



Environmental Health and Safety - EHS

Laboratory Safety Coordinator Meeting



SUMMER 2013

News and Updates



- Welcome !
 - Welcome New LSCs!
 - Joseph Barbercheck- Associate Director Research Safety
 - Andrea Voehringer – Research Safety Specialist
- Good Byes!
 - Jenna Moar- Sr. Research Safety Specialist
 - George Bain- Controlled Substance Officer
 - ✦ Ron Morales, Director of Research Safety, will be assuming the role of Controlled Substance Officer

Chemical Safety Inspections



Chemical Safety Inspections



- Schedule with your DSA
- Helpful before students return to get the lab in order
- Helpful for new DSA to learn the process
- Assistance from ATCC (Around the Clock Compliance)
 - Assist with Safety Shower and Eye Wash inspections
 - Chemical Fumehoods
- All inspections available on RIMS after completed

What Are We Looking For?



- Chemical Inspection
 - Segregation
 - Processes and Operation Procedures
 - Personal Protective Equipment Selection
 - Adequate Storage
 - Hazard Awareness
 - Tools available on the LSC toolkit!
 - New chemicals
 - ✦ Updated to RIMS Inventory Change the date if nothing has changed.
 - ✦ Segregated properly
 - ✦ New Global Harmonization Updates

Global Harmonization



Introduction to GHS



GHS

The

Globally Harmonized System

of Classification and Labeling of Chemicals



Benefits of Adopting the Global Harmonized System (GHS):



- Standardized International Format
 - Improve quality of substance information
 - Improve consistency of information
 - Internationally recognized
- One system for ALL participating countries covering:
 - New Universal Labels
 - New Pictograms
 - Material Safety Data Sheet → Safety Data Sheet which will always be in a consistent format which makes it quicker to find information

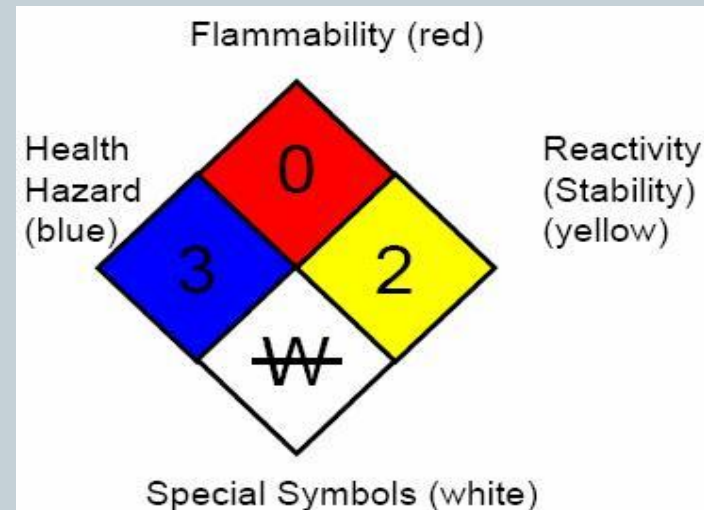
Currently you may see the below symbols on labels...



Chemical Name	
HEALTH	<input type="text" value="0"/>
FLAMMABILITY	<input type="text" value="0"/>
PHYSICAL HAZARD	<input type="text" value="0"/>
PERSONAL PROTECTION	<input type="text" value="0"/>

HMIS

By the time implementation is complete you will only see the GHS labels outlined in the next several slides.

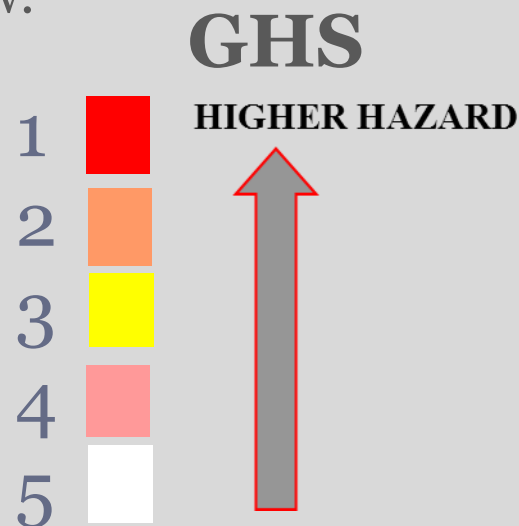
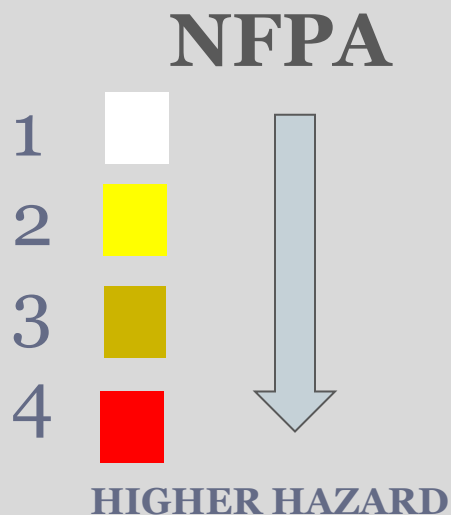


NFPA

Hazard Classification



To date the NFPA 704 diamond and corresponding numbers have been taught as a means of classification of chemicals. In GHS the numbers are inverted as seen below.



Note: Door signage is mandated by the City of Boston who adopts NFPA 704. This means as of now the numbers on the door signs will not change

GHS Labeling System



- GHS labels are standardized with no variation and include the following elements
 - **Symbols** (hazard pictograms): Convey health, physical and environmental hazard information, assigned to a GHS hazard class and category.
 - **Signal Words:** "Danger" or "Warning" are used to emphasize hazards and indicate the relative level of severity of the hazard, assigned to a GHS hazard class and category.
 - **Hazard Statements:** Standard phrases assigned to a hazard class and category that describe the nature of the hazard.
 - **Precautionary Statements:** Measures to minimize or prevent adverse effects.
 - **Product Identifier** (ingredient disclosure): Name or number used for a hazardous product on a label or in the SDS.
 - **Supplier identification:** The name, address and telephone number should be provided on the label.
 - **Supplemental information:** non-harmonized information.

GHS Labeling System Continued



- **Pictograms**-must be contain a red outer square, a white background, and a black hazard symbol. OSHA has designated 8 pictograms under this standard. A pictogram must be listed for each of the *hazards* of the chemical.



Carcinogen
Mutagen
Reproductive
Toxin



Irritant
Sensitizer
Respiratory
irritant



Burns
Skin
Corrosion
Eye Damage



Acute Toxicity



Flammables
Pyrophoric
Self Heating
Organic
Peroxides



Oxidizers



Explosives
Self Reactive



Gases under
pressure

Sample GHS Label with Elements



1 → **n-Propyl Alcohol**

UN No. 1274
CAS No. 71-23-8

2 → **DANGER**

3 → Highly flammable liquid and vapor. Causes serious eye damage.
May cause drowsiness and dizziness.

4 → Keep away from heat/sparks/open flames/hot surfaces. No smoking. Avoid breathing fumes/mist/vapours/spray. Wear protective gloves/protective clothing/eye protection/face protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present. Continue rinsing.

Fill Weight: 18.65 lbs. Lot Number: B56754434
Gross Weight: 20 lbs. Fill Date: 6/21/2013
Expiration Date: 6/21/2020

5 → Acme Chemical Company • 711 Roadrunner St. • Chicago, IL 60601 USA • www.acmechem.com • 123-444-5567

See SDS for further information.

6 →

- 1. Product Identifier** - Should match the product identifier on the Safety Data Sheet.
- 2. Signal Word** - Either use "Danger" (severe) or "Warning" (less severe)
- 3. Hazard Statements** - A phrase assigned to a hazard class that describes the nature of the product's hazards
- 4. Precautionary Statements** - Describes recommended measures to minimize or prevent adverse effects resulting from exposure.
- 5. Supplier Identification** - The name, address and telephone number of the manufacturer or supplier.
- 6. Pictograms** - Graphical symbols intended to convey specific hazard information visually.

Safety Data Sheets (SDS)



As part of OSHA adopting the GHS what you currently know as an MSDS will phase into an SDS.



What does this mean for you?

It means you must become familiar with the new universalized format. MSDS have no current required format however SDS will have a strict 16 category format and order.

MSDS libraries should begin to be updated with SDS as they are received. You are not required to change them all at one time!!

SDS Categories



- 1. Identification**-Product identifier, manufacturer contact info, restrictions on use
- 2. Hazard Identification**-Includes all hazards regarding chemical and label elements
- 3. Composition/ ingredients**- Chemical ingredients, and trade name secrets
- 4. First Aid measures**-Includes symptoms/ effects, acute, delayed and treatment
- 5. Firefighting measures**- proper extinguishing techniques, equipment. Hazards from fire
- 6. Accidental release measures**-Emergency procedures, ppe, containment and cleanup
- 7. Handling and Storage**-precautions for safe storage such as incompatibles
- 8. Exposure Controls/ PPE**- Lists PEL, TLV, engineering controls and ppe
- 9. Physical and chemical properties**- Characteristics of a chemical
- 10. Stability and Reactivity**- possible reactions and stability of the substance
- 11. Toxicological information**- Routes of exposure, symptoms, effects, numerical toxicity measures
- 12. Ecological Information***
- 13. Disposal Considerations***
- 14. Transport information***
- 15. Regulatory Information***
- 16. Other information**- preparation and revision dates

***OSHA doesn't regulate information in these sections**

Questions



Boston Fire Dept Walk Through



Annual Boston Fire Dept. Walk Through



- Walk through occurred in early June
- Both campuses
- All research laboratories on campus

Results



- Areas of Concern

- Flammable Cabinets

- ✦ Large improvement from last year and previous years!
 - ✦ Keep in mind during relocations and renovations
 - ✦ Place all materials back when not in use

- Compressed Gas and Hazardous Gas Systems

- ✦ SOPs in place for hazardous gas systems
 - All aware and trained
 - Let EHS know where to help!
 - ✦ Keep strapped and capped
 - Strapped to upper 2/3 of the cylinder, sturdy object, sturdy strap
 - Capped when not in use

Results Continued



- Emergency Equipment

- Safety Showers and Eye Washes accessible.

- ✦ Not blocked or obstructed
 - ✦ No extension cords through shower areas
 - ✦ Fire blankets in working condition where no shower accessible with flammable materials.
 - ✦ Alarms, extinguishers not blocked and available.
 - ✦ Exits not blocked!

- Electrical

- ✦ Proper amount per unit and needs
 - ✦ No extension cords to permanent equipment

Furniture



- Furniture must be fire rated to CAL. 135 standard
 - No outside furniture, couches, chairs, futons!
 - BU Sourcing and procurement has lists of available resources
 - Curtains, dividers and containment must meet these standards
 - ✦ Consult with EHS



What to do?!



- Great relationship with BFD
 - Improving and helpful
 - Your assistance is appreciated and helpful!
 - ✦ Keep us in the loop
- Upcoming inspection will be on Fire and General Safety
- Items of concern by BFD are items that EHS looks for
- We are here to help!
 - Let us know where we can assist with facilities requests
 - Removal of old equipment

Safety Minute



HOW TO INCORPORATE SAFETY

Next Group Meeting!



- Discuss Training and LSC meeting!
 - Issues, questions, and make sure everyone is on track.
 - Discuss Global Harmonization
 - ✦ Contact your DSA if you have these issues
- Discuss items from your current inspection.
 - All inspections are in RIMS
 - ✦ Discuss the findings
 - Everyone is responsible for safety, not just the LSC
 - ✦ What areas do you need assistance with from EHS
- Invite your D.S.A
 - We would like to learn about your work, your difficulties, and schedules. It can help our relationship.



UPDATES!

Updates



- Schools back!
 - New members
 - ✦ Training available on line and in person
 - ✦ New processes?
 - LSC Photo Contest!
 - ✦ Send a photo of Safety in the Lab! We will put them on the tool kit
 - ✦ Best photos win
 - ✦ Be creative, Be fun