



# **W.H.M.I.S.**

**Workplace Hazardous Materials Information  
System**

**Generic Learning Booklet**

**2010**

**Prepared by: Health, Safety and Wellness**



## **WHAT IS THE PURPOSE OF WHMIS?**

WHMIS is the abbreviation for “Workplace Hazardous Materials Information System”. It is a legislated system designed to provide workers with information they need about hazardous materials in the workplace, and how to protect themselves from those hazards. WHMIS applies to all workplaces in Canada.

## **WHAT HAZARDOUS MATERIALS ARE COVERED BY WHMIS?**

All hazardous materials that are covered by WHMIS, are referred to as "controlled products", and are grouped in categories of materials with similar chemical properties called “classes”. The classes are as follows:

- (a) compressed gases
- (b) flammable and combustible materials
- (c) oxidizing materials
- (d) poisonous and infectious materials
- (e) corrosive materials
- (f) dangerously reactive materials

Each class has been assigned a WHMIS symbol for easy recognition. Shown on the following page is a chart which describes the classes and provides the general hazards associated with each class.

# WHMIS Hazard Class Symbols

<u>Description</u>	<u>Symbol</u>	<u>Examples</u>	<u>Potential Hazards:</u>
<b>Class A</b> Compressed Gas		<ul style="list-style-type: none"> <li>– oxygen</li> <li>– nitrous oxide</li> </ul>	Cylinder may explode if heated in a fire or if dropped. Sudden release of compressed gas due to puncture can cause cylinder to become a projectile.
<b>Class B</b> Flammable & Combustible Material		<ul style="list-style-type: none"> <li>– acetone</li> <li>– alcohol</li> </ul>	Substance may burn at relatively low temperatures. May cause fire if exposed to heat, sparks, or flames.
<b>Class C</b> Oxidizing Material		<ul style="list-style-type: none"> <li>– oxygen</li> <li>– sodium hypochlorite</li> <li>– hydrogen peroxide</li> </ul>	May react violently or cause an explosion or fire when it comes into contact with combustible materials. May also burn eyes and skin upon contact.
<b>Class D, Division 1</b> Poisonous & Infectious Material: <b>Causing Immediate &amp; Serious Toxic Effects</b>		<ul style="list-style-type: none"> <li>– carbon monoxide</li> <li>– phosphoric acid</li> </ul>	May be fatal or cause permanent damage if it is inhaled or swallowed or if it enters the body through skin contact.
<b>Class D, Division 2</b> Poisonous & Infectious Material: <b>Causing Other Toxic Effects</b>		<ul style="list-style-type: none"> <li>– alcohol</li> <li>– asbestos</li> <li>– nitrous oxide</li> <li>– epoxy glues</li> </ul>	May cause disease or permanent damage as a result of repeated exposures over time. May be a skin or eye irritant, or a sensitizer.
<b>Class D, Division 3</b> Poisonous & Infectious Material: <b>Biohazardous Infectious Material</b>		<ul style="list-style-type: none"> <li>– blood</li> <li>– body fluids</li> </ul>	May cause an infectious disease resulting in illness or possibly death.
<b>Class E</b> Corrosive Material		<ul style="list-style-type: none"> <li>– acids</li> <li>– caustics</li> </ul>	Causes severe eye and skin irritation upon contact. Causes severe tissue damage with prolonged contact.
<b>Class F</b> Dangerously Reactive Material		<ul style="list-style-type: none"> <li>– sodium metal</li> <li>– picric acid</li> </ul>	Substance is very unstable. Can react with water to form toxic or flammable gas. Can explode as the result of shock, friction or increase in temperature.

## ARE ALL PRODUCTS COVERED BY WHMIS?

There are many products in the workplace that may be hazardous. Some are covered by other legislation and are exempt, therefore, from WHMIS requirements for labelling and MSDS's. They are not, however, exempt from the education requirements of WHMIS. Some examples are as follows:

- 1) Any product packaged as a **Consumer Product**. However, if a consumer product that has hazardous ingredients is brought into the workplace, all WHMIS requirements then apply to that product.
- 2) A cosmetic, food, or device within the meaning of the **Food and Drug Act**. These products are assigned a Drug Identification Number (DIN).
- 3) Products within the meaning of the **Pest Control Products Act**. Products covered under this act are assigned a Pest Control Product (PCP) number. Household bleach is regulated under this act.
- 4) Substances covered under other legislation such as the **Atomic Energy Control Act**, the **Transportation of Dangerous Goods Act** and the **Explosives Act**.

## WHAT ARE THE REQUIREMENTS FOR WORKPLACES THAT HAVE CONTROLLED PRODUCTS ON SITE?

The overall purpose of WHMIS is to protect workers from hazardous substances by providing information about those hazards. The three ways that WHMIS provides this information is through:

- 1) Labels
- 2) Material Safety Data Sheets (MSDS)
- 3) Worker training

The WHMIS legislation as well as Hospital Policy places responsibilities on supervisors/managers as well as employees.

Under WHMIS legislation, **supervisors/managers** are responsible for:

- 1) Maintaining an inventory of hazardous materials in all areas/units.
- 2) Ensuring that controlled products in the workplace are labelled properly.
- 3) Ensuring that MSDSs for controlled products are maintained in the area and readily accessible for workers to examine.
- 4) Ensuring that all workers who use, handle or may come into contact with hazardous materials, receive and participate in required training on an annual basis.

For WHMIS, **workers** are responsible for:

- 1) Participating in WHMIS training programs.
- 2) Following safe working procedures including the wearing of personal protective equipment as required by the employer.
- 3) Reporting to their supervisor any situations where a container of a hazardous material/controlled product does not have appropriate labels or does not have an MSDSs available.

### **WHAT INFORMATION MUST BE ON WHMIS LABELS?**

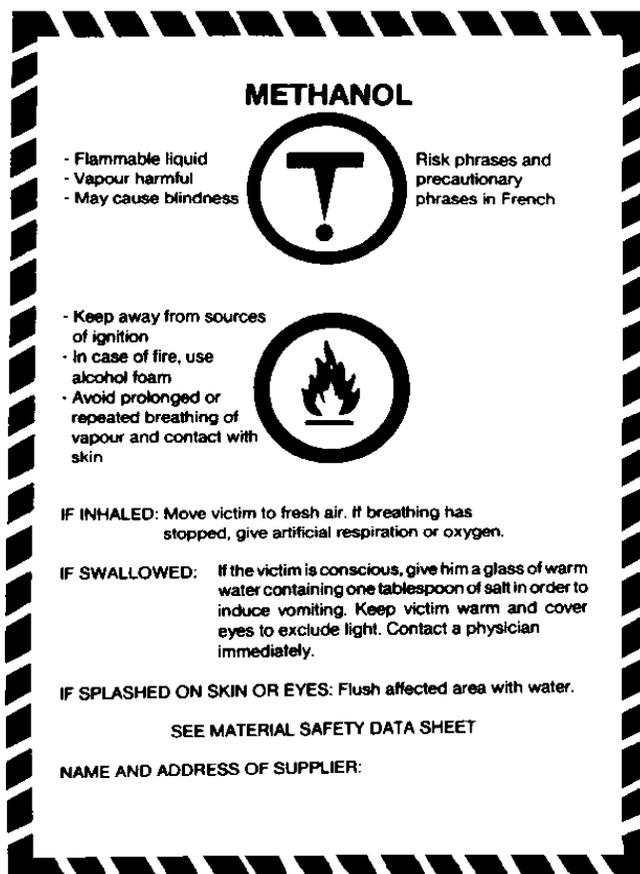
There are two main types of WHMIS labels: Supplier Labels and Workplace Labels.

#### **WHMIS Supplier Labels:**

A supplier label is affixed to containers of hazardous materials by the persons or companies that supply the products to a workplace. The content of the label is specified by legislation and is easily recognizable by its unique border. An example is shown on the following page.

Sample WHMIS

Supplier Label:



Information required on the Supplier Label is as follows:

- 1) product identifier
- 2) supplier identifier - name and address of supplier
- 3) hazard symbol(s) - one or more symbols
- 4) risk phrases - explanation of risk associated with product
- 5) precautionary measures - essential measures to be taken when using, handling and storing product
- 6) first aid measures
- 7) reference to the Material Safety Data Sheet

## **WHMIS Workplace Labels:**

WHMIS workplace labels are used in the workplace in the absence of the supplier label. They must also be used when a product is transferred from the original container into a secondary unlabelled container, or, where a supplier label has become damaged, unreadable or is missing.

Workplace labels are much simpler than supplier labels and only require the following three pieces of information:

- 1) product identifier
- 2) safe handling instructions
- 3) reference to the Material Safety Data Sheet

Shown below is a sample workplace label:



## WHAT ARE MATERIAL SAFETY DATA SHEETS?

While the WHMIS label alerts the worker with a brief profile of a hazardous material, the Material Safety Data Sheet (MSDS) provides more detailed information about the product. The MSDS contains additional data regarding the hazardous ingredients and properties of the product, the proper handling, storage and safe use of the product, as well as emergency procedures.

The actual design requirements for the MSDS are not specified by regulation and, as a result, MSDSs often look different from supplier to supplier. However, the MSDSs must contain the following nine (9) separate categories of information.

### **1) Product Information:**

- Lists the trade and chemical names and primary use of the product.
- Lists the name, address, emergency phone # of the manufacturer and supplier.

### **2) Hazardous Ingredients:**

- Lists the names of hazardous ingredients in mixtures such as alloys, paints etc.

### **3) Physical Data:**

- Provides information about the product's appearance, smell and physical properties (boiling point, vapour density, volatility etc.)

### **4) Fire or Explosion Hazard:**

- Explains the product's potential to catch fire or explode.

### **5) Reactivity Data:**

- Indicates how stable a product is and what materials it should not come into contact with.

### **6) Toxicological Properties:**

- Lists the exposure limit, and explain the effects of overexposure.

### **7) Preventative Measures:**

- Identifies protective equipment that must be used to avoid overexposure, details on required ventilation, safe handling and storage procedures, and any other necessary precautions.

## **8) First Aid Measures:**

- Lists emergency medical instructions in case of accidental exposure to the product.

## **9) Preparation Information:**

- Lists the date that the MSDS was prepared, and the name of the person or group who prepared the MSDS.

### **WHERE CAN MSDSs BE OBTAINED?**

Material Safety Data Sheets are maintained in each unit/area's MSDS Binder.

MSDSs must be readily accessible to all workers in the area at all times.

A current MSDS is required for each controlled product in the workplace. These data sheets must be updated by the supplier whenever a change is made in the product or when new information becomes available. Even if no new information is available, an MSDS must be less than three (3) years old.

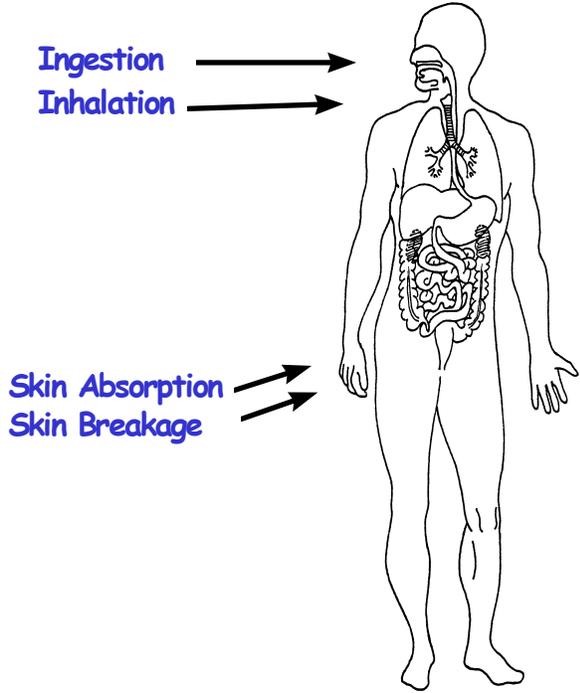
An example of a MSDS that can be found in our workplace is located at the end of the booklet.

## HOW CAN HAZARDOUS PRODUCTS BE CONTROLLED?

WHMIS is designed to provide workers with information about the hazards of products that they work with and how to protect themselves from those hazards.

There are four ways in which a substance can enter the body:

Routes of Entry:



**Ingestion**  
**Inhalation**

**Skin Absorption**  
**Skin Breakage**

Inhalation is the most common route. Dusts, fumes or vapours that are inhaled can enter the bloodstream or body tissues via the lungs.

Ingestion usually occurs when someone using a product fails to wash their hands before eating or smoking.

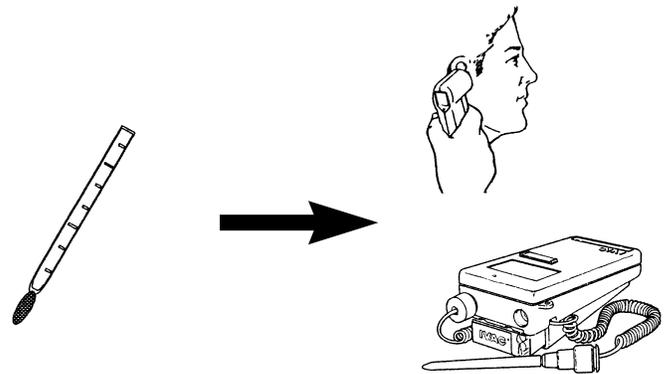
Some substances that come in contact with skin or mucous membranes are readily absorbed through the skin into the bloodstream.

Substances can also enter directly into the bloodstream either through contact with a cut or crack in the skin or by being injected into the body e.g. needle stick.

There are several ways to control exposure to hazardous substances.

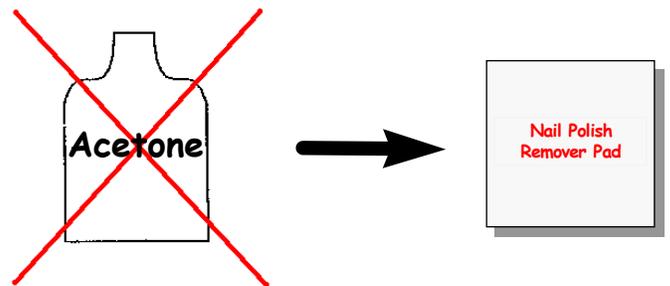
### **Elimination:**

The best way to control exposure to a hazardous substance is to completely eliminate it from the workplace. One example is replacement of mercury thermometers with electronic thermometers.



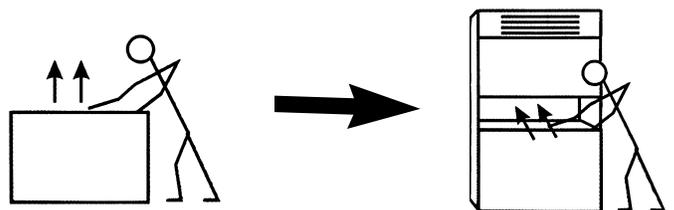
### **Substitution:**

If it is not possible to eliminate a substance, then another control is to substitute with a less hazardous product. One example is the substitution of acetone (used to remove patients nail polish) with single use nail polish remover pads.



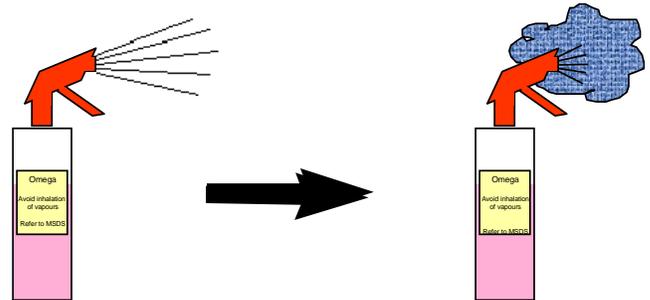
### **Ventilation:**

In some cases, use of a product may generate dusts, fumes, mists or vapours that are hazardous if released into the workplace. In such cases, local exhaust ventilation, such as a laboratory fumehood may be required to contain and remove these contaminants.



## **Safe Work Practices:**

Safe work practices can be developed and used to reduce unnecessary exposure. An example is squirting cleaning products directly onto a rag instead of spraying it in the air where the mist may be inhaled.



## **Personal Protective Equipment:**

When all other means of hazard control cannot be used, Personal Protective equipment (ppe) may be necessary.

This equipment, if used properly, provides a barrier between a hazardous substance and a worker. Wherever PPE is used, training must also be provided to ensure its proper use.

Examples of personal protective equipment includes gloves, safety glasses, safety goggles, face shields, protective clothing and respirators.



One or more of the above controls may be required so that a hazardous product can be safely used and handled by workers.



**PERCEPT RTU WIPES**

HMIS		NFPA	Personal protective equipment
Health	0	0	None / Aucune / Ninguno
Fire Hazard	0	0	
Reactivity	0	0	

Version Number: 2

Preparation date: 2009-04-28

**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product name:** PERCEPT RTU WIPES  
**MSDS #:** MS0400144  
**Product Code:** 4395900  
**Recommended use:** Disinfectant Cleaner. This product is intended to be used neat .  
**Manufacturer, importer, supplier:**  
 US Headquarters: The Butcher Company, 8310 16th St. Sturtevant, Wisconsin 53177-1964  
 Phone: 1-800-225-9475  
 MSDS Internet Address: www.thebutchercompany.com  
 Canadian Headquarters: JohnsonDiversey - Canada, Inc., 2401 Bristol Circle Oakville, Ontario L6H 6P1  
 Phone: 1-800-668-3131  
**Emergency telephone number:** 1-800-851-7145 (U.S.); 1-651-917-6133 (Int'l)

**2. HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW**

The product contains no substances which at their given concentration, are considered to be hazardous to health.

**Principle routes of exposure:** Eye contact. Skin contact. Inhalation. Ingestion.  
**Eye contact:** None known.  
**Skin contact:** None known.  
**Inhalation:** None known.  
**Ingestion:** None known.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**Hazardous components:** None

**4. FIRST AID MEASURES**

**Eye contact:** Rinse with plenty of water.  
**Skin contact:** Rinse with plenty of water.  
**Inhalation:** No specific first aid measures are required.  
**Ingestion:** No specific first aid measures are required.  
**Aggravated Medical Conditions:** None known.

**5. FIRE-FIGHTING MEASURES**

**Suitable extinguishing media:** The product is not flammable. Extinguish fire using agent suitable for surrounding fire.  
**Specific hazards:** None known.  
**Unusual hazards:** None known.  
**Specific methods:** None known.  
**Autoignition temperature:** No information available.

**Special protective equipment for firefighters:** As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.  
**Extinguishing media which must not be used for safety reasons:** None.

**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions:** Not relevant for the product itself.  
**Environmental precautions and clean-up methods:** Clean-up methods - large spillage. Sweep up and shovel into suitable containers for disposal. Use a water rinse for final clean-up.

## 7. HANDLING AND STORAGE

### Handling:

Handle in accordance with good industrial hygiene and safety practice. FOR COMMERCIAL AND INDUSTRIAL USE ONLY.

### Storage:

Protect from freezing. Keep tightly closed in a dry, cool and well-ventilated place. KEEP OUT OF REACH OF CHILDREN.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Engineering measures to reduce exposure:

No special ventilation requirements.

### Personal Protective Equipment

#### Eye protection:

No special requirements under normal use conditions.

#### Hand protection:

No special requirements under normal use conditions.

#### Skin and body protection:

No special requirements under normal use conditions.

#### Respiratory protection:

No special requirements under normal use conditions.

#### Hygiene measures:

Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State:</b>	Wipes	<b>Bulk density:</b>	No information available
<b>pH:</b>	1.75	<b>Dilution pH:</b>	No information available.
<b>Appearance:</b>	Moistened Tow elette	<b>Vapor density:</b>	No information available
<b>Color:</b>	White	<b>Evaporation Rate</b>	No information available
<b>Odor:</b>	No Odor/Odorless	<b>Boiling point/range:</b>	Not determined
<b>Specific gravity:</b>	1.01	<b>Melting point/range:</b>	Not determined
<b>Density:</b>	8.42 lbs/gal 1.01 Kg/L	<b>Decomposition temperature:</b>	Not determined
<b>VOC:</b>	0% *	<b>Autoignition temperature:</b>	No information available
<b>Flash point:</b>	>200°F >93.4°C	<b>Partition coefficient (n-octanol/water):</b>	No information available
<b>Solubility:</b>	Completely Soluble	<b>Solubility in other solvents:</b>	No information available
<b>Viscosity:</b>	No information available	<b>Elemental Phosphorus:</b>	0.41% by wt.

\* - Title 17, California Code of Regulations, Division 3, Chapter 1, Subchapter 8.5, Article 2, Consumer Products, Sections 94508

## 10. STABILITY AND REACTIVITY

<b>Stability:</b>	The product is stable
<b>Polymerization:</b>	Hazardous polymerization does not occur
<b>Hazardous decomposition products:</b>	None reasonably foreseeable.
<b>Materials to avoid:</b>	Strong bases. Reducing agents. Do not mix with chlorinated products.

## 11. TOXICOLOGICAL INFORMATION

<b>Acute toxicity:</b>	Oral LD50 estimated to be greater than 5000 mg/kg. Dermal LD50 estimated to be > 2000 mg/kg.
<b>Component Information:</b>	See Section 3
<b>Chronic toxicity:</b>	None known
<b>Specific effects</b>	
<b>Carcinogenic effects:</b>	None known
<b>Mutagenic effects:</b>	None known
<b>Reproductive toxicity:</b>	None known
<b>Target organ effects:</b>	None known

## 12. ECOLOGICAL INFORMATION

<b>Environmental Information:</b>	No data available
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## 13. DISPOSAL CONSIDERATIONS

### Waste from residues / unused products:

Dispose of in compliance with all Federal, state, provincial, and local laws and regulations..

## 14. TRANSPORT INFORMATION

DOT/TDG: Not classified as dangerous goods.

## 15. REGULATORY INFORMATION

### International Inventories

All components of this product are listed on the following inventories: U.S.A. (TSCA), Canada (DSL/NDL).

### Canada

**WHMIS hazard class:** Non-controlled.

**DIN No. :** 02239775

## 16. OTHER INFORMATION

<b>Reason for revision:</b>	Not applicable
<b>Prepared by:</b>	NAPRAC
<b>Additional advice:</b>	None

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