# Adusumilli Gopalakrishnaiah& Sugarcane Growers Siddharatha Degree College of Arts and Science

**Autonomous College :: Aided College of Govt. of AP**

**NAAC 'A' Grade College**

**Vuyyuru, Krishna (Dt).,Andhra Pradesh-521165**

## *VALUE ADDED COURSE*

**Title: Lab Symbols & Safety**

***VAC CODE: CHPG-SS-02***

**1ST AUG, 2019 TO 31th AUG 2019**

**Duration of the Course: 30Hrs**

**Organized By**

## Department of CHEMISTRY P.G

# A.G. & S.G. Siddhartha Degree College of Arts & Science

Vuyyuru-521165, Krishna District, Andhra Pradesh
(Managed by: Siddhartha Academy of General& Technical Education, Vijayawada-10)
An Autonomous College in the Jurisdiction of Krishna University
**Accredited by NAAC with "A" Grade**

## DEPARTMENT OF Chemistry [P.G]

# Value Added Course

**Title:** Lab symbols and safety

| | | |
|---|---|---|
| Name of the Lecturer | : | Dilshad Begum |
| Class | : | I M.Sc (Organic Chemistry) |
| Duration of the Course | : | Thirty Days |
| VAC Code | : | CHEV1C2 |

**Objectives:** "Lab Symbols andsafety

The objective of the Course is to bring Knowledge of students to understand various lab procedures and handling techniques by understanding nature of symbol present on chemicals. So that student can safely handle chemicals and further work in the laboratory.

**Methodology :**

Experimental and Learning Methods

**Duration:** 30 Days

# A.G. & S.G. Siddhartha Degree College of Arts & Science

Vuyyuru-521165, Krishna District, Andhra Pradesh

## Value Added Course

"Lab Symbols and safety"

**Date:** **01/08/2019 to 31/08/2019**

| S. No | Content | Module No |
|---|---|---|
| 1 | Introduction to Basic Safety rules | I |
| 2 | Handling and Identifying symbols. | II |
| 3 | Identifying by Observing Symbols in laboratory store and their handling by using procedures. | III |
| 4 | **Examples of symbols like** Carcinogenic Explosive \, Skull bones, compressed gasses etc | IV |

# A.G. & S.G. Siddhartha Degree College of Arts & Science

Vuyyuru-521165, Krishna District, Andhra Pradesh

## Value Added Course

**Title:** "Lab Symbols and safety"

**Test Exercise:**

1. Safety symbols have to be known in lab. (Yes/No)
2. Explosives identified by symbols. (Yes/No)
3. Carcinogenic means---------- causing.
4. Skull and bones indicates _____.
5. First aid box is required in laboratory_____.
6. Causing Blisters, burns is example for_____ damage
7. Compressed gas example is_____.
8. Cylinder symbol indicates _____.
9. Laboratory safety glasses are to be used. (Yes/No)
10. Hazard means_____.

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## Value Added Course

**Title:** "Lab symbols and safety"

**Key:**

1. Yes
2. Yes
3. Cancer
4. Poisonous
5. Yes
6. Irreversible
7. N-butane etc.
8. Compressed gas.
9. Yes
10. Harmful to human being

# A.G. & S.G. Siddhartha Degree College of Arts & Science

Vuyyuru-521165, Krishna District, Andhra Pradesh

## Department of Chemistry [P.G]

## Value Added Course

**Title:**"Lab Symbols and safety"

## Feed Back Form

**Name of the Student:**

**Class and Roll Number:**

1. Is the programme interested to you (Yes/No)
2. Have you attended all the session (Yes/No)
3. Is the content of the program is adequate (Yes/No)
4. Have the teacher covered the entire syllabus? (Yes/No)
5. Is the number of hours adequate? (Yes/No)
6. Do you have any suggestions for enhancing or reducing the number of weeks designed for the program? (Yes/No)
7. On the whole, is the program useful in terms of enriching your knowledge? (Yes/No)
8. Do you have any suggestions on the program? (Yes/No)

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## Value Added Course

## Student Enrollement Sheet

### Class: IM.Sc (Organic Chemistry)

| S. No | Roll No. | Name of the Student | Signature |
|---|---|---|---|
| 1 | Y190CH102001 | A.Khadhar | A. Khadhar. |
| 2 | Y190CH102002 | A.Aswini | A. Aswini |
| 3 | Y190CH102003 | B. Praddep | B. pradeep. |
| 4 | Y190CH102004 | V.Siva Kalayani | V. Siva Kalyani |
| 5 | Y190CH102005 | B.Anka Babu | B. Ankababu. |
| 6 | Y190CH102006 | D.S.Reddy | D.S Reddy. |
| 7 | Y190CH102007 | D.V.S.S.Rao | D. V. S. S. Rao |
| 8 | Y190CH102008 | G.Ramya | G. Ramya. |
| 9 | Y190CH102009 | G.N.Veeramma | G.N. Veeramma. |
| 10 | Y190CH102010 | G.Sirisha | G. Sirisha |
| 11 | Y190CH102011 | G.Eswar | G. Eswar. |
| 12 | Y190CH102012 | K.S.N.Tulasi | K.S.N. Tulasi. |
| 13 | Y190CH102013 | K.Ramesh | K. Ramesh. |
| 14 | Y190CH102014 | K.Srinu | K. Srinu |
| 15 | Y190CH102015 | K.Ssrinivas | K. Ssrinivas. |

Head, P.G. Department of Chemistry
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Arts&Science (Autonomous),Vuyyuru

**A.G. & S.G. Siddhartha Degree College of Arts & Science**
Vuyyuru-521165, Krishna District, Andhra Pradesh

**Department of Chemistry [P.G]**

## Value Added Course

Title: Lab Symbols and Safety

## Marks List

**Class: I M.Sc (Organic Chemistry)**

| S. No | Roll No. | Name of the Student | Marks |
|---|---|---|---|
| 1 | Y190CH102001 | A. Khadhar | 12 |
| 2 | Y190CH102002 | A. Aswini | 10 |
| 3 | Y190CH102003 | B. Praddep | 12 |
| 4 | Y190CH102004 | V. Siva Kalayani | 18 |
| 5 | Y190CH102005 | B. Anka Baby | 14 |
| 6 | Y190CH102006 | D. S. Reddy. | 14 |
| 7 | Y190CH102007 | D.V.S.S. Rao | 12 |
| 8 | Y180CH102008 | G. Ramya | 12 |
| 9 | Y190CH102009 | G.N. Veeramma. | 18 |
| 10 | Y190CH102010 | G. Sirisha | 14 |
| 11 | Y190CH102011 | G. Eswari | 14 |
| 12 | Y190CH102012 | K.S.N. Tulasi | 14 |
| 13 | Y190CH102013 | K. Ramesh | 10 |
| 14 | Y190CH102014 | K. Srinu | 16 |
| 15 | Y190CH102015 | K. Srinivas. | 18 |

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# A.G. & S.G. Siddhartha Degree College of Arts & Science

Vuyyuru-521165, Krishna District, Andhra Pradesh

## Value Added Course / ~~Certificate Course~~ - Attendance Register

Class / Section: Msc Chemistry Year : 2019 Department of: P.G CHEMISTRY Paper: Lecturer: Dilshad Begum

| Sl.No | Roll No | Student Name | Category | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | y19CH102001 | A.Khadhar | OBC | P | P | A | P | A | P | P | P | P | A | P | P | P | P | A | 11 |
| 2 | y19CH102002 | A.A.Swini | SC | A | P | P | P | P | P | A | P | P | P | P | P | P | P | P | 13 |
| 3 | y19CH102003 | B.Praddep | SC | P | P | P | A | P | P | P | P | A | P | P | A | A | P | A | 10 |
| 4 | y19CH102004 | V.Siva Kalayani | SC | P | P | P | P | A | P | P | P | P | P | P | P | P | P | P | 14 |
| 5 | y19CH102005 | B.Anka Babu. | BC | P | P | A | P | P | P | P | A | P | P | P | P | A | A | A | 10 |
| 6 | y19CH102006 | D.S.Reddy | OC | P | A | P | P | P | P | P | P | A | P | P | A | P | P | P | 12 |
| 7 | y19CH102007 | D.V.S.S.Rao. | BC | P | P | P | A | P | P | P | P | A | P | P | P | P | A | A | 11 |
| 8 | y19CH102008 | G.Ramya. | SC | P | P | P | P | P | P | P | P | P | A | A | P | P | P | A | 13 |
| 9 | y19CH102009 | G.N.Veeramma | SC | P | P | P | P | P | P | A | P | P | P | P | P | A | A | P | 11 |
| 10 | y19CH102010 | G.Srirsha | BC | A | P | P | P | P | P | P | P | A | P | A | P | A | P | P | 11 |
| 11 | y19CH102011 | G.Eswar | BC | P | P | P | P | P | P | A | A | A | P | P | P | P | P | A | 11 |
| 12 | y19CH102012 | K.S.N.Tulasi | BC | P | P | P | P | A | A | A | A | A | P | P | P | P | P | A | 09 |
| 13 | y19CH102013 | K.Ramesh | SC | P | P | P | P | A | P | A | P | P | A | A | P | P | P | P | 11 |
| 14 | y19CH102014 | K.Srinu | BC | P | P | P | P | P | P | A | P | P | A | P | P | P | P | P | 13 |
| 15 | y19CH102015 | K.Ssrinivas. | BC | P | P | P | P | P | A | A | P | P | P | A | P | P | P | P | 12 |

Signature of the Lecturer

Signature of the HOD

Head, P.G. Department of Chemistry
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# A.G. & S.G. Siddhartha Degree College of Arts & Science

Vuyyuru-521165, Krishna District, Andhra Pradesh

## Value Added Course / ~~Certificate Course~~ - Attendance Register

Class / Section: M.Sc (Chemistry) Year : 2019 Department of: PG chemistry Paper: CHEVIC2 Lecturer: Dilshad Begum.

| Sl.No | Roll No | Student Name | Category | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 419OCH102001 | A. Khadhar | OBC | P | P | P | A | P | P | A | A | P | P | A | P | P | A | P | 10 |
| 2 | 419OCH102002 | A. Aswini | SC | A | P | P | P | P | A | A | P | P | P | P | A | P | P | P | 11 |
| 3 | 419OCH102003 | B. Praddep | SC | P | A | P | A | P | P | P | P | P | A | P | P | P | A | A | 10 |
| 4 | 419OCH102004 | V. Siva Kalayani | SC | A | P | P | P | P | A | P | P | P | A | A | P | P | A | A | 9 |
| 5 | 419OCH102005 | B. Anka Babu | BC | P | A | P | P | P | A | P | P | A | P | A | P | A | A | P | 9 |
| 6 | 419OCH102006 | D.S. Reddy | OC | A | P | P | P | P | A | P | P | A | A | P | P | P | P | P | 11 |
| 7 | 419OCH102007 | D.V.S.S. Rao | BC | P | P | P | P | P | P | A | P | P | A | P | P | A | P | A | 11 |
| 8 | 419OCH102008 | G. Ramya | SC | A | P | A | P | A | P | P | A | P | P | P | A | P | A | P | 9 |
| 9 | 419OCH102009 | G.N. Veeramma | SC | P | P | P | P | P | P | P | P | P | A | A | A | A | P | P | 11 |
| 10 | 419OCH102010 | G. Sirisha | BC | A | P | P | A | P | P | A | P | P | P | A | A | P | A | A | 8 |
| 11 | 419OCH102011 | G. Eswar | BC | P | P | P | P | P | P | P | A | P | A | P | A | P | P | P | 12 |
| 12 | 419OCH102012 | K.S.N Tulasi | BC | P | P | A | P | A | P | P | P | P | P | A | P | P | A | A | 10 |
| 13 | 419OCH102013 | K. Ramesh | SC | P | P | P | P | P | P | P | P | A | A | P | P | A | A | P | 11 |
| 14 | 419OCH102014 | K. Sriu. | BC | P | P | A | P | A | P | A | P | P | A | P | P | A | A | P | 9 |
| 15 | 419OCH102015 | K. Ssrinivas. | BC | A | A | P | P | P | P | P | A | P | P | P | A | P | P | P | 11 |

Signature of the Lecturer

Signature of the HOD

Head, P.G. Department of Chemistry
A.G.& S.G.Siddhartha College of Arts & Sc
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Arts&Science (Autonomous),V

**A.G. & S.G. Siddhartha Degree College of Arts & Science**
Vuyyuru-521165, Krishna District, Andhra Pradesh

18/20

## Value Added Courses

Title : "Lab Symbols and Safety"

**Test Exercise:**

1. Safety symbols have to be known in lab. ✓ (Yes/No)
2. Explosives identified by symbols. ✓ (Yes/No)
3. Carcinogenic means---Cancer---causing.
4. Skull and bones indicates Poisonous.
5. First aid box is required in laboratory Yes.
6. Causing Blisters, burns is example for Irreversible damage
7. Compressed gas example is N-butene etc.
8. Cylinder symbol indicates Compressed gas
9. Laboratory safety glasses are to be used. ✓ (Yes/No)
10. Hazard means, Dangerous to human being.

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Vuyyuru-521165, Krishna District, Andhra Pradesh

12/20

Value Added Course

Title: " Lab Symbols and Safety"

**Test Exercise:**

1. Safety symbols have to be known in lab. (Yes/No)
2. Explosives identified by symbols. (Yes/No)
3. Carcinogenic means---Cancer--- causing.
4. Skull and bones indicates danger.
5. First aid box is required in laboratory yes.
6. Causing Blisters, burns is example for reversible damage
7. Compressed gas example is N-Butane.
8. Cylinder symbol indicates gas.
9. Laboratory safety glasses are to be used. (Yes/No)
10. Hazard means Noisy.

**A.G. & S.G. Siddhartha Degree College of Arts & Science**
Vuyyuru-521165, Krishna District, Andhra Pradesh

**Department of Chemistry**

**Value Added Course**

Title: "Lab Safety and Symbols

## Feed Back Form

**Name of the Student:** G. Ramya
**Class and Roll Number:** I. M.Sc K 4190CH102008

1. Is the programme interested to you (Yes/No)
2. Have you attended all the session (Yes/No)
3. Is the content of the program is adequate (Yes/No)
4. Have the teacher covered the entire syllabus? (Yes/No)
5. Is the number of hours adequate? (Yes/No)
6. Do you have any suggestions for enhancing or reducing the number of weeks designed for the program? (Yes/No)
7. On the whole, is the program useful in terms of enriching your knowledge? (Yes/No)
8. Do you have any suggestions on the program? (Yes/No)

**A.G. & S.G. Siddhartha Degree College of Arts & Science**
Vuyyuru-521165, Krishna District, Andhra Pradesh

**Department of Chemistry [P.G]**

**Value Added Course**

Title : "Lab Symbols and Safety

## Feed Back Form

**Name of the Student:** G.M. Veeramma
**Class and Roll Number:** I.M.Sc X 4190H10 2009

1. Is the programme interested to you (Yes/No)
2. Have you attended all the session (Yes/No)
3. Is the content of the program is adequate (Yes/No)
4. Have the teacher covered the entire syllabus? (Yes/No)
5. Is the number of hours adequate? (Yes/No)
6. Do you have any suggestions for enhancing or reducing the number of weeks designed for the program? (Yes/No)
7. On the whole, is the program useful in terms of enriching your knowledge? (Yes/No)
8. Do you have any suggestions on the program? (Yes/No)

# MODULES

## Basic safety rules

A standard list of basic laboratory safety rules are given below and must be followed in every laboratory that uses hazardous materials or processes. These basic rules provide hygiene and behavior safety information to avoid accidents in the laboratory. Laboratory specific safety rules may be required for processes, equipment, and materials, which should be addressed by laboratory standard operating procedures

- Know locations of laboratory safety showers, eyewash stations, and fire extinguishers. The safety equipment may be located in the hallway near the laboratory entrance.
- Know emergency exit routes.
- Avoid skin and eye contact with chemicals
- Minimize all chemical exposures.
- No horseplay will be tolerated.
- Assume that all chemicals of unknown toxicity are highly toxic.
- Post warning signs when unusual hazards, hazardous materials, hazardous equipment, or other special conditions are present.
- Avoid distracting or startling persons working in the laboratory.
- Use equipment only for its designated purpose
- Combine reagents in their appropriate order, such as adding acid to water.
- Avoid adding solids to hot liquids.
- All laboratory personnel should place emphasis on safety and chemical hygiene at all times.
- Never leave containers of chemicals open.
- All containers must have appropriate labels. Unlabeled chemicals should never be used.
- Do not taste or intentionally sniff chemicals.
- Never consume and/or store food or beverages or apply cosmetics in areas where hazardous chemicals are used or stored.
- Do not use mouth suction for pipetting or starting a siphon.
- Wash exposed areas of the skin prior to leaving the laboratory.
- Long hair and lose clothing must be pulled back and secured from entanglement or potential capture.
- No contact lenses should be worn around hazardous chemicals even when wearing safety glasses.
- Laboratory safety glasses or goggles should be worn in any area where chemicals are used or stored. They should also be worn any time there is a chance of splashes or particulates to enter the eye.
- Closed-toe shoes must be worn at all times in the laboratory. Perforated shoes or sandals are not appropriate.
- Determine the potential hazards and appropriate safety precautions before beginning any work.
- Procedures should be developed that minimize the formation and dispersion of aerosols.
- If an unknown chemical is produced in the laboratory, the material should be considered hazardous.

- Do not pour chemicals down drains, and do not utilize the sewer for chemical waste disposal.
- Keep all sink traps (including cup sink traps and floor drains) filled with water by running water down the drain at least monthly.
- Do not utilize fume hoods for evaporations and disposal of volatile solvents.
- Perform work with hazardous chemicals in a properly working fume hood to reduce potential exposures.
- Avoid working along in a building. Do not work alone in a laboratory if the procedures being conducted are hazardous.
- The permissable exposure limit (PEL) and the threshold limit values (TLV) must be observed in all areas. If exposure above a PEL or TLV is suspected for an ongoing process, please contact EHS immediately.
- Laboratory employees should have access to a chemical inventory list, applicable safety data sheets (SDS), departmental laboratory safety manual, and relevant standard operating procedures.
- Access to laboratories and support areas such as stockrooms or specialized laboratories should be limited to approved personnel only.
- All equipment should be regularly inspected for wear or deterioration.
- Equipment should be maintained according to the manufacturer's requirements and records of certification, maintenance, or repairs should be maintained for the life of the equipment.
- Designated and well-marked waste storage locations are necessary.
- No cell phone or ear bud usage is allowed in the active portion of the laboratories or during experimental operations.
- Clothing made of synthetic fibers should not be worn while working with flammable liquids or when a hazard is present as these materials tend to melt and stick to exposed skin.
- Laboratory coats should not be stored in offices or break rooms as this spreads contaminates to other areas.
- Computers and instrumentation should be labeled to indicate whether gloves should be worn or not. Inconsistent glove use around keyboards is a source of potential contamination.
- Avoid wearing jewelry in the lab as this can post multiple safety hazards.

# Hazard symbols

Hazard symbols have come a long way from the rudimentary drawings used to designate poison in the early 1800s.

As a result of updated OSHA chemical labeling requirements, 2016 marks the first full year of adoption of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) in the U.S.

The GHS system, part of OSHA's Hazard Communication Standard (HCS), consists of nine symbols, or pictograms, providing recognition of the hazards associated with certain substances. Use of eight of the nine are mandatory in the U.S., the exception being the environmental pictogram (see below).

Each pictogram covers a specific type of hazard and is designed to be immediately recognizable to anyone handling hazardous material.

In addition to pictograms, labels are required to include a signal word ("danger" or "warning"), a brief hazard statement and a precautionary statement outlining ways to prevent exposure.

## flame Over Circle

**The Flame Over Circle symbol identifies oxidizers.** Oxidizers are a type of chemical that facilitates burning. They also make fires burn at a higher temperature and for a longer period of time.To avoid burns and hazardous chemical injuries, products and machinery should be clearly marked with warnings and instructions. Clarion Safety's GHS flame over circle labels (ITEM# GHS6245-) help end-users reduce the risk of interacting with hazards. Our highly visible safety labels are printed on your choice of durable materials, at the size right for your project. These labels are expertly designed to meet your equipment safety needs, including those related to chemical and fire hazards, making them critical in notifying product users, employees, or visitors of burn and other safety and health hazards. They are perfectly suited for product and equipment applications in a range of demanding industrial climates where high performance and high visibility are required to keep people safe.



## Flame

**The Flame symbol identifies flammable materials.** This symbol also warns workers nearby that these hazardous materials may emit flammable gas or may self ignite when they are exposed to water or air. Hazardous products with the flame pictogram can be a fire or explosion hazard in the workplace.

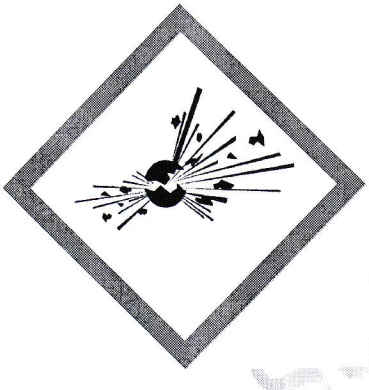
For a fire to occur, three elements must be together at the same time and in the right proportions:

- a source of fuel (e.g., the flammable product),
- oxygen, and
- heat (e.g., an ignition source such as a spark).

It is very important when working with flammable products that these three elements are not present together in the right amounts at any time.

The following hazards are also associated with flammable liquids:

## Exploding Bomb



**The Exploding Bomb symbol indicates explosives are present.** Explosives include organic peroxides and any highly unstable material that is at risk for explosion. This includes environments where the substance is not exposed to air, called self-reactives. The symbol within the pictogram shows an exploding bomb. Products with this pictogram present severe fire and explosion hazards. Significant injury and property damage could result from incidents involving these products.

Products with this pictogram are not commonly used because of their severe hazards. When used, they must be handled and stored in stringently controlled conditions. Specialized training and supervision are required.

The Explosives hazard class has not been implemented in WHMIS 2015. In Canada, explosives are regulated under the *Explosives Act*. Provision of information about the hazards, and the safe

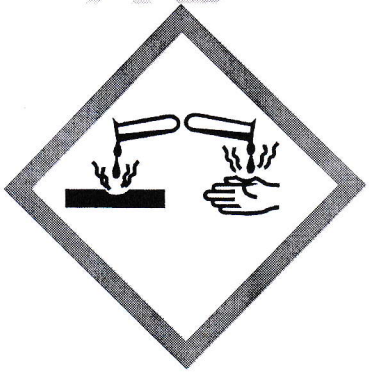
handling and storage and emergency procedures for explosives is beyond the scope of this document.

## Skull And Crossbones

**The Skull and Crossbones symbol identifies substances that have an immediate and severe toxic effect.** This is called acute toxicity, and examples of these substances include poisons and highly concentrated acids. A **skull and crossbones** is a picture of a human skull above a pair of crossed bones which warns of death or danger. It used to appear on the flags of pirate ships and is now sometimes found on containers holding poisonous substances.

Skull and crossbones stickers on the drums aroused the suspicion of the customs officers.

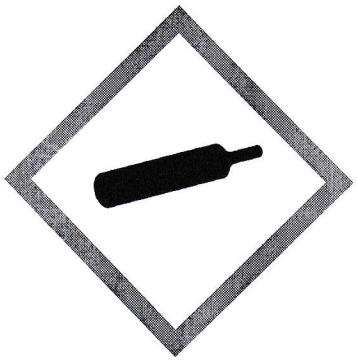
## Corrosion



**The Corrosion symbol indicates that a material can cause skin corrosion or burns.** Corrosive substances can also damage eyes on contact, or may damage metals when the substances and metals come in direct contact.

# Gas under pressure

### Gas Cylinder



**The Gas Cylinder symbol means that a gas is stored under pressure.** Examples of substances stored in gas cylinders include ammonia and liquid nitrogen. Is gas cylinder a chemical hazard?

Hazards due to the chemical properties of gas cylinders include: fire or explosion from the release of flammable gases near ignition sources (e.g. acetylene or liquid petroleum gas) spontaneous combustion from oxidising gases (e.g. oxygen or nitrous oxide) exposure to toxic or corrosive gases (e.g. anhydrous ammonia)

# Carcinogenic

## Health Hazard

**The Health Hazard symbol indicates that a cancer-causing agent is present.** In addition to carcinogens, the agents or substances present can also cause respiratory, reproductive or organ toxicity issues that can cause damage over time. In other words, the Health Hazard symbol warns of a long-term health hazard.

## Environment

**The Environment symbol alerts individuals that present chemicals are toxic to aquatic wildlife.** It's important to note that this is the only symbol listed here that is non-mandatory.

## Radioactive symbols

## Exclamation Mark

**The Exclamation Mark symbol indicates that the substance can cause immediate irritation**, including to the skin, eye or respiratory tract. This symbol also indicates a narcotic. Unlike the very specific hazard pictograms, such as for example the flame symbol, the meaning of the exclamation mark in GHS CLP is of a more general nature. In short: There are several different hazards indicated by the exclamation mark. Moreover, this pictogram can be replaced by other pictograms. What are the hazards that may be present, what do they have in common and when is the exclamation displayed and when not?

The pictogram "Exclamation mark" with the short name GHS07 is described in the CLP Regulation in Annex. It is part of the health hazard pictograms and generally only appears in case of minor hazards, accompanied by the signal word "Warning". The "Exclamation mark" pictogram is also used to denote "Hazardous to the ozone layer"

**ADUSUMILLI GOPALAKRISHNAIAH AND SUGARCANE GROWERS**
**SIDDHARTHA DEGREE COLLEGE OF ARTS AND SCIENCE,**
**(AUTONOMOUS) VUYYURU A.P**
**(Accredited at "A" level by NAAC, Bengaluru)**

## Department of CHEMISTRY p.g

**VALUE ADDED COURSE:** Lab Symbols and Safety

***CERTIFICATE***

This is to Certify that . Son/Daughter of Shri/Smt

has Successfully completed value added course in Lab symbols and safety
Conducted by the Department of Chemistry from 01-08-2019 to 31-08- 2019 We wish him her bright future

*Co-ordinator* *Head of Department* *Principal*