

WHMIS Handbook



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WHMIS



What is it?

- Workplace Hazardous Materials Information System
- A system of information delivery




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You have to do something to protect yourself, too.

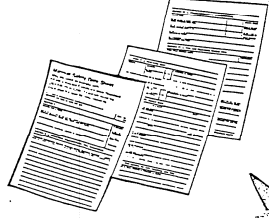


INFORMATION
is the heart of
WHMIS

1. Container Labels



2. Material Safety Data Sheets (MSDS)



Let's learn about how they can help you stay safe and healthy.

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3 Components of WHMIS:

- Labels for hazardous materials which alert employers and workers
- MSDS (material safety data sheets) which provide detailed hazard and precautionary information
- Worker Education which provides information on hazards and training in work procedures



WHMIS

- A nationwide system to provide information on hazardous materials
- WHMIS was created to keep employees healthy
- Business and industry must comply



Capital Health WHMIS Policy

- **Capital Health has a WHMIS policy**
- **Capital Health policy includes ALL hazardous materials; not just those covered under WHMIS legislation, but also covered under the Pest Control Products Act, the Food and Drug Act, and the Consumer Products Regulations**
- **In this way, employees have access to ALL hazardous materials that they handle in the workplace**



WHMIS Classes and Symbols

- There are **six classes** with one class divided into three divisions.
- Therefore, there are **eight** corresponding WHMIS **symbols**



Class A - Compressed Gas

Risk

- danger of explosion

Precautions

- do not drop
- avoid heat
- store in the designated area



Class B - Combustible/Flammable

Risk

- potential fire hazard



Precautions

- avoid even low heat
- do not smoke
- store in cool, fireproof area approved by supervisor



Class C - Oxidizing Material

Risk

- explosion or fire

Precautions

- keep away from combustible materials such as wood and fuels
- keep away from sources of ignition
- wear protective equipment & clothing, including eye, face and hand protection



Class D1 - Immediate and Serious Toxic Effects

Risk

- may cause death or permanent damage if it enters the body in any way
- may burn eyes or skin

Precautions

- extreme caution
- wear protective equipment & clothing including eye, face, hand and breathing protection
- use in well-ventilated areas only
- wash and shower thoroughly after use
- store in designated area only



Class D2 - Material Causing Other Toxic Effects

Risk

- may cause death or permanent damage with multiple exposures over time
- skin or eye irritation
- chemical allergy
- cancer
- birth defects or sterility

Precautions

- wear protective equipment and clothing including eye, face, hand and breathing protection
- use in well-ventilated areas only
- store in designated area only



Class D3 - Biohazardous Infectious Material

Risk

- may cause a serious disease leading to illness or death

Precautions

- extreme caution
- use proper protective equipment
- use in designated areas only with proper engineering controls



Class E - Corrosive Material

Risk

- severe skin and eye irritation upon contact
- serious tissue damage with prolonged contact
- harmful if inhaled

Precautions

- keep container tightly closed
- wear proper protective clothing including eye, face, hand and breathing equipment
- use in well-ventilated areas only



Class F - Dangerously Reactive

Risk

- very unstable
- may react with water to release toxic or flammable gas
- container may explode if heated or dropped

Precautions

- keep away from heat
- open carefully, do not drop
- store in cool, flameproof area approved by supervisor



Material Safety Data Sheets

(MSDS)



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Material Safety Data Sheet (MSDS)

An MSDS is a Technical Data Sheet providing information on:

- health effects of overexposure
- health evaluation related to product handling, storage and use
- measures to protect workers at risk of overexposure
- emergency procedures



MSDS

An MSDS acts as:

- a reference for health information at the work site
- a method to keep health information up-to-date



MSDS

- The MSDS does **NOT** give all information needed for safe use of a product. Conditions of use change from one location to another, and each work area should develop safe work procedures based on information from the MSDS and the work site.



An MSDS must have the following 9 sections:

1. Product Information
2. Hazardous Ingredients
3. Physical Data
4. Fire & Explosion Hazard
5. Reactivity Data
6. Toxicological Properties
7. Preventive Measures
8. First Aid Measures
9. Preparation Information



Product Information

The intention of this section is to provide product and manufacturer / supplier identification and a description of product use. It is of particular use in organizing data sheets for quick retrieval and in emergency circumstances for contact with the manufacturer and supplier.



Product Information

- Product Identifier – the identification of the product by generic name, trade name, brand name, common name, chemical name, code name or code number specified by the supplier. The name of the product on the MSDS must match the name on the label.
- Product Use – the way the product is being used should match the manufacturer's intended use, so that safety information will be correct.



Product Information

- Manufacturer's and Supplier's Information – the name, street address, city, province, postal code and emergency telephone number must appear for both manufacturer and supplier, if any of the information changes, a new MSDS should be issued.
- Product Identification Number (PIN) – a 4-digit reference number to help locate additional hazard information.



Hazardous Ingredients

This section provides information on the identity, concentration and estimators of acute toxicity for ingredients in a controlled product.



Physical Data

This section provides a physical description of the product which is useful for product recognition, understanding its response to changes in the physical environment, and has specific applications for ventilation system design and emergency procedures.



Fire or Explosion Hazard

The intent of Section 4 is to provide information to assist with fire and explosion prevention, and procedures in the event of an emergency. This section is particularly important with flammables, solvents, organic peroxides, explosives, metal dusts and other unstable substances. If the product is not flammable or explosive, information in this section must reflect that fact.



Reactivity Data

This section provides information on the stability of the product and its likelihood of dangerous reaction with other chemicals. Information here has implications for handling procedures, storage arrangements and may be useful along with Section 4 for the prevention and control of fires and explosions.



Toxicological Properties

This section provides information on how a material is likely to enter the body and what short- and long-term health effects it is likely to have on an exposed worker, including signs and symptoms of exposure and pre-existing medical conditions which may be aggravated.



Preventive Measures

The intent of this section is to provide a clear direction for the provision of measures to protect worker health and safety during the transportation, storage, use and disposal of the product, as well as emergency procedures related to accidental release.



First Aid Measures

Provides information necessary for the safe evacuation and immediate treatment of a person experiencing acute effects of overexposure to the controlled product. Information is meant for use by workers on site, including first aid personnel, and will normally expand on and must always be consistent with first aid measures on the label.



Preparation Information

Information in this section is designed to help ensure compliance with current Material Safety Data Sheets, in that they be no older than three years.



LABELS

Supplier and Workplace



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Supplier Label

- The supplier label must be included on all WHMIS controlled products before entering Capital Health facilities.
- The label acts to alert you to health dangers of the products, and
- indicate that an MSDS with additional information is available.



Supplier Label

- Has a hash mark border
- Seven pieces of information if the bottle size is 100 ml or more
- Four pieces of information if the bottle size is less than 100 ml
- If the supplier has been granted Trade Secret Rights, they can withhold the product name (and use a generic name) and the Supplier information.



Supplier Label

Sample supplier label

JET BLACK SPRAY PAINT
PEINTURE À VAPORISER "JET BLACK"

RISK PHRASES

- Spray may catch fire if directed at open flame
- Gives off flammable vapours when drying
- Respiratory and eye irritant
- Danger of cumulative effects

PRECAUTIONARY MEASURES

- Keep in a cool place
- Do not store with oxidizers
- Do not spray near ignition source
- Wear safety glasses for normal use
- Wear gloves if skin contact may occur
- If used in poorly ventilated area, wear respirator

FIRST AID MEASURES

- If gets in eyes, flush with water for 15 minutes and call doctor immediately
- If gets on skin, wash with soap and water
- If breathing difficulties develop, remove from exposure and call physician immediately

INDICATION DES RISQUES

- Les vapeurs peuvent s'enflammer si dirigées vers une flamme ouverte
- Dégage des vapeurs inflammables en séchant
- Irritant pour les yeux et les poumons
- Risque d'entraîner des effets cumulatifs

MESURES DE PREVENTION

- Tenir au frais
- Ne pas conserver en présence d'agents oxydants
- Ne pas vaporiser près d'une source d'ignition
- Porter un appareil de protection pour les yeux
- Porter des gants
- En cas d'utilisation dans une zone à ventilation insuffisante, utiliser un appareil respiratoire approprié

MESURES DE SECOURS D'URGENCE

- En cas de contact avec les yeux, rincer avec de l'eau pendant 15 minutes et appeler un médecin immédiatement
- En cas de contact avec la peau, laver avec de l'eau et du savon
- S'il y a apparition de problème respiratoires, retirer de la zone d'exposition et appeler un médecin immédiatement

Refer to material safety data sheet for further information
Pour plus d'information, consulter la fiche signalétique

CORPUS INFORMATION SERVICE
1450 Don Mills Rd., Don Mills, Ont. M3C 3X7
416/445-6841

Risk phrases: Phrases that explain the nature of the hazard and the risks involved in misusing the product, beyond the risks conveyed by the symbols

Product identifier: Identification of the material by chemical name, common name, generic name, trade name, brand name, code name or code number

Hazard symbol or symbols: Symbols that correspond to the classes and, where applicable, divisions under which the controlled product falls; the symbols immediately alert label readers to the product hazards

Reference to the MSDS: A statement to the effect that an MSDS is available, reminding label readers of the more comprehensive source of information

First aid measures: Phrases explaining the measures to be taken in case of an acute exposure

Precautionary measures: The essential measures to be taken when using, handling or working in the presence of a controlled product

The label shown above is a sample label only

THE WHMIS HANDBOOK



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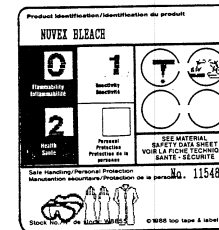
Workplace Labels

- **A workplace label is added to the container if:**
- **A controlled product is produced in the workplace**
- **a controlled product is transferred from an original container to an unlabelled container**
- **the supplier label cannot be read or is accidentally removed**
- **All workers must know and understand label symbols on both supplier and workplace labels, and must tell WHMIS trainers when labels need to be replaced.**



Workplace Labels

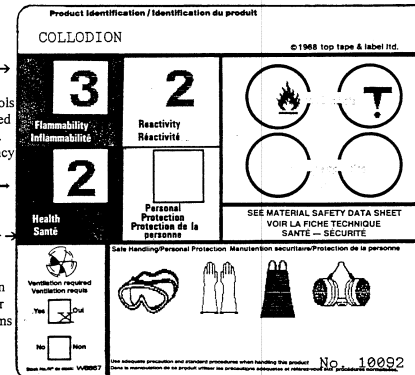
Workplace Labels



Product Identifier →

National Fire Protection Association (NFPA) Color and Number symbols refer to the hazards created by short term exposure ... in fire or related emergency conditions. Numbers range from 0-4 → Minimal to severe risk.

Personal Protection letter → refers to the W.I.S.H. Pocket Card Risk Chart; F= gloves, goggles, apron and dust/vapor respirator as identified by pictograms



← WHMIS Symbols - 8 different symbols Describing compressed gas, flammable, oxidizing, poisonous, toxic, biohazardous, corrosive and reactive materials.

← Equipment required for Safe handling of the Product.

Number refers to MSDS file # Assigned by WHMIS Clerk Specific to this product.



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Personal Protective Equipment

- Offers worker protection from workplace hazards:
- head (eyes and ears)
- body (arms, hands, feet)
- respiratory system



Personal Protective Equipment

PPE does not eliminate the hazard.

If it fails, exposure will occur.

It is only effective if:

- the equipment is properly selected for the situation
- employees are trained in its use
- the equipment is maintained
- the equipment is used by employees



PERSONAL PROTECTIVE EQUIPMENT

See W.I.S.H. Pocket Chart.



Face Shield



Apron



Boots



Gloves



Lab Coat



Full Facepiece
Dust & Vapour
Respirator



Dust Respirator



Dust & Vapour
Respirator



Goggles



Full Face Air-
Line Respirator



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EMERGENCIES

Chemical Spill Response

Chemical spills are considered emergencies under the Hospital Disaster Plan.

Includes spills involving mercury, biohazardous materials, small and large quantities of chemicals and radioactive materials.

When a spill is discovered, you should call the **EMERGENCY** number 473- **3333**.

Chemical spills are identified as **CODE BROWN**.



Reporting Spills


Also call **473-SAFE (7233)** at the earliest opportunity. If necessary, the Accident Prevention Officer will investigate the incident. The information will be entered into the Safety database and statistical analyses assist the development of better and safer preventive measures.



Handy Reference Guide



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Queen Elizabeth II
Health Sciences Centre


WHMIS


Workplace Hazardous Materials Information System


WHMIS Classes and Symbols


<p>Class A Compressed Gas</p> 	<p>Class D - 1 Materials Causing Immediate and Serious Toxic Effect</p> 	<p>Class E Corrosive Material</p> 
<p>Class B Flammable and Combustible Material</p> 	<p>Class D - 2 Materials Causing Other Toxic Effect</p> 	<p>Class F Dangerously Reactive Material</p> 
<p>Class C Oxidizing Material</p> 	<p>Class D - 3 Biohazardous Infectious Material</p> 	


Personal Protective Equipment



Gloves



Goggles



Apron



Dust Respirator



Face Shield


Dust & Vapour Respirator


Full Suit


Full Facepiece Dust & Vapour Respirator





Boots


Full Face Air Line Respirator

Workplace Label



Product Identification/Identification du produit
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ETHYL ALCOHOL (ANHYDROUS)

4 <small>Flammability Inflammabilité</small>	0 <small>Reactivity Réactivité</small>	 Symbols  Caution symbols	
2 <small>Hazard Dang.</small>	B <small>Personal Protection Protection de la personne</small>	SEE MATERIAL SAFETY DATA SHEET VOIR LA FICHE TECHNIQUE SÉCURITÉ-ÉCARTER	
<small>Wear Safety Glasses / Portez des lunettes de protection</small> 			

Supplier Label

<p style="text-align: center;">Ethanol</p> <p style="font-size: x-small;">Supplier Commercial Alcohol Inc. 1-800-387-3773</p> <p style="font-size: x-small;">FLAMMABLE TOXIC</p> <p style="font-size: x-small;">FIRST AID</p> <p style="font-size: x-small;">SPILL</p> <p style="font-size: x-small;">IN CASE OF A LARGE SPILL</p>	<p style="text-align: center;">Ethanol</p> <p style="font-size: x-small;">Supplier Commercial Alcohol Inc. 1-800-387-3773</p> <p style="font-size: x-small;">FLAMMABLE TOXIC</p> <p style="font-size: x-small;">FIRST AID</p> <p style="font-size: x-small;">SPILL</p> <p style="font-size: x-small;">IN CASE OF A LARGE SPILL</p>
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NEVER TO MIX WITH OTHERS - 10270

Risk Index

- ⊕ Severe Risk
- ⊙ Serious Risk
- ⊖ Moderate Risk
- ⊙ Slight Risk
- ⊙ Minimal Risk

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WHMIS Training Checklist

- I have viewed the WHMIS Orientation Program Yes No
- I know the location of the WHMIS Binder Yes No
- I know the WHMIS labeling system (What & How) Yes No
- I have reviewed all products listed in the MSDS Binder Yes No
- I know the procedure for acquiring MSDS and Workplace Labels Yes No
- I know the procedure for Reporting Problems or Concerns re: WHMIS Yes No



Name: _____ Date: _____

The WHMIS Quiz

Print the following pages, take the quiz
and return to your WHMIS instructor
for your certificate.



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Name the Symbol:



















WHMIS Quiz (please circle correct answer)

What does WHMIS stand for?

- A) Work Hazards and Methods in Safety
- B) Workers Handling Materials in Safety
- C) Workers Handling of Materials in a System
- D) Workplace Hazardous Materials Information System

Which of the following is NOT part of WHMIS?

- A) Worker education program
- B) Labeling of hazardous materials
- C) Material Safety Data Sheets
- D) Handling of explosives

Why is WHMIS an Important Piece of Legislation?

- A) Creates employment
- B) Regulates inventories
- C) Standardized work procedures
- D) Alerts people to hazards of materials used in the workplace

What distinguishes a WHMIS label from other labels?

- A) Its unusual odour
- B) Its special shape
- C) Its unique pale yellow colour
- D) Its distinctive broken slash (hash mark) border

Unless new information becomes available, a material safety data sheet is valid for:

- A) 1 year
- B) 2 years
- C) 3 years
- D) 5 years

Information provided on the material safety data sheet must include details about:

- A) safe work procedures
- B) choice of personal protective equipment
- C) procedures to be followed in case of emergency
- D) all of the above

Training must enable workers to understand procedures for:

- A) purchasing labels for hazardous materials
- B) ordering hazardous materials from supplier
- C) proper filing of the Material Safety Data Sheet
- D) safe handling, use, storage and disposal of a hazardous product



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