

The Workplace Hazardous Materials Information System & WHMIS 2015



A Introductory Resource for Educators

This slideshow is informational only. It is provided for the use of teachers and instructors in secondary and post-secondary schools to introduce students to key principles and practices of WHMIS 2015.

This does not take the place of workplace-based WHMIS education and training, which employers are legally obligated to ensure for workers.

Questions about compliance to WHMIS legislation may be directed to the Nova Scotia OHS Division at ohsdivision@gov.ns.ca, or by calling 1-800-952-2687.

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WHMIS is a Communication System



- WHMIS is Canada's national communication system for the safe handling of chemicals in the workplace.
- WHMIS is about working safely with the many different chemicals found in almost all workplaces!
- WHMIS law includes federal, provincial and territorial legislation.
- In 2015 changes were adopted to WHMIS law. These changes are known as WHMIS 2015.

WHMIS *key principles* are unchanged!

1. Labels

2. Safety Data Sheets

3. Worker Training



WHMIS labels, SDS and training are how we talk and learn about working safely around chemicals at work.

WHMIS 2015



The Globally Harmonized System of Classification & Labelling of Chemicals

Changes for suppliers and users of occupational chemical products include:

- New pictograms to denote hazards.
- New classes and classification rules for chemicals.
- New standardized format for Safety Data Sheets
- New requirements for labels, including:
 - Signal Words
 - Standardized Statements



WHMIS Pictograms

Workplace Hazardous Materials Information System

2015

Flame

Flammable
Self-Reactives
Pyrophoric
Self-Heating
In Contact with Water,
Emits Flammable Gases
Organic Peroxide



Flame over Circle

Oxidizer

Exploding Bomb

Explosive*
Self-Reactives (severe)
Organic Peroxide (severe)



Gas Cylinder

Gas Under Pressure

Corrosion

Serious Eye Damage
Skin Corrosion
Corrosive to Metals



Exclamation Mark

Irritation (skin or eyes)
Skin Sensitization
Acute Toxicity (harmful)
Specific Target Organ
Toxicity
(drowsiness or dizziness,
or respiratory irritation)
Hazardous to the
Ozone Layer*



Environment

Aquatic Toxicity*



Skull and Crossbones

Acute Toxicity
(fatal or toxic)



Biohazardous

Biohazardous Infectious
Materials



Health Hazard

Carcinogenicity
Respiratory Sensitization
Reproductive Toxicity
Specific Target Organ
Toxicity
Germ Cell Mutagenicity
Aspiration Hazard



A GHS pictogram appropriate for the hazard

Physical Hazards Not Otherwise Classified
Health Hazards Not Otherwise Classified

NOTE: No pictogram is assigned to some hazard classes e.g., Combustible Dusts and Simple Asphyxiants, and some less severe hazard categories.

*Not required by WHMIS, but may be used.

- Ten new and new design pictograms that represent 32 hazard classes.
- All provide visual cue to risks of the product.
- Supplier labels must show pictograms.
- Employers may use for workplace labels.

Safety Data Sheets (SDS)

- Formerly *Material Safety Data Sheets* (MSDS)
- New standardized format including content and listing order for 16 required sections
- Suppliers must give to customers at time of sale.
- Show more details than the supplier label.
- *Employers* must ensure SDS are properly maintained and easily accessible at the worksite.
- *Employers* use SDS information to assess risk and determine needed safe work procedures and PPE.

SDS Sections: Content and Order

1. Identification
2. Hazard Identification
3. Composition/Information on Ingredients
4. First Aid Measures
5. Fire Fighting Measures
6. Accidental Release Measures
7. Handling and Storage
8. Exposure Controls and Personal Protection
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'

** Nature and scope of content also influenced by other legislation.*

Labels

Before a chemical product arrives and is accepted at a workplace, the supplier must affix a **supplier label**.

If at the workplace the chemical product is diluted or decanted, the employer must ensure measures are in place for another supplier label or a **workplace label** to be affixed to the new container.



Supplier Labels

Product Identifier

Hazard Pictogram: symbol in square on point

Signal word: "Danger" or "Warning"

Hazard Statements: standardized wording

Precautionary Statements: response, prevention, storage & disposal

Precautionary Statement: first aid & emergency response

Supplier Identifier: name, address, tel. number

Product K1 / Produit K1



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.

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

IF ON SKIN: Wash with plenty of water.
If skin irritation occurs: Get medical advice or attention.
Take off contaminated clothing and wash it before reuse.
IF SWALLOWED: Immediately call a POISON CENTRE or doctor.
Rinse mouth.

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.

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In Canada, must be in French and English.

Workplace Labels

Must be legible, easy to read and show:

1. Product name
2. Safe handling information
(eg. correct PPE, safe use measures)
3. Reference to SDS

Product K-1
Danger Fatal if swallowed. Causes skin & eye irritation. Wear splash glasses and butyl rubber gloves. Wash hands thoroughly after handling.
See SDS for more information

Employers may also add signal words, hazard statements and pictograms.


Signal Words on Labels

- Signal words are a new element of WHMIS 2015
- 'Danger' or 'Warning'
- Show level of severity
- Required for supplier labels and data sheets
- Always placed together with pictogram/s and hazard statements
- Not all provinces require for workplace labels, but is a good practice.

"Danger" →
Used to show the most severe hazards

or

"Warning"
Used to show lower severity hazards.



Only one signal word is displayed. If a product is assigned two, then the signal word "Danger" will be used. If creating a workplace label, use the signal word cited on the supplier label or safety data sheet.

Standardized Statements on Labels

WHMIS 2015 law codifies the use of precautionary and hazard statements for labels.

Product K1 / Produit K1

Pictograms
Signal Word

Hazard Statement
Precautionary Statements

There can be many precautionary statements. Always check the safety data sheet as labels may not list all of them.

Danger
Fatal if swallowed.
Causes skin irritation.

Danger
Mortel en cas d'ingestion.
Provoque une irritation cutanée.

Precautions:
Wear protective gloves.
Wash hands thoroughly after handling.
Do not eat, drink or smoke when using this product.

Conseils :
Porter des gants de protection.
Se laver les mains soigneusement après manipulation.
Ne pas manger, boire ou fumer en manipulant ce produit.

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

Garder sous clé.
Éliminer le contenu/réceptacle conformément aux règlements locaux en vigueur.

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.

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.

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Hazard statements describe the nature of the hazard posed by that product.

Precautionary statements describe how to prevent harmful effects from that product.

Education and Training

Employers must ensure all employees (including managers and supervisors) receive WHMIS education and training that is proper for their job and the chemical products they are working with or around.

WHMIS **education** is foundational in nature and delivered to all workers and managers onsite. The outcome of WHMIS education is to ensure that all workers are aware of and understand the general principles of WHMIS, pictograms, labels and education and training.

WHMIS **training** is detailed and specific to the chemical being used, how it's being used and how a task is being done. It will include safe use, handling, storage, clean-up and disposal of chemical products, proper use of personal protective equipment (PPE,) and emergency and first aid response.

Scope of work determines the levels of education and training needed.

WHMIS 2015: Health and Safety Rights!

Three key worker rights under health and safety law are:

1. The Right to Know
2. The Right to Participate
3. The Right to Refuse

Through WHMIS this means:

1. Workers have the right to know about the hazards of chemical products in workplaces, and how to protect themselves.
2. Workers have the right to participate in WHMIS education and training, and to report WHMIS hazardous situations
3. If not trained for safe use of a chemical product, workers have the right to refuse to work with that product.

Along with our safety rights,



we also have safety responsibilities.

Employer responsibilities include ensuring:

- All chemical products have an MSDS or SDS readily available for all workers and supervisors,
- All supplier and workplace labels are in clear, legible condition,
- Workers and supervisors receive WHMIS education and training that is proper for the work they are doing,
- All chemical product hazards are identified, assessed and controlled with measures that include proper storage and disposal, safe use and work procedures, personal protective equipment, and emergency response.

Worker responsibilities include:

- Engaging in education and training, using information properly and talking to supervisors if the content is not clear.
- Working safely and properly with chemicals; following safe work procedures and using PPE and other controls.
- Reading workplace labels and telling supervisor if the labels aren't legible, or if the wording isn't clear.
- Reporting chemical hazards to supervisors, including lack of information, no or improper PPE, and unclear procedures.
- **Supporting co-workers** to safely work with chemical products, and to report hazards.

Review and wrap up!

- WHMIS is Canada's national communication system for the safe handling of chemicals in the workplace. WHMIS law includes federal, provincial and territorial legislation.
- WHMIS is about working safely with and around the many different chemicals found in almost all workplaces!
- WHMIS 2015 includes new pictograms and phrases, but doesn't change the three key principles of WHMIS:
 - ✓ Presence of supplier and workplace **Labels**
 - ✓ Access to and use of **Safety Data Sheets**
 - ✓ Provision of worker **Education and Training**

WHMIS 2015: References & Resources

- ➔ Canadian Centre for Occupational Health & Safety
- ➔ Safety Branch: NS Labour and Advanced Education
- ➔ Health Canada
- ➔ Workers' Compensation Board of Nova Scotia

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