RIGHT TO KNOW GUIDE BOOK

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Saginaw Intermediate School District's
Compliance Responsibility Outline
Michigan Right to Know Law

Compliance Item	**Personnel Responsible**
Person responsible for coordination of the total program with the authority over all staff for implementation	Director of Personnel and the Building & Grounds Supervisor
Person responsible for obtaining, monitoring, distribution, and maintaining files of Material Safety Data Sheets (MSDS)	Director of Personnel and Building/Department Supervisors
Person responsible for inventory of All suspected hazardous materials in SISD buildings	Individual Building Administrators, Directors, Coordinators, and Supervisors
Master inventory list of Material Sheets	Director of Personnel Safety Data
Distribution of MSDS Manuals	Director of Personnel
Person(s) responsible for informing outside contractors of the potential and hazards when providing services at one of the buildings and obtaining a listing of potential hazardous materials that a contractor may be using at on of our buildings	Building and Grounds Supervisor and Individual Building Directors
Person responsible for development of Written Program	Director of Personnel

Saginaw Intermediate School District's Objectives for the Adhering to the Michigan Right to Know Law

The **MICHIGAN RIGHT TO KNOW LAW** and the **SISD's** written communication/training program will assist ALL employees:

- In becoming familiar with the physical and health hazards of certain chemicals and categories of chemicals in the workplace
- In becoming familiar with the protection methods which includes personal protective equipment and any emergency procedures as recommended on the MSDS (Material Safety Data Sheets)
- In locating Material Safety Data Sheets and how to understand and utilize them in the workplace
- In becoming familiar with safety related items available at the District
- In becoming familiar with product labels and how to utilize the information provided
- In the proper use of safety equipment when handling a potentially hazardous chemical
- In informing them of all hazardous chemicals found at he District, as written in this hazard communication program
- To observe proper work practices and use of personal protective equipment in relation to the hazardous chemicals in the workplace
- To know who is responsible for specific information in regards to the Michigan Right To Know Law
- To know the SISD's administrative and supervisory staff will provide any assistance possible in providing safety in the workplace

Saginaw Intermediate School District
Hazard Communication Program

INTRODUCTION

The following hazard communication program has been established for Saginaw Intermediate School District. This program will be available for review by all employees.

I. HAZARD DETERMINATION

The Saginaw Intermediate School District will be relying on material safety data sheets from suppliers to meet determination requirements.

II. LABELING

A. The Director of Personnel and the Building and Grounds Supervisor will be responsible for see that all containers coming in are properly labeled.

B. All labels shall be checked for:

- Identity
- Hazard
- Name and address of responsible party

C. Each department director shall be responsible for seeing that all portable containers used in their work area are labeled with identity and hazard warning.

III. MATERIAL SAFETY DATA SHEET (MSDS)

A. the Personnel Director will be responsible for compiling the master MSDS file. It will be kept in the Personnel Office.

B. Copies of the MSDS for all hazardous chemicals to which employees may be exposed will be kept in the file at the Millet Learning Center (Nurses Office), the Hartley Nature Center (Directors Office), and the Administration Building (Personnel Office). These files will be designated as Hazardous Material Centers.

C. MSDS will be available for review to all employees during each work-shift. Copies will be available upon request to any supervisor of employees or building director.

D. Each District supervisor or building director will be provided with the required MIOSHA Right to Know posters and postings notifying employees of new or revised MSDS within five (5) days of receipt of new or revised MSDS.

IV. EMPLOYEE INFORMATION AND TRAINING

A. The Personnel Office shall coordinate and maintain records of training conducted for District employees.

B. Before starting work, or as soon as possible thereafter, each new employee will attend a safety class. In that class, each employee will be given information on:

- Chemicals and their hazards in the work place
- How to lessen or prevent exposure to these chemicals
- What the District has done to lessen or prevent workers exposure to these chemicals
- Procedures to follow if they are exposed
- How to read and interpret labels and MSDS
- Where to locate MSDS and from whom they may obtain copies

C. The District will inform each employee that:

- The employer is prohibited from discharging, or discriminating against, an employee who exercises the rights regarding information about hazardous chemicals in the work place
- As an alternative to requesting as MSDS from the employer, the employee may obtain a copy from the Department of Public Health. A sign will be posted with the address and telephone number of the department responsible for such requests

D. Attendance will be taken at training sessions. These records will be kept by the Personnel Office.

E. Before any new hazardous chemical is introduced into the work place, each employee will be given information in the same manner as during the safety class.

V. HAZARDOUS NON-ROUTINE TASKS

A. On occasion, employees are required to do work in hazardous areas (e.g. confined spaces). Prior to starting work in such areas, each employee will be given information about the hazards involved in these areas.

This information will include:

- Specific chemical hazards
- Protection/safety measures the employee can take to lessen risks.
- Measures the company has taken to lessen the hazards including ventilation, respirators, the presence of another employee, and emergency procedures.
- It is the policy of this District that no employee will begin working a confined space or any non-routine task, without first receiving a safety briefing.

VI. INFORMING CONTRACTORS

A. It is the responsibility of the Building and Grounds Supervisor or the building Director to provide contractors with employees exposed to our chemicals with the following information:

- Hazardous chemicals with which they may come in contact
- Measures the employees may take to lessen the risks
- Where to get MSDS for all hazardous chemicals

B. It is the responsibility of the building and Grounds Supervisor or the Building Director to obtain chemical information from contractors when they potentially may bring hazardous chemicals into our workplace that might expose our employees.

VII. PIPE AND PIPING SYSTEMS

A. Information on the hazardous contents of pipe and piping shall be identified by labels on the pipes.

VIII. LIST OF HAZARDOUS CHEMICALS

A. List of the chemicals used by the District will be developed and maintained. Further information can be obtained by reviewing MSDS at each building's Hazardous Material Center.

Understanding
Your
MATERIAL SAFETY DATA SHEET

When a person initially looks at a Material Safety data Sheet (MSDS), their first thoughts are "I'm not a Chemist." There are a number of ways to understand the full meaning for these sheets.

Step 1: Remember that material safety data sheets are separated into 8 categories

Section I	Manufacture Information
Section II	Hazardous Ingredients
Section III	Physical/Chemical Characteristics
Section IV	Fire and Explosion Hazard Data
Section V	Reactivity Data
Section VI	Health Hazard Data
Section VII	Precautions for Safe Handling
Section VIII	Control Measures

Step 2: Review the basic functions of each category

Section I Manufacture information This section provides information by the manufacture such as: address, emergency telephone number, date of the MSDS, and who prepared the MSDS

Section II Hazardous Ingredients This section describes the material's hazardous components and chemical names. Also, TLV's (worker exposure limits) are listed and other information to let the employee know the hazard level of this material

Section III Physical/Chemical Characteristics This section elaborates on the boiling & melting point of the material, vapor pressure evaporation rate (important for flammable materials), solubility in water (how well it mixes with water), and what is the normal appearance and odor of the substance

Section IV Fire and Explosion Hazard Data Assists the user in determining the flammability risk of the substance. The flashpoint is listed (minimum temperature for a spark to occur). Flammability limits are discussed in this section (how much

of this substance must be in the area for a fire when this material is involved. For example, what type of extinguisher to utilize (ABC, CO2, or foam).

Section V Reactivity Data This section explains what could happen if this material is combined with other chemicals, or with water or air. This information is very useful if a spill occurs. It is helpful in storing of materials. For instance, this section let's you know what other materials should not be stored in the same area as this material

Section VI Health Hazard Data This is a very important section; it tells the user how the material will affect your body and how it might enter your body if not utilized properly. If not utilized properly materials can cause skin burns, skin rashes, headaches, nausea, dizziness, and cancer (results from long term exposure to a particular substance). First aid information is provided in this section

Section VII Precautions for Safe Handling Discusses how to handle and move the material. Information is provided on how to clean up spills. Be careful in cleaning up spills, some chemicals can cause dizziness, and others could potentially kill a person who passes out in an unventilated area.

Section VIII Control Measures This section informs the user on what type of personal protective equipment should be utilized in working with materials or substances. Examples include respirators, gloves, eye protection, ventilation, clothes, and other equipment. Be sure you have been trained on how to properly wear the equipment. Do not take chances with your health.

Step 3: Always ask questions on what you do not understand. People who can provide answers are your supervisor, personnel director, custodian, or the manufacturer

Common Material Safety Data Sheet Terms

ACGIH ACUTE EFFECT – Abbreviation for the American Conference of Governmental Industrial Hygienists, a private organization of occupational safety and health professionals. The ACGIH recommends occupational exposure limits for many hazardous substances, and it updates and revises its recommendations as more information becomes available. ACGIH limits are not legally enforceable.

ACUTE TOXICITY – the adverse effects resulting from a single excessive overexposure to a substance. Usually a figure denoting relative toxicity.

ASPHYXIANT A vapor or gas that can cause unconsciousness or death by suffocation, Most are associated with a lack of sufficient oxygen to promote life.

BOILING POINT – A temperature at which a liquid turns to a vapor state. This term is usually associated with the temperature at sea level pressure when a flammable liquid gives off sufficient vapors to promote combustion.

CEILING LIMIT – In terms of exposure concentrations, this is the number that should never be exceeded even for a short period, for a substance.

CUBIC CENTIMETER – A volume measurement usually associated with small quantities of a liquid. One quart has 946 cubic centimeters.

CHRONIC EFFICIENT – An adverse effect with symptoms that develop or recur very slowly, or over long periods of time.

COMBUSTIBLE –A term used to classify liquids, gases, or solids that will burn readily. This term is often associated with flash point which is a temperature at which a given material will generate sufficient vapors to promote combustion.

COMBUSTIBLE LIQUID – Liquids with flash points between 100 degrees Fahrenheit and 200 degrees Fahrenheit.

CONCENTRATION – The amount of a substance present.

COMPRESSES GAS – Any gas at 40 psi or greater is considered hazardous
Corrosives – A chemical that can cause burns and destruction of unprotected skin and other tissues

CUTANEOUS HAZARDS – Chemicals which may cause drying, itching, and reddening of the skin

DECOMPOSITION – The breakdown of materials or substances into other substances or parts of compounds. Usually associated with heat or chemical reactions.

DENSITY – The weight of a given volume of a substance. Gold is a very dense substance with a small amount weighing a lot. Plastic foams have low densities with a a large volume weighing very little. The density of a substance is usually compared with water, which has a density of 1. Substances with densities less than 1 will float on water if they don't dissolve; substances with densities greater than 1 will sink in water if they don't dissolve.

DERMAL – By or through the skin.

EVAPORATION RATE – The rate at which a liquid material is known to evaporate, usually associated with flammable materials. The faster a material will evaporate, the sooner it will become concentrated in the air, creating either an explosive/combustible mixture or toxic concentration, or both.

EXPLOSIVE LIMITS – The amounts of a vapor in air which form explosive mixtures. Explosive limits are expressed as LOWER EXPLOSIVE LIMIT (LEL) and UPPER EXPLOSIVE LIMIT (UEL); these give the range of vapor concentrations in air which will explode if heat is added. Explosive limits are expressed as percent of vapor in air.

EYE IRRITANTS – Chemical which irritate the eyes

FLAMMABLE – Any liquid that has flash point of 100 degrees Fahrenheit or below. Also, any solid which can sustain fire and ignite readily
Flash Point – The temperature at which a liquid will generate sufficient vapors to promote combustion. Generally, the lower the flash point, the greater the danger of combustion.

FLAMMABLE GASES – Gases that are likely to explode or burn readily if the vapor is exposed to an ignition source.

FLAMMABLE LIQUIDS – Liquids with a flash point below 100 degrees Fahrenheit. Even a small low energy spark like static electricity may ignite the vapors, which are usually given off readily under normal temperatures

GENERAL EXHAUST – A term used to define a system for exhausting or ventilating air from a general work area. Not as site specific as localized exhaust.

"g"- GRAM – A unit of weight. One ounce equals about 28.4 grams.

HAZARDOUS CHEMICAL – Any chemical which is either a physical or health hazard or both.

HEALTH HAZARD – anything which may have a harmful effect on health if overexposure occurs. There can be both ACUTE and CHRONIC health hazards.

HEMATOPIETIC Agents – Chemicals which affect the blood or blood forming system

HEPATOTOXINS – Chemicals which affect the liver.

HIGHLY TOXIC CHEMICALS – Chemicals which are poisonous in extremely small doses.

IGNITION TEMPERATURE – The lowest temperature at which a substance will burst into flames without a source of ignition like a spark or flame. The lower the ignition temperature, the more likely the substance is going to be a fire hazard.

INCOMPATIBLE – Materials which could cause dangerous reactions from direct contact with one another

INGESTIONS – Swallowing

INHALATION – The breathing in of a substance in the form of a gas, liquid, vapor, dust, mist, or fume.

INHIBITOR – A chemical added to another substance to prevent an unwanted change from occurring.

IRRITANTS – Chemicals that may cause reddening, swelling and pain, but are not likely to cause tissue destruction

KILOGRAM – 10000 grams. One kilogram equals about 2.2 pounds.

LC (LETHAL CONCENTRATION) – In lab animal tests, this is the concentration of a substance which is sufficient to kill the tested animal.

LC-50 (LETHAL CONCENTRATION 50) – In lab animal tests, this is the concentration of a substance required to kill 50% of animals tested.

L.E.L. (LOWER EXPLOSIVE LIMIT) – The lowest concentration, or percentage in air, of a vapor or gas, that will produce a flash fire when an ignition source is introduced.

LITER – The unit of volume in the metric system. A liter is slightly larger than a quart.

LOCAL EXHAUST – The system for ventilating or exhausting air from a specific area such as in welding operations. More localized than general exhaust.

MELTING POINT – The temperature that a solid must be heated to in order to make it melt.

METER – The unit of length in the metric system. A meter is about 40 inches.

mg/kg – A way of expressing dose: milligrams (mg) of a substance per kilogram (kg) of body weight. A dose of one mg/kg is equal to 1/1,000,000th of the test animal's body weight.

mg/M3 – A way of expressing the concentration of a substance in air: milligrams (mg) of substance per cubic meter (m3) of air. For comparison a fingerprint weighs about 1 mg and a m3 is slightly larger than a yd3.

MILLIGRAM – One one-thousandth of a gram.

mmHg – A unit of pressure measurement equal to 2/100's of a pound per square inch (psi).

MUCOUS MEMBRANE IRRITANTS – Chemicals which irritate the mucous membranes such as those founding the nose and throat.

MUTAGENS – Chemicals which may change sperm or egg c ells in such a way that defective offspring may be conceived.

NEPHROTOXINS – Chemicals which affect the central nervous system causing dizziness, confusion, and unconsciousness much like that experienced when one drinks too much.

NIOSH – Abbreviation for the National Institute for Occupational Safety and Health. U.S. Department of Health and Human Services. NIOSH does research on occupational safety and health questions and makes recommendations to OSHA.

NON-FLAMMABLE GASES – Gases that pose no fire hazard. However, they share a hazard with all gases stored in compressed gas cylinders in that if the pressure is released in an uncontrolled manner, such as the breaking of a valve, they can become projectiles similar to a rocket. They may also dilute the are causing asphyxiation.

ODOR THRESHOLD – The lowest concentration of a substance's vapor, in air, that can be smelled. Odor thresholds are highly variable depending on the individual who breathes the substance and the nature of the substance.

ORGANIC PEROXIDES – Chemicals containing oxygen bonded to another oxygen. Organic peroxides are very unstable an may act either as oxidizer or explosives.

OSHA – Abbreviation for the Occupational Safety and Health Administration, U.S. Department of Labor. OSHA develops and enforces federal standards for occupational safety and health.

OXIDIZERS – Chemicals which contain a large amount of oxygen and may cause the ignition of combustible materials without the aid of an external sources of ignition or which, when mixed with combustible materials, increases the rate of burning of these materials when the mixtures are ignited.

PEL – Abbreviation for Permissible Exposure Limit. The OSHA enforceable average or ceiling exposure limit for a chemical.

PH – A measure of how acidic or how caustic (basic) a substance is on a scale of 1-14. A pH 1 indicates that a substance is very acid. A pH 7 indicates that a substance is neutral. A pH 14 indicates that a substance is very caustic (basic).

PHYSICAL HAZARD – A hazard posed by a chemical which is not directly related to health such as flammability or water creativeness.

POLYMERIZATION – A chemical reaction in which individual molecules combine to forma single large molecule (a polymer). Usually a lot of heat is released.

PPM – Parts per million. Generally used to express small concentrations of one substance in a mixture. One ppm would be equal to 1 inch in 15.78 miles.

PULMONARY AGENTS – chemicals which may affect the lungs.

PYROPHORIC – See SPONTANEOUSLY COMBUSTIBLE MATERIALS.

REACTIVITY – The ability of a substance to undergo change, usually by combining with another substance or by breaking down. Certain conditions, such as heat and light, may cause a substance to become more reactive. Highly reactive substances my explode.

REPRODUCTIVE TOXINS – Chemicals which may be mutagens, teratogens, cause sterility, or other effects on the reproductive system.

SOLUBILITY – the amount of a substance that can be dissolved in a solvent, usually water.

SOLVENT – Usually, a liquid in which other substances are dissolved. The most common solvent is water.

SPECIFIC GRAVITY – The specific gravity of a liquid is a measurement of how much a given volume of the liquid weighs compared to the same volume of water. Liquids with a specific gravity greater than 1 are heavier than water. Liquids with a specific gravity less than 1 are lighter than water.

SPONTANEOUSLY COMBUSTIBLE MATERIALS – Chemicals which will burst into flames and burn without an outside ignition source if exposed to air.

STABILITY – The stability of a chemical is a measure of how likely it is the chemical may begin to react on its own. Unstable chemicals may react or explode if stored too long, warmed too much, or otherwise improperly handled.

SUSPECT CARCINOGEN – A substance that might cause cancer in humans or animals but has not necessarily been proven to do so.

TERATOGENS – Chemicals which may cause birth defects.

THERMAL – Involving heat

TLV – Abbreviation for Threshold Limit Value. Usually a recommended average 8-hour occupational exposure limit. This means that the actual exposure level may sometimes be higher, sometimes lower, but the average must not exceed the TLV. TLV's are calculated to be save exposure for a working lifetime. Some recommended TLV's are ceilings which cannot be exceeded.

TOXIC CHEMICALS – Any chemical which can cause acute or chronic injury to the human body.

UNSTABLE CHEMICALS – chemicals which may react unpredictably or explode

VAPOR – The gas given off by a liquid when it evaporates. Some solids, such as naphthalene, also give off vapors and evaporate.

VAPOR DENSITY – The density of the vapor given off by a substance, it is usually compared with air, which has a vapor density set at q. If the vapor is more dense than air (greater than 1), it will sink to the ground; if it is less dense than air (less than 1), it will rise.

VAPOR PRESSURE – A measure of the ease with which a liquid evaporates. The higher the vapor pressure, the more rapidly a liquid will evaporate into the air. Vapor pressure is measured in mm/Hg. One mm/Hg equals approximately 2/100's of a pound per square inch (psi).

VENTILATION – Ventilation refers to mechanically moving the air to dilute or remove contaminants. Local exhaust involves placing hoods or suction devices right at the source of chemical contaminant. General exhaust involves the use of normal ventilating procedures such as roof fans or wall fans. Sometimes specialized ventilating devices are suggested.

VISCOSITY – A relative measure of how slowly a substance pours or flows. Very viscous substances, like water, pour and splash easily.

VOLATILITY – A measure of how quickly a substance forms vapor and evaporates at ordinary temperatures.

WATER REACTIVE CHEMICALS – Chemicals which share the characteristics of a flammable solid. However, in addition, they can react with water to give off either a poisonous gas or a flammable gas.

Guide to Understanding Chemical Labels

Labels are an important part of the District's Hazardous Communication Program which gives an employee the right to know about chemical hazards on the job. Material Safety Data Sheets (MSDS) and chemical labels provide employees with the information they need to work safely with chemicals

Before handling any type of chemical or Material that could be potentially dangerous To your health, please read the label or MSDS to ensure your safety.

When reading labels remember the 4 W's:

- What a chemical's identity is…
- Who made it…
- Why its hazardous…
- What to do to protect yourself …

Labels come in a number of different styles and forms. In addition, they aren't always attached to the side of the container. Labels can be written on the container, on a batch ticket, a descriptive warning label, attached by a string or chain. Please review the samples below:

It is very important to read the hazardous warnings on labels every time you handle a container. Some products may have more than one hazard. Materials can be flammable, toxic or they can be reactive.

When a label warns the user about more than one hazard, he/she has to be even more careful. Sometimes, there may no be any information on the label to tell an employee about the hazard so the next step is to review the Material Safety Data Sheet (MSDS).

Here is a list of some typical types of the health hazard terms you might find on a Chemical label:

- Carcinogen
- Heptotoxin
- Irritant
- Toxic Agent
- Neurotoxin
- Reproductive Hazard
- Highly Toxic
- Nephrotoxin Agent
- Corrosive
- Sensitize

Precautionary Statements for Handling Hazardous Materials

Here are some examples of label statements that explains how the user can avoid health problems:

- Do not breathe vapors from this product
- Use only in well-ventilated areas
- Keep container closed when not in use
- Avoid contact with skin
- Wash thoroughly with soap and water after handling
- Keep away from sparks, heat and flames
- Do not store near combustible materials
- Store ina tightly closed container
- and wash contaminated clothing Promptly
- Keep from contact with clothing and other combustible materials

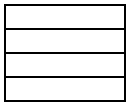
Systems for Understanding the Hazard Level of a Material

Color and number coded label systems have been developed by the National Fire Protection Association (NFPA) and other Organizations. These systems use colors to represent the kind of hazard and a number rating to show the degree of hazard. These two charts are examples of what an employee can expect to see on some containers.

… A good rule of thumb is to remember that the lower the number rating the safer the material.

0 = MINIMAL HAZARD
1 = SLIGHT HAZARD
2 = MODERATE HAZARD
3 = SERIOUS HAZARD
4 = SEVERE HAZARD

The white section usually contains abbreviations of the type of hazard that is associated with the material. This section also informs the worker on what type of personal protection equipment should be utilized. Please review the examples that are shown below:
another container without labeling it



Safety at Home

At home safety awareness is very important. In cleaning and maintaining your home all people utilize floor cleaners, pesticides, bleaches, and other products. These chemicals can be hazardous to your family's health if not utilized properly. The labels on thee products are somewhat different than work place chemicals. Thee products are regulated by the Consumer Product Safety Commission or the Environmental Protection Agency instead of OSHA. Similar products will basically have the same warning Information but it will not be in as much detail.

Program Summary – Right To Know/Hazardous Materials

1. Read the label on any product that is utilized at work before handling

2. If a material does not have a label notify your supervisor

3. Make sure you understand the hazard level of a material. Review NFPA logo or the Material Safety Data Sheets

4. Be sure to read emergency instructions before utilizing a material

Examples:

- What is used to put out a fire?
- How to clean up a spill?
- What type of first aid should be provided

5. Do not ever transfer a material into

6. Ask you supervisor, custodian, or personnel director about label information that you do not understand

7. Most important, use the information that you have been given on the chemical. Its hazards, and the precautions to follow.

Your health and safety may depend on it!