



WHMIS 2015 AND THE GHS

VIDEO TRANSCRIPT

TRANSCRIPT OF THE VIDEO PROGRAM

WHMIS 2015

© Copyright Safety care. All rights reserved

Canada has incorporated the Workplace Hazardous Materials Information System - WHMIS - with the Globally Harmonized System of Classification and Labelling of Chemicals, or GHS for short. GHS has not replaced WHMIS. Rather, the original WHMIS, which remained virtually unchanged since 1988, has incorporated GHS elements, resulting in new standardized:

- Classification criteria
- Label requirements
- Safety data sheet requirements
-

The modified WHMIS is referred to as WHMIS 2015 or some may call it WHMIS / GHS.

What is the GHS?

Developed at the UN level, the Globally Harmonized System of Classification and Labelling of Chemicals (or GHS for short) aims to develop a single, globally harmonized system to address:

- Classification of chemicals, and
- Hazard Communication, through:
 - Labels, and
 - Safety Data Sheets

The GHS is not a regulation or standard. The GHS document establishes a system of hazard classification and communication. Regulatory bodies in countries that decide to adopt the GHS, do so by adjusting their existing requirements.

The overall strategy is to allow classification and hazard communication elements in existing systems to converge - rather than attempting to roll out a new global system. Thus, many of the elements of the GHS may seem quite familiar to you.

Although GHS implementation is Canada wide, each province or territory may have its own regulations that detail how it is to be applied.

Also, the adoption of the GHS is often accompanied by a transitional period - during which time, GHS compliant Labels and Safety Data Sheets may coexist with those that predate GHS requirements. In Canada, the WHMIS 2015 transitional period is between February 2015 and December 2018.

Classification

WHMIS 2015 aims to provide a logical and comprehensive approach to defining Physical, Health, and Environmental hazards of chemicals.

It is the classification that a chemical receives under the WHMIS that determines the information required on its Labels and Safety Data Sheets.

WHMIS 2015 typically defines hazards by:

- Class, which defines the type of hazard, and
- Category, which indicates a degree of severity - with Category 1 being the most severe.

Under WHMIS, Hazard Classes fall into three groups:

- Physical Hazards,
- Health, Hazards, and
- Environmental Hazards.
-

Not all provinces or Territories have adopted the 'Environmental Hazards' classification. However, you may see the environmental classes listed on labels and Safety Data Sheets. Including information about environmental hazards is allowed by WHMIS 2015.

Physical Hazards tend to relate to physical threat or the potential for destruction. They include such Classes as:

- Flammable Gases (including chemically unstable gases)
- Aerosols
- Oxidizing Gases
- Gases Under Pressure
- Flammable Liquids
- Flammable Solids
- Self-Reactive Substances and mixtures
- Pyrophoric Liquids
- Pyrophoric Solids
- Self-Heating Substances and mixtures
- Substances which, in contact with water, emit flammable gases
- Oxidizing Liquids
- Oxidizing Solids
- Organic Peroxides, and -
- Substances Corrosive to Metals

The GHS also defines an Explosive class. The WHMIS regulations do not

currently include the Explosives hazard class. Explosives are covered by other legislation in Canada.

Health Hazards tend to describe hazards that impact upon health generally, and include Classes for:

- 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, and:
- Aspiration Hazards

Environmental Hazards are hazardous to the general environment, and include:

- Hazardous to the Aquatic Environment, both -
 - Acute, and –
 - Long Term. And -
- Hazardous to the Ozone Layer

Labelling

There are two main types of WHMIS labels: supplier labels, and workplace labels.

A **supplier label** is provided or affixed by the supplier and will appear on all hazardous products received at a workplace in Canada. If the hazardous product is always used in the container with the supplier label, no other label is required.

A **workplace label** is required when:

- a hazardous product is produced at the workplace and used in that workplace,
- a hazardous product is decanted or transferred into another container, or
- a supplier label becomes lost or illegible.

Every combination of class and category classification under WHMIS, requires a unique combination of Label elements, including:

- Pictograms



- Signal Words, and
- Hazard Statements

WHMIS pictograms are recognizable as being in the shape of a square, set on a point. They have a red frame, containing a black symbol, on a white background. The exception is the Biohazardous Infectious Materials pictogram which remains the same as the previous WHMIS standard, being based in a black circle.

There are ten WHMIS pictograms in all, and depending on the hazard, one or several may be present on a label. As a general guide...

This pictogram is used for oxidizers...

This may be used with:

- Flammables
- Self-reactives
- Pyrophorics
- Self-heating substances
- Substances emitting flammable gas, and
- Organic peroxides
-

This particular GHS symbol is not a requirement of WHMIS 2015, but you may see it used on:

- Explosives
- Self-reactives, and
- Organic peroxides

This pictogram is associated with:

- Acute Toxicity (Severe)

This pictogram is used for substances that are:

- Corrosive to metals, or that can cause
- Skin Corrosion, or
- Serious eye damage

This pictogram signifies

- Gases under pressure

This pictogram has a range of applications, including:

- Carcinogenicity
- Respiratory sensitization
- Reproductive toxicity

- Specific target organ toxicity (repeated)
- Germ cell mutagenicity, and
- Aspiration hazards
-

This pictogram indicates Aquatic environmental hazards

This pictogram may also be used to indicate a range of hazards, including:

- Acute Toxicity (harmful)
- Skin/eye irritation
- Skin sensitization
- Specific Target Organ Toxicity (single), and -
- Hazardous to the ozone layer
-

This pictogram signifies Biohazardous Infectious Materials

The pictogram is just one element that may make up a GHS compliant supplier WHMIS label. Other elements - also required by the GHS classification of a chemical may include:

A Product Identifier - which may be the technical name for the chemical, and would generally indicate the chemical identity of the substance.

This identifier should match the SDS accompanying the chemical. For mixtures or alloys, the label may include the chemical identities of all ingredients that contribute to the hazard.

Initial supplier identifier - including the name, address and other contact details of the manufacturer or supplier is another useful label element.

Signal Words are used to indicate the relative level of severity of a hazard. They are:

- DANGER - for more severe hazards, and -
- WARNING - for less severe hazards

Hazard Statements are prescribed statements that describe the nature, and where appropriate - the degree of the hazard.

Precautionary Statements - are intended to prevent improper storage and handling, and to reduce the adverse effects that may result.

Precautionary Statements can cover:

- Prevention
- Response
- Storage, and

- Disposal
- ...or be of a General nature.

Supplemental label information- some supplemental label information is required based on the classification of the product. Labels may also include supplementary information about precautionary actions, hazards not yet included in the GHS, physical state, or route of exposure.

Supplier labels must be in English and French. They may be bilingual, as one label, or available as two labels - one each in English and French.

A workplace label will require the following information:

- Product name
- Safe handling precautions, possibly including pictograms or other supplier label information, and
- A reference to the SDS (if available).

Workplace label requirements fall under your provincial or territorial jurisdiction, or under the Canada Labor Code if you work in a federally regulated workplace. Watch for confirmation, updates, or changes to these requirements when the WHMIS regulations in your jurisdiction are updated.

Safety Data Sheets

Safety Data Sheets, or SDS's, are another important component of hazard communication in the new WHMIS standard.

SDS's, which are still known in some areas as MSDS's, (for Material Safety Data Sheets), are designed to provide comprehensive information about a substance or mixture which is defined as a hazard.

SDS's can be invaluable for providing information about hazards, as well as providing advice about precautions that may need to be undertaken when working with a potentially hazardous chemical or mixture.

Under WHMIS 2015, SDS's use the following 16 section format:

- Identification of the substance or mixture and of the supplier
- Hazards identification
- Composition/information on ingredients
- First aid measures
- Fire fighting measures
- Accidental release measures
- Handling and storage
- Exposure controls / personal protection

- Physical and chemical properties
- Stability and reactivity
- Toxicological information
- Ecological information
- Disposal considerations
- Transport information
- Regulatory information, and
- Other information ...which may include information on preparation and revision of the SDS.

SDS's should be reviewed at regular intervals to make sure the information contained in them is still current.

New and significant information may change the classification of a chemical, and thus its Labelling and SDS requirements - so it's best to ensure you are up to date.

Harm from Chemicals

A fire or explosion is one of only three ways that we can become injured or ill when dealing with controlled products.

The other two ways are by having direct physical contact with controlled products and by having controlled products actually entering the body.

Direct physical contact means contact with the skin, face or eyes. This contact can occur with a controlled product in any physical form, be it a solid, liquid or a gas.

Direct physical contact will obviously not necessarily lead to harmful effects but can result in a variety of problems including burns, tissue damage, dermatitis and allergic reactions.

The wearing of appropriate personal protective equipment such as full-face shields, gloves, aprons and boots is often required when the possibility of direct physical contact exists.

The most common problem, and frequently the most serious, when using controlled products in the workplace, is when the products actually enter the body.

And, this can only occur in one of four ways.

- by absorption of the substance through the skin
- by injection of the substance most commonly via a needle

- by ingestion, most frequently as a result of bad hygiene and contaminated food, and finally
- by simply breathing in the substance.

Of these four ways inhalation is by far the most common route of entry into the body.

Dust, vapors, mists, sprays, smoke, fumes and gases could all be potential sources for controlled products to enter the body.

Adequate ventilation and or the requirement to wear appropriate respiratory equipment are the two most frequently used methods of controlling airborne contaminants.

Before you use any chemical for the first time you need to know how to use it safely. Employers have an obligation to ensure that employees are aware of the hazards associated with their job, including how to work safely with chemicals.

Employees have a responsibility to refer to Safety Data Sheets and labels should they have questions about the chemical and its usage.

If you are unsure about any aspect of the safe use of a particular chemical, seek advice from an appropriate person within your organization.

Conclusion

WHMIS 2015 may be having an impact on your workplace.

You can expect to see:

- New classification rules and hazard classes
- A new standardized format for Safety Data Sheets, and
- New label formats with new information and pictograms
-

During the transitional period however, it is expected that you will see a combination of both the old WHMIS standard of labelling, combined with the new standard.

Hazardous chemicals in the workplace can pose a multitude of hazards and risks.

Any chemicals you work with must be properly labelled, and it is important that you know how to effectively gain valuable information from the labels around you.

You should know how to access SDS's for the chemicals you work with - and how to quickly find information within them.

Make sure you have the knowledge and the training required to ensure your workplace is a safe one.

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. Pictograms are assigned to specific hazard classes or categories.

Fire Hazard



This pictogram is used for indicating flammable gases, aerosols, liquids and solids; pyrophoric liquids, gases and solids; self-heating substances and mixtures; substances and mixtures that produce flammable gases when in contact with water; organic peroxides; and self-reactive substances and mixtures

Oxidizing Hazard



This pictogram is flame over a circle plus a distinctive red "diamond" shaped border. It is used to indicate oxidizing gases, liquids and solids.

Gases Under Pressure Hazard



This pictogram is used to indicate the hazard of gases under pressure such as dissolved gas, liquefied gas, compressed gas and refrigerated liquefied gas.

Explosion or Reactivity Hazard



Used to indicate explosion or reactivity hazards, the Exploding Bomb Pictogram is placed on the labels of self-reactive substances and mixtures, and on labels of organic peroxides.

Health Hazard



This pictogram is used to indicate a product that causes or is suspected of causing serious health effects. It forms part of labels of products that cause respiratory sensitivity, skin toxicity, germ cell mutagenicity, carcinogenicity, reproductive toxicity, aspiration hazard, and specific target organ toxicity after repeated exposure.

Hazardous Products



Used for hazardous products that cause less serious health effects, the Exclamation Mark Pictogram indicates acute toxicity (oral, dermal or inhalation), skin corrosion (irritation), eye irritation, skin sensitivity, respiratory damage, and specific target organ toxicity on single exposure.

Death or Toxicity Hazard



For hazardous products that can cause death or acute toxicity after exposure to small amounts of the products, this Pictogram is used to warn users of the potential dangers. It is placed on labels of materials with acute oral, dermal and inhalation toxicity. For instance, the pictogram can be used on containers for cleaning chemicals.

Corrosion Hazard



The corrosive pictogram indicates 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.

Biohazardous Infectious Materials Hazard



Indicates the presence of organisms or toxins that can cause diseases in humans and animals, the Biohazardous Infectious Materials Pictogram has been retained from WHMIS 1988. The Pictogram is used on labels of biohazardous infectious materials. For instance, it is used on growths of micro-organisms like E.Coli or salmonella bacteria cultures.

Environment Hazard



This GHS Pictogram has not been integrated into WHMIS, however it stands for Environmental Hazards.