

GLOBALLY HARMONIZED SYSTEM
FOR CLASSIFICATION AND LABELLING OF CHEMICALS (GHS) ---
IMPLEMENTATION IN CANADA

COMPARISON OF SECTOR INTERIM RECOMMENDATIONS
OR PREFERRED OPTIONS

Introduction

The Globally Harmonized System of Classification and Labelling of Chemicals (GHS) provides a common and coherent basis to define and classify chemical hazards and communicate information on labels and safety data sheets. It also provides the underlying infrastructure for a comprehensive national chemical safety program. After more than a decade of development, the GHS was endorsed at the World Summit on Sustainable Development in August 2002 and formally adopted by the United Nations Committee of Experts on the Transport of Dangerous Goods and the GHS in December 2002.

The four key sectors in Canada that will be most affected by the implementation of the GHS are: pest control products, workplace chemicals, consumer chemical products and products regulated under the transportation of dangerous goods.

Guiding Principles of GHS Implementation in Canada:

- Harmonization to the greatest extent possible between the sectors.
- Harmonization to the greatest extent possible between NAFTA countries and other trading partners.

This document

This document provides a summary of the results of the deliberations by the sectors affected by the implementation of the GHS---consumer chemicals, pest control products, workplace chemicals and products subject to transportation of dangerous goods as denoted in the charts by the abbreviations: CC, PCP, WHMIS and TDG.

The document reflects the current status of preferred options for adoption (indicated by "yes") up to the specified date, ie. 23 February 2006. The technical consultations are not completed. These results are subject to change.

The document is formatted to allow comparison of hazard information communication between the sectors and the GHS. Information for comparisons with trading partners is not yet available.

Technical Consultations

The technical consultation for GHS implementation is through sectoral working group meetings using discussion and issue papers to present various options, rationale and impact. These consultations focus on determining interim recommendations for GHS implementation, based on the Canadian situation.

The interim recommendations may be re-visited based on further discussion with trading partners and recommendations made in other sectors.

The key pieces of legislation and regulations include:

- *Hazardous Products Act (PART I), Consumer Chemicals and Containers Regulations, 2001*
- *Hazardous Products Act (PART II), Controlled Products Regulations (for work place chemicals / WHMIS)*
- *Pest Control Products Act, Pest Control Products Regulations*
- *Transportation of Dangerous Goods Act, 1992, Transportation of Dangerous Goods Regulations*

Transport Canada does not have a sectoral working group, but is proceeding according to the timeline set out by the United Nations Sub-committee of Experts on Transport of Dangerous Goods. The *Transportation of Dangerous Goods Regulations* follows the *United Nations Recommendations on the Transport of Dangerous Goods, Model Regulations*. Therefore, the adoption of GHS is harmonized internationally, and in accordance with the *UNRTDG Model Regulations*.

In the case of workplace chemicals, the WHMIS Working Group (WWG) is a working group of the larger WHMIS Current Issues Committee (CIC). Please refer to Appendix 1 for further detail on the consultation process in WHMIS as well as additional hazard information that pertains to WHMIS.

Appendix 2 further describes the situation for pest control products. It is recognized that for several of the physical hazard classes, products that meet the hazard classification criteria are not expected to be used as pest control products; however, the Pest Management Regulatory Agency is proposing to adopt these classes as placeholders in the event that such products are manufactured as pest control products.

Last update: 23 February 2006




The Consumer Chemicals Sector Working Group serves as a forum for open discussion and advice on matters concerning the implementation of the GHS as it relates to consumer chemical products.

In addition to the sectoral working groups, expert groups have been addressing specific issues of environmental and chronic hazard classification and labelling.

The draft *GHS Situational Analysis*, posted on www.healthcanada.ca/ghs, provides a description of the current hazard classification and communication requirements in each sector and those of the GHS.


PHYSICAL HAZARDS

Explosive



Division	1.1	1.2	1.3	1.4	1.5	1.6
GHS	 Danger Explosive; mass explosion hazard	 Danger Explosive; severe projection hazard	 Danger Explosive; fire, blast or projection hazard	No Symbol Warning Fire or projection hazard	No Symbol Warning May explode in fire	
CC*	No	No	No	No	No	No
PCP	Yes	Yes	Yes	Yes	Yes	Yes
TDG	Yes	Yes	Yes	Yes	Yes	Yes
WHMIS	Not yet discussed	Not yet discussed	Not yet discussed	Not yet discussed	Not yet discussed	Not yet discussed

*Explosives are exempt from the *Hazardous Products Act (Part I)*


Flammable Gases

	Category 1	Category 2
GHS	 Danger Extremely flammable gas	No Symbol Warning Flammable gas
CC	Yes	Yes
PCP	Yes	Yes
TDG	Yes	No
WHMIS	Yes	Yes

Flammable Aerosols





	Category 1	Category 2
GHS	 <p>Danger Extremely flammable aerosol</p>	 <p>Warning Flammable aerosol</p>
CC	Yes	Yes
PCP	Yes	Yes
TDG	Yes	Yes
WHMIS	Yes	Yes

Oxidizing Gases




GHS	Category 1
	 <p style="text-align: center;">Danger May cause or intensify fire; oxidizer</p>
CC	Not yet discussed
PCP	Yes
TDG	Yes
WHMIS*	Yes

*For mixtures: The WHMIS Working Group recommended inclusion of the mathematical formula in the proposed amendment to the WHMIS regulations (*Controlled Products Regulations*) upon GHS implementation

Gases Under Pressure

	Compressed Gas	Liquified Gas	Refrigerated Liquified Gas	Dissolved Gas
GHS	 Warning Contains gas under pressure; may explode if heated	 Warning Contains gas under pressure; may explode if heated	 Warning Contains refrigerated gas; may cause cryogenic burns or injury	 Warning Contains gas under pressure; may explode if heated
CC	Yes	Yes	Yes	Yes
PCP	Yes	Yes	Yes	Yes
TDG	Yes	Yes	Yes	Yes
WHMIS	Yes	Yes	Yes	Yes

Flammable Liquids



GHS	Category 1	Category 2	Category 3	Category 4
	Flashpoint <23°C Initial Boiling Pt ≤35°C  Danger Extremely flammable liquid and vapour	Flashpoint <23°C Initial Boiling Pt >35°C  Danger Highly flammable liquid and vapour	Flashpoint ≥23°C and ≤ 60°C  Warning Flammable liquid and vapour	Flashpoint >60°C and ≤ 93°C No symbol Warning Combustible liquid
CC	Yes	Yes	Yes	No*
PCP	Yes	Yes	Yes	Yes
TDG	Yes	Yes	Yes**	No
WHMIS***	Yes	Yes	Yes	Yes

*As per 28 June 2005 Consumer Chemical Sector Working Group meeting and comments






** The current TDG cut point for Category 3 is 60.5°C but this will be changed to 60°C in Amendment Schedule 6

*** For Mixtures: The WHMIS Current Issues Committee recommended that the mathematical formula not be included in the proposed amendments to the WHMIS regulations (*Controlled Products Regulations*) upon GHS implementation.

Flammable Solids

	Category 1	Category 2
GHS	 Danger Flammable solid	 Warning Flammable solid
CC	Yes	Yes
PCP	Yes	Yes
TDG	Yes	Yes
WHMIS	Yes	Yes


Self-Reactive Substances

	Type A	Type B	Type C & D	Type E & F	Type G
GHS	 Danger Heating may cause an explosion	  Danger Heating may cause a fire or explosion	 Danger Heating may cause a fire	 Warning Heating may cause a fire	No label elements
CC	Not yet discussed	Not yet discussed	Not yet discussed	Not yet discussed	Not yet discussed
PCP	Yes	Yes	Yes	Yes	Yes
TDG	No*	Yes	Yes	Yes	No
WHMIS	Yes	Yes	Yes	Yes	Pending additional information**


* Type A Self-Reactive substances are FORBIDDEN for Transport

** The WHMIS Working Group recommended revisiting self-reactive substances and ascertaining the rationale for inclusion of Type G products (i.e., no label elements).



Pyrophoric Liquids

GHS	Category 1
	 Danger Catches fire spontaneously if exposed to air
CC	Not yet discussed
PCP	Yes
TDG	Yes
WHMIS	Yes




Pyrophoric Solids

	Category 1
GHS	 Danger Catches fire spontaneously if exposed to air
CC	Not yet discussed
PCP	Yes
TDG	Yes
WHMIS	Yes




Self Heating Substances

	Category 1	Category 2
GHS	 <p>Danger Self-heating; may catch fire</p>	 <p>Warning Self-heating in large quantities; may catch fire</p>
CC	Not yet discussed	Not yet discussed
PCP	Yes	Yes
TDG	Yes	Yes
WHMIS	Yes	Yes




Substances, which in contact with water, emit flammable gases

	Category 1	Category 2	Category 3
GHS	 Danger In contact with water releases flammable gases which may ignite spontaneously	 Danger In contact with water releases flammable gases	 Warning In contact with water releases flammable gases
CC	Not yet discussed	Not yet discussed	Not yet discussed
PCP	Yes	Yes	Yes
TDG	Yes	Yes	Yes
WHMIS	Yes	Yes	Yes






Oxidizing Liquids

	Category 1	Category 2	Category 3
GHS	 Danger May cause fire or explosion; strong oxidizer	 Danger May intensify fire; oxidizer	 Warning May intensify fire; oxidizer
CC	Not yet discussed	Not yet discussed	Not yet discussed
PCP	Yes	Yes	Yes
TDG	Yes	Yes	Yes
WHMIS	Yes	Yes	Yes

Oxidizing Solids

	Category 1	Category 2	Category 3
GHS	 <p>Danger May cause fire or explosion; strong oxidizer</p>	 <p>Danger May intensify fire; oxidizer</p>	 <p>Warning May intensify fire; oxidizer</p>
CC	Not yet discussed	Not yet discussed	Not yet discussed
PCP	Yes	Yes	Yes
TDG	Yes	Yes	Yes
WHMIS	Yes	Yes	Yes


Organic Peroxides

	Type A	Type B	Type C & D	Type E & F	Type G
GHS	 Danger Heating may cause an explosion	  Danger Heating may cause a fire or explosion	 Danger Heating may cause a fire	 Warning Heating may cause a fire	No label elements
CC	Not yet discussed	Not yet discussed	Not yet discussed	Not yet discussed	Not yet discussed
PCP	Yes	Yes	Yes	Yes	Yes
TDG	No*	Yes	Yes	Yes	No
WHMIS	Yes	Yes	Yes	Yes	Pending additional information **

*Type A organic peroxides are FORBIDDEN for Transport





** The WHMIS Working Group recommended revisiting organic peroxides and ascertaining the rationale for inclusion of Type G products (i.e., no label elements).

Corrosive to Metals

<p>GHS</p>	<p>Category 1</p>
	<div style="text-align: center;">  <p>Warning</p> <p>May be corrosive to metals</p> </div>
<p>CC</p>	<p>Not yet discussed</p>
<p>PCP</p>	<p>Yes</p>
<p>TDG</p>	<p>Yes</p>
<p>WHMIS</p>	<p>Yes</p>

HEALTH HAZARDS





Acute Toxicity: Oral (mg/kg)

	Category 1	Category 2	Category 3	Category 4	Category 5
	LD₅₀ ≤ 5	LD₅₀ ≤ 50	LD₅₀ ≤ 300	LD₅₀ ≤ 2000	LD₅₀ ≤ 5000
GHS					No symbol
	Danger	Danger	Danger	Warning	Warning
	Fatal if swallowed	Fatal if swallowed	Toxic if swallowed	Harmful if swallowed	May be harmful if swallowed
CC	Yes	Yes	Yes	Yes	Pending additional information
PCP	Yes	Yes	Yes	Yes	No
TDG*	Yes	Yes	Yes	No	No
WHMIS**	Yes	Yes	Yes	Still under discussion	Pending additional information

*This shows the requirements of the 14th Revised Edition of the UN Model Regulations and will be reflected in a future amendment to TDG





** For mixtures: The WHMIS Current Issues Committee recommended the incorporation of bridging principles and formulae to calculate the acute toxicity estimate (ATE) be included in the proposed amendment to the WHMIS regulations (*Controlled Products Regulations*) upon GHS implementation.

Acute Toxicity: Skin (mg/kg)

	Category 1	Category 2	Category 3	Category 4	Category 5
	LD₅₀ ≤ 50	LD₅₀ ≤ 200	LD₅₀ ≤ 1000	LD₅₀ ≤ 2000	LD₅₀ ≤ 5000
GHS					No symbol
	Danger	Danger	Danger	Warning	Warning
	Fatal in contact with skin	Fatal in contact with skin	Toxic in contact with skin	Harmful in contact with skin	May be harmful in contact with skin
CC	Yes	Yes	Yes	Yes	Pending additional information
PCP	Yes	Yes	Yes	Yes	No
TDG*	Yes	Yes	Yes	No	No
WHMIS	Yes	Yes	Yes	Still under discussion	Pending additional information

*This shows the requirements of the 14th Revised Edition of the UN Model Regulations and will be reflected in a future amendment to TDG





Acute Toxicity: Inhalation - Gases (ppmV)

	Category 1	Category 2	Category 3	Category 4	Category 5 ¹
GHS	LC₅₀ ≤ 100	LC₅₀ ≤ 500	LC₅₀ ≤ 2500	LC₅₀ ≤ 5000	
	 Danger Fatal if inhaled	 Danger Fatal if inhaled	 Danger Toxic if inhaled	 Warning Harmful if inhaled	No symbol Warning May be harmful if inhaled
CC	Yes	Yes	Yes	Yes	Pending additional information
PCP	Yes	Yes	Yes	Yes	No
TDG	Yes	Yes	Yes	Yes*	No
WHMIS	Yes	Yes	Yes	Still under discussion	Pending additional information

¹Guidance on Category 5 Inhalation Values: The OECD Task Force on Harmonisation of Classification and Labelling (HCL) did not include numerical values for acute inhalation toxicity class 5 but instead specified doses "equivalent" to the range of 2000-5000 mg/kg bodyweight by the oral or dermal route.

*TDG has no cut-points for inhalation of toxic gases and regulates to 5000 ppm. The TDG label for Category 4 is skull & crossbones.

Acute Toxicity: Inhalation - Vapours (mg/l)





	Category 1	Category 2	Category 3	Category 4	Category 5 ¹
	LC ₅₀ ≤ 0.5	LC ₅₀ ≤ 2.0	LC ₅₀ ≤ 10.0	LC ₅₀ ≤ 20.0	
GHS					No symbol
	Danger Fatal if inhaled	Danger Fatal if inhaled	Danger Toxic if inhaled	Warning Harmful if inhaled	Warning May be harmful if inhaled
CC	Yes	Yes	Yes	Yes	Yes
PCP	Yes	Yes	Yes	Yes	No
TDG	Yes	Yes	Yes	Yes*	No
WHMIS**	Yes	Yes	Yes	Still under discussion	Pending additional information

¹Guidance on Category 5 Inhalation Values: The OECD Task Force on Harmonisation of Classification and Labelling (HCL) did not include numerical values for acute inhalation toxicity class 5 but instead specified doses "equivalent" to the range of 2000-5000 mg/kg bodyweight by the oral or dermal route.

* TDG regulates to 5000 ppm for the inhalation of toxic vapours. The TDG label for Category 4 is skull & crossbones.

** The WHMIS Current Issues Committee recommended eliminating the existing saturated vapour concentration (SVC) from the WHMIS classification criteria for this hazard class.





Acute Toxicity: Inhalation - Dusts & Mists (mg/l)

	Category 1	Category 2	Category 3	Category 4	Category 5 ¹
	LC₅₀ ≤ 0.05	LC₅₀ ≤ 0.5	LC₅₀ ≤ 1.0	LC₅₀ ≤ 5	LC₅₀ ≤ 10
GHS	 Danger Fatal if inhaled	 Danger Fatal if inhaled	 Danger Toxic if inhaled	 Warning Harmful if inhaled	No symbol Warning May be harmful if inhaled
CC	Yes	Yes	Yes	Yes	Pending additional information
PCP	Yes	Yes	Yes	Yes	No
TDG*	Yes	Yes	Yes	No	No
WHMIS	Yes	Yes	Yes	Still under discussion	Pending additional information

¹Guidance on Category 5 Inhalation Values: The OECD Task Force on Harmonisation of Classification and Labelling (HCL) did not include numerical values for acute inhalation toxicity class 5 but instead specified doses "equivalent" to the range of 2000-5000 mg/kg bodyweight by the oral or dermal route.



* This shows the requirements of the 14th Revised Edition of the UN Model Regulations and will be reflected in a future amendment to TDG

Skin Corrosion/Irritation

	Category 1A	Category 1B	Category 1C	Category 2	Category 3
GHS	 Danger Causes severe skin burns and eye damage	 Danger Causes severe skin burns and eye damage	 Danger Causes severe skin burns and eye damage	 Warning Causes skin irritation	Warning Causes mild skin irritation
CC	Yes	Yes	Yes	Yes	Pending additional information
PCP	Yes, Adopt 1A, 1B, 1C as Category 1			Yes	Yes
TDG	Yes	Yes	Yes	No	No
WHMIS*	Yes, Adopt 1A, 1B, 1C as Category 1			Yes	Yes

*For Mixtures: The WHMIS Current Issues Committee recommended incorporation of the GHS bridging principles and "non-additivity" approach for classifying untested mixtures.


Serious Eye Damage/Irritation

	Category 1	Category 2A	Category 2B
GHS	 Danger Causes serious eye damage	 Warning Causes serious eye irritation	Warning Causes eye irritation
CC	Yes	Yes	Yes
PCP	Yes	Yes	Yes
TDG	No	No	No
WHMIS**	Yes	Yes, Adopt 2A, 2B as Category 2	

** For Mixtures: The WHMIS Current Issues Committee recommended incorporation of the GHS bridging principles and "non-additivity" approach for classifying untested mixtures.

Respiratory Sensitization


As part of the implementation of the GHS in Canada, an Ad Hoc Expert Group on Chronic Hazards was established to examine the application of the GHS chronic and sub-chronic hazard classes to consumer chemical products. Currently, regulations for consumer chemical products do not cover these hazards. This Expert Group will provide recommendations back to the Consumer Chemical Sector Working Group.

	Category 1
GHS	 <p style="text-align: center;">Danger</p> <p style="text-align: center;">May cause allergy or asthma symptoms or breathing difficulties if inhaled</p>
CC	Pending discussion of ad hoc Expert Group on Chronic Hazards
PCP	Still under discussion
TDG	No
WHMIS*	Yes

* For Mixtures: The WHMIS Working Group recommended the retention of the 0.1% cut-off value for solid/liquid and gaseous respiratory sensitizers and full labelling requirements for all mixtures that contain these sensitizers at concentrations $\geq 0.1\%$.

Skin Sensitization




As part of the implementation of the GHS in Canada, an Ad Hoc Expert Group on Chronic Hazards was established to examine the application of the GHS chronic and sub-chronic hazard classes to consumer chemical products. Currently, regulations for consumer chemical product do not cover these hazards. This Expert Group will provide recommendations back to the Consumer Chemical Sector Working Group.

	Category 1
GHS	 Warning May cause an allergic skin reaction
CC	Pending discussion of ad hoc Expert Group on Chronic Hazards
PCP	Yes
TDG	No
WHMIS*	Yes

*For Mixtures: The WHMIS Working Group recommended a cut-off value of 0.1% with reduced labelling requirements for mixtures containing sensitizers at concentrations between 0.1% and 1.0%. Where an elicitation response is evident below 0.1%, the mixture should be classified and supplementary labelling used accordingly. Supplementary labelling here only includes a statement identifying the sensitizer present in the mixture.

Germ Cell Mutagenicity

As part of the implementation of the GHS in Canada, an Ad Hoc Expert Group on Chronic Hazards was established to examine the application of the GHS chronic and sub-chronic hazard classes to consumer chemical products. Currently, regulations for consumer chemical products do not cover these hazards. This Expert Group will provide recommendations back to the Consumer Chemical Sector Working Group.




	Category 1A	Category 1B	Category 2
GHS	 Danger May cause genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)	 Danger May cause genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)	 Warning Suspected of causing genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)
CC	Pending discussion of ad hoc Expert Group on Chronic Hazards	Pending discussion of ad hoc Expert Group on Chronic Hazards	Pending discussion of ad hoc Expert Group on Chronic Hazards
PCP*	Yes	Yes	Yes
TDG	No	No	No
WHMIS**	Yes, adopt 1A , 1B as Category 1		Yes

*Classify for Safety Data Sheet purposes only. Do not adopt GHS labelling. Use risk based labelling.

**For Mixtures: The WHMIS Working Group recommended a cut-off value of 0.1% and 1.0% for classification of mixtures containing Category 1 and 2 mutagens, respectively.

Carcinogenicity

As part of the implementation of the GHS in Canada, an Ad Hoc Expert Group on Chronic Hazards was established to examine the application of the GHS chronic and sub-chronic hazard classes to consumer chemical products. Currently, regulations for consumer chemical products do not cover these hazards. This Expert Group will provide recommendations back to the Consumer Chemical Sector Working Group.




	Category 1A	Category 1B	Category 2
GHS	<p>Known human carcinogen</p>  <p>Danger</p> <p>May cause cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)</p>	<p>Presumed human carcinogen</p>  <p>Danger</p> <p>May cause cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)</p>	<p>Suspected human carcinogen</p>  <p>Warning</p> <p>Suspected of causing cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)</p>
CC	Pending discussion of ad hoc Expert Group on Chronic Hazards	Pending discussion of ad hoc Expert Group on Chronic Hazards	Pending discussion of ad hoc Expert Group on Chronic Hazards
PCP*	Yes	Yes	Yes
TDG	No	No	No
WHMIS**	Yes, adopt 1A , 1B as Category 1		Yes

*Classify for Safety Data Sheet purposes only. Do not adopt GHS labelling. Use risk based labelling.

** For Mixtures: The WHMIS Working Group recommended a cut-off value of 0.1% for classification of mixtures containing Category 1 and 2 carcinogens.

Toxic to Reproduction

As part of the implementation of the GHS in Canada, an Ad Hoc Expert Group on Chronic Hazards was established to examine the application of the GHS chronic and sub-chronic hazard classes to consumer chemical products. Currently, regulations for consumer chemical products do not cover these hazards. This Expert Group will provide recommendations back to the Consumer Chemical Sector Working Group.

	Category 1A Known human reproductive or developmental toxicant	Category 1B Presumed human reproductive or developmental toxicant	Category 2 Suspected human reproductive or developmental toxicant
GHS	 Danger May damage fertility or the unborn child (state specific effect if known) (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)	 Danger May damage fertility or the unborn child (state specific effect if known) (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)	 Warning Suspected of damaging fertility or the unborn child (state specific effect if known) (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)
CC	Pending discussion of ad hoc Expert Group on Chronic Hazards	Pending discussion of ad hoc Expert Group on Chronic Hazards	Pending discussion of ad hoc Expert Group on Chronic Hazards
PCP*	Yes	Yes	Yes
TDG	No	No	No
WHMIS**	Yes, adopt 1A , 1B as Category 1		Yes

*Classify for Safety Data Sheet purposes only. Do not adopt GHS labelling. Use risk based labelling.

** For Mixtures: The WHMIS Working Group recommended a cut-off value of 0.1% for classification of mixtures containing Category 1 and 2 reproductive toxicants.

Effects on or via Lactation




As part of the implementation of the GHS in Canada, an Ad Hoc Expert Group on Chronic Hazards was established to examine the application of the GHS chronic and sub-chronic hazard classes to consumer chemical products. Currently, regulations for consumer chemical products do not cover these hazards. This Expert Group will provide recommendations back to the Consumer Chemical Sector Working Group.

GHS	Category 1
	No Symbol No Signal Word May cause harm to breast-fed children
CC	Pending discussion of ad hoc Expert Group on Chronic Hazards
PCP*	Yes
TDG	No
WHMIS**	Yes

*Classify for Safety Data Sheet purposes only. Do not adopt GHS labelling. Use risk based labelling.

** For Mixtures: The WHMIS Working Group recommended a cut-off value of 0.1% for classification of mixtures containing substances classified under "effects on or via lactation".

Target Organ Systemic Toxicity (Single Exposure)



	Category 1	Category 2	Category 3
GHS	 Danger Causes damage to (state all organs affected, or use a general statement where there is no definite evidence that other organs are not affected) if (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)	 Warning Causes damage to (state all organs affected, or use a general statement where there is no definite evidence that other organs are not affected) if (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)	 Warning May cause respiratory irritation or May cause drowsiness and dizziness
CC	Yes	Still under discussion	Still under discussion
PCP*	Yes	Yes	Still under discussion
TDG	No	No	TBD
WHMIS**	Yes	Yes	Yes

* Classify for Safety Data Sheet purposes only. Do not adopt GHS labelling. Use risk based labelling.

** For Mixtures: The WHMIS Working Group recommended a 1.0% cut-off value for classification of mixtures containing Category 1 or 2 target organ / systemic toxicants.

Target Organ Systemic Toxicity (Repeated Exposure)



As part of the implementation of the GHS in Canada, an Ad Hoc Expert Group on Chronic Hazards was established to examine the application of the GHS chronic and sub-chronic hazard classes to consumer chemical products. Currently, regulations for consumer chemical products do not cover these hazards. This Expert Group will provide recommendations back to the Consumer Chemical Sector Working Group.

	Category 1	Category 2
GHS	 <p>Danger</p> <p>Causes (state all organs affected, or use a general statement where there is no definite evidence that other organs are not affected) damage through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no their routes of exposure cause the hazard)</p>	 <p>Warning</p> <p>Causes (state all organs affected, or use a general statement where there is no definite evidence that other organs are not affected) damage through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no their routes of exposure cause the hazard)</p>
CC	Pending discussion of ad hoc Expert Group on Chronic Hazards	Pending discussion of ad hoc Expert Group on Chronic Hazards
PCP*	Yes	Yes
TDG	No	No
WHMIS**	Yes	Yes

* Classify for Safety Data Sheet purposes only. Do not adopt GHS labelling. Use risk based labelling.

** For mixtures: The WHMIS Working Group recommended a 1.0% cut-off value for classification of mixtures containing Category 1 or 2 repeated exposure target organ / systemic toxicants.


Aspiration Toxicity

	Category 1	Category 2
GHS	 <p>Danger</p> <p>May be fatal if swallowed and enters airways</p>	 <p>Warning</p> <p>May be harmful if swallowed and enters airways</p>
CC	Yes	Pending additional information
PCP	Still under discussion	Still under discussion
TDG	No	No
WHMIS	Still under discussion	Still under discussion

ENVIRONMENTAL HAZARDS

Aquatic Toxicity: Acute



An ad hoc Expert Group for Environmental Hazards was established, drawing on experts in the field and stakeholders identified by the sectoral working groups. The Expert Group is examining whether to, and if so how, environmental hazards should be covered by the existing systems with hazard communication requirements in Canada, and will provide recommendations back to the individual sectoral working groups.

	Category 1	Category 2	Category 3
GHS	 Warning Very toxic to aquatic life	No symbol No signal word Toxic to aquatic life	No symbol No signal word Harmful to aquatic life
CC	Pending discussion of ad hoc Expert Group on Environmental Hazards	Pending discussion of ad hoc Expert Group on Environmental Hazards	Pending discussion of ad hoc Expert Group on Environmental Hazards
PCP	Pending discussion of ad hoc Expert Group on Environmental Hazards	Pending discussion of ad hoc Expert Group on Environmental Hazards	Pending discussion of ad hoc Expert Group on Environmental Hazards
TDG*	Yes	Yes	Yes
WHMIS	Pending discussion of ad hoc Expert Group on Environmental Hazards	Pending discussion of ad hoc Expert Group on Environmental Hazards	Pending discussion of ad hoc Expert Group on Environmental Hazards

*TDG: Criteria will be applied. Labelling required only if no other hazard labelled.

Aquatic Toxicity: Chronic

Criteria not ready for implementation. The Organization for Economic Co-operation and Development (OECD) is currently revising these criteria.

	Category 1	Category 2	Category 3	Category 4
GHS	 Warning Very toxic to aquatic life with long lasting effects	 No signal word Toxic to aquatic life with long lasting effects	No symbol No signal word Harmful to aquatic life with long lasting effects	No symbol No signal word May cause long lasting harmful effects to aquatic life
CC	Criteria not ready for implementation.	Criteria not ready for implementation.	Criteria not ready for implementation.	Criteria not ready for implementation.
PCP	No	No	No	No
TDG	No	No	No	No
WHMIS	Criteria not ready for implementation.	Criteria not ready for implementation.	Criteria not ready for implementation.	Criteria not ready for implementation.

Appendix 1 Additional Information on WHMIS

Background on WHMIS consultations on GHS implementation

The WHMIS Working Group (WWG) is a working group of the WHMIS Current Issues Committee (CIC) which is the established forum for consultation on matters concerning the interpretation or modification of WHMIS. The CIC enables Health Canada, in part, to meet the legislated requirement of section 19 of the *Hazardous Products Act* (HPA) to consult with WHMIS stakeholders prior to making any modifications to the federal WHMIS legislation and regulations on behalf of the Minister of Health. Its role is to make recommendations to departments and agencies responsible for WHMIS legislation including recommendations for modifications to WHMIS or changes in its scope. Stakeholders include the Hazardous Materials Information Review Commission; the thirteen provincial, territorial, and federal government bodies responsible for occupational safety and health; and other groups representing industry, employers and organized labour. The CIC operates on an ongoing basis and serves as the forum for the continued development and application of WHMIS.


Once the preferred options of the WWG for GHS implementation are made, they are discussed by the full CIC in order to reach consensus agreement on recommendations to the Minister of Health.

Hazards not covered by GHS

Currently, the GHS does not have criteria for water activated toxicity or biohazardous infectious materials. In order to maintain the current level of protection in WHMIS, the following recommendations have been made during the technical consultations.


Water activated toxicity: Substances, which in contact with water, release a toxic gas or vapour.

The WWG recommended using existing WHMIS criteria until the GHS criteria for this hazard class becomes available. The WWG also preferred to eliminate SVC for substances that release toxic vapour in contact with water. The WWG preferred to adopt the skull and crossbones symbol for this class.

Symbol	Signal Word	Hazard Statement
	Danger	In contact with water releases toxic gases / vapours which are fatal if inhaled.

Biohazardous Infectious materials:

The CIC has recommended retention of the criteria for the Biohazard class. The WWG's preferred option would be to retain the internationally recognized biohazardous symbol.

Class	Symbol	Signal Word	Hazard Statement
Biohazardous Infectious Material		Danger	Poisonous and infectious material – may cause disease

Appendix 2

Summary of Recommendations from the Pest Management Regulatory Agency (PMRA)

With the principle of the building block approach in mind, and in keeping with the intent to maintain the existing level of coverage, the PMRA is recommending the following:

- adoption of all GHS physical hazard classes and categories;
- adoption of the GHS hazard class for acute aquatic toxicity but not the hazard criteria for chronic aquatic toxicity since the GHS chronic criteria are not as rigorous as the chronic risk assessment conducted by the PMRA; and
- adoption of those human health hazard classes and categories consistent with the PMRA's current approach to classification and labelling of pesticides.

It is recognized that for several of the physical hazard classes, products that meet the hazard classification criteria are not expected to be used as pesticides; however, the PMRA is proposing to adopt these classes as placeholders in the event that such products are manufactured as pest control products.

With respect to human health hazards, the PMRA intends to use the GHS criteria for all the hazard classes to identify and classify the health hazard. However, not all aspects of labelling will be applied in every instance. This reflects the current practice of classification and labelling of pesticides based on identified acute hazards while addressing other health hazards (for example, reproductive toxicity) through a risk assessment process. The PMRA is proposing to adopt the GHS criteria for the latter health hazard classes for the sole purpose of classifying and communicating the hazard on the Material Safety Data Sheet (MSDS). The GHS labelling elements for these hazard classes would not be adopted.

General Considerations

The criteria used in the GHS for classification of chemicals into physical hazard classes are based largely on United Nations Test Methods required by authorities regulating the transportation of dangerous goods. It is anticipated that these tests will already have been conducted by manufacturers of pest control products; therefore it is not likely that additional testing will need to be conducted for classification into most physical hazard classes where the criteria used by the GHS differ from those currently used by the PMRA.

PMRA may take different approaches when it comes to the submission of data for classification of registered products versus new products.