



PRESENTS

WHMIS

***AND THE SAFE HANDLING OF
HAZARDOUS MATERIALS***

WHMIS

What is WHMIS?

WHMIS is a Canada-wide system designed to give employers and workers information about hazardous materials used in the workplace.

There are three ways in which information on hazardous materials is to be provided:

- 1. Labels on the containers of hazardous materials;**
- 2. Materials Safety Data Sheets (MSDS) to supplement the label with detailed hazard and precautionary information; and**
- 3. Worker education programs**

Who Supplies the Information ?

- **The supplier of the hazardous material provides the labels and material safety data sheets to the employer. The employer passes the information on to the worker and provides education programs.**

What does WHMIS stand for?

- **Workplace Hazardous
Materials Information
System**

Why is WHMIS important?

- The purpose of WHMIS is to give all working Canadians a uniform and appropriate quantity and quality of information about hazardous materials used in the workplace.

To what workplaces does WHMIS apply?

- In Ontario, WHMIS applies to all workplaces covered by the Occupational Health & Safety Act

What enforces the WHMIS legislation?

- In Ontario, WHMIS legislation is enforced by provincial Ministry of Labour inspectors

What do I need to do in my workplace to comply with WHMIS legislation?

- Labelling

1. Ensure that materials that you receive at your location are properly labelled.
2. Apply workplace labels to all products that are transferred from a supplier container to another container.

LABELLING

- WHMIS legislation requires that a workplace label be applied to all controlled products used on site. This includes :
 - samples that will NOT be used within one shift and/or that will be used by more than one person.
 - on or near piping or tanks.

Workplace labels must contain:

- (a) Product Identifier
- (b) Precautionary Measures
- (c) Reference to Material Safety Data Sheet (MSDS) for more information

Material Safety Data Sheets (MSDS)

1. Obtain current (within 3 years) Material Safety Data Sheets for each product used at your location. Refer to the WHIMIS Regulation, Ontario Regulation 644/88 or WHMIS: A Guide to Legislation for detailed requirements of a Material Safety Data Sheet.

- **Material Safety Data Sheet
Content Design
Completion**

Product Identification and Use

- Product name, identification number and use as well as information on how to contact the supplier or manufacturer.

Hazardous Ingredients

- The identity of the ingredients, their concentrations and estimates of immediate and severe health effects (acute toxicity).

Physical Data

- Physical description of the product

Fire and Explosion Data

- Information on the ability of the product to catch fire or explode, and means of fire fighting.

Reactivity Data

- The ability of the product to react dangerously.

Toxicological Properties (Health Effects)

- Information on how materials enter the body and what the short and long term health effects are.

Preventive Measures

- Information on control measures including ventilation, personal protective equipment (gloves, respirators, etc.) and safe work procedures

First Aid Measures

- Information on immediate treatment in case of illness or injury.

Preparation Information

- Information on who prepared the MSDS and when. MSDS must be reviewed and updated every 3 years, or more often if there are changes to any of the information.

MSDS Availability

- All data sheets must be made available in the workplace for use by workers
- The data sheets must be easily accessible during each shift, in a place where a worker can access the information.
- MSDS information must be readily available for the fire department or external agencies involved in emergency responses





CLASS A COMPRESSED GAS

This class includes compressed gases, dissolved gases and gases liquefied by compression or refrigeration. Example: gas cylinders for oxyacetylene welding or water disinfection.



CLASS B FLAMMABLE AND COMBUSTIBLE MATERIAL

- Solids, liquids and gases capable of catching fire or exploding in the presence of a source of ignition.
Example: white phosphorus, acetone and butane. Flammable liquids such as acetone are more easily ignited than combustible liquids such as kerosene.



CLASS C OXIDIZING MATERIALS

- Materials that provide oxygen or similar substance and which increase the risk of fire if they come in contact with flammable or combustible materials. Examples: sodium hypochlorite, perchloric acid, inorganic peroxides.

- **CLASS D
POISONOUS AND
INFECTIOUS MATERIALS**
(3 Divisions)

Division 1 Materials causing immediate and serious toxic effects



- This division covers materials that can cause the death of a person exposed to small amounts. Examples: sodium cyanide, hydrogen sulphide.



Division 2 Materials causing other toxic effects

- This division covers materials that cause immediate skin or eye irritation as well as those which can cause long-term effects in a person repeatedly exposed to small amounts. Example: acetone (irritant), asbestos (cancer causing), toluene diisocyanate (sensitizing agent).



Division 3 Biohazardous infectious material

- This division applies to materials that contain harmful microorganisms.
Example: cultures or diagnostic specimens containing salmonella bacteria or the hepatitis B virus.



CLASS E CORROSIVE MATERIALS

- Acid or caustic materials that can destroy the skin or eat through metals. Examples: Hydrochloric acid (also known as Muriatic acid), lye.



CLASS F DANGEROUSLY REACTIVE MATERIALS

- Products that can undergo dangerous reaction if subjected to heat, pressure, shock, or allowed to contact water.
Examples: plastic monomers such as butadiene and some cyanides.

Training

Provide “generic” WHMIS training to all workers who are “exposed or likely to be exposed” to a controlled product (Refer to the WHMIS Regulation, Ontario Regulation 644/88 or WHMIS: A Guide to Legislation for definition of controlled product).

Training

- Provide workplace specific WHMIS training

Training

Review workplace specific WHMIS training at least annually or more often if conditions at the workplace change; or new information on a controlled product becomes available.

Training

- WHMIS review to take place in consultation with the JHSC.

SAFETY GUIDELINES FOR **MATERIALS HANDLING**

- A. No material is to be taken internally.
- B. Hands must be washed before eating or smoking.
- C. Food must be stored or eaten only in designated areas.
- D. Containers must be kept closed when not in use.
- E. Spilled material must be cleaned up immediately.
- F. All unnecessary personal contact with materials must be avoided.
- G. All employees should be alert for any unusual dusty condition, such as those encountered during cleanup of a dusty area. Under these conditions a respirator should be worn to ensure protection.

SAFETY GUIDELINES FOR MATERIALS HANDLING (cont.)

- H. During normal operations, only the personal protective equipment supplied is expected to be subject to contamination with a hazardous material. This equipment must be decontaminated after use. If a Technician's personal clothing is inadvertently contaminated with a hazardous material, it must also be decontaminated as quickly as possible, laundered before reuse, and in the case of an extremely toxic material, discarded.

SAFETY GUIDELINES FOR MATERIALS HANDLING (cont.)

- I. All personal protective equipment must be cleaned and stored according to stated procedures.
- J. All personnel handling hazardous materials must be knowledgeable of any hazard posed by the use of such hazardous materials. They must also be provided with written instructions or procedures, appropriate engineering controls and/or protective equipment where required.

SAFETY GUIDELINES FOR MATERIALS HANDLING (cont.)

K. All personnel must be familiar with the first aid and emergency response procedures for those hazardous chemicals that they normally handle.

QUIZ

1. Which word correctly completes the phrase: Workplace Hazardous Materials _____ System?

- Inventory
- Information
- In-house

2. Where can you get further information regarding the hazardous material?

- Transport of Dangerous Goods papers
- Ask your Safety Office
- Material Safety Data Sheet

3. The purpose of WHMIS is to:

- protect the health and safety of Canadian workers
- assist Canada Customs to control entry of products
- punish employers for hazardous work practices

4. WHMIS Regulations apply mainly to the:

- trucks and trains transporting hazardous materials
- stores where hazardous materials are sold to the public
- workplace where hazardous materials are used

5. The purpose of a WHMIS label is to:
- tell consumers how many items are in the box
 - alert workers to a product's potential hazards
 - help Revenue Canada track the employer's profits
6. The MSDS for a hazardous material must be:
- readily available to anyone using the hazardous material
 - supplied by the purchaser of the hazardous material
 - routinely updated every year.

7. The MSDS does NOT need to include:
- information about first aid and fire fighting procedures
 - the name of the shipping company or deliverer
 - the name of the supplier or manufacturer

8. Who should be trained in WHMIS?
- Workers only
 - Suppliers and workers
 - Anyone who handles, uses, disposes or works near controlled products

9. WHMIS Supplier labels are easy to recognize because:

- they have a "hash mark" border
- they are always round
- they are always orange

10. MSDS must be updated every:

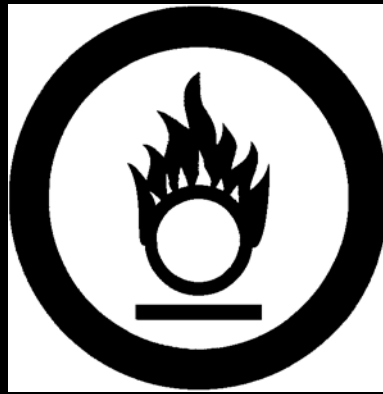
- 6 months
- year
- 3 years

11. The main responsibility for classifying products is up to the:

- Ministry of Consumer and Corporate Affairs
- supplier
- worker

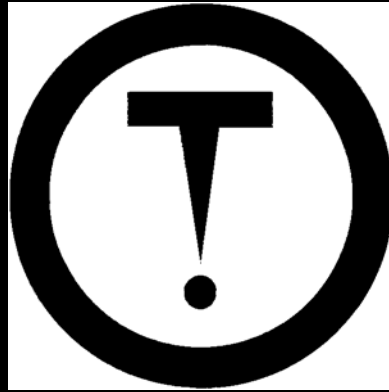
12. Workplace labels on containers for on-site use:

- must include a list of hazardous ingredients
- must include a product identifier
- are unnecessary, if the container is WHMIS approved



14. This WHMIS hazard symbol corresponds to the following class:

- Flammable or Combustible Material
- Oxidizing Material
- Biohazardous Infectious Material



15. This symbol corresponds to:

- Dangerously Reactive Material
- Flammable and Combustible Material
- Materials Causing Other Toxic Effects



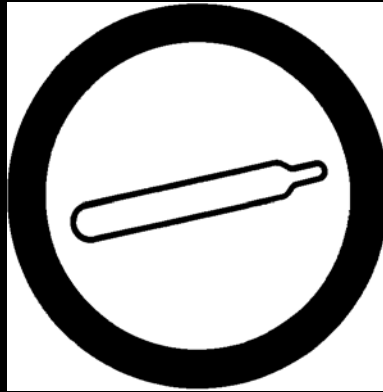
16. This hazard symbol corresponds to:

- Biohazardous Infectious Material
- Oxidizing Material
- Corrosive Material



17. This hazard symbol corresponds to:

- Flammable and Combustible Material
- Materials Causing Immediate & Serious Toxic Effects
- Materials Causing Other Toxic Effects



18. This hazard symbol corresponds to:

- Oxidizing Material
- Compressed Gases
- Flammable and Combustible Material



19. This hazard symbol corresponds to:

- Biohazardous Infectious Material
- Materials Causing Other Toxic Effects
- Corrosive Material



20. This hazard symbol corresponds to:

- Biohazardous Infectious Material
- Materials Causing Immediate & Serious Toxic Effects
- Flammable and Combustible Material