

# *The Gisborne Group*



## **WHMIS – 2024 ORIENTATION**

# WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS) - 2015

## LEARNING OBJECTIVES

By the end of the presentation you should:

- Understand the basic differences between WHMIS 1988 and WHMIS 2015.
- Recognize the two hazard groups.
- Understand the hazard classes as well as the categories, subcategories, and types associated with each hazard class.
- Learn the pictograms and the information they convey.
- Be able to identify and understand GHS labels.
- Learn the components of Safety Data Sheets (SDS) and how to utilize them for information.

# WHMIS - 2015

## THREE KEY ELEMENTS

- **Labels:** placed on containers to inform workers of the dangers of the products and basic safety procedures.
- **Safety Data Sheet (SDS):** bulletins that provide detailed hazard and precautionary information on the products.
- **Worker Education Program:** provides instruction on hazards, how to work safely with the chemicals, spill cleanup and emergency procedures. Must be specific to the workplace.



# EXCLUSIONS FROM WHMIS

- **Explosives** within the meaning of the *Explosives Act*
- **Cosmetics, food or drugs** covered under the *Food and Drugs Act*
- **Pesticides** within the meaning of the *Pest Control Act*
- **Prescribed substances** covered under the *Atomic Energy Control Act*
- **Consumer products** covered under the *Consumer Product Safety Act*
- **Others:**
  - Wood and wood products
  - Tobacco and tobacco products
  - Manufactured products
  - Hazardous waste

# WHMIS – 2015: PURPOSE

- **WHMIS - 2015** has been implemented across all Provinces and Territories in Canada to reduce the incidence of illness and injury by providing workers with information regarding hazardous material/product employed in Canadian workplaces.
- The program came into effect in July 2015 to replace WHMIS - 1988. This, to more closely align Canadian WHMIS legislation with the Globally Harmonized System (GHS) developed for use with the goal of standardizing the classification, labeling, and safety data sheet information for hazardous products around the globe.
- This presentation is to inform you of what has changed, what remains the same, and the differences with GHS adopted in Canada as WHMIS - 2015.

# WHMIS vs GHS

GHS remains a standard across the globe to classify hazardous material and communicate those hazards worldwide. In Canada however, WHMIS remains the modified Canadian equivalent to GHS.

WHMIS 2015 incorporates the following GHS elements:

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

It is notable that WHMIS retains the classification for biohazardous materials.

# 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
- Limits other employees' exposure to hazardous products

# YOUR RESPONSIBILITIES

Before using any **WHMIS** controlled product, you are responsible to:

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

As a Gisborne employee, you must review the labels for products used at your workplace. Your supervisor is responsible to inform you of any pipes, pumps, or vessels that contain hazardous products and ensure that they are labelled for your safety. A means of identification shall include warning signs, tags, number or colour codes, and suitable drawings or similar labelling systems.



# EMPLOYER & SUPPLIER RESPONSIBILITIES

## Employers are responsible for:

- Ensuring hazardous products are properly labelled in the workplace
- Providing education, instruction and training to employees
- Ensuring SDS's are current and readily available to employees
- Annually reviewing the company WHMIS program with the OH&S Committee
- Periodically evaluating employees' knowledge of the WHMIS program

## Manufacturers, Distributors and Suppliers are responsible for:

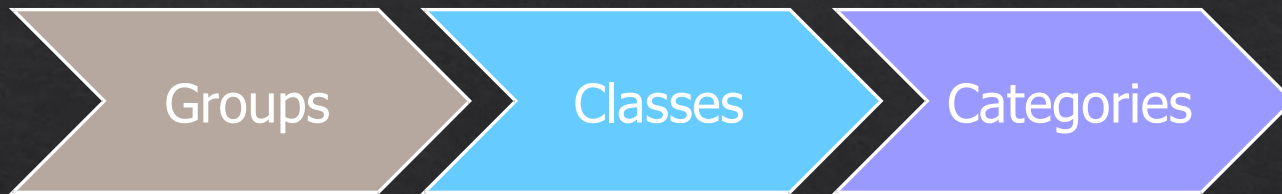
- Classifying products using WHMIS-2015
- Creating supplier labels that meet WHMIS 2015 requirements
- Preparing supplier Safety Data Sheets (SDS's) that meet the requirements under WHMIS 2015 legislation.

**WHMIS**

**HAZARD  
CLASSIFICATION  
SYSTEM**

# HAZARD GROUPS

- Hazards are categorized by groups which are broken down into classes which are further broken down into categories.



- Physical
- Health

- WHMIS 2015 applies to **two major groups** of hazards from the three identified in GHS: **PHYSICAL, and HEALTH**. WHMIS 2015 has not adopted the **ENVIRONMENTAL HAZARD GROUP**.

## Physical Hazards

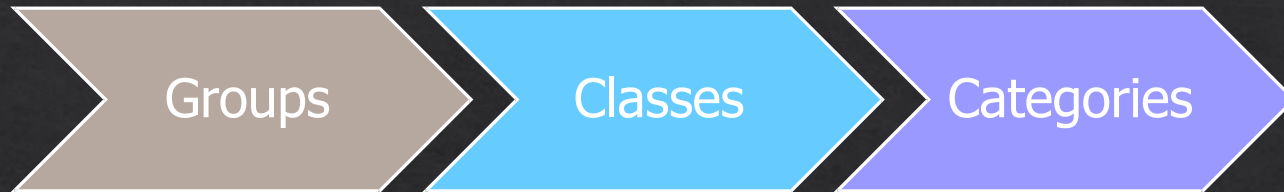
Based on the physical or chemical properties of the product - such as flammability, reactivity, or corrosivity to metals.

## Health Hazards

Based on the ability of the product to cause a health effect - such as eye irritation, respiratory sensitization (may cause allergy or asthma symptoms or breathing difficulties if inhaled), or carcinogenicity (may cause cancer).

# HAZARD CLASSES

Groups are divided into hazard classes: (20) Physical Hazards, (12) Health Hazards



- 20 Physical
- 12 Health

## WHMIS 2015 PHYSICAL HAZARD Classes Include:

- Explosives\*
- Flammable Gases
- Flammable Aerosols
- Oxidizing Gases
- Gases Under Pressure
- Flammable Liquids
- Flammable Solids
- Combustible dusts
- Self-Reactive Substances and Mixtures
- Pyrophoric Liquids
- Pyrophoric Solids
- Pyrophoric Gases
- Self-Heating Substances and Mixtures
- Substances and Mixtures that, in Contact with Water, Emit Flammable Gases
- Oxidizing Liquids
- Oxidizing Solids
- Organic Peroxides
- Corrosives to Metals
- Simple Asphyxiants
- Physical Hazards Not Otherwise Classified

# HAZARD CLASSES

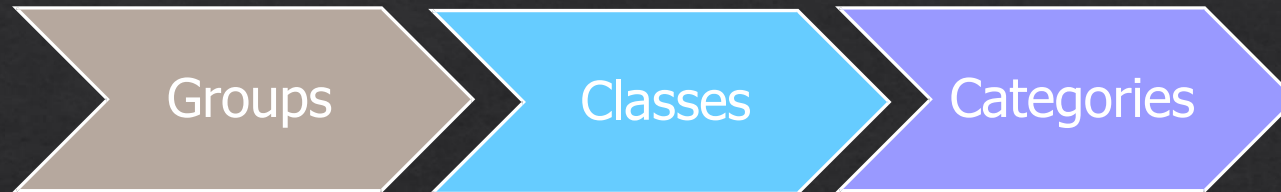
Of note is that WHMIS 2015 has not adopted the explosive hazard class as it is covered by other legislation (The Explosives Act).

## WHMIS 2015 HEALTH HAZARD Classes Include:

- Acute Toxicity
- Skin Corrosion/Irritation
- Serious Eye Damage/Eye 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 Materials
- Health Hazards Not Otherwise Classified

# HAZARD CATEGORIES

Classes may be divided into one or more categories or types:



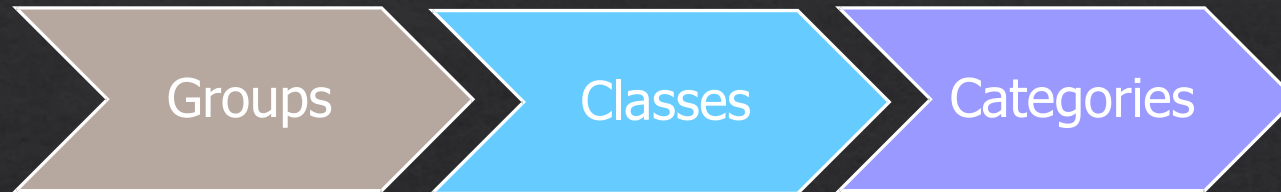
- Categories
- Types

Each Hazard Class may be divided into one or more Categories ranging from (1) through (4). Category 1 is the highest level of hazard category (most hazardous), Category 4 being the least hazardous.



# HAZARD CATEGORIES

Classes may be divided into one or more categories or types.



- Categories
- Types

Categories may also be further sorted into "types" that are assigned an alphabetical letter (e.g., A, B, C, etc.) Type A is the greatest level of hazard type.

Sub-categories may be assigned depending on the Class, which are then identified with a number and a letter (e.g., 1A and 1B).

For example, a product may be classified as follows:

1A – greatest level of hazard

1C – less hazardous than 1A

2 – less hazardous than 1C

**WHMIS**

**PICTOGRAMS**



# WHMIS 2015 PICTOGRAMS

The pictograms (hazard symbols), between WHMIS-1988 and WHMIS-2015 have changed:










WHMIS-1988



WHMIS-2015



# WHMIS 2015 PICTOGRAMS

<b>Health Hazard</b>   May cause or suspected of causing serious health effects	<b>Flame</b>   Fire Hazards	<b>Exclamation Mark</b>   May cause less serious health effects or damage the ozone layer
<b>Gas Cylinder</b>   Gases under pressure	<b>Corrosion</b>   Corrosive damage to metals, as well as skin and eyes	<b>Exploding Bomb</b>   Explosion or reactivity hazards
<b>Flame Over Circle</b>   Oxidizing hazards	<b>Skull and Crossbones</b>   Can cause death or toxicity with short exposure to small amounts	<b>Biohazardous Infectious Material</b>   Organisms or toxins that can cause diseases in people or animals

# GASES UNDER PRESSURE

The gas cylinder pictogram is used for Gases under pressure:

- Compressed gas
- Liquefied gas
- Refrigerated liquefied gas
- Dissolved gas



Gases under pressure may explode if heated and may cause frostbite when in contact with the skin.

# FIRE HAZARDS

The **flame** pictogram is used to indicate materials that can catch fire and burn easily, including flammable gases, aerosols, liquids, solids; pyrophoric liquids, gases and solids, self heating substances and mixtures; substances that produce flammable gases when in contact with water; organic peroxides; and self-reactive substances and mixtures



# OXIDIZING MATERIAL

The **flame over circle** pictogram is used for oxidizing material. Oxidizing material includes those that:

- Release oxygen or other components
- Reacts with flammable materials to increase risks



# EXPLOSIVE OR REACTIVE

The **exploding bomb** pictogram is used to indicate reactive substances and mixtures and is assigned to labels of organic peroxides that are:

- Unstable
- Explosive
- Severely Self-Reactive



# CORROSIVE

The **corrosive** pictogram is used to indicate a substance that can irritate the skin and eyes and damage metals. It is used for hazardous products that are corrosive to metals, cause skin irritation (corrosion), and cause serious eye irritation or damage.



# TOXIC

The **skull and crossbones** pictogram is used for materials that can cause death or toxicity with short exposure to small amounts. This symbol is assigned to material with acute oral, dermal and inhalation toxicity.



Toxicity may occur through single incident contact with skin, inhalation, or ingestion or a combination of these exposures



# HEALTH HAZARDS

The **health hazard** pictogram is used for materials that may cause, or are suspected of causing serious health effects, including:

- Genetic mutations
- Respiratory sensitization
- Cancer
- Lung damage
- Reproductive damage (parent and/or fetus)
- Organ Damage



# ACUTE TOXICITY

The **exclamation mark** pictogram is used for materials that may cause less serious health effects such as acute toxicity (oral, dermal, inhalation), skin corrosion (irritation), eye irritation, skin sensitivity, respiratory damage and specific target organ toxicity on single exposure.



# BIOHAZARDOUS

The **biohazardous and infectious materials** pictogram is used to indicate the presence of organisms or toxins that cause disease in humans and animals. The pictogram is used on biohazardous infectious materials.



# ENVIRONMENTAL HAZARD CLASS

Under GHS, some products shipped to Canada may have a GHS Environmental Hazard Class pictogram indicated on the WHMIS label.

This Hazard Class is **NOT INCLUDED** in the Canadian WHMIS Legislation.

Understandably however, all workers should know what the pictogram means when indicated on a WHMIS label or in an SDS.



**WHMIS**

**SIGNAL WORDS  
&  
HAZARD  
STATEMENTS**

# SIGNAL WORDS & HAZARD STATEMENTS

There are two **SIGNAL WORDS**:

- **DANGER** (higher-level hazards)
- **WARNING** (moderate-level hazards)

**HAZARD STATEMENTS** describe the nature and degree of the hazard:  
Examples include the following:

- Extremely Flammable Gas
- Causes Serious Eye Irritation
- Fatal if Swallowed



Assigned pictograms, signal words and hazard statements will be grouped together on a supplier label to ensure that workers understand the risk associated with the use of the controlled product.

**WHMIS**

**LABELS**

# WHMIS LABELS

THERE TWO KINDS OF LABELS - **SUPPLIER** AND **WORKPLACE**

## SUPPLIER LABELS

Prepared and provided  
by the supplier

**E-Z Clean**



**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.

**IF ON SKIN:** Wash with plenty of soap and water.  
**If skin irritation occurs:** Get medical advice/attention.  
Take off contaminated clothing and wash before reuse.

**IF SWALLOWED:** Immediately call a POISON CENTER or  
doctor/physician. Rinse mouth.

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

ABC Chemical Co., 123 Anywhere St., (123) 456-7890

## WORKPLACE LABELS

Developed and used in  
the workplace

**ACETONE**

No smoking, sparks, or flames  
Wear eye, face, and hand protection  
Use in well ventilated area, or wear NIOSH approved  
respirator with organic vapour cartridges

**Safety Data Sheet Available**



# WHMIS LABELS



## SUPPLIER LABELS

Must be bilingual (English/French), easy to read and durable. The pictograms, signal word, and hazard statement must be grouped together on a supplier label

Each label must contain:

1. Product Identifier
2. Hazard Symbols (pictograms)
3. Signal Word
4. Hazard Statements
5. Precautionary Statements
6. Supplier Identifier

**1 Product K1 / Produit K1**

**2**  

**Danger** **3** Fatal if swallowed. **4** 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. **5**

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. **6**

**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.

ABC Chemical Co., 123 rue Anywhere St., Mytown, ON NON ONO (123) 456-7890

# WORKPLACE LABELS

## Workplace labels are applied to:

- Secondary containers
- Containers of products received in bulk
- Employer-produced products
- Containers with lost or defaced supplier labels

## A Workplace label MUST contain:

1. The Product Name
2. Precautionary Statements (Safe Handling Information)
3. A Reference to Safety Data Sheet

# ALTERNATIVE LABELS

**Where a hazardous product is contained or transferred in the following:**

- A tube, pipe, or piping systems including valves and fittings,
- A process or reaction tank or vessel,
- A mobile tank car, tanker truck or cart, ore car, conveyor belt or similar conveyance.

A suitable label, placard, or colour-coding identification is considered acceptable as long as workers are trained in the safe use, storage, and handling of the product and the WHMIS information specific to that material is readily available to workers.

**WHMIS**

**SAFETY DATA  
SHEETS**

# SAFETY DATA SHEETS

A Safety Data Sheet is a document with **16 SECTIONS** that must accompany each hazardous product. Safety Data Sheets must be Bilingual, or have separate English and French copies.

Safety Data Sheets must contain detailed information on:

- Controls (protection from hazards)
- Safe handling
- Safe use
- Storage
- Emergency procedures

An SDS must be updated when a supplier becomes aware of significant new data regarding the product. Any person using a controlled product is responsible for reading the applicable SDS for the safe use of the product.

# SAFETY DATA SHEETS

Some sections of a Safety Data Sheet may not apply to the product in question or be exempt under Canadian regulations (Ecological information for example). Where information for any section is either **not available** or **not applicable**, the words must be typed in full.

Safety Data Sheets must contain detailed information on:

- Controls (protection from hazards)
- Safe handling
- Safe use
- Storage
- Emergency procedures

# SAFETY DATA SHEETS

## THE 16 SECTIONS OF AN SDS INCLUDE THE FOLLOWING:

1. Product Identifier
2. Hazard Identification (E.G., Label Elements)
3. Composition/Information on Ingredients
4. First-Aid Measures
5. Fire-Fighting Measures
6. Accidental Release Measures
7. Handling and Storage
8. Exposure Controls / Personal Protection
9. Physical and Chemical Properties
10. Stability and Reactivity
11. Toxicological Information
12. Ecological Information (Optional In Canada)
13. Disposal Considerations (Optional In Canada)
14. Transport Information (Optional In Canada)
15. Regulatory Information (Optional In Canada)
16. Other Information

# SAFETY DATA SHEETS

## SOME SPECIFIC REQUIREMENTS...

**BIOHAZARDOUS MATERIALS** - Must have a modified nine-section SDS with specific information.

Section Headings Include:

1. Infectious agent
2. Hazard identification
3. Dissemination
4. Stability and viability
5. First aid/Medical
6. Laboratory hazard
7. Exposure controls/Personal protection
8. Handling and storage
9. Regulatory and other information






# SAFETY DATA SHEETS

## SOME SPECIFIC REQUIREMENTS...

**SECTION 16 OF EACH SDS** - Must include the issue date and/or the latest revision of the SDS.

16. Other information, including date of preparation or last revision

Issue date	26-October-2016
Revision date	-
Version #	01
HMIS® ratings	Health: 2 Flammability: 3 Physical hazard: 0
NFPA ratings	
Disclaimer	The information in the sheet was written based on the best knowledge and experience currently available. Oatey cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.

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TFP-600 Blazemaster CPVC Cement SDS US  
935557 Version #: 01 Revision date: - Issue date: 26-October-2016 10 / 10

Sections 15 and 16 excerpted from: Oatey 935557 SDS US

**Limited  
Warranty**

For warranty terms and conditions, visit  
[www.tyco-fire.com](http://www.tyco-fire.com).

# KEY POINTS TO CONSIDER

## THERE ARE (3) MAIN WHMIS ELEMENTS:

1. Required Supplier WHMIS labels
2. Accurate and current Supplier Safety Data Sheets (SDS's)
3. The requirement for education, instruction and training in WHMIS-2015

## REMEMBER

- The WHMIS Classification System aids in understanding hazard types and their severity.
- Precautions are based on hazardous product classification
- Pictograms, signal words and hazard statements help us quickly recognize the hazard type.
- It's critically important to read and follow the instructions on the WHMIS labels and SDS's.

**EVERYONE HAS RESPONSIBILITIES UNDER WHMIS, INCLUDING SUPPLIERS, EMPLOYERS AND EMPLOYEES (WORKERS). REMEMBER TO DO YOUR PART FOR YOUR SAFETY AND THAT OF YOUR FELLOW WORKER.**



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