

HAZARD COMMUNICATION PROGRAM

The majority of the hazardous chemicals used and stored at Northwestern State University (NSU) are normally below the reportable quantities as prescribed by the Environmental Protection Agency and the Louisiana Department of Environmental Quality. In keeping with the intent of the Right- to-Know legislation, NSU has established the Hazardous Communication Program (29 CFR- Code of Federal Regulations 1910.1200) and OSHA's Laboratory Standard (29 CFR 1910.1450- Chemical Hygiene Plan). These programs are implemented to provide appropriate knowledge to students, faculty, visitors, and employees of proper safety practices when working in areas where exposure to hazardous chemicals is a safety consideration.

PURPOSE

This purpose of the hazard communication program is to effectively inform NSU employees of all potential or existing chemical hazards. The method used to effectively inform employees includes:

1. Safety data sheets (SDS's)
2. Container labeling and other forms of warning
3. Employee education and training.

Proper handling, storage, and disposal requirements are outlined in the departmental procedures.

DETERMINING CHEMICAL HAZARDS

Foremen, supervisors, lab managers or their representatives shall:

1. Compose and maintain an up-to-date list of all hazardous materials in his/ her area of responsibility.
 2. Provide the list of hazardous materials to the Environmental Health and Safety Office with appropriate updates (at least annually, in January).
 3. Ensure all hazardous materials are properly labeled with the 9 hazardous material labels.
 4. Provide safety instructions to employees/ students covering proper handling, health considerations, storage, emergency response and disposition of hazardous materials using the information provided by chemical manufacturers and distributors on safety data sheets (SDS's).
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SAFETY DATA SHEETS (SDS's)

A Safety Data Sheet is a written information sheet about a specific hazardous chemical. All chemical manufacturers and distributors must obtain or develop a SDS for each hazardous material they produce or import. A hazardous material is one that is either a physical hazard (i.e., flammable, oxidizer, etc.) or a health hazard (cause acute or chronic health effects).

Foremen, supervisors, lab managers or their representatives will maintain the SDS files of all hazardous materials used or handled within their area of responsibility; review each data sheet to make sure it is complete, and replace old data sheets with the new ones that accompany shipments of materials. One indication that the SDS might be obsolete is the date. If the data sheet is more than three years old then chances are there is a more current version. In the case of an outdated SDS, every attempt should be made to obtain a more recent copy.

Employees have the right to obtain copies of any SDS(s) and/ or list(s) of hazardous chemicals.

OSHA's Hazard Communication Standard specifies certain information that must be included in SDSs, but does not require that any particular format be followed in presenting this information. All SDS's are required to contain:

- Identity used on the label
- Hazardous Ingredients- chemical and common names of all ingredients which have been determined to be a physical and/ or health hazard.
- Physical/ Chemical Characteristics- boiling point, vapor pressure, vapor density, specific gravity, water solubility, melting point, appearance and color
- Fire and Explosion Data- flash point special firefighting procedures, unusual fire and explosion hazards
- Reactivity Data- stability, incompatibility, hazardous decomposition byproducts
- Health Hazard Data- routes of entry into the body, carcinogenicity, sign and symptoms of exposure, emergency first aid procedures
- Control Measures- respiratory protection, ventilation, protective gloves, eye protection, other protective clothing and/or equipment, work/ hygienic/ maintenance practices
- Spill Procedures
- Waste Disposal
- Transportation and Regulatory Data
- Date of preparation of the material safety data sheet or the last change to it.
- Name, address, and telephone number of the chemical manufacturer, importer, employer, or other responsible party.

Glossary of Terms Used on a SDS:

Acute - Short term period of action. Readily apparent.

Asphyxiate - A gas or vapor that can cause injury by reducing the amount of oxygen available for breathing.

Carcinogen - A substance which has been identified as causing cancer in humans.

Chronic - A long time period of action.

Combustible Liquid - A liquid having a flash point at or above 1000F but below 2000F. This definition does not include mixtures containing one or more constituents with flash points outside the parameters indicated.

Compressed Gas - Means 1) a gas or mixture of gases having in a container an absolute pressure exceeding 40 pounds per square inch at 700F, or 2) a gas or mixture of gases having in a container an absolute pressure exceeding 104 pounds per square inch at 1300F, regardless of the pressure at 700F, or 3) a flammable liquid having a vapor pressure exceeding 40 pounds per square inch absolute pressure at 1000F, as determined by the American National Standard Method of Test for Vapor Pressure of Petroleum Products.

Corrosive Material - A chemical capable of causing visible and irreversible damage to human skin tissue at the site of contact.

Explosive - A chemical that produces a sudden release of pressure, gas and/or heat when subjected to sudden shock, pressure or high temperature.

Exposure - Contact of an individual with a hazardous material during the course of employment through any route of entry.

Flammable Material - A substance that meets any of the following specifications: A flammable aerosol is a chemical substance or mixture, dispensed from a container as a mist, spray or foam by a propellant under pressure, which yields a flame of at least 18 inches at full valve opening, or a flashback (flame extending back through the valve) at any opening. A flammable gas is a gas which, at normal atmospheric pressure and temperature and at a concentration of 13 percent or less, forms a flammable mixture, or that forms a range of flammable mixtures with air greater than 12 percent regardless of the lower limit. A flammable liquid for our purposes, is defined as having a flash point below 1000F except that this does not include any mixture where any one constituent has a flash point at or above 1000F and makes up 99 percent or more of the total volume of the mixture. A flammable solid is a material (other than an explosive) that causes fire through friction, absorption of moisture, spontaneous chemical change, retained heat from manufacturing or processing, or that can be readily ignited and can remain so even after the ignition source is removed.

Flash Point - The minimum temperature at which a substance produces enough vapor to be ignited.

Foreseeable Emergency - Any potential occurrence that could result in the uncontrolled release of a hazardous material into the workplace.

Hazardous Chemical Substance or Mixture - Is a substance considered as one or more of the following : a toxic material, a carcinogen, a corrosive material, an irritant, a strong sensitizer, a dangerously reactive material, a flammable material, a combustible liquid, a pyrophoric material, a strong oxidizer, an explosive material, or a compressed gas.

Health Hazard - A relative term generally referring to any substance that has been shown by at least one established scientific study to produce acute or chronic detrimental health effects to exposed personnel.

Irritant - A chemical substance or mixture, other than a corrosive, that when contacted with the skin produces an inflammatory reaction to the affected area and/or surrounding areas.

Median Lethal Concentration LC50 - The concentration in air of gas, vapor, mist, fume or dust for a given period of time that will kill 50 percent of the test animals using a specified test procedure. Inhalation is the primary route of entry.

Median Lethal Dose LD50 - The dosage of a substance that will kill 50 percent of the test animals to which the substance is administered using a specified test procedure. Various routes of entry can be used for testing purposes.

LEL (Lower Exposure Limit) - The lowest concentration of a gas or vapor in air that will ignite or explode if an ignition source is provided.

Safety Data Sheet (SDS) - An information document that contains relevant information about a specific chemical or mixture. Also lists the hazards of the chemical, appropriate emergency response procedures, protective equipment that should be worn, etc.

Mutagen - A material that affects organisms at the genetic level and whose effects may be seen in subsequent generations.

Oxidizer - A chemical that promotes combustion in other materials. The definition does not include explosives.

Physical Hazard - A chemical that is either a combustible liquid, a compressed gas, an explosive, is flammable, an organic peroxide, an oxidizer, is pyrophoric, is reactive or water-reactive.

Pyrophoric Material - A chemical substance or mixture that will ignite spontaneously in dry or moist air at below 1300F.

Reactive Material - A chemical substance or mixture that may vigorously polymerize, decompose, condense, or become self-reactive under conditions of shock, pressure or temperature. Includes chemical substances that can be

classified as explosive, an organic peroxide, a pressure generating material or a water reactive material.

Sensitizer - A chemical substance or mixture known to cause some form of hyper-sensitive reaction to normal tissue when said tissue is exposed to it.

Teratogen - A chemical that causes physical defects in a developing embryo.

Threshold Limit Values (TLV) - These are the upper exposure limits of airborne concentrations of chemicals that are accepted as safe for employees to be exposed to on a day-in, day-out basis. There are three types of threshold limit values. The Time Weighted Average (TWA) is the maximum concentration that employees working eight hours per day, 40 hours per week can be exposed to with no adverse physical effects. The Short Term Exposure Limit (STEL) is the maximum concentration to which workers can be exposed for a period of up to 15 minutes with no detrimental effects. Finally, the Ceiling (C) is the concentration that should never be exceeded, not even instantaneously.

Toxic - Refers to any chemical or substance that falls into any of the following categories:

1. A chemical that has a median lethal dose of more than 50 milligrams per kilogram but not more than 1000 milligrams per kilogram of body weight when administered orally to albino rats weighing between 200 and 300 grams each;
2. A chemical that has a median lethal dose of more than 200 milligrams per kilogram but not more than 1000 milligrams per kilogram of body weight when administered by continuous contact for 24 hours or less with the bare skin of albino rabbits weighing between 2 and 3 kilograms each; or,
3. A chemical that has a median lethal concentration in air of more than 200 ppm but not more than 2000 ppm by volume of gas 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 to albino rats weighing between 200 and 300 grams each.

Unstable - A chemical or substance in a pure state (nothing added) that will readily polymerize, decompose, condense, or become self-reactive under conditions of shock, pressure or temperature.

LABELS AND OTHER FORMS OF WARNING

Chemical manufacturers, importers, and distributors provide labels, tags, or other markings for containers of hazardous chemicals. This identification includes the following information:

1. Identification of the hazardous chemical
2. Appropriate hazard warning labels (see last page)
3. Name and address of the chemical manufacturer, distributor, or other responsible party

NSU, in accordance with state and federal regulations, requires that containers of hazardous materials in the workplace be labeled, tagged, or marked with the identity of the hazardous chemical and appropriate hazard warning. Labels provide an immediate source of information and should not under any circumstance be removed or defaced.

Portable containers of hazardous chemicals do not have to be labeled if they contain chemicals transferred from labeled containers, and which are intended only for the immediate use of the employee who performs the transfer. "Immediate use" in this case 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." If the hazardous material is going to be in the container after the employee who filled it leaves work, or if another employee is going to use the material, it must be labeled. However, it would be in everyone's best interest if all containers, even portable containers, were labeled. When an employee fills a portable container, a simple piece of masking tape with the name of the material and its primary hazard will suffice as a temporary label.

All labels on incoming containers must not be defaced in any way. Missing or defaced labels must be immediately reported to supervisors so appropriate labels can be reapplied immediately.

EMPLOYEE INFORMATION, EDUCATION, AND TRAINING

Information, education and training shall be provided by foremen, supervisors, lab managers or their representatives to personnel and students in accordance with this standard. Employees who are new to the work environment or instructional area or may receive a change in work procedures that would include application of new or unfamiliar hazardous materials will be trained to work with them. Training will be documented and kept on file. The Environmental Health & Safety Office will be glad to assist in training involving the hazard communication program.

Signing the required safety meeting sign-in sheet indicates that I have received and read the Hazard Communication Policy.

