Chemical labels

By Tim L. Govenor

Find several products at your work site that contain hazardous chemicals. Use the product labels to illustrate examples in the main section of this program. Try to find labels with both written and illustrative hazard warnings.

As defined in OSHA's Hazard Communication standard, a label "means any written, printed or graphic material, displayed on or affixed to containers of hazardous chemicals." This program will describe common types of labels and graphics found on hazardous chemical containers and review the information provided to the employee by the label.

Share with the group that OSHA requires containers containing hazardous materials to have labels with the following information:

- The chemical's name;
- The physical and health hazards of the chemical;
- The manufacturer's name and address;
- The manufacturer's emergency phone number.

The U.S. Department of Transportation (DOT) has established labels to be used when transporting hazardous materials. Commonly found on shipping containers, these labels are required to be displayed prominently and to be easily readable from a distance. The graphic labels convey the hazard of the material but not the identity of the chemical. Several examples are shown below. Ask the group what each label conveys, and where they have seen these labels.

Hazardous chemical container labels

Tell the group that in addition to the information conveyed by these DOT labels, hazardous chemical container labels provide common names and chemical names of the ingredients. The common name is usually the product name, and it will match the name on the material safety data sheet (MSDS). The chemical name tells you the product's contents. For example, Zip Strip contains the hazardous chemicals methylene chloride, trichloroethylene and methanol.

Using the samples of container labels you gathered before the session, ask participants to provide the common name and the chemical ingredients.

Make sure that everyone understands labels must also provide the name of the product manufacturer and the phone number where emergency information can be obtained 24 hours a day, seven days a week.

Examples of DOT labels

This label indicates the materal contains and gives off oxygen or similar oxidizing chemicals. They accelerate the burning of any material by providing more oxygen than the air does.

This label symbolizes corrosive materials that will destroy materials and tissues through chemical corrosion.

This label conveys the message the liquid is flammable. At room temperature, static, sparks or other ignition sources can ignite the liquid.

This label informs you the solid material is flammable. It is not as common as others. These solids will ignite readily and burn violently. Some do so in contact with humid air.

Have participants find and share this information from the labels.

The last piece of information that must be conveyed on a label is the body part or organ that may most likely be damaged by the chemicals in the product. This information is referred to as the target organ(s). The most common organs affected by chemicals are the lungs, skin, eyes, mucous membranes, kidneys, liver, reproductive systems and the central nervous system.

Ask participants to find information on target organs from the labels.

Group actions

Given the information presented, identify actions the group can take to maintain or improve safe practices. You might suggest everyone take the following actions:

1. Ensure that chemical labels in the workplace have been maintained, are legible and have not been removed or defaced;
2. Suggest changes where necessary to handle the chemical in a safer manner;
3. Ask the group to look at products in their homes and identify how many contain hazard information.

References

Web sites

- Hazard Communication: Foundation of Workplace Chemical Safety Programs (Occupational Safety and Health Administration): www.osha.gov/dsg/hazcom/index.html
- Hazard Communication: Labeling and Marking Systems (Oklahoma State University): www.ehs.okstate.edu/modules/hazcom/Label.htm
- HMIS® III - Hazardous Materials Identification System (American Coatings Association): www.paint.org/programs/hmis.html
- NFPA - National Fire Protection Association (Interactive Learning Paradigms Incorporated): www.ilpi.com/msds/ref/nfpa.html

Videos

BWC's Division of Safety & Hygiene video library has a number of videos on labeling and hazard communication. These are available for loan to Ohio employers. Order a catalog by calling 1-800-OHIOBWC (ask for the video library), or visit our web site, ohiobwc.com.

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