LIFESAVER 101
FIRST AID & CPR TRAINING INC.

WHMIS 2015

Participant Reference Manual

WHMIS 2015

Introduction

The overall purpose of WHMIS is to create a safer, healthier workplace. WHMIS education helps you understand how WHMIS works and WHMIS training gives you the hands-on knowledge of how to work safely with specific products at your workplace.
When you have been successfully trained in WHMIS you should be able to answer these four questions:

1. ***What are the hazards associated with hazardous products? (How can this product hurt me?)***
2. ***How do I protect myself? (What Personal protective equipment should I wear?)***
3. ***What should I do in an emergency? (what do I do if I spill it?)***
4. ***Where do I get more information?***

By understanding the information in this course, you will learn where to look on the label of a hazardous product, where to look on a safety data sheet, and what to discuss with your supervisor.

1. WHAT IS WHMIS?

Overview of WHMIS

WHMIS provides you with health and safety information about hazardous products in your workplace. WHMIS was formed to uphold the rights of Canadian workers to be informed about the different hazardous materials and chemicals they use when working. Exposure to hazardous products can result in health problems such as irritation of the eyes, sensitivity of the skin or lungs, heart ailments, kidney and lung damage or cancer. Hazardous products can also cause fires, explosions, or other accidents when improperly stored or handled.

Under WHMIS you have the right to receive accurate information about each hazardous product you use, handle or store (for example, what it is, its hazards and the safety precautions your need to take). You can use this information to help make sure you go home safe and alive at the end of every workday.

What does WHMIS Stand for?

Workplace

- ✓ Deals only with products in your workplace

Hazardous Materials

- ✓ Dangerous products that may cause fires, explosions, or health problems

Information System

- ✓ Provides information about hazardous products

WHMIS Gets an Update

WHMIS first came into effect across Canada in 1988. It was updated in early 2015 to reflect a new set of rules called the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

GHS was developed by the Unite Nations and it does the following

- Defines and classifies hazards of chemical products
- Provides health and safety information on labels and safety data sheets, or SDSs (previously called MSDSs in the original WHMIS)

GHS is a worldwide system. Its goals are for the whole world to adopt and use

- The same set of rules for classifying hazardous products
- The same format and content for labels and SDSs

Currently, many countries have different systems for classifying and labelling hazardous products. In fact, several different systems can exist within the same country. This has made working with hazardous materials confusing for everyone.

GHS has not replaced WHMIS. Instead, GHS introduces some important changes to WHMIS. This will result in many benefits such as

- Providing improved, consistent hazard information
- Encouraging the sage handling and use of hazardous products
- Promoting better emergency response
- Making it easier and less expensive for companies to follow the rules
- Making trade easier around the world
- Reducing the costs of regulation and enforcement

For the sake of clarity, the original WHMIS is now called WHMIS 1988. The updated version is called WHMS 2015

Key Changes from WHMIS 1988 to WHMIS 2015

- The term hazardous product replaces controlled product
- Hazardous classification criteria are more complete, this improves the ability to show the severity of hazards
- New hazard classes are included (for example – aspiration hazard)
- The language has been made more consistent (standardized).
- Supplier labels have a few new requirements (for example, the use of specific signal words, hazard statements, pictograms and precautionary statements).
- SDSs follow a 16-section format and the information in those sections is now standardized.

By late 2018, all suppliers and employers were required to comply with WHMIS 2015. WHMIS 1988 no longer applies.

WHMIS Legislation

Federal Legislation

(The Hazardous Products Act and Hazardous Product Regulations) deals with the importation and sale of hazardous products. Health Canada reviews claims for confidential business information (Trade Secrets).

Provincial Legislation

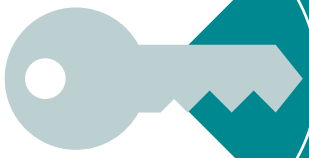
Each province and territory have their own legislation which covers the use of hazardous products in the workplace (for example, BC's Worker Compensation ACT or Ontario's Occupational Health and Safety Act (OHSA)).

WHMIS in Brief

A nationwide system put in place at the federal, provincial and territorial levels in1988; updated in 2015

Recognizes the interests of all concerned

- Workers
- Employers
- Suppliers
- Governement



Four key elements of WHMIS 2015

- Classification
- Labels
- Safety data sheets (SDSs)
- Worker education and training

Four Key Elements of WHMIS 2015

Classification

Hazardous products are classified by the types of hazards they present. WHMIS 2015 divides hazardous products into two hazard groups: **Physical hazards** and **Health hazards**. The two hazard groups are further divided into hazard classes. For more information see page 10.

WHMIS Labels

Labels on hazardous products alert you to the identities of products, their hazards, and the precautions you'll need to take. The information on hazards and precautions has been standardized.

Safety Data Sheets (SDSs)

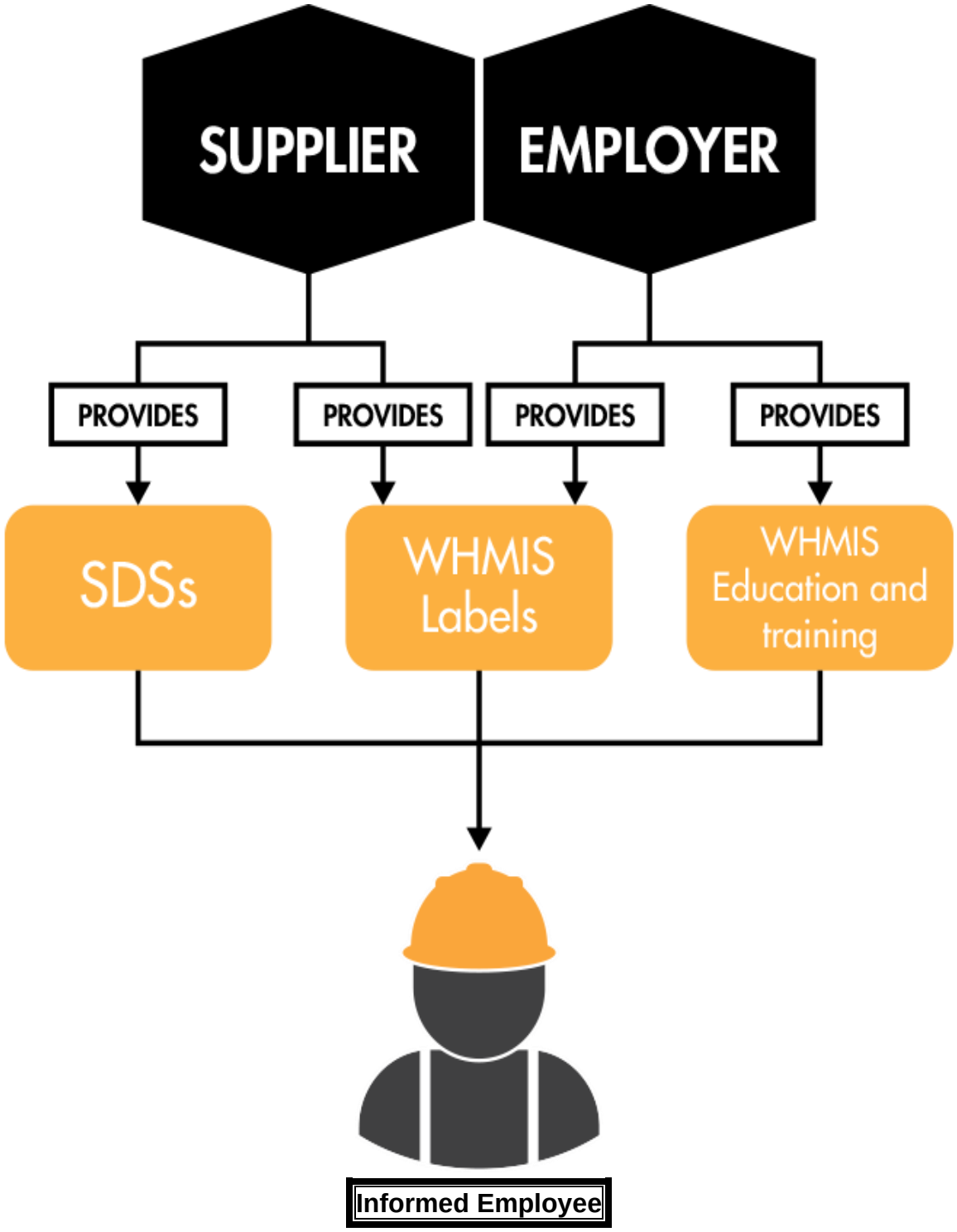
These documents provide detailed hazard and precautionary information. Under WHMIS 2015, SDSs use a 16-section format, the information required in each of these 16 sections has been standardized.

WHMIS Education and Training Programs

Your employer provides education and training for your so you can work safely with or near hazardous products. As a worker, you need to know

- How WHMIS works
- The hazards of hazardous products in your workplace
- The safe work procedures you must follow

How WHMIS 2015 Works



Key WHIMS Participants and Their Responsibilities

As a worker, you are one of the key participants in WHMIS along with employers and suppliers (Suppliers are organizations or individuals who make, sell, import or distribute hazardous products in Canada)

All three groups – workers, employers and suppliers – have specific responsibilities as shown in the following table. The roles and responsibilities of each group remain unchanged in WHMIS 2015.

Table 1. Group responsibilities

Workers	Employers	Suppliers
• **Participate in WHIMIS education and training programs** • **Take necessary steps to protect themselves and their co-workers** • **Participate in identifying and controlling hazards**	• **Educate and train workers on the hazards and safe use of products** • **Ensure that hazardous products are properly labelled** • **Prepare workplace labels when required** • **Prepare SDSs as needed Provide workers with access to up-to-date SDSs** • **Ensure appropriate control measures are in place to protect the health and safety of workers**	• **Properly classify all hazardous products** • **Obtain or prepare up-to-date labels and SDSs** • **Provide these labels and SDSs to purchasers of hazardous products**

2. Classification of Hazardous Products

What's New?

New classification criteria

Two hazard groups (physical hazards, health hazards

19 physical hazard classes

Hazard classes containing "categories" or "types" that reflect varying degrees for hazard

How Hazardous Products are Classified

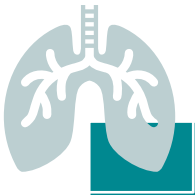
The way hazardous products are classified has changed in WHMIS 2015. Hazardous products are now divided into two Hazard groups

The two hazard groups are further divided into hazard classes. A brief listing of hazard classes in each hazard group is shown on the next page, followed by an overview of classes. Hazard classes are a way of grouping together products that have similar properties.

Hazard Classes

Physical Hazards

- The physical hazard group includes the following hazard classes:
- Combustible dust
- Corrosive to metals
- Flammable aerosols
- Flammable gases
- Flammable liquids
- Flammable solids
- Gases under pressure
- Oxidizing peroxides
- Oxidizing gases
- Oxidizing liquids
- Oxidizing solids
- Pyrophoric gases
- Pyrophoric liquids
- Pyrophoric solids
- Self-heating substances and mixtures
- Self-reactive substances and mixtures
- Simple asphyxiants
- Substances and mixtures which, in contact with water emit flammable gas
- Physical hazards not otherwise classified



Health Hazrds

- The health hazard group includes the following hazard classes:
- Acute toxicity
- Aspirational hazard
- Biohazardous infectious materials
- Carcinogenicity
- Germ cell mutagenicity
- Reproductive toxicity
- Respirotory or skin sensitization
- Serious eye damage/eye irriitation
- skin corrrosion/irritation
- specific target organ toxicity - repeated exposure
- Health hazards not otherwise classified

Note: Explosives are classified as physical hazards under GHS. And the “exploding bomb” pictogram appears in WHMIS 2015 because some

hazardous products may explode. But explosives are not included in WHMIS 2015 because other laws cover them.

Hazard Classes

A hazardous product is a product that falls into one or more of the hazard classes described on page 12. Suppliers classify thee products and assign one or more pictograms (Pictograms are symbols surrounded my borders)

The following tables provide you a brief description of each of the hazardous classes.

Table 2. Overview of physical hazard classes

Physical hazard class	General description
Flammable gases **Flammable aerosols** **Flammable liquids,** **Flammable solids**	These four classes cover products that have the ability to ignite (catch fire) easily. The main hazards are fire or explosion.
Oxidizing gases **Oxidizing liquids** **Oxidizing solids**	These three classes cover oxidizers which may cause or intensify a fire or cause a fire or explosion.
Gases under pressure	This class includes compressed gases, liquified gases, dissolved gases, and refrigerated liquified gases. Compressed gases, liquified, gases and dissolved gases are hazardous because of the high pressure inside the cylinder or container. The cylinder may explode if heated. Refrigerated liquified gases are very cold. They can cause severe cold (cryogenic) burns or injury.
Self-reactive substances and mixtures	These products may react on their own to cause a fire or explosion or may cause a fire or explosion if heated.
Pyrophoric liquids **pyrophoric solids** **pyrophoric gases**	These products can catch fire very quickly (spontaneously) if exposed to air.
Self-heating substances and mixtures	These products may catch fire if exposed to air. These products differ from pyrophoric liquids or solids in that

	they will ignite only after a longer period of time or when in large amounts
Physical hazard class	**General description (continued)**
Organic peroxides	These products are unstable, highly reactive, or explosive. They may cause fire or explosion if heated.
Corrosive to metals	These products may be corrosive (chemically damaging or destructive) to metals.
Combustible dusts	This class is used to warn of products that are finely divided solid particles. If dispersed in air, the particles may catch fire or explode if ignited.
Simple asphyxiants	These products are gases that may displace (take the place of) oxygen in the air and cause rapid suffocation.
Physical hazards not otherwise classified	This class is meant to cover any physical hazards that are not covered in any other physical hazard class. These hazards involve chemical reactions that result in serious injuries or deaths when the reactions occur. If a product is classified in the class, the hazard statement on the label and SDS will describe the nature of the hazard.

Table 3. Overview of Health Hazards

Health hazard class	General description

Acute toxicity	These products are fatal, toxic (poisonous), or harmful if they are inhaled (breathed in), if they come into contact with skin or if they are ingested (swallowed).
	
	Acute toxicity refers to effects that occur following
	• Skin contact or ingestion exposure to
	  ◦ A single dose or
	  ◦ Multiple doses given within 24 hours
	• An inhalation exposure of 4 hours
	Acute toxicity could result from exposure to the produce itself. It could also result from a product that, upon contact with water, releases a gas that an cause acute toxicity.

Skin corrosion/irritation	This class covers products that cause severe skin burns (corrosion) and products that cause skin irritation.
Serious eye damage/eye irritation	This class covers products that cause serious eye damage (corrosion) and products that cause eye irritation.
Respiratory or skin sensitization	A respiratory sensitizer is a product that may cause allergy or asthma symptoms or breathing difficulties if inhaled. A skin sensitizer is a product that may cause an allergic skin reaction.
Germ cell mutagenicity	This hazard class includes products tha may cause or a suspected of causing genetic defects. Genetic defects are permanent changes (mutations) to body cells that can be passes on to future generations.
Carcinogenicity	This hazard class includes products that cause or are suspected of causing cancer.
Reproductive toxicity	This hazard class includes products that may damage or are suspected of damaging fertility (the ability to conceive children) or the embryo, fetus or offspring.

	Note: there is also a category that includes products that may harm breast-fed children.
Health hazard class	**General description continued**
Specific target organ toxicity – repeated exposure	This hazard covers products that cause or may cause damage to organs (liver, lungs, kidneys, etc.) following prolonged or repeated exposure.
Aspiration hazard	This hazard class is for products that may be fatal if they are swallowed and enter the airways.
Biohazardous infectious materials	These materials are micro-organisms (viruses, bacteria, etc.) nucleic acids (RNA or DNA), or proteins that cause or are probable causes of infection, with or without toxicity in humans and animals.
Health hazards not otherwise classified	This class covers products that are not included in any other health hazard class. These hazards occur following acute or repeated exposure. They have adverse effects on the health of a person exposed to them – including injury or death. If a product is classified in this class, the hazard statement will describe the nature of the hazard.

Hazard Categories

Each hazard class contains at least one category. The hazard categories are assigned a number (1,2, etc.). Categories may also be called types. Types are assigned an alphabetical letter (A, B, etc.). In a few cases, subcategories are also specified. Subcategories are identified with a number and a letter (for example 1A and 1B).

Some hazard classes have only one category (for example, corrosive to metals). Others may have two categories (carcinogenicity) or three categories (oxidizing liquids). There are a few hazards with five or more categories such as organic peroxides.

Hazard category	Level of hazard
1	More hazardous
2A	
2B	
3	Less hazardous

The category tells you how hazardous the product is (the severity of the hazard)

Category 1 is always the greatest level of hazard. If category 1 is further divided, category 1A within the same class is a greater hazard than 1B. Category 2 within the same hazard is more hazardous than category 3 and so on.

There are a few exceptions to this rule. For example, for the “Gasses under pressure” hazard class, the hazard categories are “Compressed gas”, Liquid Gas”, “Refrigerated gas” and “Dissolved gas”. These classes relate to the physical state of the gas when packaged. They do not describe the degree of hazard.

Also, the “Reproductive toxicity” hazard class has a separate category called “Effects on or via lactation”. This category was not assigned a numbered category. Reproductive toxicity also has categories 1 and 2 which relate to effects of fertility and/or the embryo, fetus or offspring. “Effects on or via lactation” is considered a different but related hazard within the Reproductive toxicity class.

Products Not Covered by WHMIS

The following types of products are not covered under WHMIS 2015:

- Explosives
- Cosmetics, devices, drugs, food
- Pest control products (pesticides)
- Consumer products (for example, cleaning products, adhesives and lubricants)
- Wood or products made or wood
- Nuclear (radioactive) substances

- Hazardous waste
- Tobacco and tobacco products
- Manufactured articles

Many of these products are covered under other laws and may not require a WHMIS label and SDS. But if these products are used in your workplace, your employer must still provide you with education and training on their health effects safe usage and storage.

The remainder of this reference manual deals with hazardous products that require a WHMIS label and SDSs (products covered by WHMIS 2015).

3. Pictograms

About Pictograms

What's new?

Pictograms show the type of hazard at a glance

There are 10 pictograms

Most pictograms have a red diamond-shaped border

Pictograms are assigned to specific hazard classes or categories

Pictograms are graphic images that immediately show you what type of hazard a hazardous product presents. With a quick glance you can see, for example, that a product is flammable or if it might be a health hazard.

Most pictograms have a red, diamond-shaped border. Inside this border is a symbol that represents the hazard, such as fire, a health hazard, corrosive, etc. Together, the symbol and the border are referred to as a pictogram. Pictograms are assigned to specific hazard classes or categories.

This chapter includes tables which show pictograms. The name of each pictogram is in bold type and the words in the brackets describe the hazard.

Table 4. Introducing the Pictograms

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

How Pictograms Compare to WHMIS 1988 Hazard Symbols

HAZARD CLASSIFICATION AND PICTOGRAMS

SYMBOLS: WHMIS 1988

SYMBOLS: WHMIS 2015

In general, pictograms (at right) are similar to WHMIS 1988 hazard symbols (left). Many of the symbols inside the borders are the same. Notice there are some new symbols (health hazard, exploding bomb, environmental, exclamation mark). Two symbols were retired (materials causing other toxic effects and dangerously reactive materials). All but one of the pictograms are in a red diamond-shape, biohazardous infectious material is in a black circle. Most pictograms are assigned to multiple hazard classes and categories.

How Pictograms Are Used with WHMIS 2015 Hazard Classes and Categories

The following table shows how the pictograms match up with the hazard classes and categories

Table 5. Pictograms matched to hazard classes and categories

Pictogram	Hazard Classes and Categories
	The **flame** pictogram is used for the following classes and categories: • 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) •
	The **flame over circle** pictogram is used for the following classes and categories: • Oxidizing gases (Category 1) • Oxidizing liquids (Category 1, 2 and 3) • Oxidizing solids (Category 1, 2 and 3)

The **gas cylinder** pictogram is used for the following classes and categories:

- Gases under pressure (Compressed gas, Liquefied gas, Refrigerated liquefied gas, and Dissolved gas)

The **corrosion** pictogram is used for the following classes and categories:

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

The **exploding bomb** pictogram is used for the following classes and categories:

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

The **skull and crossbones** pictogram is used for the following classes and categories:

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

The **health hazard** pictogram is used for the following classes and categories:

- 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)

The **exclamation mark** pictogram is used for the following classes and categories:

- 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)

The **biohazardous infectious materials** pictogram is used for the following classes and categories:

- Biohazardous Infectious Materials (Category 1)

*Both the flame and exploding bomb pictograms are used for “Self-reactive substances and mixtures”. (Type B) and “Organic Peroxides” (Type B).

Hazard Classes and Categories Without Pictograms

Some hazardous products do not require a pictogram. But the product label and Section 2 (Hazard identification) of the SDS still need to show the signal word hazard statement(s), and other required parts of the label.

WHMIS 2015 classes and categories that do not require a pictogram are:

- Flammable gases – Category 2
- Flammable liquids – Category 4
- Self-reactive substances and mixtures – Type G
- Organic peroxides – Type G
- Combustible dusts – Category 1
- Simple Asphyxiants – Category 1
- Serious eye damage/eye irritation – Eye Irritation – Category 2B
- Reproductive toxicity – Effects on or via lactation

Where to Find Pictograms

Pictograms will be on the supplier labels of the hazardous products you work with. They will also be on the SDSs as the symbol of the words that describe the symbol. For more information on labels see Chapter 4. For more information on SDSs see Chapter 5.

4. Labels

What's New

Supplier labels now require pictograms, signal words, and standardized hazard statements and precautionary statements.

A pictogram, signal word and hazard statement are now assigned to most hazard classes and categories.

About Labels

Under WHMIS 2015, hazardous products used, handled, or stored in the workplace must be labelled. Labels are your first alert about the major hazards of these products. Labels also outline the basic precautions or safety steps you should take.

- All WHMIS hazardous products must be labelled
- There are two main types of WHMIS labels
  - Supplier labels
  - Workplace labels
- Other means of identification (warning signs, colour codes, placards)
- Labels alert you to hazards and safe handling instructions

Overview of Label Types

There are two main types of WHMIS labels: **supplier labels** and **workplace labels**. Other types of identification may be used where appropriate. Examples include warning signs, placards and colour codes.

Supplier Labels

A supplier label is provided for each hazardous product by the supplier. Supplier labels will appear on all hazardous products received at a Canadian workplace.
Most suppler labels show six types of information. In rare cases, a supplier label may show seven types of information.
The written information must be shown in both English and French. Supplier labels may be bilingual (in both languages) or available as 2 labels (one in English and one in French).

Information Required

A WHMIS supplier label must include the following information

1. **Product identifier** – the brand name, chemical name, common name, generic or trade name of the hazardous product.
2. **Initial supplier identifier** – the name, address and telephone number of the Canadian manufacturer or importer.
3. **Pictogram(s)** – hazard symbol usually contained within a red-diamond shaped border.
4. **Signal word** – one of just two words used to alert you to a potential hazard and to state the severity of the hazard. (“Danger” is used for high-risk hazards and “Warning” is used for less sever hazards.
5. **Hazard statement(s)** – a standardized phrase or phrases that describe the type of hazard(s) posed by the hazardous product (for example “fatal if inhaled” and “may cause cancer”).
6. **Precautionary statement(s)** – a standardized phrase or phrases that describe how to reduce or prevent harmful effects resulting in the following: Exposure to a hazardous product or improper handling or storage of a hazardous product (for example, “keep container tightly closed”, wear eye protection”).

In rare cases, supplier labels may also include **supplemental label information**. This information gives you more detail about the following

- Precautionary actions
- Hazards not yet included in GHS
- Physical state (solid, liquid, gas, etc.)
- Route of exposure (by inhaling, swallowing, etc.)

Supplementary label information is only included on a supplier label in the following cases:

- A toxic mixture has an ingredient with unknown acute toxicity or
- A product reacts with water to produce an acutely toxic gas

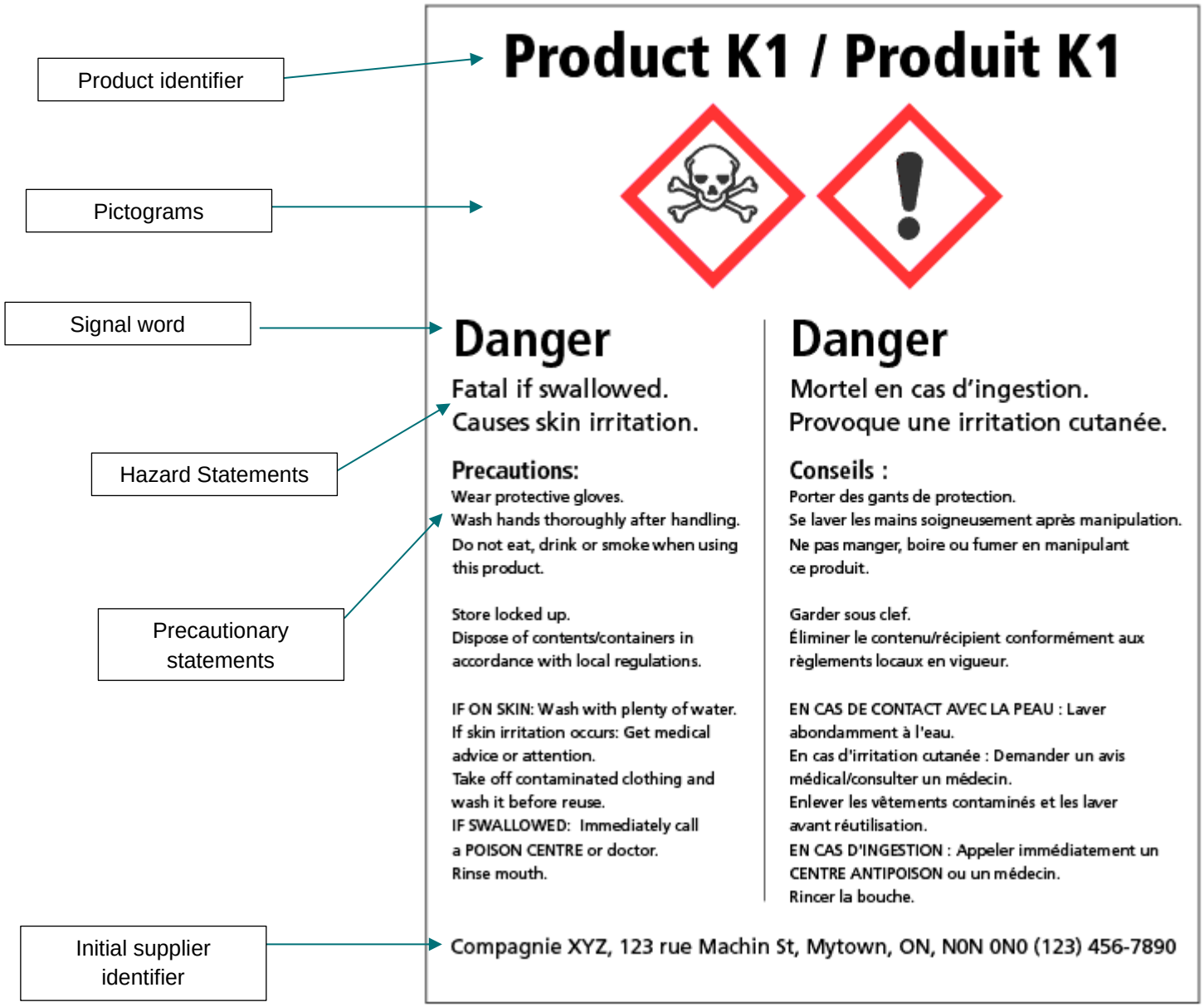
Format

There is no set format for a supplier label, but the pictogram(s), signal word and hazard statement(s) must be grouped together.
A supplier label must he as follows:

- Clearly and prominently displayed on the container
- Easy to read (you can see it without using any items other than corrective glasses)
- In contrast with other information on the product or container
- Bilingual (as one label or two)

If a supplier label becomes damaged, unreadable or is accidentally removed, **your employer** must replace the label with either a supplier label or a workplace label.

Example of a bilingual supplier label



Comparing supplier labels: WHMIS 1988 to WHMIS 2015

Supplier labels

WHMIS 1988

ACETONE ACÉTONE

SEE MATERIAL SAFETY DATA SHEET FOR THIS PRODUCT
VOIR FICHE SIGNALETIQUE POUR CE PRODUIT

DANGER! EXTREMELY FLAMMABLE. IRRITATES EYES. HARMFUL IF INHALED

PRECAUTIONS: Keep away from heat, sparks and flames. Ground containers when pouring. Avoid breathing vapors or mists. Avoid eye contact. Avoid prolonged or repeated contact with skin. Wear protective equipment during handling. Use with adequate ventilation especially in enclosed areas. Store in a cool, well ventilated area, away from incompatibles.

FIRST AID: In case of contact with eyes, immediately flush eyes with lots of running water for 15 minutes, lifting the upper and lower eyelids occasionally. Get medical attention immediately. In case of contact with skin, immediately wash skin with lots of soap and water. Remove contaminated clothing and shoes. Get medical attention if irritation persists after washing. Wash clothing before reuse. If inhaled, remove to fresh air. Give artificial respiration if not breathing. Get medical attention immediately if swallowed, and if conscious, immediately induce vomiting by giving 2 glasses of water and sticking a finger down the throat. Get medical attention immediately. Do not give anything by mouth to an unconscious or convulsing person.

ATTENTION! THIS CONTAINER IS HAZARDOUS WHEN EMPTY. ALL LABELLED HAZARD PRECAUTIONS MUST BE OBSERVED.

DANGER! EXTRÊMEMENT INFLAMMABLE. IRRITE LES YEUX. NOCIF SI AVALÉ

MESURES PRÉVENTIVES: Tenir à l'écart de la chaleur, des étincelles et des flammes. Mettre à la terre les contenants lors de l'écoulement. Éviter de respirer les vapeurs ou les brumes. Éviter le contact avec les yeux. Éviter le contact prolongé ou répété avec la peau. Porter un équipement de protection lors de la manipulation. Utiliser avec suffisamment de ventilation surtout dans les endroits clos. Entreposer dans un endroit frais, bien aéré à l'écart des produits incompatibles.

PREMIERS SOINS: En cas de contact, rincer les yeux immédiatement et copieusement avec de l'eau courante pendant 15 minutes en soulevant les paupières inférieures et supérieures de temps en temps. Obtenir immédiatement des soins médicaux. En cas de contact avec la peau, laver immédiatement la région affectée avec beaucoup d'eau et de savon. Retirer les vêtements et les souliers contaminés. Si l'irritation persiste après le lavage, obtenir des soins médicaux. Laver les vêtements avant de les réutiliser. En cas d'inhalation, transporter la victime à l'air frais. En cas d'arrêt respiratoire, pratiquer la respiration artificielle. Obtenir immédiatement des soins médicaux. En cas d'ingestion si la victime est consciente, faire vomir immédiatement en donnant 2 verres d'eau et en insérant un doigt à l'arrière-gorge. Obtenir des soins médicaux immédiats. Ne rien faire avaler à une victime inconsciente ou en convulsions.

ATTENTION CE CONTENANT EST DANGEREUX LORSQU'IL EST VIDE. CHAQUE INDICATION SUR LES ÉTIQUETTES DE DANGER DOIVENT ÊTRE OBSERVÉES.

Van Waters & Rogers Ltd.
subsidiary of Univar
9000 Van Horn Way, Richmond, B.C. V6X 1E5

WHMIS 2015

ACETONE / ACÉTONE

Danger

Highly flammable liquid and vapour.

Causes serious eye irritation.

May cause drowsiness or dizziness.

Precautions:

Keep away from heat, hot surfaces, open flames, sparks. No smoking.

Keep container tightly closed.

Take precautionary measures against static discharge.

Use only outdoors or in a well-ventilated area.

Wear eye protection, face protection, protective clothing, protective gloves.

Avoid breathing mist, spray, vapours.

IF INHALED: Remove person to fresh air and keep comfortable.

Danger

Liquide et vapeur très inflammable.

Cause une irritation oculaire grave.

Peut provoquer la somnolence ou le vertige.

Conseils:

Tenir à l'écart de la chaleur, des surfaces chaudes, flammes et étincelles. Ne pas fumer.

Garder le récipient bien fermé.

Protéger contre les décharges électrostatiques.

Utiliser uniquement à l'extérieur ou dans un endroit bien aéré.

Porter des lunettes de protection, appareil de protection du visage, et des vêtements et gants de protection.

Éviter de respirer la buée, l'aérosol et les vapeurs.

EN CAS D'INHALATION: Transporter la personne contaminée à l'air frais et la garder confortable.

Rappter Chemicals Ltd., 1234 Jurassic Court, Moose Jaw, SK, S6H 3J8

Workplace Labels

A workplace label gives you the following information about a hazardous product:

- The product identifier (name)
- Safe handling information
- A reference to the SDS

Workplace labels may include pictograms or other information from the supplier.

Format

The format for workplace labels is flexible. For example:

- The information can be written directly onto the container using a permanent marker
- The working and language(s) used can be chosen to fit your workplace.

Example of a workplace label

When workplace labels are needed

- A workplace label is needed in the following cases:
- A hazardous product is decanted (transferred or poured) into another container
- A supplier label becomes lost or unreadable

In general, your **employer is responsible** for providing workplace labels. Your employer must also make sure that all labels at your workplace are readable and that they are replaced if damaged.

Exceptions for decanted products

Workplace labels are not needed in two specific cases.

The first case is when a hazardous product is decanted from a container that has a supplier label or workplace label on it into another container and:

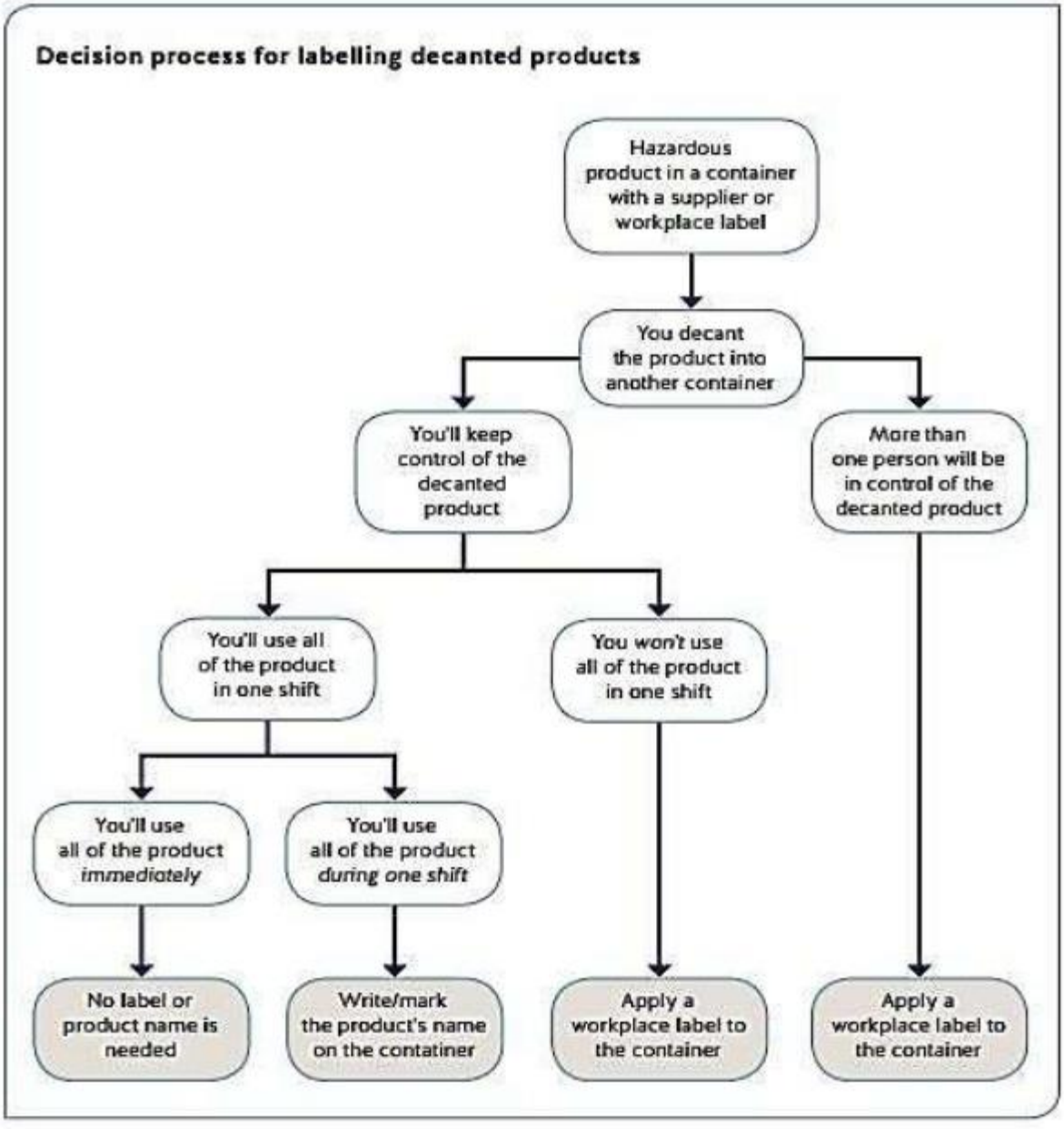
- The decanted product stays in control of the person who decanted it, and
- The decanted product's name (product identifier) is marked on the container, and
- All of the decanted product will be used during that same shift.

For example, you pour a hazardous product into a container (spray bottle, bucket, jar) you write the product's name on the container, you'll be the only person who will use the product and your use it all during that shift, then you don't need to apply a workplace label.

The second case is when you'll use the decanted product immediately and completely. In this situation, you don't ned to apply a workplace label or write the product's name on the container.

**Note – your employer may have rules about labelling that you must follow that go beyond what is required under WHMIS.

The following flowchart will walk you through the decision process for workplace labeling.



Other means of identification

In some cases, a WHMIS label can also be a mark, sign, stamp sticker, seal, ticket, tag or wrapper. It can be attached, imprinted, stenciled or embossed on the hazardous product or its container. If these other systems are used in your workplace, your employer must make sure you are trained to identify them.

Examples of cases where these other systems may be used, and some exceptions allowed include:

Bulk shipments – there is a labelling exemption for products sold without packaging.

Small capacity containers, 100m or less – no precautionary or hazardous statement are needed on the label.

Small capacity containers, 3ml or less – the label must be durable and readable but can be removed for ease of use.

Piping systems and vessels – labels, placards, colour coding, etc. is allowed.

Laboratory samples – modified supplier labels are permitted.

What You Should Do When Using a Hazardous Product

As a worker using a hazardous product, you should do the following

1. Always check to see if there is a label on the product before you use it
2. Read, understand and follow the instructions on the label and SDS and follow any education, instructions and training your employer provides.
3. Ask your supervisor if you are not sure about how to use or store a product.
4. Ask for a new label when you can't see or read the old one properly
5. Do not use a product that is not labelled or if the label is unreadable. Ask your supervisor for help.

5.Safety Data Sheets (SDSs)

What's New

SDS replaces MSDS

Standard 16-section format.

New information requirements (WHMIS classification, hazard statements and other label elements in Section 2).

SDSs must be accurate at the time of sale or import for each sale or import.

SDSs need to be updated when significant new information becomes available.

About Safety Data Sheets (SDS)

Safety data sheets (SDSs) are documents that provide information about hazardous products and advice about safety precautions.

An SDS tells you:

- The hazards of a product
- How to use the product safely
- What to expect if you don't follow the advice
- How to recognize symptoms of exposure
- Safe handling and emergency procedures

The suppliers of products usually obtain or prepare the SDSs. In some cases, and employer may need to prepare and SDS (for example, when the product is produced and used only in that workplace).

In general, your employer needs to make sure that no SDS is more than three yeas old. However, there are some exceptions to this rule. For example, if an up to date SDS is unavailable, your employer may need to get written confirmation from the suppler that the SDS hasn't changed.

Under WHMIS 2015, every hazardous product that is used, handled or stored in a workplace must have an SDS.

Uses of an SDS

- A source of detailed information on the hazards of a hazardous product
- An important resource for developing safe work procedures and control measures
- A key part of worker education and training

Format and information required

WHMIS 2015 requires a standard 16-section SDS. All information on the SDS must appear in the order shown below.

The table below gives an overview of the information provided in each section of the SDS

Table 6. Overview of information required in each section of an SDS (on next 3 pages)

SDS Section and Heading		Specific Information Elements
1	Identification	• Product identifier (e.g. Product name) • Recommended use • Restrictions on use • Canadian supplier identifier ○ Name, full address and phone number(s) • Emergency telephone number

2	Hazard identification	• Hazard classification (class, category or subcategory)
		• Label elements:
		  ○ Symbol (image) or the name of the symbol (e.g., flame, skull and crossbones)
		  ○ Signal word
		  ○ Hazard statement(s)
		  ○ Precautionary statement(s)
		• Other hazards which do not result in classification (e.g., molten metal hazard)

3	Composition/Information on ingredients	• When a hazardous product is a material or substance:
		  ○ Chemical name
		  ○ Common name and synonyms
		  ○ Chemical Abstract Service (CAS) registry number and any unique identifiers
		  ○ Chemical name of impurities, stabilizing solvents and/or additives*
		• For each material or substance in a mixture that is classified in a health hazard class:
		  ○ Chemical name
		  ○ Common name and synonyms
		  ○ CAS registry number and any unique identifiers
		  ○ Concentration
		
		NOTE: Confidential business information rules can apply

4	First-aid measures	• First-aid measures by route of exposure:
		  ○ Inhalation
		  ○ Skin contact
		  ○ Eye contact
		  ○ Ingestion
		• Most important symptoms and effects (acute or delayed)
		• Immediate medical attention and special treatment, if necessary

5	Fire-fighting measures	• Suitable and unsuitable extinguishing media • Specific hazards arising from the hazardous product (e.g., hazardous combustion products) • Special protective equipment and precautions for fire-fighters

6	Accidental release measures	• Personal precautions, protective equipment and emergency procedures • Methods and materials for containment and cleaning up
7	Handling and storage	• Precautions for safe handling (PPE) • Conditions for safe storage (including incompatible materials)
8	Exposure controls/ Personal protection	• Control parameters, including occupational exposure guidelines or biological exposure limits and the source of those values • Appropriate engineering controls • Individual protection measures (PPE)
9	Physical and chemical properties	• Appearance (physical state, colour, etc.) • Odour • Odour threshold • pH • Melting point/Freezing point • Initial boiling point/boiling range • Flash point • Evaporation rate • Flammability (solid; gas) • Lower flammable/explosive limit • Upper flammable/explosive limit • Vapour pressure • Vapour density • Relative density • Solubility • Partition coefficient - n-octanol/water • Auto-ignition temperature • Decomposition temperature • Viscosity
10	Stability and reactivity	• Reactivity • Chemical stability • Possibility of hazardous reactions • Conditions to avoid (e.g., static discharge, shock, or vibration) • Incompatible materials • Hazardous decomposition products

11	Toxicological information	Description of the various toxic health effects and the data used to identify those effects, including: • Information on the likely routes of exposure (inhalation, ingestion, skin and eye contact) • Symptoms related to the physical, chemical and toxicological characteristics • Delayed and immediate effects, and chronic effects from short-term and long-term exposure • Numerical measures of toxicity, including acute toxicity estimates (ATEs)
12	Ecological information***	• Ecotoxicity • Persistence and degradability • Bioaccumulative potential • Mobility in soil • Other adverse effects
13	Disposal considerations***	Information on safe handling for disposal and methods of disposal, including any contaminated packaging
14	Transport information***	• UN number • UN proper shipping name • Transport hazard class(es) • Packing group • Environmental hazards • Transport in bulk, if applicable • Special precautions
15	Regulatory information***	Safety, health and environmental regulations specific to the product
16	Other information	Date of the latest revision of the SDS

***Sections 12 to 15 require the headings to be present, but under Canadian regulations, the supplier has the option to not provide information in these sections.

Why SDSs can be difficult to understand

SDSs are complex and technical. They are written for many different audiences, including health and safety professionals, employers, supervisors, nurses, doctors, emergency responders, and workers like you.

To make sure that SDS users can quickly find the information they need, information directed toward different users will be listed in specific sections. Having a set format makes it easier to find the information you need on every SDS.

However, you may find some of the information on the SDS difficult to understand. Your employer needs to be able to explain the content of each SDS to you so that you can work safely with or near hazardous products.

When you should use SDSs

Always be familiar with the hazards of a product **before** you start using it.

- Look at an SDS and match the name of the product on the container to the one on the SDS (Section 1)
- Know the hazards (Section 2)
- Understand safe handling and storage instructions (Section 7)
- Understand what to do in an emergency (Section 4, 5 & 6)

You can think of the SDS as having four main purposes. It provides information on the following:

1. Identification - for the product and supplier
2. Hazards – physical (fire and reactivity) and health
3. Prevention – steps you can take to work safely and reduce or prevent exposure
4. Response – what to do in various emergencies (first aid, a fire or spill)

A few things to make sure you know

- Make sure you use the product in the way the manufacture intended. Otherwise, the advice provided on the SDS and label may not apply or the safety steps listed may not work. Section 1 of the SDS should describe the typical use of the product and may state restrictions. If the way you use the product does not match the SDS, ask your supervisor or safety professional for advice.
- Section 2 will sum up the hazards of the product, precautions to take and what to do in an emergency. But the SDS may not be specific about the safe work procedures needed for your workplace. Ask your supervisor for more information. These decisions may require the help of a safety professional of someone with chemical safety knowledge.

MSDS headings vs. SDS headings

The table below compares the section headings of a sample MSDS against the headings of an SDS. Note that there was no set MSDS format but the SDS format is standardized.

Material Safety Data Sheet WHMIS 1988	Safety Data Sheet for WHMIS 2015
I. Product identification	1. Identification
II. Hazardous Ingredients	2. Hazard identification
III. Physical Data	3. Composition/Information on ingredients
IV. Fire & Explosion Hazard Data	4. First-aid measures
V. Toxicological Properties	5. Fire-fighting measures
VI. First Aid Measures	6. Accidental release measures
VII. Reactivity Data	7. Handling and storage
VIII. Preventive Measures	8. Exposure controls/Personal protection
IX. Preparation Information	9. Physical and chemical properties
	10. Stability and reactivity
	11. Toxicological information
	12. Ecological information
	13. Disposal considerations
	14. Transport information
	15. Regulatory information
	16. Other information

Looking beyond and SDS for more information

An SDS may not contain all the information you need. A lot of health hazard information, for example is written in general terms. And SDSs are often written for many different uses of products. So the handling and safety precautions may not be specific to your workplace.

The following people or organizations should be able to help you find more information you need:

- Your health and safety committee or representative
- A health and safety specialist
- An occupational health nurses
- Your family doctors
- Your supervisor
- Your employers
- Supplier

Confidential business information

Confidential business information (CBI) refers to specific product information that suppliers are permitted to withhold from an SDDS or label for a period of three years. Under WHMIS, a supplier can make a request to Health Canada to protect certain information that gives a company a business advantage over competitors. Crucial information such as health hazards may never be withheld.

Here is a quick summary of how CBI works:

- Suppliers may apply for confidential business information protection to Health Canada
- An approved claim is valid for three years
- Protected trade information is only released to health or safety professionals in the event of an emergency.
- Health hazard information must be shown on the SDS.

6.Putting WHMIS into Action

WHMIS Program

If your workplace uses hazardous products, a WHMIS program must be in place. To put a WHMIS program in place, your employer needs to make use of supplier labels and SDDSs.

Your employer also needs to use their own knowledge of the hazards of products and their use in the workplace. This knowledge should take into account factors such as work processes, control measures, and work locations. For example, the hazards of spray painting with a hazardous product inside a confined space are very different than the hazards of hand painting the same product outdoors.

Based on all this information, your employer must develop exposure control plans when required and written safe work procedures that ensure your health and safety. An exposure control plan (ECP) sets out a detailed approach to protecting workers from harmful exposures to certain substances and under some conditions, for all other hazardous products.

Your employer must also education you about the hazards and train you in safe work procedures.

Employer Responsibilities for A WHMIS Program

- Assign responsibility
- Establish an inventory of hazardous products
- Meet SDS and label requirements
- Establish workplace controls
- Establish emergency procedures
- Provide worker education and training
- Evaluate the WHMIS program

Education and Training

Your employer is responsible for education you about WHMIS and training you on safe work procedures.

Who should Receive Education and Training?

As a worker, you must be educated and training, so you understand the hazards and kniw how to work safely with hazardous products.

If you work with hazardous products or may be exposed to hazardous products as part of your work activities, you must learn about the hazardous information for that product. The hazard information should include the information received from the supplier. If should also include any other information that your employer is aware of about the use, storage or handling of each product.

For instance, you will receive this education and training if more than one of the following applies:

- You may be exposed to hazardous products due to your work activies
- You use, store, handle or dispose of hazardous product.
- You supervise, manage other workers who may be exposed, or use, store, handle or dispose of hazardous product.
- You are involved in emergency response.

Who Should Provide Education and Training?

Under WHMIS, your employer is responsible for education and training. WHMIS outlines those minimum requirements. Your employer may provide the education and training, or it may be provided by a qualified person or agency (such as Lifesaver 101) chosen by your employer. Regardless of who delivers the training and education, employers remain legally responsible to ensure the protection of workers.

Topics to be Covered

Examples of topics that should be covered during education and training should include the following:

- The information on both supplier labels and workplace labels and what this information means
- The information on safety data sheets (SDS) and what that information means
- The procedures required for safe use, handling and disposal of hazardous product
- Any other information required when the product is in a pipe, piping system, vessel, tank, car, etc.
- Procedures for you to follow if the hazardous product may be present in the air and you may be exposed
- All procedures that you may follow in an emergency that involves the hazardous product

Your Responsibilities

As a worker, you must participate in the education and training sessions. You must also follow your employer's safe work procedures

If you have been successfully trained and educated in WHMIS, you must be able to answer these four questions for every hazardous product you work with:

1. What are the hazards of the product?
2. How do I protect myself from the hazard?
3. What do I do in case of an emergency?
4. Where can I get more information?