

G&S/M.P.I. Hazard Communication Program

1. Written Program. This standard practice instruction will be maintained in accordance with 29 CFR 1910.1200 and updated as required. Where no update is required this document will be reviewed annually. Effective implementation of this program requires support from all levels of management within this company. This written program will be communicated to all personnel that are affected by it. It encompasses the total workplace, regardless of number of workers employed or the number of work shifts. It is designed to establish clear goals, and objectives. G&S/M.P.I. Corporation shall:

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

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

1.2.1 Generate a list of the hazardous chemicals known to be present in each department using an identity that is referenced from the appropriate material safety data sheet. This list will be available to all employees in the facility, and located as a minimum in the facility "Worker Right-To-Know Center".

1.2.2 Detail the method G&S/M.P.I. will use to inform employees of the hazards of non-routine tasks (for example cleaning of heat treatment pits). Immediate supervisors of affected employees will oversee this requirement The Safety Officer may be consulted to provide any task hazard analysis assistance required.

1.2.3 The hazards associated with chemicals contained in process or facility piping routed through their work area. Immediate supervisors of affected employees will oversee this requirement. The Safety Officer may be consulted to provide any hazard analysis assistance required. Any unlabeled pipes in their work areas must be immediately reported to the supervisor for labeling.

1.2.4 The methods G&S/M.P.I. will use to inform employee(s) of any precautionary measures that need to be taken to protect employees during normal operating conditions and in foreseeable emergencies. Immediate supervisors of affected employees will oversee this requirement. The Maintenance Manager and or the Safety Officer may be consulted to provide any task hazard analysis assistance required.

1.2.5 G&S/M.P.I. shall make the written hazard communication program available to all employees, during each work shift.

2. Training Program. G&S/M.P.I. shall provide employees with information and training on hazardous chemicals in their work area at the time of their initial assignment, annually, and whenever a new chemical is introduced into their work area that could present a potential hazard.

2.1 Information. G&S/M.P.I. Employees shall be informed of:

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

2.1.2 The location and availability of the written hazard communication program, including a list(s) of hazardous chemicals used in their department, and the associated material safety data sheet (MSDS). This information will be available in the Safety Offices of GSI/MPI, and at each of the MPI plant locations.

2.2 Training.

Employee hazard communication training at G&S/M.P.I. shall be conducted annually. This training will be conducted by an approved training instructor. Newly hired personnel will be briefed on the general requirements of the OSHA hazard communication standard by the Safety Staff, as well as duty specific hazards by their immediate supervisor before they begin any duties within the department. Interdepartmentally transferred personnel will also be briefed on the duty specific hazards by their immediate supervisor before they begin any duties within the department. This training will include at least the following:

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

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

2.2.3 The measures employees can take to protect themselves from these hazards. Specific procedures G&S/M.P.I. has implemented to protect employees from exposure to hazardous chemicals, to include; appropriate work practices, Standard Practice Instructions, emergency procedures, and personal protective equipment

2.2.4 An explanation of the labeling system used at G&S/M.P.I., the material safety data sheet, and how employees can obtain and use the appropriate hazard information.

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

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

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

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

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

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

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

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

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

2.2.14 Emergency and first aid procedures.

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

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

2.3 Documentation. All training will be documented using a standard company attendance roster.

3. Labeling Requirements.

Labeling requirements of containers of chemicals used at G&S/M.P.L, as well as of containers of chemicals and hazardous materials being shipped off site. The following procedures apply:

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

3.2 Container Labeling. G&S/M.P.L will maintain and provide a container labeling kit to any employee requesting its use. Employees shall ensure that labels on incoming containers of hazardous chemicals are not removed or defaced. Containers containing hazardous chemicals will be properly disposed of and the labels defaced after use. Once they are emptied, chemical containers can never be used in the place of any other container (for example, trash receptacles).

3.3 Label Information for a single chemical (non-mixture). G&S/M.P.L will provide the appropriate hazard rating and chemical compatibility charts to label containers. The MSDS will be consulted first to determine labeling requirements. The label as a minimum will contain:

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

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

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

3.3.4 The normal operational use of the chemical.

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

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

4.1 G&S/M.P.I. shall maintain copies of any material safety data sheets that are received with incoming shipments of the sealed containers of hazardous chemicals, shall obtain a material safety data sheet for sealed containers of hazardous chemicals received without a material safety data sheet if an employee requests the material safety data sheet, and shall ensure that the material safety data sheets are readily accessible during each work shift.

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4.3 Master copies of each MSDS will be maintained in the safety office.

4.4 Right-To-Know (worker) copies will be available to all employees in the facility, and located as a minimum in the safety office. Additionally, a list of the hazardous chemicals known to be present in each department using an identity that is referenced from the appropriate material safety data sheet will be located at each facility. G&S/M.P.I. will ensure a system is in place to maintain a current set of MSDS's.

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

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

5. Non-Company Employees Program. Visitors, Contract Employees, Contractor Personnel and In-House Representatives. The principle company escort or contact will advise visitors, contract employees, contractor personnel, and in-house representatives of any chemical hazards that may be encountered in the normal course of their work on the premises, the labeling system in use, the protective measures to be taken, the safe handling procedures to be used, and availability of MSDS's. Any contractor bringing chemicals on-site must provide G&S/M.P.I. with the appropriate hazard information on these substances, including the labels used and the precautionary measures to be taken in working with these chemicals. Consult with the safety manager where this determination is unclear or assistance is required.

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

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

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

Article means a manufactured item:

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

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

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

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

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

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

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

Compressed gas means:

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

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

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

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

Employee means a worker who may be exposed to hazardous chemicals under normal operating

conditions or in foreseeable emergencies. Workers such as office workers or bank tellers who encounter hazardous chemicals only in non-routine, isolated instances are not covered.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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