techniques
2. Personal Protective Equipment to be used during cleanup
3. Disposal of waste & cleanup material

Employee Use of MSDS/SDS - For MSDS/SDS use to be effective, employees must:

1. Know the location of the MSDS/SDS
2. Understand the major points for each chemical
3. Check MSDS/SDS when more information is needed or questions arise
4. Be able to quickly locate the emergency information on the MSDS/SDS
5. Follow the safety practices provided on the MSDS/SDS

APPENDIX A

PLACARDS FOR CHEMICAL STORAGE AREAS

NOTICE

RULES FOR FLAMMABLE STORAGE SHEDS OR CABINETS

1. Post the HAZCOM Placard, *“Storage Restrictions for Flammable Storage Cabinets or Buildings”* on the door of the cabinet/shed, along with these rules.
2. Follow all restrictions listed on the placard
3. All chemical product labels must include:
 - ◆ Product name
 - ◆ Manufacturer name
 - ◆ Physical hazards
 - ◆ Health hazards
 - ◆ First Aid treatment
4. All spills must be cleaned up immediately
5. OSHA Regulations and BLM policy prohibits the storage of gasoline in plastic jerry cans.
6. All gasoline storage must be in the original steel product drums or in vented, labeled, steel safety rated cans, painted red
7. Combustible liquids may be stored in plastic jerry cans or drums in flammable storage areas, but they must be clearly labeled for the product in them
8. No blue plastic drums or Jerry cans are allowed in this area: Never store anything but water in blue plastic jerry cans or drums.
9. Be realistic about products in storage: if you haven't utilized them in two years or more, dispose of them through your HAZMAT disposal person.
10. Do not store materials that will be damaged by freeze-thaw cycles in unheated areas; it unnecessarily creates hazardous waste

CAUTION

**THIS CABINET/AREA IS FOR
STORAGE OF FLAMMABLE OR
COMBUSTIBLE LIQUIDS
ONLY!**

**Do not store any of the following
types of materials in this cabinet:**

- 1. Unlabeled containers**
- 2. Compressed flammable gases**
Propane, butane, MAPP gas, Gaz, etc.
- 3. Acids**
Hydrochloric, sulfuric, muriatic, metal etching solutions, etc.
- 4. Oxidizers**
Chlorine bleach, hydrogen peroxide, lye, drain cleaners, etc.
- 5. Water reactive or pyrophoric type
chemicals**
Lye, phosphorous, calcium carbide, metal hydrides, etc.
- 6. Explosives or incendiary devices**
Fusees, flares, ammunition, gunpowder, blasting caps, etc.

CAUTION

THIS CABINET IS FOR THE STORAGE OF CAUSTIC CHEMICALS ONLY!

Do not store any of the following types of materials in this cabinet:

1. **Unlabeled containers**
2. **Mixed acids and bases**
3. **Flammable or combustible liquids**
Gasoline, kerosene, diesel, solvents, paints, etc.
4. **Compressed flammable gases**
Propane, butane, MAPP gas, Gaz, etc.
5. **Incendiary materials**
Fuses, flares, ammunition
6. **Oxidizers**
Chlorine bleach, hydrogen peroxide, lye, drain cleaners, etc.
7. **H₂O reactive/pyrophoric chemicals**
Lye, phosphorous, calcium carbide, metal hydrides, etc.

CAUTION

THIS CABINET IS FOR THE STORAGE OF INCENDIARY MATERIALS ONLY!

Do not store any of the following types of materials in this cabinet:

- 1. Unlabeled containers/items**
- 2. Flammable or combustible liquids**
Gasoline, kerosene, diesel, solvents, paints, etc.
- 3. Compressed flammable gases**
Propane, butane, MAPP gas, Gaz, etc.
- 4. Caustic Chemicals**
Drain cleaners, Lime-Away, acids, alkalis, etc.
- 5. Oxidizers**
Chlorine bleach, hydrogen peroxide, etc.
- 6. H₂O reactive or pyrophoric chemicals**
Lye, phosphorous, calcium carbide, metal hydrides, etc.