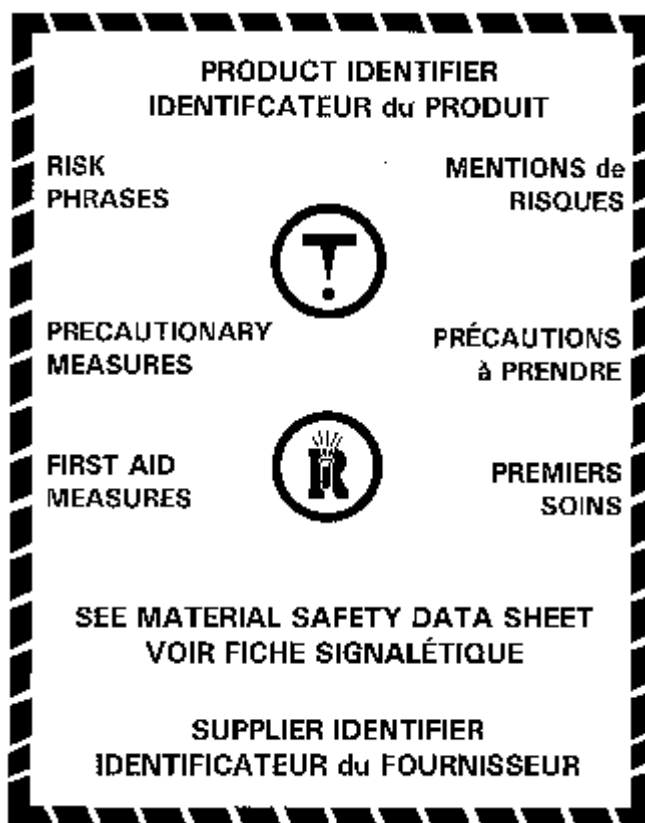


Hazard Identification Systems

Whether at home or in the work place, we use chemicals everyday that can be potentially harmful to us if used incorrectly. Correctly identifying what these hazards are is essential to the safe use of these products. There are three methods of identifying hazardous materials that you need to be aware of.

WHMIS is Canada's national system for identifying hazardous materials. This system uses a set of eight symbols to designate different classes of hazardous materials. It is the common type of safety labeling used in all industries and government worksites as mandated by federal regulations.

Atypical label for a container looks like:



The “Risk Phrases” and “Precautionary Measures” are also standardized and come from a common databank. This ensures that all people understand the associated risks of the product regardless of where in Canada they live or move to.

In addition to the WHMIS labels, a place of business must also keep a Material Safety Data Sheet (MSDS) for each hazardous product that they keep on site. The MSDS for a chemical includes all of the pertinent information, such as chemical makeup, supplier name, first aid measures, and safety precautions.

WHMIS Symbols

	Gas Cylinder This class includes <u>compressed</u> gases, <u>dissolved</u> gases, and gases <u>liquefied</u> by compression or <u>refrigeration</u>.
	<u>Exploding Bomb</u> for <u>explosions</u> or <u>reactivity</u> hazards under <u>normal</u> working conditions.
	Flame This class includes any substance or mixture (solid, liquid, aerosol or gas) that may catch fire in the <u>presence</u> of a <u>spark</u> or <u>open</u> flame. They may also emit a flammable gas in <u>contact with water</u>. It also includes any self-reactive or self-heating
	<u>Corrosion</u> This class includes caustic and acid materials that can <u>eat through</u> metals or cause <u>serious irritation</u> or damage to <u>eyes</u> or <u>skin</u>. Examples: sodium hydroxide, hydrochloric acid, nitric acid
	Exclamation Mark may cause less serious health effects such as: - <u>irritation (to eyes + skin)</u> - skin sensitivity - single exposure specific target organ toxicity - drowsiness/dizziness or respiratory irritation or <u>damage to the ozone (O₃)</u>
	<u>Environment</u> may cause both short and long-term damage to the aquatic environment



Health Hazard

These materials can cause or are suspected of causing serious health problems. They may be life-threatening and have serious long-term health consequences. As well as less severe but immediate reactions in a person who is repeatedly exposed to small amounts.



Flame over Circle

These materials increase the risk of fire if they come in contact with flammable or combustible materials.



Skull & Crossbones

can cause death or toxicity with short exposure to small amounts

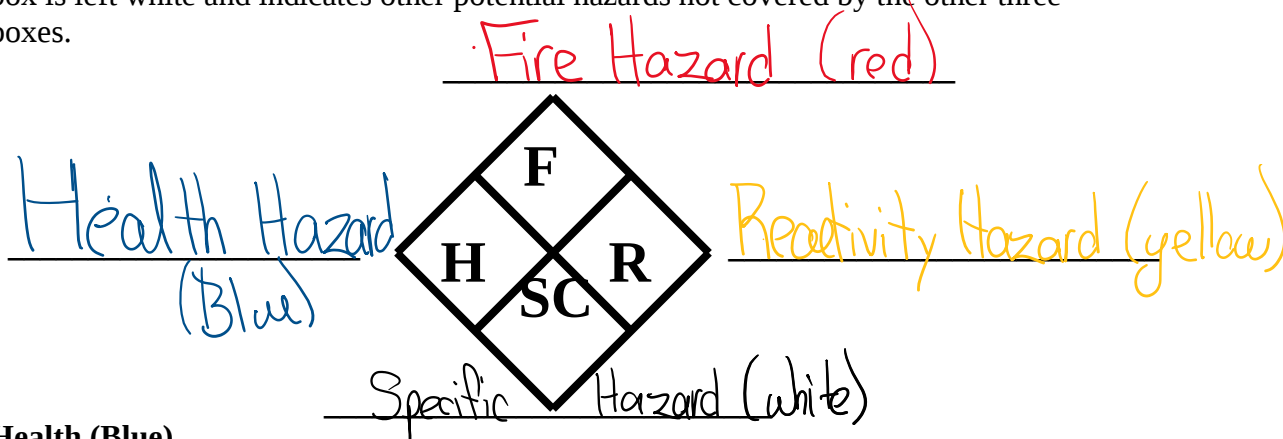


Biohazardous infectious materials

- for organisms or toxins that can cause diseases in people or animals

Hazard Identification System (HIS)

This system uses a colour-coded set of four boxes arranged either as a diamond or as a large box. Three of the boxes are colour-coded for health (blue), flammability (red) and yellow (reactivity), and use a number scale (0-4) to indicate the hazard level. The fourth box is left white and indicates other potential hazards not covered by the other three boxes.



Health (Blue)

- 4 Can cause death or major injury despite medical treatment.
- 3 Can cause serious injury despite medical treatment.
- 2 Can cause injury; requires prompt treatment.
- 1 Can cause irritation if not treated.
- 0 No hazard.

Fire (Red)

- 4 Very flammable gases or very volatile flammable liquids.
- 3 Can be ignited at all normal temperatures.
- 2 Ignites if moderately heated.
- 1 Ignites after considerable preheating.
- 0 Will not burn

Reactivity / Stability (Yellow)

- 4 Readily detonates or explodes.
- 3 Can detonate or explode, but requires a strong initiating force or heating under confinement.
- 2 Normally unstable but will not detonate.
- 1 Normally stable; unstable at high temperature and pressure; reacts with water.
- 0 Normally stable; not reactive with water.

Special Comments (White)

- C May be carcinogenic with chronic exposure.
- SC Suspected carcinogen.
- Exp Risk of explosion.
- W Reacts with water.
- Cor Corrosive.
- Oxy Oxidizing agent.
- T Toxic.

- Pol Polymerizes under normal conditions.

Household Hazardous Products Symbols (HHPS)

This system uses a set of four symbols and two borders to identify a potential danger from either the container or the contents.



Poisonous



Flammable



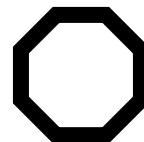
Explosive



Corrosive



Danger posed by Container



Danger posed by content

On many household products, you may see the following combinations.

Symbol	The Danger	Product Example
	This container can <u>explode if heated or punctured</u> . Flying pieces of metal or plastic can cause serious injuries, especially to the eyes.	Chemicals in aerosol containers such as <u>hairspray, deodorant spray, spray paint</u> .
	This product is <u>corrosive</u> . It will burn skin or eyes on contact, or throat and stomach if swallowed.	<u>Strong cleaners (toilet bowl cleaner, oven cleaner)</u> .
	This product is <u>flammable</u> . It, or its fumes, will <u>catch fire easily</u> if it is near heat, flames or sparks.	Products such as <u>gasoline adhesives</u> .



This **product** is poisonous.

Licking, eating, drinking or
sometimes smelling this product will
cause illness or death.

Products such as

windshield washer
fluid and furniture polish.

NAME:

HAZARDOUS IDENTIFICATION SYSTEMS WORKSHEET

Identify the hazards associated with each of the following symbols.

1.		
2.		
3.		
4.		

5.		
6.		
7.		
8.	