

The Globally Harmonized System for the Classification and Labelling of Chemicals (The GHS)

Implementation of the GHS in Canada

Pest Control Products

Introduction

Pesticide labelling encompasses both a hazard-based and risk-based approach. Symbols are required to represent some physical hazards (i.e. flammability, explosivity, corrosivity) and acute health hazards. Other physical, health and environmental hazards are not shown on the labels of pest control products but are considered in the registration decisions as described below.

The hazards associated with pressurized containers and flammable, corrosive, irritating or acutely toxic products are consistently communicated by means of symbols and signal words which convey both the nature and level of the hazard. The symbols and signal words are provided in Schedule III of the PCPR. The Registration Handbook contains general guidance on label requirements for petitioners of pest control products. It includes criteria for identifying a product as flammable, corrosive, acutely toxic, or irritant. It also includes three levels of hazard in a progression of increasing severity to be reflected in the signal words CAUTION, WARNING, and DANGER and corresponding symbols. If more than one symbol is required, the most severe signal word is required with all of the hazard identifying words. If more than one signal word is required, there are operational criteria in place for use by the pesticide regulatory authority when verifying labels. Verification of the appropriateness of the symbols and signal words is performed following evaluation of the information submitted to support registration.

An application to register a pest control product must include information on several physical and chemical properties: explosibility, flammability, oxidizing or reducing action, corrosion characteristics and the container. These properties are used to determine the appropriate hazard symbols. Methods used to determine the physical and chemical properties must be described or referenced. For technical active ingredients, the melting point, boiling point, vapour pressure and stability (metals, temperature) must be provided as well as the test method or reference to an established international protocol. This information is used in the risk assessment of the product.

Health (other than acute and irritation) and environmental hazards are not labelled but are evaluated through a risk assessment approach. This process includes the identification of hazards and the level of anticipated exposure when the product is used as intended. The exposure levels are combined with the hazard assessment to determine whether there are risks associated with the use of the product. If risk mitigation measures such as personal protective equipment, buffer zones to sensitive ecosystems, or other exposure reducing measures are necessary and reasonable to achieve an acceptable level of risk, they are added to the label as a condition of use or else the registration of the product is not supported.

The Pest Control Products Regulations (PCPR) stipulate the types of information to be provided on labels. These labelling requirements will be included in regulations under PCPA 2002 when it comes into force. However, a few changes will be incorporated.

The current PCPR requires that the active ingredient(s) and its concentration be identified on the label. There is no regulatory requirement for disclosure of any other hazardous ingredients. Under PCPA 2002, the active ingredient and any components (formulants and contaminants) of health or environmental concern that are identified on a Health Canada list are excluded from the definition of confidential business information. The regulations could therefore require that these components be listed on the Material Safety Data Sheet (MSDS) and on the label of a pest control product. Other components of a pest control product will be included in the definition of confidential business information and therefore will not be disclosed.

Material Safety Data Sheets are not currently required under the PCPA. The PCPA 2002 requires that an MSDS be provided to workplaces where a pest control product is used or manufactured. The content of the MSDS will be prescribed in the regulations.

The label of each pest control product must show the market class to which it has been designated. The purpose of these classes is to provide a framework for provincial regulation of the sale and use of registered pesticides. Classification has an important role in mitigating potential risks associated with pesticide use, because there is an ascending degree of hazard associated with the DOMESTIC, COMMERCIAL and RESTRICTED classes. The DOMESTIC class is for products marketed to consumers for use in and around a dwelling. The COMMERCIAL class is for products marketed for general use in the commercial activities specified on the label. Products within the RESTRICTED class are subject to specific limitations respecting their display, distribution, use, or operator qualifications, due to high inherent toxicity or intended use in environmentally sensitive areas. The market class to which a product is assigned depends on the intended uses, the package size, potential risks, and inherent hazards of the product. Acute toxicity is one criterion used to ensure that more hazardous products are not available in the DOMESTIC class and that highly hazardous products are limited to the RESTRICTED class.

The FPT Committee on Pest Management and Pesticides has proposed for public comment (November 2002) some modifications to the federal market class system to enable harmonization of provincial and federal classification systems. The proposed system would include 5 market classes: Lower Risk Domestic, Higher Risk Domestic, Lower Risk Commercial, Higher Risk Commercial, and Restricted. The intended uses, package size, potential risks and inherent hazards of a pest control product would continue to be important considerations in designating its appropriate market class. Acute toxicity remains an important criterion. The proposed LD50 (oral, dermal) and LC50 (inhalation) cut-values for the FPT market classes are generally consistent with cut-off values for Acute Toxicity categories of the GHS. The proposal states that other hazards within the GHS may be incorporated in the FPT market classification system at a future date.

TABLE 1 GHS hazards which are identified on the labels of Pest Control Products (PCP) File 07

GHS Physical Hazard Classes	Hazard is indicated on front of PCP label	COMMENT
Explosive Substances/Articles (Liquid or Solid)	no	Such substances are not used as pest control products.
Flammable Gases	yes	e.g. ethylene gas
Flammable Aerosols	yes	
Oxidizing Gases	no	Such substances are not used as pest control products.
Gases Under Pressure	yes	e.g. methyl bromide, carbon dioxide, aerosol sprays
Flammable Liquids	yes	
Flammable Solids	no	Such substances are not used as a pest control products.
Self-Reactive Substances	no	Such substances are not used as pest control products.
Pyrophoric Liquids	no	Such substances are not used as pest control products.
Pyrophoric Solids	no	The label may include a precautionary statement such as: "Exposure to moist air or liquids releases flammable gas. Gas-air mixtures at concentrations above the lower flammable limit may ignite spontaneously. Never allow the buildup of gas to exceed explosive conditions." e.g. magnesium/aluminum phosphide
Substances which in contact with water emit flammable gases	no	

Self-Heating Substances	no	Such substances are not used as pest control products.
Oxidizing Liquids	no	Such products are usually labelled “Corrosive” but not “Flammable”. There may be a precautionary statement such as: “Strong oxidizing agent. Contamination with moisture, organic material or other chemicals may start a chemical reaction with generation of heat, hazardous gases, and possible fire or explosion.” e.g. sodium chlorate, trichloro-s-triazinetrione, hydrogen peroxide, sodium hypochlorite, peracetic acid
Oxidizing Solids	no	
Organic Peroxides	no	
Corrosive to Metals	yes	

GHS Health and Environmental Hazard Classes	Hazard is indicated on front of PCP label	COMMENT
Acute Toxicity - Oral	yes	
Acute Toxicity - Skin	yes	
Acute Toxicity - Inhalation	yes	
Skin Corrosion/Irritation	yes	
Serious Eye Damage/Eye Irritation	yes	
Respiratory Sensitization	no	
Skin Sensitization	yes	The hazard statement "Potential Skin Sensitizer" is required, not a symbol
Mutagenicity	no	These hazards are considered in the risk assessment process and if there is unacceptable risk, registration of the product is not supported.
Carcinogenicity	no	
Reproductive Toxicity	no	
Target Organ Systemic Toxicity - Single Exposure	no	
Target Organ Toxicity - Repeat Exposure	no	
Aquatic Toxicity	no	An Environmental Hazards section is included on the label if the risk assessment shows that operational applications of the pesticide could result in risk to aquatic organisms. This section includes statements to mitigate risk to aquatic organisms.