Pesticides

Pesticides - Labels

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Pesticide Labels?

How do I know how toxic a pesticide is?

Pesticides are labelled to help identify their toxicity.

A pesticide container label consists of several panels of information. If all the information will not fit on these container panels then additional information may be found in a separate booklet. There could also be stickers, tags, seals, leaflets, brochures, and wrappers on or attached to a container. It is important that the label be legible at all times. If a label becomes illegible (hard to read), a new label must be obtained from the supplier and affixed (attached) to the container.

NOTE: The term "pesticide" describes a very large and diverse group of chemicals or products. It is very important to always get specific information about the exact product you are using.

For more information, other OSH Answers documents in this series include:

- Pesticides First Aid
- · Pesticides General
- Pesticides Health Effects
- Pesticides Re-Entry Time
- Pesticides Working Safely

What kind of information is found on a pesticide label?

Important information is found on the labels of pest control products, and includes:

Table 1 Pesticide Label Information					
Label element	Description				
Product Name	The full name may include a distinctive brand or trade name and common chemical name.				
Product type	This element is a description of the intended purpose of the product. Some of the most commonly used pesticides include herbicides, insecticides, and fungicides.				
Physical form	Description of the physical form of the product, such as liquid, solid, emulsifiable concentrate, etc.				
Class designation	All pest control products are classified for intended use and by toxicity into one of four pesticide classes (domestic, commercial, manufacturing or restricted). The class is based on where the product will most often be used and how hazardous the product is to the user and the environment. It is also an indication of the care that should be taken when using, storing and transporting the pesticide.				
Guarantee of Concentration	Each active ingredient is identified by its established common name and the concentration in the formulation (% by weight or by volume).				
Formulants	Disclosure of other ingredients as required, such as disclosure of allergens.				
Pest Control Product Registration Number	For example REGISTRATION NO. 00000 PEST CONTROL PRODUCTS ACT.				
Registrant's Name and Address	Name and address, and sometimes a telephone number. Under some circumstances, the name and address of the Canadian Agent may be required instead. The registrant or agent can always be contacted for additional information.				
Net Contents of Package	The amount of pesticide product in the container expressed in metric units. This information will help you decide how many packages will be needed.				
Degree and Nature of Hazards	Indicated by precautionary signs, symbols and signal words (see Table 2) as standardized and outlined in the Pest Control Products Regulations.				
Special warning statements	"READ THE LABEL BEFORE USE" statement is required on all labels. "KEEP OUT OF THE REACH OF CHILDREN" is required on all pesticides classified as domestic (are intended for household use).				

Table 1 Pesticide Label Information					
Label element	Description				
Precautionary Words, Symbols, Statements and Handling Precautions	Presents information on hazards relating to handling, storage, display, distribution and disposal. Instructions on how to eliminate the hazards should also be outlined here. May list the re-entry time.				
First Aid Instructions	Gives practical information on what to do in the event of poisoning or injury by the product.				
Toxicological Information	Gives information essential to treatment if a person is injured or poisoned by the product. Includes the symptoms of poisoning, antidote or remedial measures and identity of other ingredients (such as petroleum distillates) in the product that may affect treatment. May list the re-entry time.				
Notice to user	This notice indicates that the user must use the product in accordance with the instructions on the label.				

Further information may be placed on a secondary panel and would include:

- · directions for use
- · disposal and decontamination
- precautions
- first aid
- · toxicological information
- · notice to the user
- · storage directions
- · aerial application
- · food residue statement
- other addresses

Adapted from: Health Canada (2007) Checklist of Labelling Requirements for Pest Control Products.

What do the symbols and signal words mean?

The symbols and signal words on the pesticide label give you some quick information about the acute toxicity of the product. See Table 2 for the different types of hazard symbols.

Table 2	
Pesticide Symbols and Labelling	

Four important symbols and words that show the potential hazards of pesticides.

The hazard symbol will always appear INSIDE one of the shapes shown below. These shapes and their warning words tell you the degree of hazard of the pesticide. The greater the number of sides to the shape, the more hazardous the product.

		to the shape, the more hazardous the product.		
Hazard Symbol	Signal Word	Hazard Degree	Warning Symbol	Signal Word
	Poison (Hazard by oral, skin or inhalation routes; may cause irritation.)	Triangular shape means LOW hazard (3 sides)		Caution
	Corrosive (Product is corrosive to the skin and eyes; can cause chemical burns. It is either an acid or alkali (caustic).)	Diamond shape means MODERATE hazard (4 sides)		Warning
	Flammable (Pesticide has low flash point and is flammable or easily ignited.)	Octagonal shape means HIGH hazard (8 sides)	0	Danger
	Explosive (Pesticide can explode (e.g. pesticide in pressurized cans).)	Check the label for special warnings about eye hazards and skin hazards. The front panel of the pesticide label may also contain warnings that tell you the product is corrosive to eyes, or is a skin or eye irritant.		

Adapted from: Grower Pesticide Safety Course Manual, Chapter 5 – Pesticide Formulations, Ontario Pesticide Education Program, University of Guelph Ridgetown Campus

Table 3 Labels and Toxicity						
Poison Hazard Symbol	Danger Poison	Warning Poison	Caution Poison	[No symbol] Very low toxicity		
Acute oral LD ₅₀	less than 500 mg/kg	500 - 1000 mg/kg	1000-2000 mg/kg	greater than 2500 mg/kg		
Acute dermal LD ₅₀	less than 500 mg/kg	500-1000 mg/kg	1000-2000 mg/kg	greater than 2500 mg/kg		
Respirator	required	advisable in confined spaces	advisable in confined spaces	advisable		
Eye Protection	required	required	advisable	advisable		
Eye effects	corrosive or irreversible	severe or reversible	irritant			
Chronic effects	fatal / irreversible	non-fatal / irreversible	non-fatal / reversible			
Petroleum distillates	10% or more (domestic products)	1 - 10%				

The labels of pesticides that present multiple hazards must include all hazard symbols, but require only one signal word – the signal word corresponding to the highest degree of hazard.

Adapted from:

Pesticides in Agriculture, Government of British Columbia

Pesticide Safety, Manitoba Agriculture, Food and Rural Initiatives

Pesticide Toxicity Hazard and Risk, Government of Alberta

Where can I look up Canadian Pesticide Labels?

To look up individual pesticide labels - Health Canada's Pest Management Regulatory Agency (PMRA) has an electronic pesticide and label database. The labels of all pesticides registered for use in Canada, their complete text, including the pamphlets attached to the labels, can be found on the <u>Health Canada</u> web site.

Fact sheets and examples of how to read a pesticide label are available from:

<u>Understanding the Pesticide Label</u> - Nova Scotia Environment

<u>Grower Pesticide Safety Course Manual, Chapter 5 – Pesticide Formulations,</u> Ontario Pesticide Education Program, University of Guelph Ridgetown Campus.

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