4230.

SA08229
SA08523

Kit #82 Properties of Acids and Bases Experiment

1. IDENTIFICATION

1.1 Product Identifiers
Product Name: Copper Shot
Alternative names: Copper metal: foil, shots, sheet, wire, turnings.
Product Number: 82-9EA, A82-9, AHM-1-10, BHM-1-10, C82-9, HM-1-10E

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: For laboratory and educational use only

1.3 Details of the supplier of the safety data sheet
Company: Lab-Aids, Inc, 17 Colt Ct., Ronkonkoma, NY 11779, USA
Telephone: +1 800 381 8003.
Fax: +1 631 820 8268

1.4 Emergency telephone number: Emergency number: CHEMTREC 1 800 424-9300

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS classification
Not classified

2.2 Label elements, including precautionary statements
Signal word: Not classified
Hazards statements: Not classified
Precautionary statements: Not classified

Pictogram: Not classified

2.3 Hazards not otherwise classified: none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: metal
3.2 Mixture:

Chemical Name	Product identifier	%	GHS-US classification
Copper	CAS# 7440-50-8	>99%	Not classified

3.3 Chemicals where a trade secret is claimed: None

4. FIRST AID MEASURE

4.1 Description of the first aid measure:

INGESTION: Never give anything by mouth to unconscious person. Rinse mouth and get conscious person drink a glass of milk or water. Do NOT induce vomiting unless directed to do so by medical personnel. Get medical attention if any quantities ingested.
INHALATION: Remove to fresh air. Get medical attention if necessary.
EYE CONTACT: Wash immediately with plenty of water, and continue washing for at least 15min., occasionally lifting upper and lower eyelids. Seek medical attention if necessary.
SKIN CONTACT: Flush thoroughly with mild soap and water. Remove contaminated clothing. Get medical attention if irritation develop.
4.2 Most important symptoms and effects, both acute and delayed: Refer to section 11.

4.3 Indication of any immediate medical attention and special treatment needed: No additional information available.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media:
Suitable extinguishing media: Use TriClass, dry chemical extinguisher for surrounding fires.
5.2 Special hazard arising from the substance or mixture: Not available.
5.3 Advice for firefighters: Use self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Wear laboratory grade gloves, eye protection and a lab coat.
6.2 Emergency procedures: Restrict unprotected personnel from the area.
6.3 Methods and material used for containment and cleanup procedure: Recover or place in a suitable container for proper disposal. Wash spill area with soap and water.

7. HANDLING AND STORAGE

7.1 Precaution for safe handling: Read label on container before using. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Use only under adult supervision. Avoid breathing dust. Use with adequate ventilation. Wash hands thoroughly after handling.

7.2 Storage: Keep container in cool, well-ventilated area. Store in closed container in a dry area.

7.3 incompatibility: Refer to section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: ACGIH: 1 mg/m3 TWA (dust and mist, as Cu) 0.2 mg/m3 TWA (fume)

8.2 Exposure controls: Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits.
Respiratory protection: Non should be needed if normal laboratory handling at room temperature.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid.
Appearance: Red-brown ductile metal.
Odor: Not available
pH: Not available
Vapor Pressure (mm Hg): Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: N/A
Flash point: N/A
Autoignition: N/A

Boiling point: 2595°C
Melting point: 1083°C
Freezing point: N/A
Decomposition temp: N/A
Solubility: Soluble in Nitric Acid and hot sulfuric acid.
Specific gravity (H_2O = 1): 8.92g/cc
Percent volatile (%): N/A
Molecular formula: Cu
Molecular weight: 63.54

10. STABILITY AND REACTIVITY

Conditions to Avoid: Avoid contact with nitric acid. Emits toxic fumes of nitrogen oxides.
Incompatibilities: Contact with powerful oxidizing agents , strong acids, bromates, chlorates, iodates, and halogens.
Hazardous decomposition: At temperature above the melting point metal oxide may be elevated.
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eyes: May cause eye irritation by mechanical action. Skin: May cause skin irritation by mechanical action. Inhalation: Heating copper or melting can release oxide fumes and cause fume metal fever when inhaled. Ingestion: Individuals with Wilson's disease may be affected by ingestion of elemental copper. Hereditary metabolic disorder involving deficiency in the copper binding and transport ceruloplasmin.

Toxicological data
ORL-RAT LD_{50}: Not available
IHL-RAT LD_{50}: Not available
SKN-RABIT LD_{50}: Not available

Carcinogenicity:
California prop 65: Not classified

12. ECOLOGICAL INFORMATION

Not available.

13. DISPOSAL CONSIDERATION

Disposal of in accordance with all local, state, and federal regulations, or contact with a licensed chemical disposal agency.

14. TRANSPORT INFORMATION

UN number: N/A
Shipping name: Not regulated
Hazard Class: N/A
Packing group: N/A
Exceptions: N/A

15. REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-159-6)

16. OTHER INFORMATION

Disclaimer:

The Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Lab-Aids, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration , investigation and verification. The data should not be confused with local, state, federal regulations, or insurance mandates, and CONSTITUTE NO WARRANTY. Any use of these data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling , storage, use and disposal of the product(s) described are beyond Lab-Aids, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

1. IDENTIFICATION

1.1 Product Identifiers
Product Name: Phenolphthalein Solution
Alternative names: Phenolphthalein Solution, pH indicator.
Product Number: SA-1B20xx, CASE-B016, 80-2EA, 81R-10EA, 82-6EA, A80-2, A81R-10, A82-6, C80-2, C81R-10, C82-6

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: For laboratory and educational use only

1.3 Details of the supplier of the safety data sheet
Company: LAB-AIDS®, Inc, 17 Colt Ct., Ronkonkoma, NY 11779, USA
Telephone: +1 800 381 8003.
Fax: +1 631 820 8268

1.4 Emergency telephone number
Emergency number: CHEMTREC 1 800 424-9300

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS classification
Flam. Liq. (Category 2), H225
Eye irritant (Category 2A), H319
Carcinogenicity (Category 2), H351
2.2 Label elements, including precautionary statements
Signal word: Danger
Pictogram: 
Hazards statements: H225 - Highly flammable liquid and vapor, H319 - Causes serious eye irritation.
Precautionary statements: P210 - Keep away from heat, hot surfaces, open flames, sparks, P280 - Wear protective gloves, eye protection

2.3 Hazards not otherwise classified: none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: Not applicable
3.2 Mixture:

Chemical Name	Product identifier	%	GHS-US classification
Isopropanol	CAS# 67-63-0	70%	Flam. Liq. 2, H225; Eye Irrit. 2A; STOT SE 3, H336
Water	CAS# 7732-18-5	30%	Not classified
Phenolphthalein	CAS# 77-09-8	0.5%	Cell Mut. 2, H341; Rep. 2, H361; Carc. 2, H351

3.3 Chemicals where a trade secret is claimed: None

4. FIRST AID MEASURE

4.1 Description of the first aid measure:

INGESTION: Never give anything by mouth to unconscious person. Rinse mouth and get conscious person drink a glass of milk or water. Do NOT induce vomiting unless directed to do so by medical personnel. Get immediate medical attention.
INHALATION: Remove to fresh air. Get medical attention if necessary.
EYE CONTACT: Wash immediately with plenty of water, and continue washing for at least 15min., occasionally lifting upper and lower eyelids. Seek medical attention if necessary.
SKIN CONTACT: Not applicable.

4.2 Most important symptoms and effects, both acute and delayed: Exposure to high concentrations may cause coughing and central nervous system depression. Dizziness. Headache.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media
Suitable extinguishing media: Use TriClass, dry chemical extinguisher.
5.2 Special hazard arising from the substance or mixture: Vapor spreads at floor level. Flash back possible over considerable distance.
5.3 Advice for firefighters: Use self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Wear laboratory grade gloves, eye protection and a lab coat.
6.2 Emergency procedures: Restrict unprotected personnel from the area.
6.3 Methods and material used for containment and cleanup procedure: Contain the spill with an inert absorbent material and deposit in a sealed container. For small spill use paper towel. Dry material place in trash. Ventilate and wash spill area with soap and water.

7. HANDLING AND STORAGE

7.1 Precaution for safe handling: Read label on container before using. Keep away from heat, sparks and flame. Vapor forms from this product and may travel, or be moved by air currents and ignited by pilot lights, static discharges , flames, sparks, heaters or other ignition sources. Ensure all equipment is electrically grounded before beginning transfer operations.
Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Use only under adult supervision. Avoid breathing vapor. Use hood or with adequate ventilation. Wash hands thoroughly after handling.
7.2 Storage: Flammable cabinet. Keep container in cool, well-ventilated area.

7.3 incompatibility: Refer to section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: ACGIH: STEL: 980g/m³; **USA OSHA:** TWA: 490g/m³

8.2 Exposure controls: Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits.

Respiratory protection: Non should be needed if normal laboratory handling at room temperature. Use self-contained breathing apparatus in high vapor concentrations.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid.
Appearance: Clear to slight yellowish.
Odor: Alcohol
pH: Not available
Vapor Pressure (mm Hg): 32.4 at 20 °C/68°F (Isopropyl alcohol)
Vapor Density: the Not available
Evaporation Rate: Not available
Viscosity: N/A
Flash point: 12°C/53.6°F (isopropyl alcohol)
Autoignition: 399 °C/750.2°F (Isopropyl alcohol)

Boiling point: 82°C/180°F (isopropyl alcohol)
Melting point: -89.5°C/-129.1°F (isopropyl alcohol)
Freezing point: Not available
Decomposition temp: Not available
Solubility: Miscible in water and alcohol
Specific gravity (H_2O = 1): 0.786 g/cm³
Percent volatile (%): Not available
Molecular formula: Mixture
Molecular weight: Mixture

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: High temperatures, sparks open flames and incompatible materials.
Incompatibilities: Alkali metals, metals, organic materials, strong oxidizing agents, amines.
Hazardous decomposition: not available.
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eyes: Material is irritating to eyes. Skin: Data not available. Inhalation: Prolonged inhalation might produce nausea, dizziness and headache. Aspiration into lungs can cause chemical pneumonitis. Ingestion: Ingested doses might produce nausea, dizziness and headache. Ingestion may affect the cardiovascular system manifested by change in heart rate, hypotension, cardiac arrhythmias and respiratory depression.

Toxicological data:
ORAL LD_{50}Isopropyl alcohol: 5045mg/kg [Rat]. 3600mg/kg [Mouse]. 6410 mg/kg [Rabbit]
DERMAL LD_{50}Isopropyl alcohol: 12800 mg/kg 4h [Rabbit].

Carcinogenicity:
California prop 65: Phenolphthalein

12. ECOLOGICAL INFORMATION

Remarks: Readily biodegradable. Oxidizes rapidly by photo-chemical reactions in air.

13. DISPOSAL CONSIDERATION

Disposal of in accordance with all local, state, and federal regulations.

14. TRANSPORT INFORMATION

UN number: 1219
Shipping name: Isopropanol solution
Hazard Class: 3
Packing group: PG II
Exceptions: Lty Qty ≤1L

15. REGULATORY INFORMATION

TSCA-listed, EINECS-listed (200-661-7) isopropyl alcohol. R11- Highly flammable, R36– Irritating to eyes, R67—Vapors may cause drowsiness and dizziness.

16. OTHER INFORMATION

Disclaimer:

The Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. LAB-AIDS® makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration , investigation and verification. The data should not be confused with local, state, federal regulations, or insurance mandates, and CONSTITUTE NO WARRANTY. Any use of these data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling , storage, use and disposal of the product(s) described are beyond LAB-AIDS, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

1. IDENTIFICATION

1.1 Product Identifiers
Product Name: Calcium Carbonate
Alternative names: Calcium Carbonate, Marble, Limestone.
Product Number: 82-11EA, 83-12EA, A82-11, A83-12, C82-11, C83-12
1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: For laboratory and educational use only

1.3 Details of the supplier of the safety data sheet
Company: Lab-Aids, Inc, 17 Colt Ct., Ronkonkoma, NY 11779, USA
Telephone: +1 800 381 8003.
Fax: +1 631 820 8268

1.4 Emergency telephone number: Emergency number: CHEMTREC 1 800 424-9300

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS classification
Not classified

2.2 Label elements, including precautionary statements
Signal word: Not classified
Hazards statements: Not classified
Precautionary statements: Not classified

Pictogram: Not classified

2.3 Hazards not otherwise classified: none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: mineral
3.2 Mixture:

Chemical Name	Product identifier	%	GHS-US classification
Calcium Carbonate (natural)	CAS# 1317-65-3	>99%	Not classified

3.3 Chemicals where a trade secret is claimed: None

4. FIRST AID MEASURE

4.1 Description of the first aid measure:

INGESTION: Never give anything by mouth to unconscious person. Rinse mouth and get conscious person drink a glass of milk or water. Do NOT induce vomiting unless directed to do so by medical personnel. Get medical attention if any quantities ingested.
INHALATION: Remove to fresh air. Get medical attention if necessary.
EYE CONTACT: Wash immediately with plenty of water, and continue washing for at least 15min., occasionally lifting upper and lower eyelids. Seek medical attention if necessary.
SKIN CONTACT: Flush thoroughly with mild soap and water. Remove contaminated clothing. Get medical attention if irritation develop.
4.2 Most important symptoms and effects, both acute and delayed: Refer to section 11.

4.3 Indication of any immediate medical attention and special treatment needed: No additional information available.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media:
Suitable extinguishing media: Use TriClass, dry chemical extinguisher for surrounding fires.
5.2 Special hazard arising from the substance or mixture: Not available.
5.3 Advice for firefighters: Use self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Wear laboratory grade gloves, eye protection and a lab coat.
6.2 Emergency procedures: Restrict unprotected personnel from the area.
6.3 Methods and material used for containment and cleanup procedure: Recover or place in a suitable container for proper disposal. Wash spill area with soap and water.

7. HANDLING AND STORAGE

7.1 Precaution for safe handling: Read label on container before using. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Use only under adult supervision. Avoid breathing dust. Use with adequate ventilation. Wash hands thoroughly after handling.

7.2 Storage: Keep container in cool, well-ventilated area. Store in closed container in a dry area.

7.3 incompatibility: Refer to section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: ACGIH: TWA 10mg/m3 (powder)

8.2 Exposure controls: Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits.
Respiratory protection: Non should be needed if normal laboratory handling at room temperature.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid.
Appearance: White to off white pieces.
Odor: Not available
pH: Not available
Vapor Pressure (mm Hg): Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: N/A
Flash point: N/A
Autoignition: N/A

Boiling point: Not available
Melting point: 1517°F/825°C
Freezing point: N/A
Decomposition temp: 1517°F/825°C
Solubility: Slightly soluble in water. Soluble in dilute acid.
Specific gravity (H_2O = 1): 2.8g/cc
Percent volatile (%): N/A
Molecular formula: $CaCO_3$
Molecular weight: 100.9

10. STABILITY AND REACTIVITY

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: Incompatible materials, High temperatures.
Incompatibilities: Reactive with oxidizing agents, acids, aluminum, magnesium, fluorine, hydrogen.
Hazardous decomposition: Carbon dioxide, Carbon monoxide, Calcium oxide.
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eyes: Not likely to cause eye irritation. Skin: Not likely to cause skin irritation. Inhalation: Material in chips unlikely to cause respiratory track irritation. Ingestions of large amounts may cause gastrointestinal disturbances with nausea and possible constipation.

Toxicological data

ORL-RAT LD_{50}: 6450mg/kg
IHL-RAT LD_{50}: not available
SKN-RABIT LD_{50}: not available

Carcinogenicity:
California prop 65: Not classified

12. ECOLOGICAL INFORMATION

Not available.

13. DISPOSAL CONSIDERATION

Disposal of in accordance with all local, state, and federal regulations, or contact with a licensed chemical disposal agency.

14. TRANSPORT INFORMATION

UN number: N/A
Shipping name: Not regulated
Hazard Class: N/A
Packing group: N/A
Exceptions: N/A

15. REGULATORY INFORMATION

TSCA-listed, EINECS-listed (207-439-9)

16. OTHER INFORMATION

Disclaimer:

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1. IDENTIFICATION

1.1 Product Identifiers
Product Name: Zinc Mossy
Alternative names: Zinc metal: foil, shots, sheet, wire, turnings.
Product Number: ZI005, 82-8EA, C82-8, NAC-D0039xx, 12-MZX1

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: For laboratory and educational use only

1.3 Details of the supplier of the safety data sheet
Company: Lab-Aids, Inc, 17 Colt Ct., Ronkonkoma, NY 11779, USA
Telephone: +1 800 381 8003.
Fax: +1 631 820 8268

1.4 Emergency telephone number: Emergency number: CHEMTREC 1 800 424-9300

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS classification
Not classified

2.2 Label elements, including precautionary statements
Signal word: Not classified
Hazards statements: Not classified
Precautionary statements: Not classified

Pictogram: Not classified

2.3 Hazards not otherwise classified: none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: metal
3.2 Mixture:

Chemical Name	Product identifier	%	GHS-US classification
Zinc	CAS# 7440-66-6	100%	Not classified

3.3 Chemicals where a trade secret is claimed: None

4. FIRST AID MEASURE

4.1 Description of the first aid measure:

INGESTION: Never give anything by mouth to unconscious person. Rinse mouth and get conscious person drink a glass of milk or water. Do NOT induce vomiting unless directed to do so by medical personnel. Get medical attention if large quantities ingested.

INHALATION: Remove to fresh air. Get medical attention if necessary.

EYE CONTACT: Wash immediately with plenty of water, and continue washing for at least 15min., occasionally lifting upper and lower eyelids. Seek medical attention if necessary.

SKIN CONTACT: Flush thoroughly with mild soap and water. Remove contaminated clothing. Get medical attention if irritation develop.

4.2 Most important symptoms and effects, both acute and delayed: Refer to section 11.

4.3 Indication of any immediate medical attention and special treatment needed: No additional information available.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media:
Suitable extinguishing media: Use TriClass, dry chemical extinguisher for surrounding fires.

5.2 Special hazard arising from the substance or mixture: Not available.

5.3 Advice for firefighters: Use self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Wear laboratory grade gloves, eye protection and a lab coat.

6.2 Emergency procedures: Restrict unprotected personnel from the area.

6.3 Methods and material used for containment and cleanup procedure: Recover or place in a suitable container for proper disposal. Wash spill area with soap and water.

7. HANDLING AND STORAGE

7.1 Precaution for safe handling: Read label on container before using. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Use only under adult supervision. Avoid breathing dust. Use with adequate ventilation. Wash hands thoroughly after handling.

7.2 Storage: Keep container in cool, well-ventilated area. Store in closed container in a dry area.

7.3 incompatibility: Refer to section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: ACGIH: 10 mg/m3 TWA (dust as Zn, fumes as zinc oxide)
8.2 Exposure controls: Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits.
Respiratory protection: Non should be needed if normal laboratory handling at room temperature.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid.
Appearance: Silver, or bluish-gray metal.
Odor: Not available
pH: Not available
Vapor Pressure (mm Hg): Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: N/A
Flash point: N/A
Autoignition: N/A

Boiling point: 907°C
Melting point: 419°C
Freezing point: N/A
Decomposition temp: Not available
Solubility: Soluble in acids and alkalis.
Specific gravity (H_2O = 1): Not available
Percent volatile (%): N/A
Molecular formula: Zn
Molecular weight: 65.39

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: Incompatibles, moisture.
Incompatibilities: Acids, alkalies, metal salts, water.
Hazardous decomposition: At temperature above the melting point metal oxide may be elevated.
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eyes: May cause eye irritation by mechanical action Exposure to zinc dust may cause eye irritation. Skin: May cause skin irritation by mechanical action. Exposure to zinc dust may cause skin irritation. Inhalation: Heating zinc or melting can release zinc oxide fumes and cause fume metal fever when inhaled. Zinc in this form do not pose an Inhalation hazard. Ingestion: Information not available.

Toxicological data
ORL-RAT LD_{50}: Not available
IHL-RAT LD_{50}: Not available
SKN-RABIT LD_{50}: Not available

Carcinogenicity:
California prop 65: Not classified

12. ECOLOGICAL INFORMATION

Not available.

13. DISPOSAL CONSIDERATION

Disposal of in accordance with all local, state, and federal regulations, or contact with a licensed chemical disposal agency.

14. TRANSPORT INFORMATION

UN number: N/A
Shipping name: Not regulated
Hazard Class: N/A
Packing group: N/A
Exceptions: N/A

15. REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-175-3), Not controlled under WHMIS (Canada).

16. OTHER INFORMATION

Disclaimer:

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1. IDENTIFICATION

1.1 Product Identifiers
Product Name: Iron
Alternative names: Iron metal: foil, shots, sheet, wire, turnings.
Product Number: IR-001, 82-7EA, A82-7, C82-7,
1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: For laboratory and educational use only

1.3 Details of the supplier of the safety data sheet
Company: Lab-Aids, Inc, 17 Colt Ct., Ronkonkoma, NY 11779, USA
Telephone: +1 800 381 8003.
Fax: +1 631 820 8268

1.4 Emergency telephone number: Emergency number: CHEMTREC 1 800 424-9300

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS classification
Not classified

2.2 Label elements, including precautionary statements
Signal word: Not classified
Hazards statements: Not classified
Precautionary statements: Not classified

Pictogram: Not classified

2.3 Hazards not otherwise classified: none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: metal
3.2 Mixture:

Chemical Name	Product identifier	%	GHS-US classification
Iron	CAS# 7439-89-6	100%	Not classified

3.3 Chemicals where a trade secret is claimed: None

4. FIRST AID MEASURE

4.1 Description of the first aid measure:

INGESTION: Never give anything by mouth to unconscious person. Rinse mouth and get conscious person drink a glass of milk or water. Do NOT induce vomiting unless directed to do so by medical personnel. Get medical attention if any quantities ingested.
INHALATION: Remove to fresh air. Get medical attention if necessary.
EYE CONTACT: Wash immediately with plenty of water, and continue washing for at least 15min., occasionally lifting upper and lower eyelids. Seek medical attention if necessary.
SKIN CONTACT: Flush thoroughly with mild soap and water. Remove contaminated clothing. Get medical attention if irritation develop.
4.2 Most important symptoms and effects, both acute and delayed: Refer to section 11.

4.3 Indication of any immediate medical attention and special treatment needed: No additional information available.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media:
Suitable extinguishing media: Use TriClass, dry chemical extinguisher for surrounding fires.
5.2 Special hazard arising from the substance or mixture: Not available.
5.3 Advice for firefighters: Use self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Wear laboratory grade gloves, eye protection and a lab coat.
6.2 Emergency procedures: Restrict unprotected personnel from the area.
6.3 Methods and material used for containment and cleanup procedure: Recover or place in a suitable container for proper disposal. Wash spill area with soap and water.

7. HANDLING AND STORAGE

7.1 Precaution for safe handling: Read label on container before using. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Use only under adult supervision. Avoid breathing dust. Use with adequate ventilation. Wash hands thoroughly after handling.

7.2 Storage: Keep container in cool, well-ventilated area. Store in closed container in a dry area.

7.3 incompatibility: Refer to section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: ACGIH: Not available
8.2 Exposure controls: Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits.
Respiratory protection: Non should be needed if normal laboratory handling at room temperature.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid.
Appearance: Metalic.
Odor: Not available
pH: Not available
Vapor Pressure (mm Hg): Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: N/A
Flash point: N/A
Autoignition: N/A

Boiling point: 3000°C
Melting point: 1535°C
Freezing point: N/A
Decomposition temp: Not available
Solubility: Soluble in acids.
Specific gravity (H_2O = 1): 7.86
Percent volatile (%): N/A
Molecular formula: Fe
Molecular weight: 55.85

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: Incompatibles, moisture.
Incompatibilities: Acids, oxidizing agents.
Hazardous decomposition: At temperature above the melting point metal oxide may be elevated.
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eyes: May cause eye irritation by mechanical action. Skin: May cause skin irritation by mechanical action. Inhalation: Iron in this form do not pose an Inhalation hazard. Ingestion: The amount of ingested iron which constitute a toxic dose is not is not well defined. Proposed toxic doses of elemental iron are 20mg/kg for gastrointestinal irritation to greater than 60mg/kg for systematic toxicity.

Toxicological data
ORL-RAT LD_{50}: 30000mg/kg
IHL-RAT LD_{50}: Not available
SKN-RABIT LD_{50}: Not available

Carcinogenicity:
California prop 65: Not classified

12. ECOLOGICAL INFORMATION

Not available.

13. DISPOSAL CONSIDERATION

Disposal of in accordance with all local, state, and federal regulations, or contact with a licensed chemical disposal agency.

14. TRANSPORT INFORMATION

UN number: N/A
Shipping name: Not regulated
Hazard Class: N/A
Packing group: N/A
Exceptions: N/A

15. REGULATORY INFORMATION

DSCL (EEC) This product is not classified according to the EU regulations. Not controlled under WHMIS (Canada).

16. OTHER INFORMATION

Disclaimer:

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1. IDENTIFICATION

1.1 Product Identifiers
Product Name: Magnesium Metal
Alternative names: Magnesium metal: ribbon, sheet, wire, turnings
Product Number: 82-10EA, C1-MGXxx, NAC-D0025xx, MA007xx

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: For laboratory and educational use only

1.3 Details of the supplier of the safety data sheet
Company: LAB-AIDS®, Inc, 17 Colt Ct., Ronkonkoma, NY 11779, USA
Telephone: +1 800 381 8003.
Fax: +1 631 820 8268

1.4 Emergency telephone number
Emergency number: CHEMTREC 1 800 424-9300

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS classification
Flam. Solid (Category 1), H228
Substances and mixtures, which in contact with water, emit flammable gases (Category 1), H260

2.2 Label elements, including precautionary statements
Signal word: Danger
Pictogram: 
Hazards statements: H228 - Flammable solid.
Precautionary statements: P210 - Keep away from heat, hot surfaces, open flames, sparks, P280 - Wear protective gloves, eye protection

2.3 Hazards not otherwise classified: none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: Metal
3.2 Mixture: N/A

Chemical Name	Product identifier	%	GHS-US classification
Magnesium	CAS# 7439-95-4	>90%	Flam. Solid. 1, H228; Water-react. 1, H260

3.3 Chemicals where a trade secret is claimed: None

4. FIRST AID MEASURE

4.1 Description of the first aid measure:

INGESTION: Never give anything by mouth to unconscious person. Rinse mouth and get conscious person drink a glass of milk or water. Do NOT induce vomiting unless directed to do so by medical personnel. Get immediate medical attention.
INHALATION: Remove to fresh air. Get medical attention if necessary.
EYE CONTACT: Wash immediately with plenty of water, and continue washing for at least 15min., occasionally lifting upper and lower eyelids. Seek medical attention if necessary.
SKIN CONTACT: Not applicable.

4.2 Most important symptoms and effects, both acute and delayed: Not available

4.3 Indication of any immediate medical attention and special treatment needed: No additional information available.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media: Flammable solid
Suitable extinguishing media: Use TriClass, dry chemical extinguisher.

5.2 Special hazard arising from the substance or mixture: Highly flammable in presence of open flames and sparks. Flammable in presence of acids, of moisture. Produces flammable gasses on contact with water and acid. May ignite on contact with water or moist air.

5.3 Advice for firefighters: Use self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Wear laboratory grade gloves, eye protection and a lab coat.
6.2 Emergency procedures: Restrict unprotected personnel from the area.

6.3 Methods and material used for containment and cleanup procedure: Recover or place in a suitable container for proper disposal. Wash spill area with soap and water.

7. HANDLING AND STORAGE

7.1 Precaution for safe handling: Read label on container before using. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Use only under adult supervision. Use with adequate ventilation. Avoid breathing vapor. Wash hands thoroughly after handling.

7.2 Storage: Keep away from acids, moisture, flames, sparks and incompatibles.

7.3 incompatibility: Refer to section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: Not available

8.2 Exposure controls: Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits.
Respiratory protection: Non should be needed if normal laboratory handling at room temperature. Use self-contained breathing apparatus in high vapor concentrations.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid.
Appearance: Silver white metal.
Odor: Not available
pH: Not available
Vapor Pressure (mm Hg): Not available
Vapor Density: the Not available
Evaporation Rate: Not available
Viscosity: N/A
Flash point: Not available
Autoignition: The substance or mixture is pyrophoric

Boiling point: 1090°C (1994)°F
Melting point: 648°C (1198°F)
Freezing point: Not available
Decomposition temp: Not available
Solubility: Not available
Specific gravity (H_2O = 1): 1.74 g/cm^3
Percent volatile (%): Not available
Molecular formula: Mg
Molecular weight: 24.31 g/mol

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: Open flames, sparks and incompatibles.
Incompatibilities: Acids, oxidizing agents, water, moisture.
Hazardous decomposition: At temperature above the melting point metal oxide may be elevated.
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eyes: May cause eye irritation by mechanical action. Skin: May cause skin irritation by mechanical action. Inhalation: When magnesium metal is heated during welding or smelting process, Metal Fume Fever (flu-like condition) may result from inhalation of Magnesium fumes. Ingestion: Low hazard for usual industrial handling. There are no known reports of serious industrial poisoning with Magnesium.

Toxicological data:
ORAL LD_{50}: Not available
DERMAL LD_{50}: Not available

Carcinogenicity:
California prop 65: Not classified

12. ECOLOGICAL INFORMATION

Data not available.

13. DISPOSAL CONSIDERATION

Disposal of in accordance with all local, state, and federal regulations.

14. TRANSPORT INFORMATION

UN number: 1869
Shipping name: Flammable solid
Hazard Class: 4.1
Packing group: III
Exceptions: Lt. Qty 5kg

15. REGULATORY INFORMATION

TSCA-listed, EINECS-listed (213-104-6). WHMIS (Canada): CLASS B-4 Flammable solid. CLASS B-6 Reactive and very flammable material. DSCL (EEC): R15-Contact with water liberates extremely flammable gasses. 543-In case of fire, use dry chemical. Never use water.

16. OTHER INFORMATION

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1. IDENTIFICATION

1.1 Product Identifiers
Product Name: Hydrochloric Acid, 6M
Alternative names: Hydrochloric Acid, 6M, Hydrochloric acid water solution
Product Number: 121-2EA, 309-2EA, 310-2EA, 82-1EA, A82-1, C82-1, 83-2EA, A83-2

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: For laboratory and educational use only

1.3 Details of the supplier of the safety data sheet
Company: LAB-AIDS®, Inc, 17 Colt Ct., Ronkonkoma, NY 11779, USA
Telephone: +1 800 381 8003.
Fax: +1 631 820 8268

1.4 Emergency telephone number
Emergency number: CHEMTREC 1 800 424-9300

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS classification
Acute Tox. Oral (Category 4), H302
Skin Corr. (Category 1A) H314
Eye Dam. (Category 1) H318
Specific target organ toxicity –single exposure (Category 3) H335
2.2 Label elements, including precautionary statements
Signal word: Danger
Pictogram:

Hazards statements: H302 - Harmful if swallowed, H314– Causes severe skin burns and eye damage. H335– May cause respiratory irritation.
Precautionary statements: P280 - Wear protective gloves, eye protection, P264 - Wash exposed skin thoroughly after handling.
2.3 Hazards not otherwise classified: none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: Not applicable
3.2 Mixture:

Chemical Name	Product identifier	%	GHS-US classification
Water	CAS# 7732-18-5	79.2%	Not classified
Hydrochloric acid	CAS# 7647-01-0	20.8%	Acute Tox. 4, H302; Skin Corr. 1A H314; Eye Dam. 1, H318; STOT SE 3, H335

3.3 Chemicals where a trade secret is claimed: none

4. FIRST AID MEASURE

4.1 Description of the first aid measure:
INGESTION: Never give anything by mouth to unconscious person. Rinse mouth and get conscious person drink a glass of milk or water. Do NOT induce vomiting unless directed to do so by medical personnel. Get immediate medical attention.
INHALATION: Remove to fresh air. Get medical attention if necessary.
EYE CONTACT: Wash immediately with plenty of water, and continue washing for at least 15min., occasionally lifting upper and lower eyelids. Seek immediate medical attention.
SKIN CONTACT: Flush thoroughly with mild soap and water. Remove contaminated clothing. Get medical attention if irritation or burns develop.
4.2 Most important symptoms and effects, both acute and delayed: Refer to section 11.

4.3 Indication of any immediate medical attention and special treatment needed: No additional information available.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media: Not flammable
Suitable extinguishing media: Use water spray, alcohol-resistant foam, or TriClass, dry chemical extinguisher.
5.2 Special hazard arising from the substance or mixture: Thermal decompositions generates corrosive vapors.
5.3 Advice for firefighters: Use self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Wear laboratory grade gloves, eye protection and a lab coat.
6.2 Emergency procedures: Restrict unprotected personnel from the area.

6.3 Methods and material used for containment and cleanup procedure: Contain the spill with an inert absorbent material and deposit in a sealed container. Dispose of in accordance with you local regulations. Small spills neutralize with acid neutralizer, or sodium hydroxide solution and mop up the area. Ventilate and wash spill area with soap and water.

7. HANDLING AND STORAGE

7.1 Precaution for safe handling: Read label on container before using. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Use only under adult supervision. Avoid breathing vapor. Use hood or with adequate ventilation. Wash hands thoroughly after handling.

7.2 Storage: Acid cabinet. Keep container tightly closed in cool, well-ventilated area.

7.3 incompatibility: Refer to section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: ACGIH: TWA: 2 ppm (hydrochloric acid)

8.2 Exposure controls: Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits.
Respiratory protection: Non should be needed if normal laboratory handling at room temperature.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid.
Appearance: Colorless to slightly yellow.
Odor: Pungent
pH: <2
Vapor Pressure (mm Hg): Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: Not available
Flash point: 537.2 °C (hydrochloric acid)
Autoignition: Not available

Flammability: Not available
Boiling point: 37.08°C estimated (hydrochloric acid)
Melting point: -114.22°C (-173.6° F)
Freezing point: 3.33°C (38° F)
Decomposition temp: Not available
Solubility: Miscible in water
Specific gravity (H_2O = 1): 1.18 g/cm³ @ 25°C (hydrochloric acid)
Percent volatile (%): 66% estimated (hydrochloric acid)
Molecular formula: Mixture
Molecular weight: Mixture

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: Incompatible materials.
Incompatibilities: Alkali metals, metals, organic materials, strong oxidizing agents, amines.
Hazardous decomposition: Not available.
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eye: Causes severe eye burns and eye damage. Skin: Causes severe skin burns. Inhalation: May cause respiratory track irritation. Ingestion: Swallowing hydrochloric acid can cause immediate pain and burns of the mouth, throat, esophagus and gastrointestinal tract.

Acute oral toxicity ORAL LD_{50}: 900mg/kg [Rabbit], as hydrochloric acid
Acute vapor toxicity IHL-LC_{50}: 3124ppm [Rat]/1h, as hydrochloric acid
DERMAL LD_{50}: 1449mg/kg [Mouse], as hydrochloric acid

Carcinogenicity:
California prop 65: None

12. ECOLOGICAL INFORMATION

LC50 (Gambusia affinis) 96 hours: 282 mg/l (hydrochloric acid)

13. DISPOSAL CONSIDERATION

Disposal of in accordance with all local, state, and federal regulations, or contact with a licensed chemical disposal agency.

14. TRANSPORT INFORMATION

UN number: 1789
Shipping name: Hydrochloric acid
Hazard Class: 8
Packing group: PG II
Exceptions: Ltd Qty. ≤1L

15. REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-595-7). WHMIS (Canada): CLASS E: Corrosive liquid. DSCL (EEC) R34-Causes burns.

16. OTHER INFORMATION

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SAFETY DATA SHEET
Version: SDS_131.02.01
Revision Date: November 10, 2015

1. IDENTIFICATION

1.1 Product Identifiers
Product Name: Limewater
Alternative names: 0.1M Calcium hydroxide.
Product Number: 82-4EA, A82-4, C82-4, 83-1EA, A83-1, 12-4EA, 181-6EA, NAC-W0121xx, EDCE-B007, TX-B004

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: For laboratory and educational use only

1.3 Details of the supplier of the safety data sheet
Company: LAB-AIDS®, Inc, 17 Colt Ct., Ronkonkoma, NY 11779, USA
Telephone: +1 800 381 8003.
Fax: +1 631 820 8268

1.4 Emergency telephone number: Emergency number: CHEMTREC 1 800 424-9300.

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS classification
Eye Irrit. (Category 2B), H320

2.2 Label elements, including precautionary statements
Signal word: Warning
Pictogram: Not classified
Hazards statements: H320 - Causes eye irritation.
Precautionary statements: P264 - Wash exposed skin thoroughly after handling, P280 - Wear protective gloves, eye protection

2.3 Hazards not otherwise classified: None.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: Not applicable
3.2 Mixture

Chemical Name	Product identifier	%	GHS-US classification
Water	CAS# 7732-18-5	99.8%	Not classified
Calcium hydroxide	CAS# 1305-62-0	0.2%	Skin Irrit. 2 H315 ; Eye Dam. 1, H318; STOT SE 3 H335

3.3 Chemicals where a trade secret is claimed: None

4. FIRST AID MEASURE

4.1 Description of the first aid measure:
INGESTION: Never give anything by mouth to unconscious person. Rinse mouth and get conscious person drink a glass of milk or water. Do NOT induce vomiting unless directed to do so by medical personnel. Get immediate medical attention.
INHALATION: Remove to fresh air. Get medical attention if necessary.
EYE CONTACT: Wash immediately with plenty of water, and continue washing for at least 15min., occasionally lifting upper and lower eyelids. Seek medical attention if necessary.
SKIN CONTACT: Flush thoroughly with mild soap and water. Remove contaminated clothing. Get medical attention if irritation develop.
4.2 Most important symptoms and effects, both acute and delayed: Refer to section 11.

4.3 Indication of any immediate medical attention and special treatment needed: No additional information available.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media: Nonflammable liquid
Suitable extinguishing media: Use TriClass, dry chemical extinguisher for surrounding fires.
5.2 Special hazard arising from the substance or mixture: Not available.
5.3 Advice for firefighters: Use self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Wear laboratory grade gloves, eye protection and a lab coat.
6.2 Emergency procedures: Restrict unprotected personnel from the area.
6.3 Methods and material used for containment and cleanup procedure: Mop up the area.

7. HANDLING AND STORAGE

7.1 Precaution for safe handling: Read label on container before using. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Use only under adult supervision. Avoid breathing vapor. Use with adequate ventilation. Wash hands thoroughly after handling.

7.2 Storage: Keep container in cool, well-ventilated area.

7.3 incompatibility: Refer to section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: ACGIH: STEL: 5mg/m³
8.2 Exposure controls: Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits.
Respiratory protection: Non should be needed if normal laboratory handling at room temperature.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid.
Appearance: Transparent, Colorless, Clear .
Odor: Not available
pH: Not available
Vapor Pressure (mm Hg): Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: N/A
Flash point: N/A
Autoignition: N/A

Boiling point: ≈100°C
Melting point: Not available
Freezing point: Not available
Decomposition temp: Not available
Solubility: Not available
Specific gravity (H_2O = 1): ≈1 at 20°C
Percent volatile (%): 100%
Molecular formula: Mixture
Molecular weight: Mixture

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: Direct sunlight.
Incompatibilities: Strong acids
Hazardous decomposition: Not available.
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eyes: Causes mild eye irritation. Skin: Not expected to cause any acute effects. Inhalation: Not expected to cause irritation to the respiratory tract and mucous membrane. Ingestion: Not expected to cause any acute effects.

Toxicological data
Acute oral toxicity ORAL LD_{50}: Not available
Acute vapor toxicity IHL-LC_{50}: Not available
DERMAL LD_{50}: Not available

Carcinogenicity:
California prop 65: Not classified

12. ECOLOGICAL INFORMATION

Not available.

13. DISPOSAL CONSIDERATION

Disposal of in accordance with all local, state, and federal regulations, or contact with a licensed chemical disposal agency.

14. TRANSPORT INFORMATION

UN number: N/A
Shipping name: N/A
Hazard Class: N/A
Packing group: N/A
Exceptions: Ltd Qty. N/A

15. REGULATORY INFORMATION

TSCA-listed, DSCL (EEC) R36 irritating to eyes.

16. OTHER INFORMATION

Disclaimer:

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SAFETY DATA SHEET
Version: SDS_146.01.00
Revision Date: June 29, 2015

1. IDENTIFICATION

1.1 Product Identifiers
Product Name: Acetic Acid, 6M
Alternative names: Acetic acid water solution
Product Number: 82-3EA, A82-3, C82-3

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: For laboratory and educational use only

1.3 Details of the supplier of the safety data sheet
Company: LAB-AIDS®, Inc, 17 Colt Ct., Ronkonkoma, NY 11779, USA
Telephone: +1 800 381 8003.
Fax: +1 631 820 8268

1.4 Emergency telephone number
Emergency number: CHEMTREC 1 800 424-9300

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS classification

Skin Corr. (Category 1C) H314
Eye Dam. (Category 1) H318

2.2 Label elements, including precautionary statements
Signal word: Danger
Pictogram:

Hazards statements: H318 - Causes serious eye damage, H314– Causes severe skin burns and eye damage
Precautionary statements: P264 - Wash exposed skin thoroughly after handling, P280 - Wear protective gloves, eye protection
2.3 Hazards not otherwise classified: none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: Not applicable
3.2 Mixture:

Chemical Name	Product identifier	%	GHS-US classification
Water	CAS#7732-18-5	65.9%	Not classified
Acetic acid	CAS# 64-19-7	34.1%	Flam. Liq. 3, H226; Skin Corr. 1A H314; Eye Dam. 2, H318

3.3 Chemicals where a trade secret is claimed:

4. FIRST AID MEASURE

4.1 Description of the first aid measure:
INGESTION: Never give anything by mouth to unconscious person. Rinse mouth and get conscious person drink a glass of milk or water. Do NOT induce vomiting unless directed to do so by medical personnel. Get immediate medical attention.
INHALATION: Remove to fresh air. Get medical attention if necessary.
EYE CONTACT: Wash immediately with plenty of water, and continue washing for at least 15min., occasionally lifting upper and lower eyelids. Seek immediate medical attention.
SKIN CONTACT: Flush thoroughly with mild soap and water. Remove contaminated clothing. Get medical attention if irritation or burns develop.
4.2 Most important symptoms and effects, both acute and delayed: Refer to section 11.

4.3 Indication of any immediate medical attention and special treatment needed: No additional information available.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media:
Suitable extinguishing media: Use water spray, alcohol-resistant foam, or TriClass, dry chemical extinguisher.
5.2 Special hazard arising from the substance or mixture: Thermal decomposition generates corrosive vapors
5.3 Advice for firefighters: Use self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Wear laboratory grade gloves, eye protection and a lab coat.
6.2 Emergency procedures: Restrict unprotected personnel from the area.
6.3 Methods and material used for containment and cleanup procedure: Contain the spill with an inert absorbent material and deposit in a sealed container. For small spill use paper towel. Dry material place in trash. Ventilate and wash spill area with soap and water.

7. HANDLING AND STORAGE

7.1 Precaution for safe handling: Read label on container before using. Keep away from heat. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Use only under adult supervision. Avoid breathing vapor. Use hood or with adequate ventilation. Wash hands thoroughly after handling.

7.2 Storage: Keep container tightly closed in cool, well-ventilated area.

7.3 incompatibility: Refer to section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: ACGIH: TWA: 10 ppm (acetic acid)

8.2 Exposure controls: Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits.
Respiratory protection: Non should be needed if normal laboratory handling at room temperature.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid.
Appearance: Clear, colorless.
Odor: Pungent
pH: Acidic
Vapor Pressure (mm Hg): Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: Not available
Flash point: Not available
Autoignition: Not available

Flammability: Not available
Boiling point: Not available
Melting point: Not available
Freezing point: Not available
Decomposition temp: Not available
Solubility: Miscible in water
Specific gravity (H_2O = 1): Not available
Percent volatile (%): Not available
Molecular formula: Mixture
Molecular weight: Mixture

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: High temperatures and incompatible materials.
Incompatibilities: strong oxidizing agents, chromic and nitric acid, sulfuric acid, caustic soda, lime and strong alkalis, metals, hydroxides, peroxides, amines.
Hazardous decomposition: not available.
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eye: Causes severe eye burns. Skin: Causes severe skin burns. Inhalation: May cause respiratory track irritation. Ingestion: May cause burns of the gastrointestinal track.

Toxicological data:
ORAL LD_{50}: 3320mg/kg [Rat] (acetic acid)
VAPOR LC_{50}: >16000 ppm [Rat] 4h (acetic acid)
DERMAL LD_{50}: 1060mg/kg [Rabbit] (acetic acid)

Carcinogenicity:
California prop 65: Not classified

12. ECOLOGICAL INFORMATION

LC50 (Pimephales promelas (fathead minnow)) 96 hours: 300.82 mg/l
EC50 (Dapnia) 48 hours: >300.82 mg/l
96% (20d) Readily biodegradable

13. DISPOSAL CONSIDERATION

Disposal of in accordance with all local, state, and federal regulations, or contact with a licensed chemical disposal agency.

14. TRANSPORT INFORMATION

UN number: 2790
Shipping name: Acetic acid solution
Hazard Class: 8
Packing group: III
Exceptions: Ltd Qty. 4L

15. REGULATORY INFORMATION

TSCA-listed. DSCL (EEC) R36/37/38– Irritating to eyes, respiratory system and skin. R35-Causes severe burns.

16. OTHER INFORMATION

Disclaimer:

The Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. LAB-AIDS® makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration , investigation and verification. The data should not be confused with local, state, federal regulations, or insurance mandates, and CONSTITUTE NO WARRANTY. Any use of these data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling , storage, use and disposal of the product(s) described are beyond LAB-AIDS, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

LAB-AIDS
Expanding Science

SAFETY DATA SHEET
Version: SDS_456.01.00
Revision Date: June 29, 2015

1. IDENTIFICATION

1.1 Product Identifiers
Product Name: Unknown
Alternative names: Acetic acid water solution
Product Number: 82-5EA, A82-5, C82-5

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: For laboratory and educational use only

1.3 Details of the supplier of the safety data sheet
Company: LAB-AIDS®, Inc, 17 Colt Ct., Ronkonkoma, NY 11779, USA
Telephone: +1 800 381 8003.
Fax: +1 631 820 8268

1.4 Emergency telephone number
Emergency number: CHEMTREC 1 800 424-9300

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS classification

Skin Corr. (Category 1C) H314
Eye Dam. (Category 1) H318

2.2 Label elements, including precautionary statements
Signal word: Danger
Pictogram:
Hazards statements: H318 - Causes serious eye damage, H314– Causes severe skin burns and eye damage
Precautionary statements: P264 - Wash exposed skin thoroughly after handling , P280 - Wear protective gloves, eye protection
2.3 Hazards not otherwise classified: none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: Not applicable
3.2 Mixture:

Chemical Name	Product identifier	%	GHS-US classification
Water	CAS#7732-18-5	94%	Not classified
Acetic acid	CAS# 64-19-7	6%	Flam. Liq. 3, H226; Skin Corr. 1A H314; Eye Dam. 2, H318

3.3 Chemicals where a trade secret is claimed:

4. FIRST AID MEASURE

4.1 Description of the first aid measure:
INGESTION: Never give anything by mouth to unconscious person. Rinse mouth and get conscious person drink a glass of milk or water. Do NOT induce vomiting unless directed to do so by medical personnel. Get immediate medical attention.
INHALATION: Remove to fresh air. Get medical attention if necessary.
EYE CONTACT: Wash immediately with plenty of water, and continue washing for at least 15min., occasionally lifting upper and lower eyelids. Seek immediate medical attention.
SKIN CONTACT: Flush thoroughly with mild soap and water. Remove contaminated clothing. Get medical attention if irritation or burns develop.
4.2 Most important symptoms and effects, both acute and delayed: Refer to section 11.

4.3 Indication of any immediate medical attention and special treatment needed: No additional information available.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media:
Suitable extinguishing media: Use water spray, alcohol-resistant foam, or TriClass, dry chemical extinguisher.
5.2 Special hazard arising from the substance or mixture: Thermal decomposition generates corrosive vapors
5.3 Advice for firefighters: Use self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Wear laboratory grade gloves, eye protection and a lab coat.
6.2 Emergency procedures: Restrict unprotected personnel from the area.
6.3 Methods and material used for containment and cleanup procedure: Contain the spill with an inert absorbent material and deposit in a sealed container. For small spill use paper towel. Dry material place in trash. Ventilate and wash spill area with soap and water.

7. HANDLING AND STORAGE

7.1 Precaution for safe handling: Read label on container before using. Keep away from heat. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Use only under adult supervision. Avoid breathing vapor. Use hood or with adequate ventilation. Wash hands thoroughly after handling.

7.2 Storage: Keep container tightly closed in cool, well-ventilated area.

7.3 incompatibility: Refer to section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: ACGIH: TWA: 10 ppm (acetic acid)

8.2 Exposure controls: Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits.
Respiratory protection: Non should be needed if normal laboratory handling at room temperature.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid.
Appearance: Clear, colorless.
Odor: Pungent
pH: Acidic
Vapor Pressure (mm Hg): Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: Not available
Flash point: Not available
Autoignition: Not available

Flammability: Not available
Boiling point: Not available
Melting point: Not available
Freezing point: Not available
Decomposition temp: Not available
Solubility: Miscible in water
Specific gravity (H_2O = 1): Not available
Percent volatile (%): Not available
Molecular formula: Mixture
Molecular weight: Mixture

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: High temperatures and incompatible materials.
Incompatibilities: strong oxidizing agents, chromic and nitric acid, sulfuric acid, caustic soda, lime and strong alkalis, metals, hydroxides, peroxides, amines.
Hazardous decomposition: not available.
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eye: Causes severe eye burns. Skin: Causes skin burns. Inhalation: May cause respiratory track irritation. Ingestion: May cause burns of the gastrointestinal track.

Toxicological data:
ORAL LD_{50}: 3320mg/kg [Rat] (acetic acid)
VAPOR LC_{50}: >16000 ppm [Rat] 4h (acetic acid)
DERMAL LD_{50}: 1060mg/kg [Rabbit] (acetic acid)

Carcinogenicity:
California prop 65: Not classified

12. ECOLOGICAL INFORMATION

LC50 (Pimephales promelas (fathead minnow)) 96 hours: 300.82 mg/l
EC50 (Dapnia) 48 hours: >300.82 mg/l
96% (20d) Readily biodegradable

13. DISPOSAL CONSIDERATION

Disposal of in accordance with all local, state, and federal regulations, or contact with a licensed chemical disposal agency.

14. TRANSPORT INFORMATION

UN number: N/A
Shipping name: Not regulated
Hazard Class: N/A
Packing group: N/A
Exceptions: Ltd Qty. N/A

15. REGULATORY INFORMATION

TSCA-listed. DSCL (EEC) R36/37/38– Irritating to eyes, respiratory system and skin.

16. OTHER INFORMATION

Disclaimer:

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1. IDENTIFICATION

1.1 Product Identifiers
Product Name: Sodium Hydroxide, 0.5M
Alternative names: Sodium hydroxide water solution.
Product Number: 82-5EA, A82-2, C82-2

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: For laboratory and educational use only

1.3 Details of the supplier of the safety data sheet
Company: Lab-Aids, Inc, 17 Colt Ct., Ronkonkoma, NY 11779, USA
Telephone: +1 800 381 8003.
Fax: +1 631 820 8268

1.4 Emergency telephone number
Emergency number: CHEMTREC 1 800 424-9300

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS classification

Skin Corr. (Category 1C), H314
Eye dam. (Category 1), H318
Corrosive to metals (Category 1) H290

2.2 Label elements, including precautionary statements
Signal word: Danger
Pictogram:
Hazards statements: H314– Corrosive to skin, H318– Causes serious eye damage.
Precautionary statements: P264 - Wash skin thoroughly after handling, P280 - Wear protective gloves, eye protection
2.3 Hazards not otherwise classified: none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: N/A
3.2 Mixture:

Chemical Name	Product identifier	%	GHS-US classification
Water	CAS# 7732-18-5	98%	Not classified
Sodium hydroxide	CAS# 1310-73-2	2%	Acute Tox. 4, H312; Met. Corr. 1, H290; Eye Dam. 1, H318; Skin Corr. 1A H314.

3.3 Chemicals where a trade secret is claimed: none

4. FIRST AID MEASURE

4.1 Description of the first aid measure:
INGESTION: Never give anything by mouth to unconscious person. Rinse mouth and get conscious person drink a glass of milk or water. Do NOT induce vomiting unless directed to do so by medical personnel. Get immediate medical attention.
INHALATION: Remove to fresh air. Get medical attention if necessary.
EYE CONTACT: Wash immediately with plenty of water, and continue washing for at least 15min., occasionally lifting upper and lower eyelids. Seek immediate medical attention.
SKIN CONTACT: Flush thoroughly with mild soap and water. Remove contaminated clothing. Get medical attention if irritation, or burns develop.
4.2 Most important symptoms and effects, both acute and delayed: Refer to section 11.

4.3 Indication of any immediate medical attention and special treatment needed: No additional information available.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media: Not flammable
Suitable extinguishing media: Use extinguishing methods for surrounding fires.
5.2 Special hazard arising from the substance or mixture: Thermal decomposition releases sodium oxides.
5.3 Advice for firefighters: Use self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Wear laboratory grade gloves, eye protection and a lab coat.
6.2 Emergency procedures: Restrict unprotected personnel from the area.
6.3 Methods and material used for containment and cleanup procedure: Neutralize with 0.5M Hydrochloric acid. Mop up the area. Ventilate and wash the spill area with soap and water.

7. HANDLING AND STORAGE

7.1 Precaution for safe handling: Read label on container before using. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Use only under adult supervision. Use hood or with adequate ventilation. Wash hands thoroughly after handling.

7.2 Storage: Keep container in cool, well-ventilated area. Keep it tightly closed.

7.3 incompatibility: Refer to section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: ACGIH: TWA: 2mg/m³

8.2 Exposure controls: Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits.

Respiratory protection: Non should be needed if normal laboratory handling at room temperature.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid.
Appearance: Transparent, Colorless, Clear .
Odor: Not available
pH: Not available
Vapor Pressure (mm Hg): Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: N/A
Flash point: N/A
Autoignition: N/A

Boiling point: ≈100°C
Melting point: Not available
Freezing point: Not available
Decomposition temp: Not available
Solubility: Not available
Specific gravity (H_2O = 1): ≈1 at 20°C
Percent volatile (%): 100%
Molecular formula: Mixture
Molecular weight: Mixture

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: High temperatures and Incompatible materials.
Incompatibilities: Metals, organic materials.
Hazardous decomposition: Sodium hydroxide reacts with metals to form flammable and explosive hydrogen gas.
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eye: Causes severe eye irritations and burns. Skin: Causes severe skin irritations and burns. Inhalation: Data not available. Ingestion: Causes burns of the mouth, throat and stomach. May cause severe and permanent damage to the digestive tract.

Acute oral toxicity ORAL LD_{50}: not available
Acute vapor toxicity IHL-LC_{50}: not available
DERMAL LD_{50}: 1350mg/kg [Rabbit]

Carcinogenicity:
California prop 65: Not classified

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATION

Disposal of in accordance with all local, state, and federal regulations, or contact with a licensed chemical disposal agency.

14. TRANSPORT INFORMATION

UN number: 1824
Shipping name: Sodium hydroxide solution
Hazard Class: 8
Packing group: PG III
Exceptions: Ltd Qty. ≤4L

15. REGULATORY INFORMATION

TSCA-listed, EINECS-listed (215-185-5). WHMIS (Canada): CLASS E: Corrosive material. DSCL (EEC): R35-Causes severe burns.

16. OTHER INFORMATION

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