

## ***Standard Operating Procedure***

### Chemical Container Labeling

<b>Document#:</b> CHE016.01	<b>Distribution:</b> External
<b>Section:</b> Chemical Safety-HCP	<b>Effective Date:</b> July 2021
<b>Total Pages:</b> 4	<b>Revision Date:</b>

Per the Temple University Hazard Communication Program, all containers of hazardous chemicals in the workplace must be properly labeled. There is specific information that must be included on original (manufacturer) and on workplace (secondary) container labels.

Refer to the Temple University Chemical Hygiene Manual for additional information on the proper labeling of chemicals in laboratories.

#### **Original Container Labeling**

Under the new Globally Harmonized System of Classification and Labeling of Chemicals (GHS), all new containers shipped to Temple University (TU) will have the following information:

- Product Identifier-Should match the product identifier on the Safety Data Sheet (SDS).
- Signal Word-Either “Danger” (severe) or “Warning” (less severe)
- Hazard Statements- A phrase assigned to a hazard class that describes the nature of the products hazards.
- Precautionary Statements-Describes recommended measures to minimize or prevent adverse effects resulting from exposure.

- Pictograms-Graphical symbols intended to convey specific hazard information visually.
- Supplier Identification-provides information for contacting the makers or distributors of the chemical.

The Six elements of a GHS chemical container label

### Six Elements of a GHS Label

**PRODUCT IDENTIFIER**  
The Product Identifier gives you the unique name or number of the hazardous chemical.

**SIGNAL WORDS**  
A Signal Word lets you know the chemical's hazard level.

**HAZARD STATEMENTS**  
Hazard Statements describe the nature of the hazards of a chemical, including the degree of hazard where appropriate.  
**DANGER**- More severe hazards  
**WARNING**- Less severe hazards

**HAZARD PICTOGRAMS**  
Hazard Pictograms graphically represent the kinds of physical, health, and/or environmental hazards associated with the chemical.

**PRECAUTIONARY STATEMENTS**  
Precautionary Statements provide measures that should be taken to minimize or prevent adverse effects resulting from exposure to a hazardous chemical or improper storage or handling of a hazardous chemical including first-aid instructions if necessary.

**SUPPLIER IDENTIFICATION**  
The Supplier's Identification provides information for contacting the makers or distributors of the chemical.

*Every hazardous chemical label features specific information to help protect you and your coworkers.*

### GHS Pictograms

- Corrosion**
  - > Skin corrosion/burns
  - > Eye damage
  - > Corrosive to metal
- Flame**
  - > Flammables
  - > Pyrophorics
  - > Self-heating
  - > Emits flammable gas
  - > Self-reactives
  - > Organic peroxides
- Flame Over Circle**
  - > Oxidizers
- Exploding Bomb**
  - > Explosives
  - > Self-reactives
  - > Organic peroxides
- Gas Cylinder**
  - > Gases under pressure
- Health Hazard**
  - > Carcinogen
  - > Mutagenicity
  - > Reproductive toxicity
  - > Respiratory sensitizer
  - > Target organ toxicity
  - > Aspiration toxicity
- Skull and Crossbones**
  - > Acute toxicity (fatal or toxic)
- Exclamation Mark**
  - > Irritant
  - > Skin sensitizer
  - > Acute toxicity
  - > Narcotic effects
  - > Respiratory tract irritant
  - > Hazardous to ozone layer (non-mandatory)
- Environment**
  - > Aquatic toxicity (non-mandatory)

Standard hazard warning label

### Hazard Communication Standard Labels

OSHA has updated the requirements for labeling of hazardous chemicals under its Hazard Communication Standard (HCS). As of June 1, 2015, all labels will be required to have pictograms, a signal word, hazard and precautionary statements, the product identifier, and supplier identification. A sample revised HCS label, identifying the required label elements, is shown on the right. Supplemental information can also be provided on the label as needed.

**For more information:**  
 Occupational Safety and Health Administration (800) 321-OSHA (6742) www.osha.gov

#### SAMPLE LABEL

<p>CODE _____</p> <p>Product Name _____</p> <hr/> <p>Company Name _____</p> <p>Street Address _____</p> <p>City _____ State _____</p> <p>Postal Code _____ Country _____</p> <p>Emergency Phone Number _____</p>	<p style="text-align: center;"><b>Hazard Pictograms</b></p> <div style="display: flex; justify-content: space-around;"> </div> <p style="text-align: center;"><b>Signal Word</b> <b>Danger</b></p> <p style="text-align: center;"><b>Hazard Statements</b></p> <p style="text-align: center;">Highly flammable liquid and vapor. May cause liver and kidney damage.</p> <p style="text-align: center;"><b>Precautionary Statements</b></p> <p style="text-align: center;"><b>Supplemental Information</b></p> <p>Directions for Use _____</p> <p>_____</p> <p>_____</p> <p>Fill weight: _____ Lot Number: _____</p> <p>Gross weight: _____ Fill Date: _____</p> <p>Expiration Date: _____</p>
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Keep container tightly closed. Store in a cool, well-ventilated place that is locked.  
 Keep away from heat/sparks/open flame. No smoking. Only use non-sparking tools.  
 Use explosion-proof electrical equipment.  
 Take precautionary measures against static discharge.  
 Ground and bond container and receiving equipment.  
 Do not breathe vapors.  
 Wear protective gloves.  
 Do not eat, drink or smoke when using this product.  
 Wash hands thoroughly after handling.  
 Dispose of in accordance with local, regional, national, international regulations as specified.  
**In Case of Fire:** use dry chemical (BC) or Carbon Dioxide (CO<sub>2</sub>) fire extinguisher to extinguish.  
**First Aid**  
 If exposed call Poison Center.  
 If on skin (or hair): Take off immediately any contaminated clothing. Rinse skin with water.

OSHA 3492-02 2012

The original manufacturer label must always remain legible. If the original label is damaged, removed, or defaced, the label must be replaced immediately with a new label containing the same information.

### **Workplace (Secondary) Container Labeling**

During routine operations, hazardous chemicals are frequently transferred from the original containers into a secondary container. Unless it is intended for immediate use by the employee who performs the transfer, a workplace label is required on these secondary labels.

At a minimum, the workplace container labels must include the following:

- Chemical or product name
- Appropriate hazard warnings written as words, symbols, pictures, or a combination thereof which provide at least general information regarding the chemical and physical hazards.

EHRIS recommends that workplace containers be labeled with the same information that is on the original manufacturer label (using all the elements shown under original container labels), or an alternate labeling system such as National Fire Protection Association (NFPA) 704 hazard rating and/or the Hazardous material information System (HMIS)

In addition, workers must have quick access to the appropriate chemical Safety Data Sheet (SDS) which provide a complete description of the chemical constituents and detailed hazard information.

### HAZARDOUS MATERIALS IDENTIFICATION SYSTEM

HAZARD INDEX	PERSONAL PROTECTION INDEX
<b>4</b> Severe Hazard	<b>A</b>
<b>3</b> Serious Hazard	<b>B</b>
<b>2</b> Moderate Hazard	<b>C</b>
<b>1</b> Slight Hazard	<b>D</b>
<b>0</b> Minimal Hazard	<b>E</b>
* An asterisk or other designation corresponds to additional information on a data sheet or separate chronic effects notification	
<b>HEALTH</b> <input type="checkbox"/>	<b>F</b>
<b>FLAMMABILITY</b> <input type="checkbox"/>	<b>G</b>
<b>PHYSICAL HAZARD</b> <input type="checkbox"/>	<b>H</b>
<b>Personal Protection</b>	<b>I</b>
	<b>J</b>
	<b>K</b>
	<b>X</b> Consult your supervisor or S.O.P. for "Special" handling directions
	<b>A</b> Safety Glasses <b>n</b> Safety Goggles <b>o</b> Face Shield & Eye Protection <b>p</b> Gloves <b>q</b> Boots <b>r</b> Apron/Protective Clothing
	<b>s</b> Fall Protection <b>t</b> Ear Protection <b>u</b> Hearing Protection <b>w</b> Head & Foot Protection <b>y</b> Fall Protection <b>z</b> All-Weather or Heat Protection

Alternate labeling using HMIS is allowed for workplace chemical containers

<b>Health Hazard</b> <b>4</b> Deadly <b>3</b> Extreme Danger <b>2</b> Hazardous <b>1</b> Slightly Hazardous <b>0</b> Normal Material	<b>Fire Hazard</b> <b>Flash Points</b> <b>4</b> Below 73° F <b>3</b> Below 100° F <b>2</b> Between 100° F and 200° F <b>1</b> Above 200° F <b>0</b> Will Not Burn
<b>Specific Hazard</b> ACID - Acid ALK - Alkali COR - Corrosive OXY - Oxidizer - Radioactive - Use No Water	<b>Reactivity</b> <b>4</b> May Detonate <b>3</b> Shock/Heat May Detonate <b>2</b> Violent Chemical Change <b>1</b> Unstable if Heated <b>0</b> Stable

Alternate labeling using the NFPA diamond is also allowed