# Managing Hazardous/Chemical Materials

## Administrative Procedure 6.045

**Board Governance Policy Cross Reference: 1,2,3,4,12,13,17**
**Legal Reference: Public Schools Act, Workplace Safety and Health Act and Manitoba Labour Code**

**Date Adopted: June, 2012**
**Date Amended: November, 2024**
**Date Reviewed: February, 2019; November, 2021**

The activities with the School District of Mystery Lake include the use, storage and disposal of chemicals. This administrative procedure is designed to identify, eliminate and/or control chemical hazards and applies to all staff that may be required to handle hazardous chemicals.

## Definitions:

**W.H.M.I.S.**:
The **W**orkplace **H**azardous **M**aterial **I**nformation **S**ystem is a federal legislation that is intended to protect employee health & safety by identifying and addressing *risks* associated with *hazard*ous/controlled materials.

**Risk:**
"Risk" is the likelihood that a hazardous material will cause harm to people, property or the environment. There are two factors that can increase or decrease risk:

1) the seriousness of the hazard
2) how much exposure there is to the hazard.

It is commonly accepted that Risk = hazard X exposure.

**Hazard:**
"Hazard" is the harm that something can cause. The harm may be physical injury, damage to health, property and or the environment. Hazard is an intrinsic or "built-in" characteristic.
In W.H.M.I.S. we talk about hazardous materials; materials that can cause harm.

**SDS:**
**A S**afety **D**ata **S**heet is created by the supplier and contains specific information about the product and its ingredients. This information can be used to reduce the risk to the employee through employer preparation and provide product knowledge training. W.H.M.I.S. requires the SDS contain certain information and all sections must be completed. While all SDS sheets must have the same classes of information they may have different formats.

## SDS Binders:

To ensure compliance with the Manitoba Workplace Safety and Health Regulation at least one hard copy of the SDS binder must be maintained in each workplace. The SDS binder must be located in a place that is accessible to all employees as well as readily available to emergency personnel if required.

SDS binders will be maintained in the following locations (as defined by each school):

- One master set in each administrative office
- One set specific to the chemicals/hazardous products in each science/lab prep classroom
- One set specific to the chemicals/hazardous products in each custodian storage room
- One set specific to the chemicals/hazardous product in each Industrial Arts/Woodworking and or Power Mechanics Shop

The Safety Officer will email a Revision Notification Report to each applicable workplace Supervisor and General Office Clerical Support staff on a weekly basis i.e. every Monday.
The Revision Notification Report is used to identify when a SDS is available for a new item; when an existing SDS has expired and a new sheet is now available and or when an item has been deleted and the SDS must be archived.

The General Office Clerical Support staff will print two copies of the new/revised SDS or notice (e.g. for a deleted item). Clerical Support staff will update the master SDS binder retained in the General Office. The second copy of the revision notice is to be forwarded to the applicable custodian, teacher, mechanic etc.
Obsolete SDS copies must be removed from the applicable binders; the new SDS copy is to be filed in the binder.
All obsolete SDS hard copies must be returned to the Safety Officer's attention within five (5) business days.
The Safety Officer will match the returned SDS to the pending notification list and then file as complete.
Obsolete sheets will be retained by the Safety Officer (by school, by division for thirty years).

# Procedures to Control the Number of Hazardous Materials in the Workplace:

## Custodian Hazardous Products:

An approved product list has been reviewed and distributed to all Head Custodians; only the products on the approved list are to be purchased.

The supplier must provide all products with a Workplace Label and a SDS. Deliveries are not to be accepted if this information is not provided.

## Science Hazardous Products:

**Scholar Chemistry** (merging with Columbus) is the only vendor of choice for ordering chemicals/hazardous materials required by the Science Classrooms/Labs. Prior to ordering the following documents must be checked:

1. ***Excessive Risk Chemicals - Risk Exceeds Educational Utility:*** under no circumstances should any product on this list be ordered/carried in the science classrooms/labs.
2. ***High Risk Chemicals - Only Allow Very Limited Amounts in Storage:*** only appropriate for advanced-level High School Classes. Order quantity must be restricted to the smallest container size available for the product requested.
3. ***Under no circumstances is an unauthorized hazardous material (WHMIS controlled product) to be brought onto school property and into the school via a student, supplier and or any other third party. It is the responsibility of all Supervisors (Principal's and Teacher's) to manage this policy.***

## Excessive Risk Chemicals – Risk Exceeds Educational Utility

**Under no circumstances shall the following chemicals be permitted in a school:**

| Chemical: | Chemical: | Chemical : |
|---|---|---|
| Acetic Anhydride | Dichlorobenzene | Nitrogen Triiodide |
| Acetyl Chloride | Dichloroethane | Nitroglycerin |
| Acrylamide | Dinitro Phenol | Osmium Tetraoxide (Osmic Acid) |
| Acrylonitrile | Dinitrophenyl Hydrazine S | Pentachlorophenol |
| Adipoyl Chloride | Dioxane | Perchloric Acid |
| Aluminum Chloride, anhydrous | Ether, Anhydrous | Phosphorous Pentasulfide |
| Ammonia, gas | Ether, Ethyl | Phosphorus Pentoxide |
| Ammonium Bifluoride | Ether, Isopropyl | Phosphorus, Red |
| Ammonium Bichromate | Ethyl, Ether | Phosphorus, Yellow or White |
| Ammonium Chromate | Ethylene Dichloride | Picric Acid, Trinitrophenol |
| Ammonium Dichromate | Ethyl Nitrate | Potassium Cyanide |
| Ammonium Perchlorate | Ethyleneimine | Potassium Perchlorate |
| Ammonium Sulfide | Ferrous Sulfide | Potassium Sulfide |
| Aniline | Formaldehyde (Formalin) | Potassium, metal |
| Aniline Hydrochloride | Gunpowder | Pyridine Flammable |
| Antimony Oxide | Hydrazine | Selenium |
| Antimony Powder | Hydriodic Acid | Silver Oxide |
| Antimony Trichloride | Hydrobromic Acid | Silver Cyanide |
| Arsenic Compounds | Hydofluoric Acid | Sodium Metal Lump |
| Asbestos, Friable | Hydrogen | Sodium Arsenate |
| Azide Compounds | Hydrogen Sulfide, gas | Sodium Arsenite |
| Barium Chromate | Immersion Oil (old) | Sodium Azide |
| Benzene | Isopropyl Ether | Sodium Borohydride |
| Benzoyl Peroxide | Lithium Aluminum Hydride | Sodium Cyanide |
| Beryllium and it's compounds | Lithium Metal | Sodium Fluoride (Bifluoride) |
| Bromine | Mercaptoethanol | Sodium Fluoroacetate |
| Cadmium compounds | Mercury Compounds | Sodium Peroxide |
| Calcium Fluoride (Fluorspar) | Mercury, liquid | Sodium Sulfide |
| Carbon Disulfide | Methylene Chloride | Strontium |
| Carbon Tetrachloride | Methyl Ethyl Ketone | Testosterone HCI |
| Chloral Hydrate | Methyl Iodide (Iodomethane) | Tetrahydrofuran |
| Chlorine Poison Gas | Methyl Isocyanate | Thioacetamide |
| Chlorobenzene | Methyl Isopropyl Ketone | Thionyl Chloride |
| Chloroform | Methyl Methacrylate | Thiourea |
| Chlorosulfonic Acid | Naphthylamine, a- | Titanium Trichloride |
| Chromic Acid | Nickel Oxide | Triethylamine Flammable |
| Collodion | Nicotine | Trintrobenzene |
| Cuprous Cyanide | Nitrilotriacetic Acid | Trinitrophenol |
| Cyanogen Bromide | Nitrobenzene | Trinitrotoluene |
| Cyclohexene | Nitrocellulose | Uranium/Uranyl |

Issued by MAST July 2009

## High Risk Chemicals – ONLY Allow Very Limited Amounts in Storage
## Only appropriate for Advanced-Level High School Science Classes

**Must be Pre-Approved by Safety Officer Prior to Ordering**

| Chemical: | Chemical: |
|---|---|
| Acetamide | |
| Ammonium Nitrate | |
| Barium Peroxide | |
| Butyric Acid | |
| Cadmium Sulfide | |
| Calcium Carbide | |
| Chromium Trioxide | |
| Ethidium Bromide | |
| Hexamethylenediamine | |
| Hexanediamine 1-6 | |
| Hydrogen peroxide >29% | |
| Lead Components | |
| Lead Nitrate | |
| Magnesium, powder | |
| Phenol | |
| Potassium Chlorate | |
| Potassium Chromate | |
| Potassium Dichromate | |
| Radioactive Products | |
| Sebacoyl Chloride | |
| Silver Compounds | |
| Sodium Chlorate | |
| Sodium Chromate | |
| Sodium Dichromate | |
| Sodium, metal, small chips | |
| Strontium Nitrate Oxidizer | |
| Thermite | |
| Toluene | |
| Wood's Metal | |
| Xylene | |

Issued by MAST January 2009.

## Power Mechanic Shops & Industrial Arts/Woodworking Shops:

An approved product list has been reviewed and distributed; only the products on the list are to be purchased.

The supplier must provide all products with a Workplace Label and a SDS. Deliveries are not to be accepted if this information is not provided.

## House Hold Products:

Purchasing a product that is packaged for household use is not permitted. These types of products would be non food type items such as "over the counter" scented room aerosols, bleach & dish detergents. The Safety Officer is to be contacted directly if clarification is required regarding a specific product.

## Inventory Audits

To ensure on-going data integrity of both the WellNet data base and the SDS binder two inventory audits will be conducted annually in each workplace for each site book:

1. **A complete inventory audit of the workplace conducted by the workplace:**
    - the Safety Officer will issue an Inventory Check List (generated from WellNet) by site book to each workplace.
    - each workplace supervisor is responsible to review the lists for accuracy i.e. noting any required omissions and or deletions.
    - the Workplace Inventory Check Lists must be returned to the Safety Officer by the defined return date (normally 30 days from issue date).
    - the Safety Officer will use the lists to update the WellNet site books.
    - all discrepancies will be reviewed with the workplace supervisor

2. **A complete random inventory audit conducted by the Safety Officer:**
    - the Safety Officer will complete a random audit for each site book in each workplace i.e. an actual physical count compared to the WellNet site book and on-site SDS binder.
    - discrepancies will be reviewed with the workplace supervisors.
    - WellNet and the SDS binders will be updated accordingly.

## Disposal of Hazardous Materials:

- The SDS must always be referred to as the primary source of information regarding disposal of product.
- The supervisor/worker is responsible for ensuring that the product is properly labeled, properly packaged for transportation and is accompanied with an SDS.
- The Safety Officer must be notified via email of product being disposed of internally to ensure the SDS for the disposed product is archived/deleted in the SDS binder.

- For any hazardous material which cannot be disposed of at the workplace, supervisor/workers must complete a Hazardous Material Disposal Request Form (sample attached).
- The Hazardous Material Disposal Request Form must be signed by the supervisor of the workplace & sent to the Safety Officer for approval & processing.

# Chemical Spill Response:

Trained individuals with the knowledge of the spilled chemical's hazards and the precautions that must be taken should only handle chemical spills.

| Hazards Present: | Personal Protective Equipment (PPE) or Devices Required: | Additional Training Requirements: |
|---|---|---|
| Hazards as per SDS.<br><br>Spillage of chemicals, resulting in burns to skin, damage to eyes.<br><br>Inhalation of vapours | PPE as per SDS:<br><br>Lab Coat or Apron (Chemical Resistant)<br>Chemical Resistant Safety gloves or Non slip, disposable gloves (based on chemical)<br>Chemical Resistant Face Shield<br>Safety Goggles<br>Chemical Spill Kit, Sand, Kitty Litter. | WHMIS<br><br>Chemical Clean Up<br><br>Use of Respirators: Maintenance |

**SAFEWORK PROCEDURE:**

1. Remove all students from the immediate area or from the classroom if necessary.
2. Teacher/Administrator must determine if:
    a. Teacher can manage the clean-up process i.e. small spill or
    b. Call for clean-up from Maintenance Crew (equipped with Respirators) or
    c. Call 911 for major spills
    d. Safety Officer must be contacted immediately for all situations involving Maintenance Crew Clean Up & 911 Calls.
3. All spills must be dealt with individually and disposed of completely without delay i.e. Do not keep a general spill bin, dispose of each individual spill as they occur.
4. Have specific SDS readily available, read all precautions listed.
5. Locate & use PPE as per SDS.
6. Ensure Prep Labs are stocked with a pail of sand and a pail of kitty litter.
7. Locate & use Spill Clean Up Kit (if applicable)
    a. Work from outside the spill area.
    b. Lay out dam/sock so that it completely surrounds the spill.
    c. Apply applicable absorbent from kit to soak up spill.
    d. Allow time for absorbent to soak up maximum amount of spill.
    e. Collect absorbent & place in plastic bag (provided with spill kit)
    f. Dispose of sock in plastic bag.
    g. Wash spill area with applicable solution.
    h. Dispose of plastic bags via maintenance department. Do not leave with other garbage for end of day pick up.