

# WHMIS 2015

1<sup>ST</sup> Choice Staffing Ltd.

## Training Booklet

### WHAT IS WHMIS?

- WHMIS stands for WORKPLACE HAZARDOUS MATERIAL INFORMATION SYSTEM
- WHMIS is the regulatory requirement in Canada to classify chemical and biological agents and communicate their hazards
- WHMIS 2015 has now been updated to incorporate elements of GHS which is the GLOBALLY HARMONIZED SYSTEM for the Classification and Labeling of Chemicals.

#### **WHMIS 2015 incorporates the following GHS elements:**

- Classification rules and hazard classes
- Hazard pictograms
- Supplier label requirements
- Format of safety data sheets

**Note: WHMIS retains the classification for biohazardous materials.**

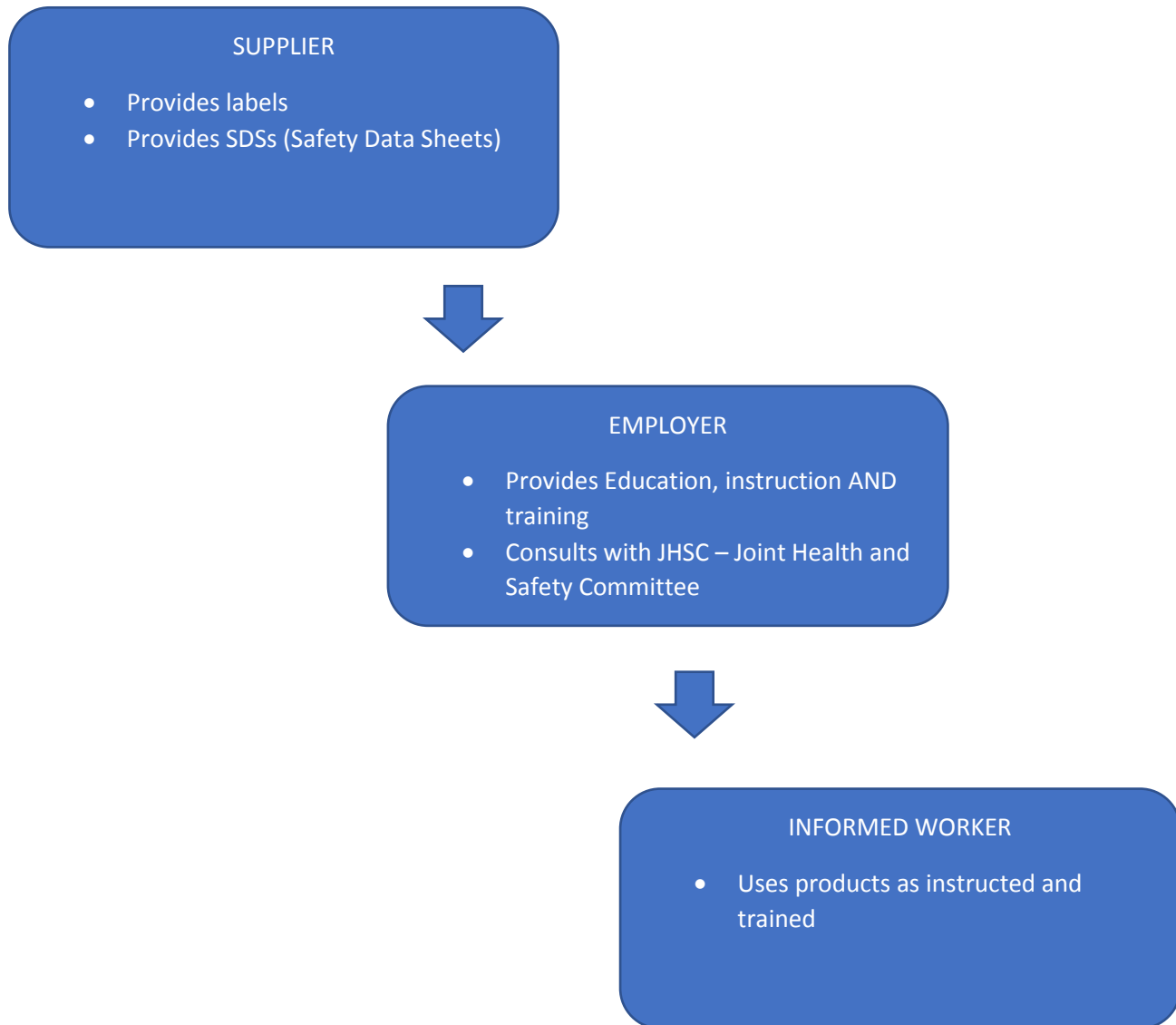
WHMIS still has three main components:

1. Labels
2. SDSs Safety Data Sheets
3. Employee education, instruction and training

An effective WHMIS program

- Reduces risk of incidents and injuries
- Ensures hazardous products are properly labelled
- Ensures proper communication of hazards through SDS's
- Ensures workers have the correct information to protect themselves including routes of entry (Inhalation, absorption, ingestion and injection)
- Limits other employees' exposure to hazardous products

## FLOW OF INFORMATION



## HAZARD CLASSIFICATION SYSTEM

WHMIS 2015 applies to two major groups of hazards:

- Physical hazards
- Health hazards

Each of these two groups is again divided into classes.

## HAZARD CLASSES

The hazard classes within each group includes:

- 20 physical hazards
- 12 health hazards

WHMIS 2015 **PHYSICAL HAZARD CLASSES** are:

- Flammable gases
- Flammable aerosols
- Oxidizing gases
- Gases under pressure
- Flammable liquids
- Oxidizing liquids
- Oxidizing solids
- Organic peroxides
- Corrosives to metals
- Biohazardous infectious materials
- Substances and mixtures that, in contact with water, emit flammable gases
- Flammable solids
- Self-reactive substances and mixtures
- Self-heating substances and mixtures
- Pyrophoric liquids
- Pyrophoric solids
- Pyrophoric gases
- Combustible dusts
- Simple asphyxiants
- Physical hazards not otherwise classified
- Health hazards not otherwise classified

WHMIS 2015 **HEALTH HAZARD CLASSES** are:

- Acute toxicity
- Skin corrosion/irritation
- Serious eye damage/irritation
- Respiratory or skin sensitization
- Germ cell mutagenicity
- Carcinogenicity
- Reproductive toxicity
- Specific target organ toxicity – single exposure
- Specific target organ toxicity – repeated exposure
- Aspiration hazard
- Biohazardous infectious material
- Health hazards otherwise not classified

### HAZARD CATEGORIES

The hazard classes can be further divided into one or more categories (Categories 1-4)

- Category 1 is the highest level of hazard

Hazard classes can also be divided into one or more hazard “types”

- A = greatest level of hazard type

Sometimes categories are also divided into sub-categories (depending upon the class)

Example: If a product is classified as follows:

- 1A – greatest level of hazard
- 1C – less hazardous than 1A
- 2 – less hazardous than 1C

Category 1

Category 2

Category 3

Category 4

High Hazard

Low Hazard

### WHMIS 2015 PICTOGRAMS



#### Explosive (Exploding Bomb)

This symbol addresses products that can and may become explosive if not handled in proper conditions. These products should only be handled by trained professionals. Products that feature this graphic may be sensitive to temperature or light changes.



#### Flammable (Flame)

Products with this label can easily ignite and burn rapidly. A fire requires a fuel source, oxygen and heat in order to burn. When handling products with this label, it's important to make sure that the three elements are not present together to minimize the risk of ignition.



#### Oxidizing (Flame Over Circle)

Products that have this label are oxidizers and are a significant fire hazard if not handled properly. Oxidizers give off oxygen, or other oxidizing substances, and therefore greatly increase the risk of fire or explosion. Oxidizing substances can create a more intense fire, cause substances that wouldn't normally burn to burn rapidly, or cause some combustible materials to burn spontaneously without the presence of a flame.



### Gases Under Pressure (Gas Cylinder)

Products with this label contain gases that are stored under pressure in cylinders. These products may carry other health hazards, such as being toxic, flammable, corrosive, etc. Compressed gas containers, if punctured, can become unpredictable and dangerous – often rocketing around the room. Frostbite is also a concern with gases under pressure, as the container can become very cold as the gases escape.



### Corrosion

Any product that can chemically damage or destroy steel or aluminum is considered corrosive to metals. Products with this label may be corrosive to metals or skin. Causes serious eye damage or irritation. Damage can be destructive and irreversible, so extra caution is to be taken when handling these substances.



### Acute Toxicity (Skull & Crossbones)

Products that dawn this label are fatal, toxic or harmful if inhaled, swallowed or put into contact with skin. Acute toxicity refers to effects that occur after a single dose, or multiple doses given within a short amount of time (24 hrs.). While the toxicity of a substance can't change, the risks associated with exposure can be minimized through proper handling.



### Health Hazard

This label is used for products that cause chronic health effects and those with targeted health effects. Chronic health effects occur from long term exposure to a product. Chronic toxicity is also included under this label, which refers to the health effects experienced after long term exposure.



### Harmful (Exclamation Mark)

This label is used to identify products that may cause less severe health hazards, such as skin and eye irritation. The effects are generally reversible and can be minimized with the proper medical treatment. Things like redness, coughing, inflammation, or itching would fall under this category.



### Hazards to The Environment

Products with this label can have a negative impact on the aquatic environment. This label is not mandatory, but many suppliers will choose to indicate these hazards. Aquatic hazards include both short-term and long-term toxic impacts to aquatic life due to exposure. Also hazardous to the ozone layer.



### Biohazardous Infectious Materials

Products with this label have organisms that can cause diseases in either animals or humans. Bacteria, viruses, fungi and parasites are all included in this category.

## HAZARD STATEMENTS AND SIGNAL WORDS

There are two signal words:

- Danger (higher level hazards)
- Warning (moderate level hazards)

Hazard statements describe the nature and degree of the hazard:

- Example: Extremely flammable aerosol
- Example: May be corrosive to metals

The pictogram(s) signal word and hazard statement(s) must be grouped together on the supplier label.

## WHMIS LABELS

There are two types of labels:


1. Supplier label (prepared and provided by the supplier)
2. Workplace label (developed and used in the workplace)

## Supplier Labels

Supplier labels must include the following information:

1. **Product Identifier:** this is the brand name, chemical name, common name, generic name or trade name of the product. The product identifier on the label must exactly match the product identifier given on the SDS (Safety Data Sheet).
2. **Supplier Identification:** the name, address and telephone number of the Canadian company that made, imported, distributed or sold the product.
3. **Pictogram:** one or more of the hazard symbols that indicate the classification of the product.
4. **Risk Phrases:** descriptions of the specific hazards of the product. “Danger” or “Warning” is used to alert the user to a potential hazard. There should be at least one risk phrase for each hazard symbol.
5. **Precautionary Measures:** instructions for the essential precautions workers should take to minimize or prevent adverse effects resulting from exposure to a hazardous product and the specific PPE they should use while handling the product.
6. **First Aid Measures:** What to do in case of an emergency such as ingestion, skin contact, inhalation etc.
7. **Reference to MSDS:** indication that an MSDS is available.

Only these seven items may be included on a WHMIS label.

<b>Product WSNB-1 / Produit WSNB-1</b>	
	
<b>Danger</b> Fatal if swallowed. Causes skin irritation. <b>Precautions:</b> 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.	<b>Danger</b> Mortel en cas d'ingestion. Provoque une irritation cutanée. <b>Conseils :</b> 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.
ABC Chemical Co., 123 rue Anywhere St., Mytown, ON NON ONO (123) 456-7890	

## Workplace Labels

A workplace label is required when:

- The product or material is transferred to another container in the workplace
- When supplier labels are missing or damaged
- Materials produced for use in the workplace (such as dilutions) or for export

The content of a workplace label is less detailed than the supplier label. The workplace label has no required format.

The workplace label must contain the following information:

- Product Identifier
- Safe handling instructions
- MSDS referral statement



Workplace labels must be updated as soon as significant new data is provided to the employer from the supplier or as soon as significant new data is available to the employer.

## SAFETY DATA SHEETS

Safety data sheets (SDSs) provide more detailed information than the label about a hazardous product's properties, its hazards, and how to work safely with it. Workers must always read the SDS before using any hazardous product. An employer is required to provide education and training that will help workers understand and use the information provided on the SDS.

An employer is required to have an SDS for every hazardous product included under WHMIS 2015 used in the workplace, and to make SDSs readily available to workers. A worker cannot use a product if there is no SDS. Employers must also prepare SDSs for any hazardous product that they produce and use exclusively in that workplace. SDSs generated by an employer must include the information required for a supplier SDS and must state that the supplier SDS is available at the work site.

The employer must ensure that the SDS for a hazardous product is the most current version. SDSs must be updated by suppliers as soon as reasonably practicable and not more than 90 days after the significant new data becomes available. The SDS must include the "Initial Supplier Identifier" and "Date of Latest Revision".

SDSs provide more detailed hazard information about the product than the label. They are an important resource for workplaces and workers to help you learn more about the product(s) used. Use this information



to identify the hazards of the products you use and to protect yourself from those hazards, including safe handling and emergency measures.

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, and what to do if emergencies occur.

**There are 16 sections required on a Safety Data Sheet. They are:**

- Product identifier
- Hazard identification
- Composition/ingredient information
- First aid measures
- Firefighting measures
- Accidental release measures
- Handling and Storage
- Exposure controls/personal protection
- Physical and chemical properties
- Stability and reactivity
- Toxicological information
- Ecological information
- Disposal considerations
- Transport information
- Regulatory information
- Other information

BIOHAZARDOUS INFECTIOUS MATERIALS must have a modified nine-section Safety Data sheet with specific information.



Section Headings:

- Infectious agent
- Hazard identification
- Dissemination
- Stability and viability
- First aid/Medical
- Laboratory hazard
- Exposure controls/Personal protection
- Handling and storage
- Regulatory and other information

WHMIS EXEMPTIONS

Certain products are exempt from WHMIS labelling and SDS requirements, but they still require TRAINING. These include:

- Explosives
- Pesticides
- Cosmetics, drugs, food
- Radioactive materials
- Consumer products
- Tobacco and tobacco products
- Wood and wood products
- Hazardous waste

## WHMIS RESPONSIBILITIES

**Suppliers, employers and employees** each have a role to play to make WHMIS work.

### MANUFACTURERS, DISTRIBUTORS, SUPPLIERS AND EMPLOYERS THAT FUNCTION AS SUPPLIERS MUST

- Classify products using WHMIS 2015
- Create supplier labels that meet WHMIS 2015 requirements
- Prepare supplier SDSs (Safety Data Sheets) that meets WHMIS 2015 requirements

### EMPLOYERS MUST

- Ensure hazardous products are properly labelled
- Ensure up to date SDSs are readily available to employees
- Provide education, instruction and training to employees
- Annually review the WHMIS program with JHSC (Joint Health and Safety Committee)
- Periodically evaluate employees' knowledge

### WHAT MUST WHMIS EDUCATION, INSTRUCTION AND TRAINING INCLUDE?

- General WHMIS information (education):
  - WHMIS definition
  - Pictogram identification (What do they mean?)
  - Required information on labels and SDSs
- Site-specific instruction and training:
  - Hazards related to specific product
  - Required procedures when exposed to/using hazardous products
  - Controls in place to reduce risk (PPE, limited access, etc.)
  - Location of the SDSs
  - What to do in an emergency

### EMPLOYEES MUST

- Complete education, instruction and training provided by employer
- Read labels and SDSs before access/exposure to hazardous products
- Follow the procedures developed by the employer working with/near hazardous products
- Know what to do in an emergency
- Know where to find more information
- Wash hands after handling hazardous products
- Ask questions when unsure how to control hazard

### KEY POINTS

- Three key WHMIS elements:
  - Appropriate supplier labels
  - Accurate supplier SDSs
  - Comprehensive system of education, instruction and training
- The classification system helps us understand hazard types and severity
- Precautions are based on hazardous product classification
- Pictograms, signal word and hazard statement help us quickly recognize the hazard type
- It is important to read and follow the instructions on the labels and SDSs
- Suppliers, employers and employees ALL have responsibilities