

6349.

C29169

Kit #39S Biofuels: Investigating Ethanol Production and Combustion

1. IDENTIFICATION

1.1 Product Identifiers

Product Name: Ethanol
Alternative names: Ethyl alcohol denatured with methanol, Ethyl acetate, Methyl Isobutyl Ketone.
Product Number: 113-2EA, A113-2, 160-SEA, A160-5, C113-2, C160-5, 39S-B01, SP-2B02xx

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; Carcinogenicity (Category 2), H351
Eye Irrit. (Category 2A) H319; Acute Tox., Oral, (Category 4), H302
Acute Tox. Inhalation, (Category 4), H332; Acute Tox. Dermal (Category 4), 312
Specific Target Organ Toxicity, Single Exposure, Oral (Category 3), H336

2.2 Label elements, including precautionary statements

Signal word: Danger
Hazards statements: H225 - Highly flammable liquid and vapor, H336- May cause drowsiness or dizziness, H351-Suspected of causing cancer, H319- Causes serious eye irritation, H302-Harmful if swallowed, H312-Harmful in contact with skin, H332-Harmful if inhaled.
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



Pictogram:

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: Not applicable

3.2 Mixture:

Chemical Name	Product identifier	%	GHS-US classification
Ethyl alcohol	CAS# 64-17-5	90%	Flam. Liq. 2, H225; STOT SE 3; H336; Eye Irrit. 2A, H319
Methanol	CAS# 67-56-1	5%	Flam. Liq. 2, H225; Acute Tox. 3, H301+H302+H303
Ethyl Acetate	CAS# 141-78-6	4%	Flam. Liq. 2, H225; Skin Irrit. 2, H315; Eye Irrit. 2A, H319
Methyl isobutyl ketone	CAS# 108-10-1	1%	Flam. Liq. 2, H225; Eye Irrit. 2A, H319; 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: 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: Flammable liquid.

Suitable extinguishing media: Use water spray, alcohol-resistant foam, or 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: TWA: 400ppm (Ethyl Acetate); USA OSHA: TWA: 200ppm (Methanol); ACGIH: TWA: 1000ppm (Ethanol).

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: Strong alcohol odor

pH: Not available

Vapor Pressure (mm Hg): 66.661hPa

Vapor Density: Not available

Evaporation Rate: Not available

Viscosity: Not available

Flash point: 13 °C (55 °F)

Autoignition: ca. 400 °C, 752 °F; ASTM D 2155

Flammability: Explosion limits: Lower: 3.3% Upper: 19.0%

Boiling point: 74-80 °C (165.2-176 °F)

Melting point: -114°C (-173° F)

Freezing point: Not available

Decomposition temp: Not available

Solubility: Miscible in water and many organic solvents

Specific gravity (H₂O = 1): 0.79 g/cm³ @ 15.5 °C, 60 °F

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: Strong oxidizing agents, acids, peroxides, acid chlorides, acid anhydrides, alkali metals, ammonia.

Hazardous decomposition: N/A

Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eye: Causes eye irritation. Skin: May cause mild skin irritation. May be absorbed through skin. Inhalation: Inhalation of high concentration may affect CNS characterized by headache, dizziness, confusion, and loss of coordination. Ingestion: May be harmful if swallowed. Ingested doses will produce nausea, dizziness and headache. May affect behavior, brain, CNS.

Toxicological data:

ORAL LD₅₀: 2000mg/kg [Rat] (Ethanol)

VAPOR LC₅₀: >20 mg/l [Mouse] 4h (Ethanol)

DERMAL LD₅₀: >2000mg/kg [Rabbit] (Ethanol)

ORAL LD₅₀Methyl alcohol: >50-300 mg/kg [Rat].

VAPOR LC₅₀Methyl alcohol: >2-10 mg/l [Rat].

DERMAL LD₅₀Methyl alcohol: >200-1000 mg/kg [Rabbit]

ORAL LD₅₀: >2000mg/kg [Rat] (Ethyl Acetate)

VAPOR LC₅₀: Not available

DERMAL LD₅₀: >2000mg/kg [Rabbit] (Ethyl Acetate)

ORAL LD₅₀MIBK: >2000 mg/kg [Rat].

VAPOR LC₅₀MIBK: >10-20 mg/l 4h [Rat].

DERMAL LD₅₀MIBK: >2000 mg/kg [Rabbit]

Carcinogenicity:

California prop 65: Methanol, Methyl isobutyl ketone.

12. ECOLOGICAL INFORMATION

LC50 (Pimephales promelas (fathead minnow)) 96 hours: > 100 mg/l; flow-through test Test substance: Ethanol;

LC50 (Pimephales promelas (fathead minnow)) 96 hours: 29,400 mg/l Test substance: Methanol;

LC50 (Pimephales promelas (fathead minnow)) 96 hours: > 100 mg/l; semi-static test Test substance: Ethyl Acetate;

LC50 (Danio rerio (zebra fish)) 96 hours: > 100 mg/l; static test, Test substance MIBK

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: 1987

NA: N/A

Shipping name: ALCOHOLS, NOS

Hazard Class: 3

Packing group: PG II

Exceptions: Lty Qty ≤1L

15. REGULATORY INFORMATION

TSCA-listed, EINECS-listed (200-578-6) ethanol, (200-659-6) methanol, (205-500-5) Ethyl Acetate, (203-550-1) MIBK. WHMIS (Canada): Class B, Division 2: Flammable liquid. Class D, Division 2, Subdivision A: Very toxic material. Class D, Division 2, Subdivision B: Toxic material.

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: Bromothymol blue, 0.1%
 Alternative names: Not available.
 Product Number: FA-1-18xx, WH-1-9xx, CH-1-4xx, IF-1-1xx, SA-1B44xx
 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: Not applicable

3.2 Mixture

Chemical Name	Product identifier	%	GHS-US classification
Water	CAS# 7732-18-5	99.1%	Not classified
Bromothymol blue	CAS#34722-90-2	0.1%	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 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: Not classified

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: Blue.

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 (H₂O = 1): ≈1 at 20°C

Percent volatile (%): 100%

Molecular formula: Mixture

Molecular weight: Mixture

10. STABILITY AND REACTIVITY

Chemical Stability: Stable

Conditions to Avoid: Not available.

Incompatibilities: Not available

Hazardous decomposition: Not available.

Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eyes: Not expected to cause any acute effects. 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 LD₅₀: Not available

Acute vapor toxicity IHL-LC₅₀: Not available

DERMAL LD₅₀: 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.

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: Aluminum Foil
Alternative names: Aluminum metal: foil, shots, sheet, wire, turnings.
Product Number: AL008, AL010, TW-1-14Fxx, IAPS-P55, 113-AX12
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
Aluminum	CAS# 7429-90-5	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: 10 mg/m³ TWA (dust and mist, as Al)

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: None should be needed if normal laboratory handling at room temperature.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid.

Appearance: Silver white.

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: 2327°C

Melting point: 660°C

Freezing point: N/A

Decomposition temp: N/A

Solubility: Soluble in alkalis, Sulfuric acid, Hydrochloric acid.

Specific gravity (H₂O = 1): 2.7g/cc

Percent volatile (%): N/A

Molecular formula: Al

Molecular weight: 26.98

10. STABILITY AND REACTIVITY

Chemical Stability: Stable

Conditions to Avoid: Incompatibles.

Incompatibilities: Contact with oxidizing agents, acids, alkalis, metal salts.

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. Contact dermatitis occurs rarely. Inhalation: Aluminum in this form does not pose an inhalation hazard. Heating aluminum or melting can release aluminum oxide fumes and cause fume metal fever when inhaled. Ingestion: No data available.

Toxicological data

ORL-RAT LD₅₀: Not available

IHL-RAT LD₅₀: Not available

SKN-RABIT LD₅₀: Not available

Carcinogenicity:

California prop 65: Not classified

12. ECOLOGICAL INFORMATION

Not available.

13. DISPOSAL CONSIDERATION

Disposal 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 (231-072-3)

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

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: Lamp Oil
Alternative names: Kerosene, distillates, petroleum, hydrotreated light.
Product Number: SS-1B46E, HC-1-9EA, CS-S-47E.

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 4), H227
Aspiration hazard (Category 1) H304
Skin Irrit. (Category 2A) H315
Aquatic Acute and Chronic (Category 2) H411

2.2 Label elements, including precautionary statements

Signal word: Danger

Hazards statements: H227-Combustible liquid, H315- Causes skin irritation, H304-May be fatal if swallowed and enters airways, H401-Toxic to aquatic life, H411-Toxic to aquatic life with long lasting effects. H336-May cause drowsiness or dizziness.

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



Pictogram:

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: Not applicable

3.2 Mixture:

Chemical Name	Product identifier	%	GHS-US classification
Distillates (petroleum)	CAS# 64742-47-8	100%	Flam. Liq. 4, H227; Asp. Haz. 1, H304, Skin Irrit. 2, H315, STOT SE 3; H336, Aquatic Acute, 2, H401, Aquatic Chronic 2, H411.

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 medical attention if necessary.

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

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: Combustible liquid.

Suitable extinguishing media: Use water spray, alcohol-resistant foam, or 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. 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: Keep container in cool, well-ventilated area.

7.3 incompatibility: Refer to section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: ACGIH: TWA: 200mg/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: Clear red liquid.

Odor: Mild petroleum

pH: Not available

Vapor Pressure (mm Hg): 0.031-0.06 kPa

Vapor Density: 4.5

Evaporation Rate: 0.08

Viscosity: Kinematic 40°C (104 °F) <0.1cm²/s (<10cSt)

Flash point: 68.9 °C (156 °F)

Autoignition: >222°C (>428°F)

Flammability: Explosion limits: Lower: 0.6% Upper: 5.5%

Boiling point: 182.22-248.89°C (360-480° F)

Melting point: -49°C (-56.2° F)

Freezing point: Not available

Decomposition temp: Not available

Solubility: Insoluble in water

Specific gravity (H₂O = 1): 0.782 g/cm³ @ 15.5 °C, 60 °F

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: Strong oxidizing agents.

Hazardous decomposition: N/A

Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Skin: Causes skin irritation. Eye: Causes eye irritation. Inhalation: Due to low volatility, overexposure by inhalation is uncommon. However inhalation can cause respiratory track and mucous membrane irritation. Ingestion: Causes gastrointestinal track irritation with burning sensation in mouth, esophagus, and stomach. Abdominal pain, nausea, vomiting, hypermotility, diarrhea, headache followed by signs of nervous system depression (e.g. headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue. ASPIRATION HAZARD - This material can enter lungs during swallowing or vomiting and cause lung inflammation and damage. Pulmonary aspiration is associated with coughing and breathing difficulties.

Toxicological data:

ORAL LD₅₀: >5000mg/kg [Rat]; 28ml/kg [Rabbit]; 20ml/kg [Guinea Pig], as kerosene.

INHALATION LC₅₀: >5000ppm [Rat], as kerosene.

DERMAL LD₅₀: >2000 mg/kg [Rabbit], as kerosene

Carcinogenicity:

California prop 65: Not listed

12. ECOLOGICAL INFORMATION

LC50 Lepomis macrochirus 96 hours: 2.2mg/l

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: 3082

Shipping name: Environmentally hazardous substance, n.o.s., distillates (petroleum) hydrotreated light.

Hazard Class: 9

Packing group: PG III

Exceptions: Lty Qty ≤5L

15. REGULATORY INFORMATION

TSCA-listed, WHMIS (Canada): B3-Combustible liquids

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: Sodium Hydroxide, 0.05M
 Alternative names: 0.05M Sodium Hydroxide water solution.
 Product Number: 803S-B01E, CS-S200S, SA-1B23xx, SS-1B15xx,
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 a hazardous substance or mixture

2.2 Label elements, including precautionary statements

Signal word: N/A Pictogram: N/A
 Hazards statements: Not a hazardous substance or mixture.
 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
Sodium hydroxide	CAS# 1310-73-2	0.2%	Skin Corr. 1A, H314; Eye Dam. 1, H318

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 necessary.

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 develops.

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: Contact with metals can generate hydrogen gas.

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: 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 (H₂O = 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: Eyes: Not expected to cause any acute reaction. Skin: Not expected to cause any acute reaction. Inhalation: Not expected to cause irritation to the respiratory tract and mucous membrane. Ingestion: No data available.

Toxicological data

Acute oral toxicity ORAL LD₅₀: Not available

Acute vapor toxicity IHL-LC₅₀: Not available

DERMAL LD₅₀: 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: N/A

15. REGULATORY INFORMATION

TSCA-listed.

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).