

WHMIS 2015 GHS

X-Ray Associates

Agenda

1. What is WHMIS
2. Labels
3. What is a pictogram
4. Safety Data Sheets (SDSs)
5. Complete Test Questions

What is WHMIS?

- **WHMIS stands for:**
 - *workplace Hazardous Materials Information System*
 - *It is a comprehensive system for providing health and safety information on hazardous products intended for use and storage.*
- Canada has aligned WHMIS with Globally Harmonized System of classification and labeling of chemicals (GHS)
- Our Current classification system is now called WHMIS 2015 GHS. Health Canada is the government body responsible for making the required changes to the overall federal WHMIS related Laws
- In Canada, WHMIS legislation requires that products used in the workplace meeting the criteria to be classified as hazardous products must be labeled.
- These labels are the first alert to the user about the major hazards that may be associated with the product and then will outline the basic precautions of safety steps that should be taken
- **When Did WHMIS 2015 GHS come into affect?**
 - **June 1st 2015**

Labels

Labels: Signal Word

These are words used to indicate the severity of the hazard and alert employees to the potential hazard.

Only 2 signal words will appear:

- **“DANGER”** (more severe hazard)
- **“WARNING”** (less severe hazard)



Not all labels will have a signal word. **Some chemicals are not hazardous enough to require that a signal word appear on the label.**

Labels

- There are two different types of Labels
 1. Supplier Label
 2. Workplace Label

Supplier Label: A supplier label must appear on all hazardous products received at a workplace in Canada

❑ If this Product is always used in the container that it came in with the supplier label intact, no further labeling is required.

❑ A supplier label will always have a cross-hatched border

Supplier Labels

A supplier label contains the following 7 pieces information:

1. PRODUCT NAME

Quick Clean Paint Stripper

2. IDENTIFIER AND RISKS

DANGER: HARMFUL/FLAMMABLE

- Keep away from heat, sparks and flame.
- Avoid contact with eyes and skin.
- Etc.

3. HAZARD SYMBOLS



Class B
Flammable and
Combustible



Class D2
Causing Other
Toxic Effects

WHMIS LABELS

Example Supplier Label

Quick Clean Paint Stripper

<p>DANGER HARMFUL/FLAMMABLE</p> <ul style="list-style-type: none"> • Keep away from heat sparks and flame. • Avoid contact with eyes and skin. • Do not inhale vapors or mist. • Do not swallow. • Harmful if absorbed through the skin. <p>PRECAUTIONS</p> <ul style="list-style-type: none"> • Use in a well ventilated area. • Wear BUTYL RUBBER Respirator • Wear chemical goggles and resistant gloves. • Wash thoroughly after handling. • Use in a well ventilated area <p>FIRST AID</p> <ul style="list-style-type: none"> • Contains METHYLENE CHLORIDE (39%) • If inhaled remove person to fresh air • In case of contact, flush eyes and skin with water for 15 minutes. • If swallowed, induce vomiting. • Get medical attention immediately 	<p>DANGER NOCIF/INFLAMMABLE</p> <ul style="list-style-type: none"> • Garder loin de la chaleur, des étincelles et de la flamme. • Éviter tout contact avec les yeux et la peau. • Ne pas respirer les vapeurs. • Ne pas absorber. • Nocif, si absorbé par la peau. <p>PRÉCAUTIONS</p> <ul style="list-style-type: none"> • Porter des lunettes protections et des gants résistants. • Se laver minutieusement les mains après usage. • Garder le contenant bien fermé. <p>PREMIERS SOINS</p> <ul style="list-style-type: none"> • En cas de contact avec les yeux ou la peau, laver à grande eau pendant 15 minutes. • Si avalé, provoque le vomissement. • Obtenir des soins médicaux immédiats.
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SEE MATERIAL SAFETY DATA SHEET
VOIR FICHE SIGNALÉTIQUE

Acme Paint Company
Ottawa, Ontario (613) 123-4567

Supplier Labels

Supplier labels also contain the following:

4. PRECAUTIONS

- Use in a well ventilated area
- Wear chemical goggles and resistant gloves.
- Wash thoroughly after handling.
- Etc.

5. FIRST AID

- If inhaled, remove person to fresh air
- If swallowed, induce vomiting.
- Etc.

6. REFERENCE TO MSDS

SEE MATERIAL SAFETY DATA SHEET

7. SUPPLIER INFORMATION

Acme Paint Company, Ottawa, Ontario (613) 123-4567

WHMIS LABELS

Example Supplier Label

Quick Clean Paint Stripper

<p>DANGER HARMFUL/FLAMMABLE</p> <ul style="list-style-type: none"> • Keep away from heat sparks and flame. • Avoid contact with eyes and skin. • Do not inhale vapors or mist. • Do not swallow. • Harmful if absorbed through the skin. <p>PRECAUTIONS</p> <ul style="list-style-type: none"> • Use in a well ventilated area. • Wear BUTYL RUBBER Respirator • Wear chemical goggles and resistant gloves. • Wash thoroughly after handling. • Use in a well ventilated area <p>FIRST AID</p> <ul style="list-style-type: none"> • Contains METHYLENE CHLORIDE (39%) • If inhaled remove person to fresh air • In case of contact, flush eyes and skin with water for 15 minutes. • If swallowed, induce vomiting. • Get medical attention immediately 	<p>DANGER NOCIF/INFLAMMABLE</p> <ul style="list-style-type: none"> • Garder loin de la chaleur, des étincelles et de la flamme. • Éviter tout contact avec les yeux et la peau. • Ne pas respirer les vapeurs. • Ne pas absorber. • Nocif, si absorbé par la peau. <p>PRÉCAUTIONS</p> <ul style="list-style-type: none"> • Porter des lunettes protections et des gants résistants. • Se laver minutieusement les mains après usage. • Garder le contenant bien fermé. <p>PREMIERS SOINS</p> <ul style="list-style-type: none"> • En cas de contact avec les yeux ou la peau, laver à grande eau pendant 15 minutes. • Si avalé, provoque le vomissement. • Obtenir des soins médicaux immédiats.
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Workplace Label

A WORKPLACE LABEL IS REQUIRED:

When a hazardous products is produced at the workplace and used at the workplace.

A hazardous products is decanted into another container

A supplier label becomes lost or unreadable

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Workplace Labels

If a controlled product is always used in its original container with a supplier label, then there is no need for any additional labels.

In some cases, however, you may want to pour or move the contents into a different container. A **workplace label** is then required.

A workplace label should also be used if the original supplier label becomes illegible or damaged.

WHMIS LABELS



Workplace Label Information

Should a product need to be decanted, relabeled or is reproduced

it is necessary for the following three items to be placed on the container.

1. Name of the Product
2. Safe handling information
3. A reference to the SDS (Safety Data Sheet)

Workplace Labels

A workplace label is designed to be made at the workplace and contains less information than a supplier label.

A workplace label can be written in English or French or the most common language used at the workplace. Also, no cross-hatch border is required.

It can be in any colour so long as it is easily visible.

WHMIS LABELS

Example Workplace Label



Workplace Label Information

There are only 3 pieces of information required on a workplace label:

1. The name of the product
2. Safe handling information
3. A reference to the MSDS

Example Workplace Label













What is a pictogram

- Pictograms are graphic images that immediately show the user of a hazardous product what type of hazard is present.
- With a quick glance, you can see, for example, that the product is flammable, or if it might be a health hazard.
- Most pictograms have a distinctive red "square set on one of its points" border. Inside this border is a symbol that represents the potential hazard (e.g., fire, health hazard, corrosive, etc.). Together, the symbol and the border are referred to as a pictogram.

What is a pictogram

- Pictograms are assigned to specific hazard classes or categories.
- The graphic below shows hazard pictograms. The bold type is the name given to the pictogram; the words in the brackets describe the hazard.

Pictogram

	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.

What pictograms will be used with WHMIS 2015

The following pictograms will be associated with these 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 following pictograms will be associated with these hazard classes and categories.



- 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 following pictograms will be associated with these hazard classes and categories.



- 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 Explosive pictogram are used for Self-reactive substances and mixtures (Type B) and Organic peroxides (Type B)
- **NOTE:** Physical Hazards Not Otherwise Classified and Health Hazards Not Otherwise Classified classes are required to have a GHS pictogram that is appropriate to the hazard identified.

Do all Hazard Classes and categories require a pictogram?

■ No

- There are hazardous products that meet the criteria for a hazard class or category, but these classes and categories do not require a pictogram.

The product label and Section 2 (Hazards Identification) of the SDS still require the signal word, hazard statement(s), and other required label elements.

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

Safety Data Sheet

What Does SDS mean?

- Safety Data Sheets (SDS)
- Safety Data Sheets (SDSs) are summary documents that provide information about the hazards of a product and advice about safety precautions.
- SDSs are usually written by the manufacturer or supplier of the product.
 - *In some circumstances, an employer may be required to prepare an SDS (e.g., when the product is produced and used exclusively in that workplace).*
- 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.

Do I need an SDS?

- ✓ Every product that is classified as a “hazardous product” under WHMIS that is intended for use, handling or storage in a workplace in Canada must have an SDS.

What information is on the SDS

The Hazardous Products Regulations specifies the sections and content for the SDS, as follows:

SDS SECTION AND HEADING	SPECIFIC INFORMATION ELEMENTS
1. IDENTIFICATION	<ul style="list-style-type: none">•Product identifier (e.g. Product name)•Other means of identification (e.g. product family, synonyms, etc.)•Recommended use•Restrictions on use•Canadian supplier identifier+•Name, full address and phone number(s)•Emergency telephone number and any restrictions on the use of that number, if applicable
2. Hazard Identification	<ul style="list-style-type: none">•Hazard classification (class, category) of substance or mixture or a description of the identified hazard for Physical or Health Hazards Not Otherwise Classified•Label elements:<ul style="list-style-type: none">○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)

The Hazardous Products Regulations specifies the sections and content for the SDS, as follows:

SDS Section and Heading	Specific Information Elements
3. Composition/Information on ingredients	<ul style="list-style-type: none">•When a hazardous product is a material or substance:<ul style="list-style-type: none">○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**:<ul style="list-style-type: none">○Chemical name○Common name and synonyms○CAS registry number and any unique identifiers○Concentration <p>NOTE: Confidential business information rules can apply</p>
4. First-aid Measures	<ul style="list-style-type: none">•First-aid measures by route of exposure:<ul style="list-style-type: none">○Inhalation○Skin contact○Eye contact○Ingestion•Most important symptoms and effects (acute or delayed)•Immediate medical attention and special treatment, if necessary

The Hazardous Products Regulations specifies the sections and content for the SDS, as follows:

SDS Section and Heading	Specific Information Elements
5. Fire-fighting Measures	<ul style="list-style-type: none">•Suitable extinguishing media•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	<ul style="list-style-type: none">•Personal precautions, protective equipment and emergency procedures•Methods and materials for containment and cleaning up
7. Handling and Storage	<ul style="list-style-type: none">•Precautions for safe handlingConditions for safe storage (including incompatible materials)
8. Exposure controls/ Personal Protection	<ul style="list-style-type: none">•Control parameters, including occupational exposure guidelines or biological exposure limits and the source of those values•Appropriate engineering controls•Individual protection measures (e.g. personal protective equipment)

The Hazardous Products Regulations specifies the sections and content for the SDS, as follows:

SDS Section and Heading	Specific Information Elements
9. Physical and Chemical Properties	<ul style="list-style-type: none">•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	<ul style="list-style-type: none">•Reactivity•Chemical stability•Possibility of hazardous reactions•Conditions to avoid (e.g., static discharge, shock, or vibration)•Incompatible materials•Hazardous decomposition products

The Hazardous Products Regulations specifies the sections and content for the SDS, as follows:

SDS Section and Heading	Specific Information Elements
11. Toxicological information	<p>Concise but complete description of the various toxic health effects and the data used to identify those effects, including:</p> <ul style="list-style-type: none">•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
12. Ecological information***	<ul style="list-style-type: none">•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

The Hazardous Products Regulations specifies the sections and content for the SDS, as follows

SDS Section and Heading	Specific Information Elements
14. Transport Information ***	<ul style="list-style-type: none">•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

Please Locate and become familiar with the WHMIS information Binder at each location you work.

Congratulations on completing WHMIS 2015
GHS Training