The Lab Rat NEWS
September 2013

EMORY UNIVERSITY
Environmental Health and Safety Office
Research Administration

Hazard Communication Standard Update: Globally Harmonized System

In March 2012, OSHA updated the Hazard Communication Standard (29 CFR 1910.1200) (HAZ COM) to align with the United Nations' Globally Harmonized System of Classification and Labeling of Chemicals (GHS). Under the 2012 HAZCOM revision, significant changes were made to the chemical labeling and Material Safety Data Sheets.

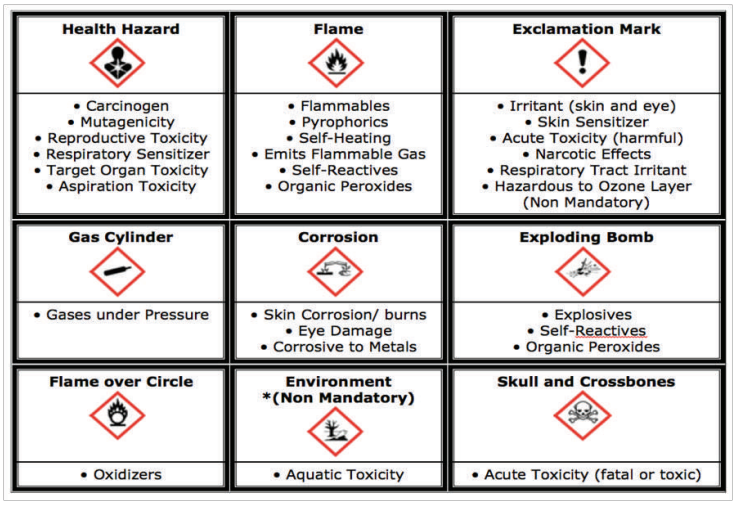
Chemical Labeling

Chemical labels now must have the following information:

1. Manufacturer's Information (name, address, and phone number)
2. Product Identifier (chemical name, batch number, and/or code number)
3. Signal Words (Danger – severe hazards, or Warning – less severe hazards)
4. Hazard Statements (nature of chemical, degree of hazard, and possible adverse effects)
5. Precautionary Statements (measures to be taken to lessen or prevent adverse effects from exposure)
6. Supplemental Information (directions, expiration date, PPE pictograms, and/or ingredients of unknown acute toxicity – greater or equal to 1%)

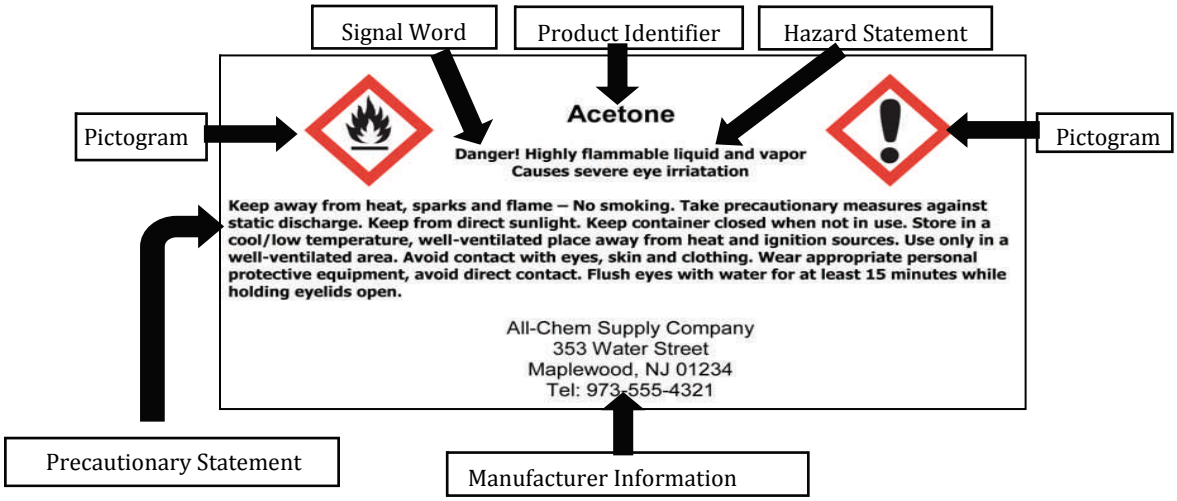
New Label Pictograms

Pictograms representing some hazards have changed. Below is a listing of the changes:



Health Hazard	Flame	Exclamation Mark
• Carcinogen • Mutagenicity • Reproductive Toxicity • Respiratory Sensitizer • Target Organ Toxicity • Aspiration Toxicity	• Flammables • Pyrophorics • Self-Heating • Emits Flammable Gas • Self-Reactives • Organic Peroxides	• Irritant (skin and eye) • Skin Sensitizer • Acute Toxicity (harmful) • Narcotic Effects • Respiratory Tract Irritant • Hazardous to Ozone Layer (Non Mandatory)
Gas Cylinder	**Corrosion**	**Exploding Bomb**
• Gases under Pressure	• Skin Corrosion/ burns • Eye Damage • Corrosive to Metals	• Explosives • Self-Reactives • Organic Peroxides
Flame over Circle	**Environment (Non Mandatory)**	**Skull and Crossbones**
• Oxidizers	• Aquatic Toxicity	• Acute Toxicity (fatal or toxic)

Label Example



Training

Access EHSO's Trainings online. Visit our website www.ehso.emory.edu for registration information.

Radiation Safety Training
2nd Tuesdays at 10:00 am

Laboratory Safety Training
3rd Thursdays at 10:00 am

Chemical/Radioactive Waste Pick-up Schedule

Full Schedule here...

All **chemical** waste pick up should be requested by emailing chemwaste@emory.edu

All **radioactive** waste pick up should be requested via EHS Assist pick-up.

Chemical waste disposal inventory form and/or **radioactive** waste inventory form should accompany all waste containers at the time of pick-up.

PPE

Based on potential exposures involved:

Eye: Glasses, goggles & face shields

Gloves: Appropriate for the type of procedure

Clothing: Gowns, lab coats, aprons, coveralls

Respirators: Appropriate for the type of procedure

Safety Data Sheets

Material Safety Data Sheets (MSDSs) are now known as Safety Data Sheets (SDSs). The information listed in the SDSs is primarily the same, but the format now consists of 16 individual sections:

1. Manufacturer Identification
2. Hazard Identification
3. Composition/Information on Ingredients
4. First Aid Measures
5. Fire Fighting Measures
6. Accidental Release Measures
7. Handling and Storage
8. Exposure Controls/Personal Protection
9. Physical and Chemical Properties
10. Stability and Reactivity
11. Toxicological Information
12. Ecological Information
13. Disposal Considerations
14. Transport Information
15. Regulatory Information
16. Other

How does this affect research labs?

1. The labels on chemical bottles from the vendor will change.*
2. External lab signage will change (EHSO will be facilitating updates in the future)
3. Relevant sections in the annual lab safety training will change
4. SDSs will be updated

Labs will notice label changes as new chemical purchases are made

Labeling and Transfer of Chemicals

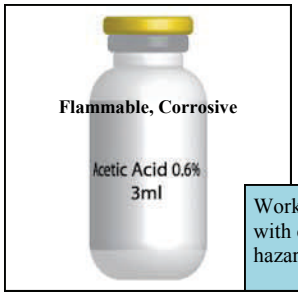
Lab personnel cannot use chemical containers that do not meet the labeling requirements of OSHA's Hazard Communication Standard. At a minimum, purchased chemical containers must have labels that meet the following:

1. The name of the chemical and the hazards of the chemical must be present on the label
2. The label must be legible
3. The label must be written in English
4. The label cannot be defaced, marked out, or removed until the original contents are removed from the container.

The hazard warnings are on the container to ensure lab personnel are aware of the physical and/or health hazards of the chemical. The hazard warnings may be communicated through pictures, symbols, words, or a combination of each. Labs must ensure that the hazard labels are present on all chemicals that are stored or used.

Working containers or portable secondary containers must also meet the requirements of OSHA's Hazard Communication Standard. This applies if the material is not used within the work shift by the individual who created or transferred the solution. The labeling requirements also apply if the researcher leaves the work area or gives the container to another researcher. The label on the working containers must contain the identity of the chemical (e.g. chemical name) and the hazards that are present. There are many ways that the labs can communicate the hazard information. Labs may use lab tape and write the hazards that apply to the solutions. Labs may also purchase manufactured labels or stickers using the Global Harmonization pictograms. **References: OSHA QuickFacts: Laboratory Safety – Labeling and Transfer of Chemicals. Web. 27 June 2013.**

Purchased Chemical Container with original manufacturer's label



Working container labeled with chemical name and hazards

Eye Wash Testing

Eyewash Stations should be tested once a month by lab personnel

Certifications

Biosafety Cabinets, Geiger Meters and Chemical Fume Hoods Certifications are required annually.

Fire Extinguishers

Visual fire extinguisher inspections conducted monthly:

A. Is it present and mounted in its proper location?

B. Is it readily accessible?

C. Initial and date attached tag.

If it appears to need servicing contact the Maintenance HELP line at 7-7463

Tell us how we are doing!

The newsletter has a new home. Every individual article is now hosted online at blogs.emory.edu/labratnews/

Got something to share? Tell us! Post comments, related articles/links, and safety concerns.

Feel free to also send your comments to **biosafe@emory.edu**.

We look forward to reading your ideas and comments!

Building Liaisons

Click here to find your building's Radiation and Research liaisons.

7 Steps to Prevent Cross Contamination…

1. ***Don't Leave the Lab Wearing Your Gloves -*** Gloves are used to protect skin from chemicals and infectious materials. Once used, gloves are considered contaminated. Gloves must be removed upon exiting the lab to prevent cross contamination of commonly used surfaces. As a general rule, never touch elevator buttons, door handles, etc. while wearing gloves.

2. ***Never reuse disposable gloves -*** Reusing disposable gloves is an unsafe laboratory practice. It can increase the likelihood of contamination. Change them between tasks when the gloves when contaminated

3. ***Discard disposable gloves into the proper container -***Don't leave gloves behind. Once gloves are removed, they must be placed into your lab's Stericycle box or biological/biohazard waste container. Gloves should not be placed in regular trash.

4. ***Always sanitize!*** – Wash your hands after you remove your gloves and before you exit the lab.

5. ***Designate "Clean" and "Dirty" areas -*** Use biohazard labels to identify computer keyboards or telephones that are typically handled with gloved hands. Remove equipment such as microscopes and cell counters from "clean" areas to "dirty" areas in the lab. Post signs to remind lab members of the sinks, bench tops, desk areas, other fixtures in the lab are "dirty".

6. ***Be mindful of others sharing your work space*** - As researchers, you often share the elevator with office personnel, hospital staff, and patients. Wearing gloves on the elevator is a concern for others that see you. They are unsure of whether your gloves are contaminated or fresh out of the box. For the sake of perception, refrain from wearing gloves or other personal protective equipment outside of research areas.

7. ***Transport samples safely*** - If carrying samples between research locations, remember to use a secondary container with a secure lid to transport your samples. Place an extra pair of clean gloves in your pocket. You can use them when you arrive at your destination.

Please Read—

Signature indicates: I have read and I understand the information in this issue of Lab Rat Newsletter. Use an additional sheet of paper for more signatures, if needed and attach to this document.

- This newsletter is a tool to help fulfill a legal requirement for ongoing safety training.
- Supervisors are responsible for ensuring that individuals in their area have read and understood the information that applies to their area.
- The signed newsletter should be placed into the PIs EHSO Lab Safety Binder.

Signature Here

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