



## FAST FACTS

# Prepare Your Workplace for the Globally Harmonized System (GHS)

### What is GHS?

The Globally Harmonized System (GHS) is an internationally consistent approach to classifying chemicals and communicating hazard information through labels and safety data sheets. The implementation of GHS will mean that all workplaces will have consistent hazard information. The Intent of GHS is to help facilitate trade by eliminating multiple classification systems as well as enhance protection of human health by using standard messaging.

You still have time: GHS is expected to be implemented between December 2014 and June 2015, and there will be a period of transition following implementation.

### What Changes?

The four cornerstones of WHMIS are Classification, Training, Labels and Material Safety Data Sheets (MSDS). GHS is based on these same four building blocks and will provide improved protection for workers when handling hazardous material. Overall the current roles and responsibilities set out in WHMIS that apply to suppliers, employers and workers will remain the same. While some elements and symbols may be retained, there are a few changes to be aware of which are summarized below.

### Classification Rules

GHS classification takes a “building block approach”. The three major hazard groups are: health hazards, physical hazards and environmental hazards. There are then classes and categories under each of these three groups.

### Health Hazards Classes:

- Acute toxicity
- Skin corrosion/irritation
- Serious eye damage/eye irritation
- Respiratory sensitization/skin sensitization
- Germ cell mutagenicity
- Carcinogenicity
- Reproductive toxicity
- Specific target organ toxicity – single exposure
- Specific target organ toxicity – repeated exposure
- Aspiration hazard

### Physical Hazard Classes:

- Explosives
- Flammable gases
- Flammable aerosols
- Flammable liquids
- Flammable solids
- Oxidizing gases
- Oxidizing liquids
- Oxidizing solids
- Self-reactive substances and mixtures
- Pyrophoric liquids
- Pyrophoric solids
- Self-heating substances and mixtures
- Organic peroxides
- Corrosive to metals
- Gases under pressure
- Substances and mixtures which, contact with water, emit flammable gases

### Environmental Hazard Class

- Hazardous to aquatic environment

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## MSDS to SDS

Material Safety Data Sheet Requirements (MSDS) require nine pieces of information whereas Safety Data Sheets (SDS) have 16 requirements.

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/Personal protection
9. Physical and chemical properties
10. Stability and reactivity
11. Toxicology information
12. Ecological information
13. Disposal considerations
14. Transport information
15. Regulatory information
16. Other information

## Pictograms

A symbol is called a pictogram when it has a border as shown. GHS has nine pictograms used to classify and label chemicals. A label or SDS that is compliant with the United States Hazard Communication Standard (2012) may not be sufficient for compliance in Canada. The supplier must be compliant with the Canadian requirements, whether the CPR or the HPR. It is expected that a biohazard symbol will be introduced through provincial legislation. Learn to identify the hazards identified by the GHS pictograms:



**Flame:** flammable, self-reactive, pyrophoric, self-heating, in contact with water, emits flammable gases, organic peroxide



**Exclamation mark:** irritation (skin or eyes), skin sensitization, acute toxicity (harmful), specific target organ toxicity (single exposure), hazardous to the ozone layer



**Health hazard:** carcinogenicity, respiratory sensitization, reproductive toxicity, specific target organ – single or repeated exposure, germ cell mutagenicity, aspiration hazard



**Skull and crossbones:** acute toxicity (fatal or toxic)



**Exploding bomb:** explosive, self-reactive, organic peroxide



**Flame over circle:** oxidizer



**Corrosion:** corrosive



**Gas cylinder:** gas under pressure



**Environment:** hazardous to the aquatic environment (acute or long term)



**Biohazard:** infectious materials. Symbol yet to be confirmed

The same symbol can represent more than one hazard class (i.e. carcinogenicity, germ cell mutagenicity, respiratory sensitizer, etc.)

In addition, one hazard class can have more than one symbol (i.e. acute toxicity: categories 1, 2 and 3 versus category 4).

## What Can You Do To Prepare?

Employers will see an increased number of SDSs coming to the workplace as we transition to GHS. As a result, employers will need to manage both MSDSs and SDSs.

A first step is to gather all current MSDS/SDSs and investigate the use and benefit of adopting a MSDS/SDS Management System. Employers will also need to ensure hazardous materials are properly labeled and that workplace labels are up to date and SDSs are prepared or provided by the supplier. Always ensure appropriate control measures recommended in the SDS are in place to protect worker health and safety.

Employers should continue to educate and train workers on hazards and the safe use of products in the workplace. While global standardization and harmonization will eventually simplify hazard recognition, employees will need to be trained on both WHMIS and GHS until the transition is complete. Training will need to include the changes that implementing GHS will have on WHMIS, such as new terminology, symbols and pictograms, labeling, and SDSs. Employers should review their current training programs and identify required updates. At the same time, you should review your internal policies and workplace procedures against GHS requirements and make required updates by the implementation deadline.

## Where Can You Find More Information?

PSHSA webinar: Moving from WHMIS to GHS: [www.pshsa.ca/products/moving-to-the-global-harmonized-system-ghs-from-whmis/](http://www.pshsa.ca/products/moving-to-the-global-harmonized-system-ghs-from-whmis/)

Health Canada: [www.hc-sc.gc.ca/ewh-semt/occup-travail/whmis-simdut/ghs-sgh/index-eng.php](http://www.hc-sc.gc.ca/ewh-semt/occup-travail/whmis-simdut/ghs-sgh/index-eng.php)

CCOHS: [www.ccohs.ca/products/webinars/ghs\\_canada/](http://www.ccohs.ca/products/webinars/ghs_canada/)

The Canada Gazette, Part II : [www.gazette.gc.ca/rp-pr/p2/2015/2015-02-11/pdf/g2-14903.pdf](http://www.gazette.gc.ca/rp-pr/p2/2015/2015-02-11/pdf/g2-14903.pdf)

WHMIS: [www.WHMIS.org](http://www.WHMIS.org)