

UNIVERSITY
OF MIAMI



HAZARD COMMUNICATION PROGRAM

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PURPOSE

- To protect our workers by informing them of the presence and properties of hazardous chemicals in the workplace.
- To train them in the safe handling of these chemicals.

AUTHORITY

- OSHA's Hazard Communication Standard.
- UM Hazard Communication Policy BSD-060

NOTICE

If you do not understand or are not sure of any of the information presented here...

STOP!

The University does not want you to work with hazardous chemicals until you do.

Ask your supervisor or contact the Office of Environmental Health and Safety.

YOUR RIGHTS AND RESPONSIBILITIES

- Under federal law you have the right to know about the hazardous chemicals that you use at work or that are used or stored.
- You also have the right to be trained in their safe use.
- If at any time you have a concern or question, it is your responsibility to contact the Office of Environmental Health and Safety.

LABELS AND SDS

- Information regarding the hazard a chemical may pose to you is transmitted by way of a label and a safety data sheet, or SDS (formerly called MSDS).
- This presentation will explain what they must contain and what you will find on them.

IT'S THE LAW

- You have the right to refuse working with any chemical that is not properly labeled, as explained in this presentation.
- You also must have access to the chemical's SDS. The SDS must be readily available and accessible.

LABEL REQUIREMENTS

- Labels must contain the following elements:
 - Product identifier
 - Supplier identifier
 - Chemical Identity
 - Hazard Pictograms *
 - Signal words *
 - Hazard statements *
 - Precautionary information
- The elements shown with an asterisk (*) must appear together on the label.

HAZARD CATEGORIES

- Hazards are grouped into three basic categories:
 - **Physical**
 - **Health**
 - **Environmental**
- Given the fact that environmental regulations fall outside OSHA's most of the information contained under this heading is non-mandatory.

THE PICTOGRAMS

- A pictogram is a graphic symbol that conveys its meaning through its pictorial resemblance to a physical object.
- There are nine pictograms used to inform you of the hazards posed by a chemical and you must learn them!

Physical Hazard Pictograms

Explosives



Flammable



Type of Hazard

Exploding Bomb

- Explosives
- Self-Reactives
- Organic Peroxides

Flame

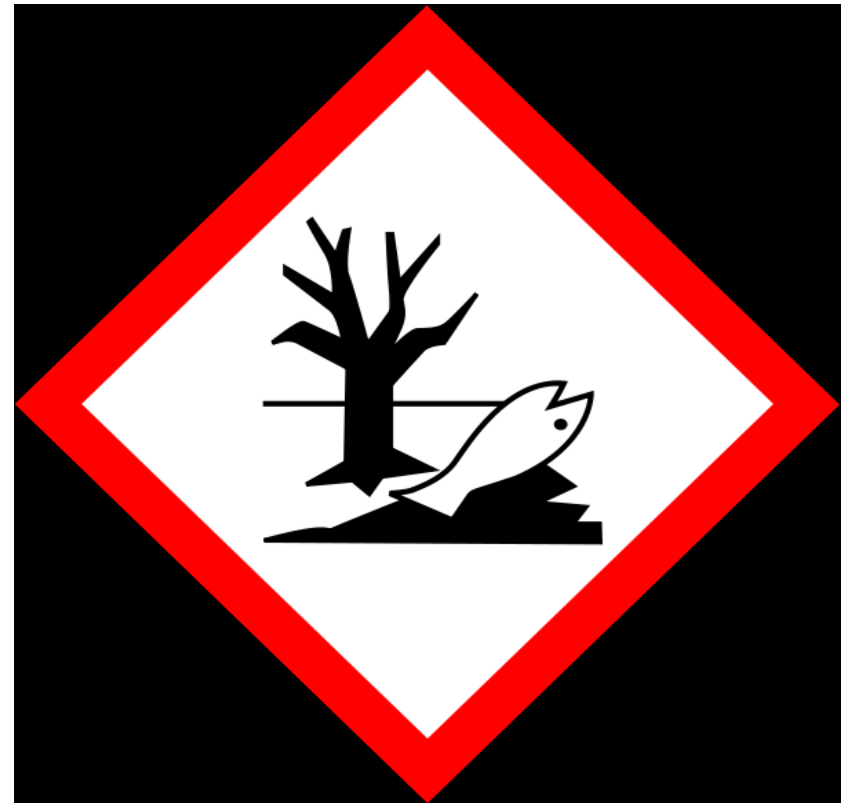
- Flammables
- Pyrophorics
- Self-Heating
- Emits Flammable Gas
- Self-Reactives
- Organic Peroxides

Physical / Environmental Hazard Pictogram

Corrosive



Environmental



Type of Hazards

Corrosion

- Skin Corrosion/Burns
- Eye Damage
- Corrosive to Metals

Environment

- Aquatic Toxicity

HEALTH HAZARD PICTOGRAMS

Poison



Irritant



Type of Hazard

Skull and Crossbones

- Acute Toxicity (fatal or toxic)

Exclamation Mark

- Irritant (skin and eye)
- Skin Sensitizer
- Acute Toxicity
- Narcotic Effects
- Respiratory Tract Irritant
- Hazardous to Ozone Layer (Non-Mandatory)

Health Hazard Pictograms

Health Hazard



Corrosive



Type of Hazards

Health Hazard

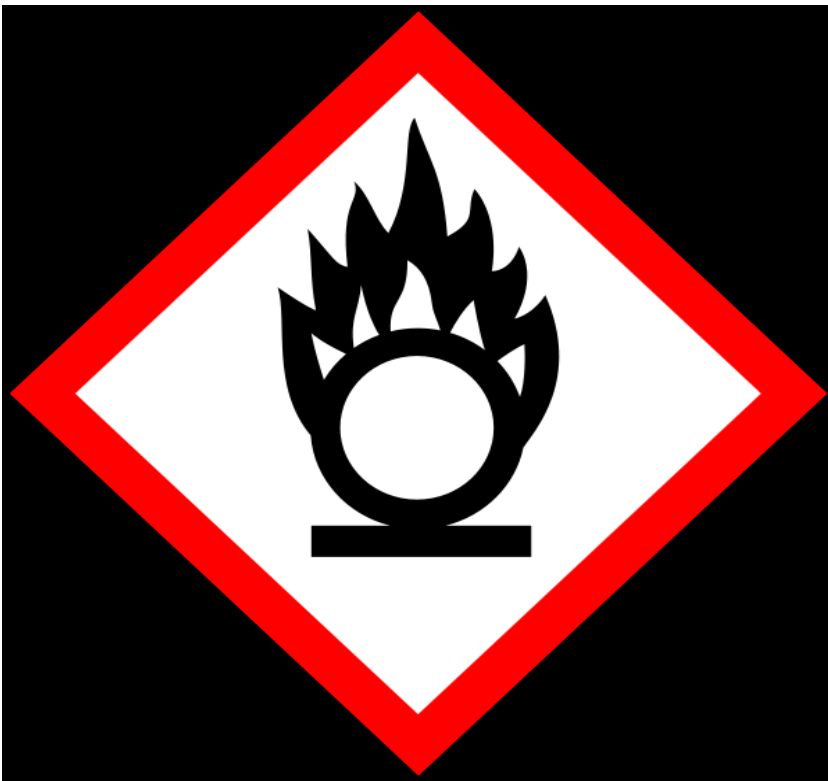
- Carcinogen
- Mutagenicity
- Reproductive Toxicity
- Respiratory Sensitizer
- Target Organ Toxicity
- Aspiration Toxicity

Corrosion

- Skin Corrosion/Burns
- Eye Damage
- Corrosive to Metals

Physical Hazard Pictograms

Oxidizing



Compressed Gases



Type of Hazards

Flame Over Circle

- Oxidizers

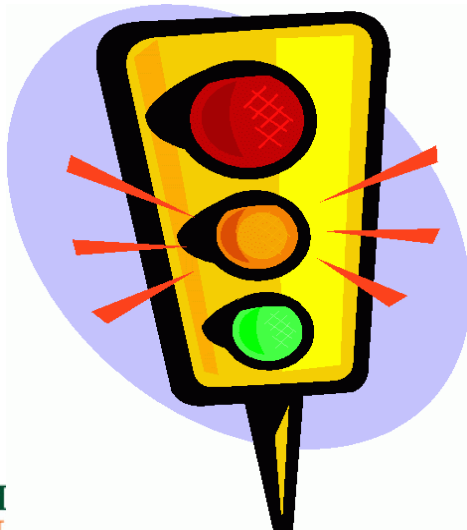
Gas Cylinder

- Gases Under Pressure

Signal Words

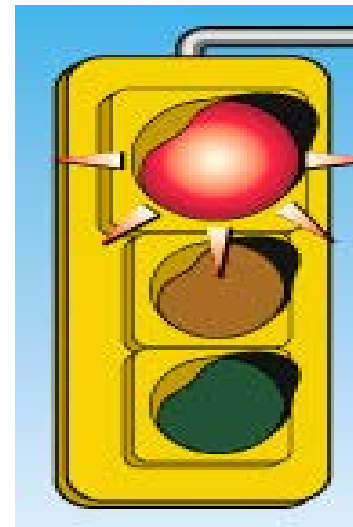
Warning

"Warning" for the less severe hazards. Think of a flashing yellow light.



Danger

"Danger" is used for the more severe hazards. Think of a flashing red traffic light.



Hazard Statement

- A statement assigned to a hazard class and category that describes the nature of the hazards of a hazardous product, including, where appropriate, the degree of hazard.

Hazard Statement Examples

- Causes damage to liver through prolonged or repeated exposure.
- Fatal if swallowed.
- Heating may cause a fire or explosion
- May cause an allergic skin reaction.
- May cause respiratory irritation.
- Toxic if swallowed
- Flammable liquid and vapor

Class and Category Defined

Class

- Means the nature of the physical, health or environmental hazard, e.g., flammable solid carcinogen, oral acute toxicity.

Category

- Means the division of criteria within each hazard class

Physical Hazard Classes

GHS <u>PHYSICAL</u> Hazard Classes	Corresponding Hazard Categories						
1. Explosives	Unstable explosive	Div 1.1	Div 1.2	Div 1.3	Div 1.4	Div 1.5	Div 1.6
2. Flammable Gases							
3. Flammable Aerosols	1	2					
4. Oxidising Gases	1						
5. Gases Under Pressure							
i. Compressed Gas	1						
ii. Liquefied Gas	1						
iii. Dissolved Gas	1						
iv. Refrigerated Liquefied Gas	1						
6. Flammable Liquids	1	2	3	4			
7. Flammable Solids	1	2					
8. Self reactive Substances	Type A	Type B	Type C	Type D	Type E	Type F	Type G
9. Pyrophoric Liquids	1						
10. Pyrophoric Solids	1						
11. Self-heating Substances	1	2					
12. Water reactive chemicals that could emit flammable gas	1	2	3				
13. Oxidising Liquids	1	2	3				
14. Oxidising Solids	1	2	3				
15. Organic Peroxides	Type A	Type B	Type C	Type D	Type E	Type F	Type G
16. Corrosive to Metals	1						

Highest Risk



Lowest Risk

GHS Compliant Label

CHEMICAL NAME

The scientific designation of a chemical in accordance with the nomenclature system developed by the International Union of Pure and Applied Chemistry (IUPAC) or the Chemical Abstracts Service (CAS) rules of nomenclature, or a name that will clearly identify the chemical for the purpose of conducting a hazard classification.

GHS 1.4.10.5.2 (d) (29 CFR 1910.1200(c))

PRODUCT IDENTIFIER

The name or number used for a hazardous chemical on a label or in the SDS. It provides a unique means by which the user can identify the chemical. The product identifier used shall permit cross-references to be made among the list of hazardous chemicals required in the written hazard communication program, the label and the SDS.

GHS 1.4.10.5.2 (d)

(29 CFR 1910.1200(c))

SIGNAL WORD

A word used to indicate the relative level of severity of hazard and alert the reader to a potential hazard on the label. The signal words used in this section are "danger" and "warning". "Danger" is used for more severe hazards, while "warning" is used for the less severe.

GHS 1.4.10.5.2 (a) (29 CFR 1910.1200(c))

PICTOGRAMS

A composition that may include a symbol plus other graphic elements, such as a border, background pattern, or color, that is intended to convey specific information about the hazards of a chemical. Eight pictograms are designated under HCS and nine pictograms are designated under GHS for application to a hazard category.

GHS 1.4.10.4 (29 CFR 1910.1200(c))

SUPPLIER IDENTIFICATION

The name, address, and telephone number of the manufacturer, importer, or other responsible party.

GHS 1.4.10.5.2 (e) (29 CFR 1910.1200(f) (1) (vi))

PAINT (METHYL FLAMMALINE, LEAD CHROMIUM)

UN1263
CAS# XXXX-XX-X

DANGER

Causes damage to the liver and kidneys through prolonged or repeated exposure to the skin.
Highly flammable liquid and vapour.

Wash hands thoroughly after use and before eating.
Keep away from food and drink.
Keep away from heat and ignition sources.

FIRST AID

Call emergency medical care.
Wash affected area of body thoroughly with soap and fresh water.

GHIS Paint Company, Chicago, IL, USA Telephone 999 999 9999

GHISTRNWC1 LABELMASTER (800) 621-5808 www.labelmaster.com

HAZARD STATEMENT

A statement assigned to a hazard class and category that describes the nature of the hazard(s) of a chemical, including, where appropriate, the degree of hazard.

Example: Fatal if swallowed.

GHS 1.4.10.5.2 (b) (29 CFR 1910.1200(c))

PRECAUTIONARY STATEMENT

A phrase that describes recommended measures that should be taken to minimize or prevent adverse effects resulting from exposure to a hazardous chemical or improper storage or handling.

Example: Do not eat, drink, or smoke when using this product.

GHS 1.4.10.5.2 (c) (29 CFR 1910.1200(c))

FIRST AID STATEMENT

There are four types of precautionary statements presented, "prevention," "response," "storage," and "disposal."

GHS 1.4.10.5.2 (c) (29 CFR Appendix C to 1910.1200-C.2.4.1)

© LABELMASTER® (800) 621-5808 www.labelmaster.com

Safety Data Sheet (SDS)

- A document provided by chemical or industrial manufacturers that contains information on hazardous chemicals.
- Contains 16 Sections.
- The term SDS is used interchangeably with MSDS



SDS – Sections 1 - 8

Contain general information about the chemical, identification, hazards, composition, safe handling practices, and emergency control measures.

1. Identification of the chemical and its supplier
2. Hazard(s) Identification
3. Composition/Information on Ingredients
4. First-Aid Measures
5. Fire-Fighting Measures
6. Accidental Release Measures
7. Handling & Storage
8. Exposure Controls/Personal Protection

SDS – Sections 9 - 16

Sections 9 through 11 and 16 contain other technical and scientific information, such as physical and chemical properties, information about stability and reactivity, toxicology, exposure control, and other information for any required element.

9. Physical & Chemical Properties

10. Stability and Reactivity

11. Toxicological Information

12. Ecological Information (non-mandatory)*

13. Disposal Considerations (non-mandatory)*

14. Transport Information (non-mandatory)*

15. Regulatory Information (non-mandatory)*

16. Other Information, including date of SDS preparation or last revision.

Sections 12 – 15

- The SDS must also contain sections 12 through 15 to be consistent with the UN Globally Harmonized System of Classification and Labeling of Chemicals (GHS), but OSHA will not enforce the content of these sections because they concern matters handled by other agencies.
- These sections deal with transportation and environmental protection.

Obtaining an SDS

- As a UM employee you can have access to an SDS just about anywhere you happen to be.
- All you need is access to the internet, it's that simple:
- Go to www.miami.edu and click on TOOLS and select *myUM*.
- After you log in, click on the EMPLOYEE tab
- Select MSDS under ONLINE RESOURCES
- Now all you have to do is enter the name of the chemical in the search window.

Contacting EHS

Know that as a UM employee you have a group of occupational health and safety professionals ready to assist you.

At the Office of Environmental Health & Safety we want to make sure your workplace is safe and so are you.

Please visit our website at www.miami.edu/ehs or call us at (305) 243-3400 anytime.