Reading a Pesticide Label

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Pesticide labels provide information for safe and effective use of pesticides. Labels are legal documents. Pesticide users are required by law to comply with the instructions in the pesticide labeling.

The pesticide label contains directions to properly mix, apply, store, and dispose of a pesticide. Safety information such as type of required personal protection equipment (PPE), worker protection standards (WPS) if applicable, physical and chemical hazards, environmental hazards, and a statement of practical treatment (first aid) must also be present on the label. Failure to comply with pesticide label directions can harm humans and the environment as well as lead to possible legal liability.

Below is a descriptive list of the information found on a pesticide label. A fictitious sample label follows to illustrate how this information might appear.

### Determining Signal Words

To establish how toxic (poisonous) a pesticide is, it is given to test animals to determine the amount of the chemical that kills 50 percent of the animals. Toxicity tests are done for each method of exposure — oral, dermal, and inhalation. Based on this and other tests, the product is classified into toxicity categories for each route of exposure. Toxicity categories I, II, III, and IV indicate how toxic the chemical or product is. Category I is most toxic and category IV is least toxic.

The toxicity categories help determine the product’s signal word. Signal words are required to appear on every pesticide label. Signal words provide a quick indication of the overall toxicity of the product. Table 1 lists the signal words. Note that the sample pesticide falls into toxicity category I according to the toxicity rating scale, and therefore the words DANGER-POISON appear on the label. For any product in category I, the words DANGER-POISON and the skull and crossbones symbol must appear in red letters on the label. The signal word must also appear in Spanish.

<table>
<thead>
<tr>
<th>Category</th>
<th>Signal word required on label</th>
<th>Approximate amount needed to kill an average adult</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>DANGER-POISON (PELIGRO)</td>
<td>A few drops to 1 teaspoon</td>
</tr>
<tr>
<td>II</td>
<td>WARNING (AVISOS)</td>
<td>1 teaspoon to 1 ounce</td>
</tr>
<tr>
<td>III</td>
<td>CAUTION</td>
<td>More than 1 ounce (low toxicity)</td>
</tr>
<tr>
<td>IV</td>
<td>CAUTION</td>
<td>More than 1 ounce (slightly toxic)</td>
</tr>
</tbody>
</table>
1. **Name of Product**  
   **Brand Name**  
   - Name used by the manufacturer to identify the product.  
   - Every product has a unique brand name.  

2. **Common Name**  
   - A simple name given to a chemical with a complex scientific name.  
   - Common names do not differ between manufacturers.  

3. **Ingredient Statement**  
   - Percentages of active and inert (other) ingredients in the product.  
   - Chemical and/or common names of active ingredients must be listed.  

4. **Net Contents**  
   - Total amount of product in the container.  
   - Net contents are expressed in ounces, pounds, gallons, quarts, pints, or fluid ounces.  

5. **Manufacturer Name and Address**  
   - Name and address of producer or distributor of the product.  

6. **Registration and Establishment Number**  
   - Environmental Protection Agency (EPA) registration number indicates the product and label are approved for use by the EPA.  
   - Establishment number is the code for the factory where the product was made.  

7. **Child Hazard Warning**  
   - The statement “KEEP OUT OF REACH OF CHILDREN” appears on every pesticide label.  

8. **Signal Word and Symbol**  
   - Indicates relative acute toxicity of the product.  
   - Acute toxicity is measured by testing five methods of exposure: acute oral, acute dermal, acute inhalation, eye irritation, and skin irritation.  

9. **Statement of Practical Treatment**  
   - Emergency first aid for pesticide exposure.  
   - First aid actions for each route of exposure (oral, dermal, inhalation, eye, and skin) are given.
Directions for Use

• How to properly use the product within its legal requirements to get the best results.
• The directions will tell you:
  • What the product is registered to control (pests).
  • Where the product can be used (crops, animals, locations).
  • How to apply the product.
  • How much product to use.
  • When the product should be applied.
  • How often to apply the product.
  • How soon the crop may be used or eaten after an application (pre-harvest interval – PHI).
  • When people can re-enter a treated area after an application (re-entry statement). Labels will give either a specific amount of time, such as 48 hours after application, or a general re-entry statement such as “Do not enter treated area until sprays have dried or dusts have settled.”

Agricultural Use Requirements

• Contains requirements for compliance with Worker Protection Standards (WPS).

Worker Protection Standards (WPS)

The Worker Protection Standards are designed to protect pesticide applicators and handlers and agricultural workers from pesticide poisoning. To comply with WPS, a product label must list the following:

• A restricted entry interval (REI), the time period immediately following a pesticide application during which entry into the treated area is not allowed, with narrow exceptions.
• If a pesticide handler or agricultural worker must enter the treated area during the REI (the exceptions), the label will state the personal protective equipment (PPE) — for example, gloves — required for early-entry workers.
• All workers must be notified when and where a pesticide application occurs. The type of notification required — oral, written, or oral and written — must be specified.
• To learn more about WPS and how to comply, see How To Comply With the Worker Protection Standard for Agricultural Pesticides, EPA Publication No. 735-B-05-002. (www.epa.gov/agriculture/epa-735-b-05-002.pdf)

Storage And Disposal

• Proper storage and disposal of unused pesticide and empty pesticide containers.
• For example, some products have special restrictions such as “Do not store below 32° F.”
• Remember: Do not reuse empty containers.
Precautionary Statements

HAZARDS TO HUMANS & DOMESTIC ANIMALS

DANGER: Fatal if absorbed through skin, fatal if swallowed, and poisonous if inhaled.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical resistant to this product are listed below. If you want more options, follow the instruction for category G on an EPA chemical resistance category selection chart.

Applicators and Other Handlers must wear:
- Coveralls over long-sleeve shirt & long pants
- Chemical-resistant gloves such as barrier laminate or vitron
- Chemical-resistant footwear plus socks
- Protective eyewear
- Chemical-resistant headgear for overhead exposures
- Chemical-resistant apron when cleaning equipment, mixing, or loading
- Respirator with either an organic vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval prefix TC-23C) or a canister approved for pesticides (MSHA/NIOSH approval number TC-14G).

User Safety Recommendations

Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of the gloves before removing.

Environmental Hazards

This pesticide is highly toxic to aquatic invertebrates and wildlife. Birds in treated areas may be killed. Shrimp and other aquatic organisms may be killed at recommended application rates. Do not contaminate water by cleaning of equipment or disposal of wastes.

Physical and Chemical Hazards

Do not use or store near heat or open flame. Not for use or storage in or around the home.

Classification Statement

The EPA classifies all pesticides as either general or restricted use. General use pesticides are less likely to cause harm when used improperly. Restricted use pesticides (RUP) have a greater potential to harm the environment or the user. Therefore, RUP labels must have the following statement on the top front panel: “RESTRICTED USE PESTICIDE: For retail sale to and use by only certified applicators or persons under their direct supervision and only for those uses covered by the certified applicator certification.”
PESTICIDE EMERGENCY INFORMATION
For any type of emergency involving pesticides, immediately contact the following emergency information centers for assistance.
Current as of March 2013

Human Pesticide Poisoning

POISON CONTROL
From anywhere in the United States, call
1-800-222-1222

Special Pesticide Emergencies

Animal Poisoning
Your veterinarian:

Pesticide Fire
Local fire department:

Traffic Accident
Local police department or sheriff’s department:

Environmental Pollution
Kansas Department of Health and Environment: Division of Environment:
785-296-1535

Pesticide Fire
Local fire department:

Traffic Accident
Local police department or sheriff’s department:

Environmental Pollution
Kansas Department of Health and Environment: Division of Environment:
785-296-1535

Pesticide Disposal Information
Kansas Department of Health and Environment, Bureau of Waste Management:
(785) 296-1600

National Pesticide Information Center
Provides advice on recognizing and managing pesticide poisoning, toxicology, general pesticide information and emergency response assistance. Funded by EPA, based at Oregon State University
7 days a week; excluding holidays
6:30 a.m. - 4:30 p.m. Pacific Time Zone
1-800-858-7378
Email: npic@ace.orst.edu

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