



All containers that contain a "Hazardous Chemical" must be labeled for the health and safety of employees, students, visitors, and emergency responders. By OSHA definition, a "Hazardous Chemical" means any chemical which is classified as a physical or health hazard, a simple asphyxiant, combustible gas, pyrophoric gas, or hazard not otherwise classified.

### What type of label is needed on a hazardous chemical container?

- Hazardous chemical containers used within a Laboratory Area must follow the OSHA Laboratory Standard.
- Hazardous chemical containers used within a Non-Laboratory Area must follow the OSHA Hazardous Communication Standard.

### Summary of OSHA standards and labeling requirements for Hazardous Chemical Containers

| Required Label Information <sup>1</sup> | Laboratory Areas & Use  |                                  | Non-Laboratory Areas & Use<br>(machine shop, paint shop, etc.)  |                     |
|---|---|----------------------------------|---|---------------------|
|   | Manufacturer's container <sup>2</sup>                           | Secondary container <sup>3</sup> | Manufacturer's container  | Secondary container |
| Chemical Identity <sup>4</sup>          | <u>Required</u> <sup>5</sup>                                    | <u>Required</u>                  | <u>Required</u>   | <u>Required</u>     |
| Hazard Warning                          | Recommended <sup>6</sup>  | Recommended                      | <u>Required</u>   | <u>Required</u>     |
| Owner Name                              | Recommended   | Recommended                      | Recommended   | Recommended         |
| Date Opened or Transferred <sup>7</sup> | <u>Required</u> for peroxide formers, reactive substances; etc. |                                  | <u>Required</u> for peroxide formers, reactive substances; etc. |                     |

<sup>1</sup> This information may be added to the secondary container with an indelible pen, commercially available label, or by printing a label via the [EH&S Assistant](#) database.

<sup>2</sup> The container produced by the chemical manufacturer that is delivered to the user.

<sup>3</sup> All containers other than the manufacturer's container (i.e. squeeze or glass bottles, flasks, Eppendorf tubes, etc.).

<sup>4</sup> Label information must be legible and in plain English.

<sup>5</sup> Chemical identity and hazard warning should already be printed on the manufacturer's container.

<sup>6</sup> Recommended for best practices, though not required per regulation.

<sup>7</sup> Required for chemicals that degrade over time, peroxide formers, and air and water reactives.

### Chemical Labeling Abbreviations

- Abbreviations for simple solutions (e.g. KCl) can be used if supplemented by the written name (e.g. Potassium chloride).
- Abbreviations for complex solutions (e.g. TAE buffer or Bouin's solution) can be used if there is a cross reference prominently posted in either the work area or within the [Lab-Specific Chemical Hygiene Plan \(LCHP\)](#).

#### Contact EHS:

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## Other Labeling Situations

- Many small containers of similar materials stored together:
  - Label the outside of the container with approximate contents if feasible **or** list where more information can be found such as in a laboratory notebook.
  - Add hazard label for highest hazard material if feasible.
- Temporary container being mixed or reacted:
  - Add a small card to the immediate area listing the appropriate information.
  - If unattended, use an [Overnight / Unattended Lab Reaction Form](#).
- Laboratory notebook nomenclature can be used to identify and label intermediary chemicals that are part of an ongoing experiment or process, provided the nomenclature code and the location of the codes (in a lab notebook) are provided within the Chemical Hygiene Plan or posted within the laboratory.

## Hazard Warning Information

- Chemicals in the original manufacturer's container that have been recently purchased from a supplier will most likely contain hazard information in the form of warnings and pictograms.
- Older manufacturer's chemical containers may have alternative labeling schemes that provide essentially the same information as the new labels.
- OSU uses the Hazardous Materials Information System (HMIS) for consistency; however containers with the National Fire Protection Association (NFPA) labeling system can also be used. The HMIS and NFPA hazard codes are published in the Safety Data Sheets (SDS) available through the [OSU EH&S SDS webpage](#).
- For chemicals with no published hazard information, a descriptive entry in a laboratory notebook will suffice.

## What About Labeling of Non-Hazardous Chemical Containers?

Although OSHA regulations require labeling only those containers with hazardous chemicals, EH&S recommends all non-hazardous chemical containers be labeled with the product identity in order to minimize confusion. In the event there is a chemical with no OSHA hazard, then a label will make that fact obvious.