

# WHMIS



**PRE EMPLOYMENT TRAINING FOR:**



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**B L U E C O L L A R G R O U P**

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# WHAT DOES IT STAND FOR?

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**W**ORKPLACE > Deals only with products used in the workplace.

**H**AZARDOUS **M**ATERIALS > Dangerous products that may cause fires, explosions, or health problems.

**I**NFORMATION **S**YSTEMS > Employers provide workers with information about hazardous materials.



# LEARNING OBJECTIVES

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- Explain and comply with WHMIS regulatory requirements
- Explain the importance and requirement of WHMIS education and training
- Explain the classification system and use it to identify hazards
- List the different types of labels and describe the main components of each
- Use labels to identify hazards and follow safe work procedures
- Describe the main components of a Safety Data Sheet (SDS) and use it to obtain information and develop safe work procedures
- Identify the key elements of a WHMIS program and implement the program



# WHO NEEDS WHMIS TRAINING?

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- Workers who work with controlled products
- Workers who work in the proximity to controlled products including:
  - Management
  - Supervisors
  - First Aid/ Emergency Personnel



# BACKGROUND

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- National system implemented at the federal level in the federal legislation - the amended [\*Hazardous Products Act\*](#) and the new [\*Hazardous Products Regulation\*](#) (HPR) 2015.
- Recognizing the interests of all concerned:
  - Government (regulators)
  - Industry (suppliers)
  - Employers
  - Labour (workers)
- The three key elements:
  - Worker education and training
  - Labels
  - SDS



# WORKER EDUCATION

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An employer must ensure that general WHMIS education is provided to each worker on:

- Major hazards of controlled products in use at the workplace
- Rights and responsibilities
- Content required on labels and SDS, and the significance of this information
- Elements of the WHMIS program



# WORKER TRAINING

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An employer must ensure instruction in:

- Specific procedures:
  - For the safe use, storage, handling and disposal of a controlled product
  - To follow in case of an escape of a controlled product
  - To follow in an emergency involving a controlled product
- Safe use, storage, handling and disposal of a controlled product in transit



# WHMIS

## HAZARD SYMBOLS

	<b>Exploding bomb</b> (for explosion or reactivity hazards)		<b>Flame</b> (for fire hazards)		<b>Flame over circle</b> (for oxidizing hazards)
	<b>Gas cylinder</b> (for gases under pressure)		<b>Corrosion</b> (for corrosive damage to metals, as well as skin, eyes)		<b>Skull and Crossbones</b> (can cause death or toxicity with short exposure to small amounts)
	<b>Health hazard</b> (may cause or suspected of causing serious health effects)		<b>Exclamation mark</b> (may cause less serious health effects or damage the ozone layer*)		<b>Environment*</b> (may cause damage to the aquatic environment)
	<b>Biohazardous Infectious Materials</b> (for organisms or toxins that can cause diseases in people or animals)				

\* The GHS system also defines an Environmental hazards group. This group (and its classes) was not adopted in WHMIS 2015. However, you may see the environmental classes listed on labels and Safety Data Sheets (SDSs). Including information about environmental hazards is allowed by WHMIS 2015.





# COMPRESSED GAS

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Product under pressure

- **Gases under pressure**  
(Compressed gas, Liquefied gas, Refrigerated liquefied gas, and Dissolved gas)
- Butane, propane, acetylene and fire extinguishers



# FIRE HAZARDS



Substance capable of catching fire

- **Flammable gases** (Category 1)
- **Flammable aerosols** (Category 1 and 2)
- **Flammable liquids** (Category 1, 2 and 3)
- **Flammable solids** (Category 1 and 2)
- **Pyrophoric liquids** (Category 1)
- **Pyrophoric solids** (Category 1)
- **Pyrophoric gases** (Category 1)
- **Self-heating substances and mixtures** (Category 1 and 2)
- **Substances and mixtures which, in contact with water, emit flammable gases** (Category 1, 2 and 3)
- **Self-reactive substances and mixtures** (Types B\*, C, D, E and F)
- **Organic peroxides** (Types B\*, C, D, E and F)



# OXIDIZING HAZARDS

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Products causing/contributing to the combustion of other materials.

- **Oxidizing gases** (Category 1)
- **Oxidizing liquids** (Category 1, 2 and 3)
- **Oxidizing solids** (Category 1, 2 and 3)



# ACUTE TOXICITY

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Materials causing immediate and serious toxic effect

- **Oral** (Category 1, 2 and 3)
- **Dermal** (Category 1, 2 and 3)
- **Inhalation** (Category 1, 2 and 3)



# BIOHAZARDOUS INFECTIOUS MATERIALS

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Harmful micro-organisms

- **Biohazardous Infectious Materials** (Category 1)



# CORROSION

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Materials such as caustics or acids causing burns to skin or eyes

- **Corrosive to metals**  
(Category 1)
- **Skin corrosion/irritation - Skin corrosion** (Category 1, 1A, 1B and 1C)
- **Serious eye damage/eye irritation** (Category 1)



# **ACUTE TOXICITY**



- **Acute toxicity - Oral, Dermal, Inhalation** (Category 4)
- **Skin corrosion/irritation - Skin irritation** (Category 2)
- **Serious eye damage/eye irritation - Eye irritation** (Category 2 and 2A)
- **Respiratory or skin sensitization - Skin sensitizer** (Category 1, 1A and 1B)
- **Specific target organ toxicity - Single exposure** (Category 3)



# HEALTH HAZARD

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- **Respiratory or skin sensitization - Respiratory sensitizer** (Category 1, 1A and 1B)
- **Germ cell mutagenicity** (Category 1, 1A, 1B and 2)
- **Carcinogenicity** (Category 1, 1A, 1B, and 2)
- **Reproductive toxicity** (Category 1, 1A, 1B and 2)
- **Specific Target Organ Toxicity - Single exposure** (Category 1 and 2)
- **Specific Target Organ Toxicity - Repeated exposure** (Category 1 and 2)
- **Aspiration hazard** (Category 1)





# **EXPLODING BOMB**



- **Self-reactive substances and mixtures** (Types A and B\*)
- **Organic peroxides** (Types A and B\*)



# WHMIS LABELS

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- All WHMIS controlled products must be labelled.
- There are 2 types of WHMIS labels
  - Supplier Labels
  - Workplace Labels
- Other means of identification
- Labels alert workers to hazards and safe handling instructions



# SUPPLIER LABEL

## Product K1 / Produit K1



### Danger

Fatal if swallowed.  
Causes skin irritation.

#### Precautions:

Wear protective gloves.  
Wash hands thoroughly after handling.  
Do not eat, drink or smoke when using this product.

Store locked up.  
Dispose of contents/containers in accordance with local regulations.

IF ON SKIN: Wash with plenty of water.  
If skin irritation occurs: Get medical advice or attention.  
Take off contaminated clothing and wash it before reuse.  
IF SWALLOWED: Immediately call a POISON CENTRE or doctor.  
Rinse mouth.

### Danger

Mortel en cas d'ingestion.  
Provoque une irritation cutanée.

#### Conseils :

Porter des gants de protection.  
Se laver les mains soigneusement après manipulation.  
Ne pas manger, boire ou fumer en manipulant ce produit.

Garder sous clef.  
Éliminer le contenu/récipient conformément aux règlements locaux en vigueur.

EN CAS DE CONTACT AVEC LA PEAU : Laver abondamment à l'eau.  
En cas d'irritation cutanée : Demander un avis médical/consulter un médecin.  
Enlever les vêtements contaminés et les laver avant réutilisation.  
EN CAS D'INGESTION : Appeler immédiatement un CENTRE ANTIPOISON ou un médecin.  
Rincer la bouche.

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- Prepared and provided by supplier
- Applied to containers of controlled products received in a workplace – employers shall not use, store or handle products without supplier labels



# **SUPPLIER LABEL CONTINUED**

Labels will require the following:

- **Product identifier** - the brand name, chemical name, common name, generic name or trade name of the product.
- **Initial supplier identifier** – the name, address and telephone number of either the manufacturer or importer.
- **Pictogram(s)** – hazard symbol.
- **Signal word** – a word used to alert the reader to a potential hazard.
- **Hazard statement(s)** - standardized phrases which describe the nature of the hazard.
- **Supplemental label information** - some supplemental label information is required based on the classification of the product.



# **SUPPLIER LABEL CONTINUED**

**Precautionary statement(s)** – standardized phrases that describe measures to be taken to minimize or prevent adverse effects resulting from exposure to a hazardous product

- Signal word, and hazard statement are to be grouped together
  - To be clearly and prominently displayed on the container
  - To be easy to read (e.g., you can see it easily without using any item except corrective glasses)
  - To be in contrast with other information on the product or container
  - All information must be disclosed in English and French



# WORKPLACE LABEL

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- Applied to:
  - secondary containers
  - containers of products



# **WORKPLACE LABEL**

**Contains the following:**

- Product name (matching the SDS product name).
- Safe handling precautions, may include pictograms or other supplier label information.
- A reference to the SDS (if available).



# OTHER IDENTIFIERS

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- Signs
- Colour/ number coding
- Any means

For Identifying:

- Products not in a container
- Products in a container intended for export
- Piping systems, reaction vessels, tank cars, conveyor belts carrying a controlled product
- Other situations





# SAFETY DATA SHEETS

## SDSs

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- Summary documents that provide information about the hazards of a product and advice about safety precautions.
  - Identification
  - Hazardous identification
  - Hazards (fire, explosions, reactivity)
  - Health effects of exposure (acute and chronic)
  - Hazard evaluation related to storage and handling
  - Measures to protect workers
  - Emergency procedures



# CONFIDENTIAL BUSINESS INFORMATION

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- Suppliers and employers may apply for trade secret protection (ingredient). For review and validation:
- Hazardous Materials Information Review Commission
- Approved claim is valid for three years
- Protected trade information is only released to medical personnel in case of a medical emergency for treatment
- Hazardous information, however, must be disclosed on SDS



# USES OF SDSs

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## **SDSs tell users:**

- What the hazards of the product are
- How to use the product safely
- What to expect if the recommendations are not followed
- How to recognize symptoms of exposure
- What to do if emergencies occur



# WHMIS PROGRAM

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- Establish inventory of controlled products
- Meet labelling requirements
- Meet SDS requirements
- Evaluate hazards of controlled products
- Establish workplace controls (eg. safe work procedures)
- Provide worker education and training
- Evaluate WHMIS program annually



# RESPONSIBILITIES

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## **SUPPLIERS:**

- Supply proper labels and SDS
- Keep information on labels and SDS current
- Classify all controlled products

## **EMPLOYERS:**

- Educate and train workers
- Provide safe work procedures
- Ensure availability of proper up to date labels and SDS

## **WORKERS:**

- Understand content and significance of labels and SDS
- Follow safe work procedures
- Notify employers about problems with labels and SDS



# FOR MORE INFORMATION

- This information was obtained from the Canadian Centre for Occupational Health and Safety.
- For more information you can ask your supervisor/employer or visit [www.ccohs.ca](http://www.ccohs.ca)

