

3999

SB 39437

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Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 10.24.2014

Acetic Acid 1.0N

SECTION 1: Identification of the substance/mixture and of the supplier

Product name: Acetic Acid 1.0N

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: KEMAA2075-B

Recommended uses of the product and restrictions on use:

Manufacturer Details:

AquaPhoenix Scientific
9 Barnhart Drive, Hanover, PA 17331
(717) 632-1291

Supplier Details:

AquaPhoenix Scientific Inc.
9 Barnhart Drive, Hanover PA 17331
(717) 632-1291

Emergency telephone number:

Emergency Telephone No.: 800-255-3924

SECTION 2: Hazards Identification

Classification of the substance or mixture: Not classified for physical or health hazards under GHS.

Signal word: None

Hazard statements: None

Precautionary statements:

If medical advice is needed have product container or label at hand.
Keep out of reach of children.
Read label before use.
Do not eat, drink or smoke when using this product.

Other Non-GHS Classification: None

SECTION 3: Composition/Information on ingredients

Ingredients:

Ingredients:		
CAS 64-19-7	Acetic Acid	6 %
CAS 7732-18-5	Deionized Water	94 %
Percentages are by weight		

SECTION 4: First aid measures

Description of first aid measures

After inhalation:

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Move exposed individual to fresh air. Loosen clothing as necessary and position individual in a comfortable position. Seek medical advice if discomfort or irritation persists. Give artificial respiration if necessary. If breathing persists give oxygen.

After skin contact:

Wash affected area with soap and water. Rinse thoroughly. Seek medical attention if irritation, discomfort or vomiting persists. Flush with water for 15 minutes.

After eye contact:

Protect unexposed eye. Rinse/flush exposed eye(s) gently using water for 15-20 minutes. Remove contact lens(es) if able to do so during rinsing. Immediately get medical assistance if irritation persists or if concerned.

After swallowing:

Rinse mouth thoroughly. Do not induce vomiting. Have exposed individual drink sips of water. Seek medical attention if irritation, discomfort or vomiting persists.

Most important symptoms and effects, both acute and delayed:

Irritation. Nausea. Headache. Shortness of breath.

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention, provide SDS document to physician. Notes to Physician: Treat symptomatically.

SECTION 5: Firefighting measures**Extinguishing media****Suitable extinguishing agents:**

If in laboratory setting, follow laboratory fire suppression procedures. Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition.

Unsuitable extinguishing agents: None

Special hazards arising from the substance or mixture:

Combustion products may include carbon oxides or other toxic vapors.

Advice for firefighters:

Protective equipment: None

Additional information (precautions):

Move product containers away from fire or keep cool with water spray as a protective measure, where feasible.

SECTION 6: Accidental release measures**Personal precautions, protective equipment and emergency procedures:**

Wear protective equipment. Avoid contact with eyes, skin, and clothing. Use respiratory protective device against the effects of fumes/dust/aerosol. Keep unprotected persons away. Ensure adequate ventilation. Keep away from ignition sources. Protect from heat. Stop the spill, if possible. Contain spilled material by diking or using inert absorbent. Transfer to a disposal or recovery container.

Environmental precautions:

Prevent from reaching drains, sewer or waterway. Collect contaminated soil for characterization per Section 13.

Methods and material for containment and cleaning up:

If in a laboratory setting, follow Chemical Hygiene Plan procedures. Collect liquids using vacuum or by use of absorbents. Place into properly labeled containers for recovery or disposal. If necessary, use trained response staff/contractor. Soak with inert material. Use spark-proof tools and explosion-proof equipment. Always obey local regulations. Remove all sources of ignition.

Reference to other sections: None

SECTION 7: Handling and storage

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Precautions for safe handling:

Prevent formation of aerosols. Follow good hygiene procedures when handling chemical materials. Do not eat, drink, smoke, or use personal products when handling chemical substances. If in a laboratory setting, follow Chemical Hygiene Plan. Use only in well ventilated areas. Avoid splashes or spray in enclosed areas. Wash hands after handling. Avoid contact with eyes, skin, and clothing.

Conditions for safe storage, including any incompatibilities:

Store in a cool location. Provide ventilation for containers. Avoid storage near extreme heat, ignition sources or open flame. Store away from foodstuffs. Store away from oxidizing agents. Store in cool, dry conditions in well sealed containers. Keep container tightly closed. Protect from freezing.

SECTION 8: Exposure controls/personal protection

**Control parameters:**

64-19-7, Acetic acid, OSHA PEL: 25mg/m³.
64-19-7, Acetic acid, ACGIH TLV: 25mg/m³.

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use/handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Respiratory protection:

Not required under normal conditions of use. Use suitable respiratory protective device when high concentrations are present. Use suitable respiratory protective device when aerosol or mist is formed. For spills, respiratory protection may be advisable.

Protection of skin:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation being used/handled. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Eye protection:

Safety glasses with side shields or goggles.

General hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals. Keep away from food, beverages and feed sources. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Do not inhale gases/fumes/dust/mist/vapor/aerosols. Avoid contact with the eyes and skin.

SECTION 9: Physical and chemical properties

Appearance (physical state, color):	Clear, colorless liquid	Explosion limit lower: Explosion limit upper:	0 Vol % 0 Vol %
Odor:	Vinegar-like	Vapor pressure at 20°C:	2.3 kPa (@ 20°C) or 23 hPa (17 mm Hg) at 20 °C (68 °F)
Odor threshold:	Not determined	Vapor density:	0.62 (Air = 1)
pH-value:	7 [Neutral] (1% soln/water)	Relative density:	1 (Water = 1)
Melting/Freezing point:	0 °C (32 °F)	Solubilities:	Completely soluble in water.

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Boiling point/Boiling range:	100°C (212°F)	Partition coefficient (n-octanol/water):	Not determined
Flash point (closed cup):	Not applicable	Auto/Self-ignition temperature:	Not determined
Evaporation rate:	Not determined	Decomposition temperature:	Not determined
Flammability (solid, gaseous):	Not applicable	Viscosity:	a. Kinematic: Not determined b. Dynamic: 0.952 mPas at 20 °C (68 °F)
Density at 20°C:	1 g/cm ³ (8.345 lbs/gal) at 20 °C (68 °F)		

SECTION 10: Stability and reactivity

Reactivity: None**Chemical stability:**

No decomposition if used and stored according to specifications.

Possible hazardous reactions: None**Conditions to avoid:**

Store away from oxidizing agents, strong acids or bases.

Incompatible materials:

Strong acids. Strong bases. Metals.

Hazardous decomposition products:Carbon oxides (CO, CO₂). Oxides of carbon and irritation fumes.

SECTION 11: Toxicological information

Acute Toxicity: No additional information.**Chronic Toxicity:** No additional information.**Skin corrosion/irritation:** No additional information.**Serious eye damage/irritation:** No additional information.**Respiratory or skin sensitization:**

See Section 2.

Carcinogenicity: No additional information.**Germ cell mutagenicity:** No additional information.**Reproductive Toxicity:**

Experiments have shown reproductive toxicity effects on laboratory animals for acetic acid.

STOT-single and repeated exposure: No additional information.**Additional toxicological information:** No additional information.

SECTION 12: Ecological information

Ecotoxicity:

Ecotoxicity, Acetic Acid has high biochemical oxygen demand, and a potential to cause oxygen depletion in aquatic systems.

Persistence and degradability:

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Readily degradable in the environment.

Bioaccumulative potential: No additional information.

Mobility in soil:

Aqueous solution has high mobility in soil.

Other adverse effects: No additional information.

SECTION 13: Disposal considerations

Waste disposal recommendations:

Product/containers must not be disposed together with household garbage. Do not allow product to reach sewage system or open water. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Consult federal state/ provincial and local regulations regarding the proper disposal of waste material that may incorporate some amount of this product. Determine whether chemical hazardous or not.

SECTION 14: Transport information

US DOT

UN Number:

ADR, ADN, DOT, IMDG, IATA

Not Regulated.

Limited Quantity Exception:

None

Bulk:

RQ (if applicable): None

Proper shipping Name: Not Regulated.

Hazard Class: None

Packing Group: Not Regulated.

Marine Pollutant (if applicable): No additional information.

Comments: None

Non Bulk:

RQ (if applicable): None

Proper shipping Name: Not Regulated.

Hazard Class: None

Packing Group: Not Regulated.

Marine Pollutant (if applicable): No additional information.

Comments: None

SECTION 15: Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

None of the ingredients are listed.

SARA Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act) :

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

None of the ingredients are listed.

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Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Canada

Canadian Domestic Substances List (DSL) :

All ingredients are listed.

SECTION 16: Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

NFPA: 1-0-0

HMIS: 1-0-0

GHS Full Text Phrases: None

Abbreviations and Acronyms:

IMDG International Maritime Code for Dangerous Goods.
IATA International Air Transport Association.
GHS Globally Harmonized System of Classification and Labelling of Chemicals.
ACGIH American Conference of Governmental Industrial Hygienists.
CAS Chemical Abstracts Service (division of the American Chemical Society).
NFPA National Fire Protection Association (USA).
HMIS Hazardous Materials Identification System (USA).
WHMIS Workplace Hazardous Materials Information System (Canada).
DNEL Derived No-Effect Level (REACH).
PNEC. Predicted No-Effect Concentration (REACH).
CFR Code of Federal Regulations (USA).
SARA Superfund Amendments and Reauthorization Act (USA).
RCRA. Resource Conservation and Recovery Act (USA).
TSCA. Toxic Substances Control Act (USA).
NPRI National Pollutant Release Inventory (Canada).
DOT US Department of Transportation.

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Ammonium Hydroxide, 3%

SECTION 1: Identification of the substance/mixture and of the supplier**Product name:** Ammonium Hydroxide, 3%**Manufacturer/Supplier Trade name:****Manufacturer/Supplier Article number:** KEMAH1025-B**Recommended uses of the product and restrictions on use:****Manufacturer Details:**

AquaPhoenix Scientific
9 Barnhart Drive, Hanover, PA 17331
(717) 632-1291

Supplier Details:

AquaPhoenix Scientific Inc.
9 Barnhart Drive, Hanover PA 17331
(717) 632-1291

Emergency telephone number:

Emergency Telephone No.: 800-255-3924

SECTION 2: Hazards identification**Classification of the substance or mixture:** Not classified for physical or health hazards under GHS.**Signal word:** None**Hazard statements:** None**Precautionary statements:**

If medical advice is needed have product container or label at hand.
Keep out of reach of children.
Read label before use.
Do not eat, drink or smoke when using this product.

Other Non-GHS Classification: None**SECTION 3: Composition/information on ingredients****Ingredients:**

Ingredients:		
CAS 1336-21-6	Ammonium Hydroxide	3 %
CAS 7732-18-5	Deionized Water	97 %
Percentages are by weight		

SECTION 4: First aid measures**Description of first aid measures****After inhalation:**

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Move exposed individual to fresh air. Loosen clothing as necessary and position individual in a comfortable position. Seek medical advice if discomfort or irritation persists. Give artificial respiration if necessary if breathing is difficult give oxygen.

After skin contact:

Wash affected area with soap and water. Rinse thoroughly. Seek medical attention if irritation, discomfort or vomiting persists. Flush with water for 15 minutes.

After eye contact:

Protect unexposed eye. Rinse/flush exposed eye(s) gently using water for 15-20 minutes. Remove contact lens(es) if able to do so during rinsing. Immediately get medical assistance if irritation persists or if concerned.

After swallowing:

Rinse mouth thoroughly. Do not induce vomiting. Have exposed individual dilute with milk or water. Get medical assistance if irritation, discomfort or vomiting persists.

Most important symptoms and effects, both acute and delayed:

Irritation. Nausea. Headache. Shortness of breath.

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention, provide SDS document to physician. Notes to Physician: Treat symptomatically.

SECTION 5: Firefighting measures**Extinguishing media****Suitable extinguishing agents:**

If in laboratory setting, follow laboratory fire suppression procedures. Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition.

Unsuitable extinguishing agents: None

Special hazards arising from the substance or mixture:

Combustion products may include carbon oxides or other toxic vapors.

Advice for firefighters:

Protective equipment: None

Additional information (precautions):

Move product containers away from fire or keep cool with water spray as a protective measure, where feasible.

SECTION 6: Accidental release measures**Personal precautions, protective equipment and emergency procedures:**

Wear protective equipment. Avoid contact with skin, eyes, and clothing. Use respiratory protective device against the effects of fumes/dust/aerosol. Keep unprotected persons away. Ensure adequate ventilation. Keep away from ignition sources. Protect from heat. Stop the spill, if possible. Contain spilled material by diking or using inert absorbent. Transfer to a disposal or recovery container.

Environmental precautions:

Prevent from reaching drains, sewer or waterway. Collect contaminated soil for characterization per Section 13.

Methods and material for containment and cleaning up:

If in a laboratory setting, follow Chemical Hygiene Plan procedures. Collect liquids using vacuum or by use of absorbents. Place into properly labeled containers for recovery or disposal. If necessary, use trained response staff/contractor. Ventilate area of spill. Always obey local regulations. Cover spill with suitable absorbing agent. Scoop mixture into container and in fume hood, add cold water. Let stand overnight and decant mixture to drain with excess water.

Reference to other sections: None

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Ammonium Hydroxide, 3%

SECTION 7: Handling and storage**Precautions for safe handling:**

Prevent formation of aerosols. Follow good hygiene procedures when handling chemical materials. Do not eat, drink, smoke, or use personal products when handling chemical substances. If in a laboratory setting, follow Chemical Hygiene Plan. Use only in well ventilated areas. Avoid splashes or spray in enclosed areas. Wash hands after handling. Avoid contact with eyes, skin, and clothing.

Conditions for safe storage, including any incompatibilities:

Store in a cool location. Store below 25 C. Provide ventilation for containers. Avoid storage near extreme heat, ignition sources or open flame. Store away from foodstuffs. Store away from oxidizing agents. Store in cool, dry conditions in well sealed containers. Keep container tightly closed. Protect from freezing and physical damage.

SECTION 8: Exposure controls/personal protection**Control parameters:**

1336-21-6, Ammonium Hydroxide, ACGIH TLV: 17 mg/m3.
1336-21-6, Ammonium Hydroxide, OSHA PEL: 35 mg/m3.

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use/handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Respiratory protection:

Not required under normal conditions of use. Use suitable respiratory protective device when high concentrations are present. Use suitable respiratory protective device when aerosol or mist is formed. For spills, respiratory protection may be advisable. Local/general exhaust is recommended.

Protection of skin:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation being used/handled. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Eye protection:

Safety glasses with side shields or goggles.

General hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals. Keep away from food, beverages and feed sources. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Do not inhale gases/fumes/dust/mist/vapor/aerosols. Avoid contact with the eyes and skin.

SECTION 9: Physical and chemical properties

Appearance (physical state, color):	Clear, colorless liquid	Explosion limit lower:	0 Vol %
		Explosion limit upper:	0 Vol %
Odor:	Ammonia odor	Vapor pressure at 20°C:	115 (@ 20°C)
Odor threshold:	Not determined	Vapor density:	0.62 (Air = 1)
pH-value:	10.6 - 11.6	Relative density:	1 (Water = 1)
Melting/Freezing point:	0 °C (32 °F)	Solubilities:	Infinite in water.

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Ammonium Hydroxide, 3%

Boiling point/Boiling range:	100°C (212°F)	Partition coefficient (n-octanol/water):	Not determined
Flash point (closed cup):	Not applicable	Auto/Self-ignition temperature:	Not determined
Evaporation rate:	Not determined	Decomposition temperature:	Not determined
Flammability (solid, gaseous):	Not applicable	Viscosity:	a. Kinematic: Not determined b. Dynamic: 0.952 mPas at 20 °C (68 °F)
Density at 20°C:	1 g/cm ³ (8.345 lbs/gal) at 20 °C (68 °F)		

SECTION 10: Stability and reactivity

Reactivity:

Nonreactive under normal conditions.

Chemical stability:

No decomposition if used and stored according to specifications.

Possible hazardous reactions:

None under normal processing.

Conditions to avoid:

Store away from oxidizing agents, strong acids or bases. excess heat. Incompatible Materials.

Incompatible materials:

Strong oxidizers, acids, gold, mercury, halogens, silver, calcium hypochlorite bleaches.

Hazardous decomposition products:

Carbon oxides (CO, CO₂). Ammonia. Nitrogen oxides (NO_x).

SECTION 11: Toxicological information

Acute Toxicity: No additional information.

Chronic Toxicity: No additional information.

Skin corrosion/irritation: No additional information.

Serious eye damage/irritation: No additional information.

Respiratory or skin sensitization: No additional information.

Carcinogenicity: No additional information.

Germ cell mutagenicity: No additional information.

Reproductive Toxicity: No additional information.

STOT-single and repeated exposure: No additional information.

Additional toxicological information: No additional information.

SECTION 12: Ecological information

Ecotoxicity:

Ecotoxicity, Very toxic to aquatic life.

Persistence and degradability:

Readily degradable in the environment.

Bioaccumulative potential: No additional information.

Mobility in soil:

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Ammonium Hydroxide, 3%

Aqueous solution has high mobility in soil.

Other adverse effects: No additional information.

SECTION 13: Disposal considerations

Waste disposal recommendations:

Product/containers must not be disposed together with household garbage. Do not allow product to reach sewage system or open water. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Consult federal state/ provincial and local regulations regarding the proper disposal of waste material that may incorporate some amount of this product. Neutralize with 5% Hydrochloric acid. Scoop mixture into container and in fume hood, add cold water.

SECTION 14: Transport information

US DOT

UN Number:

ADR, ADN, DOT, IMDG, IATA

Not Regulated.

Limited Quantity Exception:

None

Bulk:

RQ (if applicable): None

Proper shipping Name: Not Regulated.

Hazard Class: None

Packing Group: Not Regulated.

Marine Pollutant (if applicable): No additional information.

Comments: None

Non Bulk:

RQ (if applicable): None

Proper shipping Name: Not Regulated.

Hazard Class: None

Packing Group: Not Regulated.

Marine Pollutant (if applicable): No additional information.

Comments: None

SECTION 15: Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

None of the ingredients are listed.

SARA Section 313 (Specific toxic chemical listings):

1336-21-6 Ammonium Hydroxide.

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act) :

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

1336-21-6 Ammonium Hydroxide 1000 lb.

Proposition 65 (California):

Chemicals known to cause cancer:

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Ammonium Hydroxide, 3%

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Canada

Canadian Domestic Substances List (DSL) :

All ingredients are listed.

SECTION 16: Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

NFPA: 1-0-0

HMIS: 1-0-0

GHS Full Text Phrases: None

Abbreviations and Acronyms:

IMDG International Maritime Code for Dangerous Goods.
IATA International Air Transport Association.
GHS Globally Harmonized System of Classification and Labelling of Chemicals.
ACGIH American Conference of Governmental Industrial Hygienists.
CAS Chemical Abstracts Service (division of the American Chemical Society).
NFPA National Fire Protection Association (USA).
HMIS Hazardous Materials Identification System (USA).
WHMIS Workplace Hazardous Materials Information System (Canada).
DNEL Derived No-Effect Level (REACH).
PNEC. Predicted No-Effect Concentration (REACH).
CFR Code of Federal Regulations (USA).
SARA Superfund Amendments and Reauthorization Act (USA).
RCRA. Resource Conservation and Recovery Act (USA).
TSCA. Toxic Substances Control Act (USA).
NPRI National Pollutant Release Inventory (Canada).
DOT US Department of Transportation.

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Bromthymol Blue Indicator Solution, 0.04% w/v

SECTION 1: Identification of the substance/mixture and of the supplier**Product name:** Bromthymol Blue Indicator Solution, 0.04% w/v**Manufacturer/Supplier Trade name:****Manufacturer/Supplier Article number:** KEMBB5025-A**Recommended uses of the product and restrictions on use:** Laboratory chemicals**Manufacturer Details:**

AquaPhoenix Scientific
9 Barnhart Drive, Hanover, PA 17331
(717) 632-1291

Supplier Details:

AquaPhoenix Scientific Inc.
9 Barnhart Drive, Hanover PA 17331
(717) 632-1291

Emergency telephone number:

Emergency Telephone No.: 800-255-3924

SECTION 2: Hazards Identification**Classification of the substance or mixture:** Not classified for physical or health hazards under GHS.**Signal word:** None**Hazard statements:** None**Precautionary statements:**

If medical advice is needed have product container or label at hand.
Keep out of reach of children.
Read label before use.
Do not eat, drink or smoke when using this product.

Other Non-GHS Classification: None**SECTION 3: Composition/Information on Ingredients****Ingredients:**

Ingredients:		
CAS 34722-90-2	Bromothymol Blue, Sodium Salt	0.04 %
CAS 7732-18-5	Deionized Water	99.96 %
Percentages are by weight		

SECTION 4: First aid measures**Description of first aid measures****After inhalation:**

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Move exposed individual to fresh air. Loosen clothing as necessary and position individual in a comfortable position. Seek medical advice if discomfort or irritation persists.

After skin contact:

Wash affected area with soap and water. Rinse thoroughly. Seek medical attention if irritation, discomfort or vomiting persists.

After eye contact:

Protect unexposed eye. Rinse/flush exposed eye(s) gently using water for 15-20 minutes. Remove contact lens(es) if able to do so during rinsing. Seek medical attention if irritation persists or if concerned.

After swallowing:

Rinse mouth thoroughly. Do not induce vomiting. Have exposed individual drink sips of water. Seek medical attention if irritation, discomfort or vomiting persists.

Most important symptoms and effects, both acute and delayed:

Irritation. Nausea. Headache. Shortness of breath.

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention, provide SDS document to physician.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing agents:

If in laboratory setting, follow laboratory fire suppression procedures. Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition.

Unsuitable extinguishing agents: None

Special hazards arising from the substance or mixture:

Combustion products may include carbon oxides or other toxic vapors.

Advice for firefighters:

Protective equipment: None

Additional information (precautions):

Move product containers away from fire or keep cool with water spray as a protective measure, where feasible.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Wear protective equipment. Use respiratory protective device against the effects of fumes/dust/aerosol. Keep unprotected persons away. Ensure adequate ventilation. Keep away from ignition sources. Protect from heat. Stop the spill, if possible. Contain spilled material by diking or using inert absorbent. Transfer to a disposal or recovery container.

Environmental precautions:

Prevent from reaching drains, sewer or waterway. Collect contaminated soil for characterization per Section 13.

Methods and material for containment and cleaning up:

If in a laboratory setting, follow Chemical Hygiene Plan procedures. Collect liquids using vacuum or by use of absorbents. Place into properly labeled containers for recovery or disposal. If necessary, use trained response staff/contractor.

Reference to other sections: None

SECTION 7: Handling and storage

Precautions for safe handling:

Prevent formation of aerosols. Follow good hygiene procedures when handling chemical materials. Do not eat,

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drink, smoke, or use personal products when handling chemical substances. If in a laboratory setting, follow Chemical Hygiene Plan. Use only in well ventilated areas. Avoid splashes or spray in enclosed areas.

Conditions for safe storage, including any incompatibilities:

Store in a cool location. Provide ventilation for containers. Avoid storage near extreme heat, ignition sources or open flame. Store away from foodstuffs. Store away from oxidizing agents. Store in cool, dry conditions in well sealed containers. Keep container tightly closed.

SECTION 8: Exposure controls/personal protection

**Control parameters:**

No applicable occupational exposure limits.

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use/handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Respiratory protection:

Not required under normal conditions of use. Use suitable respiratory protective device when high concentrations are present. Use suitable respiratory protective device when aerosol or mist is formed. For spills, respiratory protection may be advisable.

Protection of skin:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation being used/handled. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Eye protection:

Safety glasses with side shields or goggles.

General hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals. Keep away from food, beverages and feed sources. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Do not inhale gases/fumes/dust/mist/vapor/aerosols. Avoid contact with the eyes and skin.

SECTION 9: Physical and chemical properties

Appearance (physical state, color):	Dark green liquid	Explosion limit lower:	0 Vol %
		Explosion limit upper:	0 Vol %
Odor:	Odorless	Vapor pressure at 20°C:	Not determined
Odor threshold:	Not determined	Vapor density:	14mmHg @ 20C
pH-value:	Not determined	Relative density:	1
Melting/Freezing point:	0 °C (32 °F)	Solubilities:	Soluble in Water
Boiling point/Boiling range:	100°C (212°F)	Partition coefficient (n-octanol/water):	Not determined
Flash point (closed cup):	Not applicable	Auto/Self-ignition temperature:	Not determined
Evaporation rate:	Not determined	Decomposition temperature:	Not determined

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 10.24.2014

Bromthymol Blue Indicator Solution, 0.04% w/v

Flammability (solid, gaseous):	Not applicable	Viscosity:	a. Kinematic: Not determined b. Dynamic: Not determined
Density at 20°C:	Not determined		

SECTION 10: Stability and reactivity

Reactivity:

Nonreactive under normal conditions.

Chemical stability:

No decomposition if used and stored according to specifications.

Possible hazardous reactions:

None under normal processing.

Conditions to avoid:

No information available.

Incompatible materials:

None identified.

Hazardous decomposition products:Carbon oxides (CO, CO₂).

SECTION 11: Toxicological information

Acute Toxicity: None**Chronic Toxicity:** No additional information.**Skin corrosion/irritation:** No additional information.**Serious eye damage/irritation:** No additional information.**Respiratory or skin sensitization:** No additional information.**Carcinogenicity:** No additional information.**Germ cell mutagenicity:** No additional information.**Reproductive Toxicity:** No additional information.**STOT-single and repeated exposure:** No additional information.**Additional toxicological information:** No additional information.

SECTION 12: Ecological information

Ecotoxicity: No additional information.**Persistence and degradability:**

Readily degradable in the environment.

Bioaccumulative potential: No additional information.**Mobility in soil:**

Aqueous solution has high mobility in soil.

Other adverse effects: No additional information.

SECTION 13: Disposal considerations

Waste disposal recommendations:

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 10.24.2014

Bromthymol Blue Indicator Solution, 0.04% w/v

Product/containers must not be disposed together with household garbage. Do not allow product to reach sewage system or open water. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Consult federal state/ provincial and local regulations regarding the proper disposal of waste material that may incorporate some amount of this product.

SECTION 14: Transport information

US DOT**UN Number:**

ADR, ADN, DOT, IMDG, IATA

Not Regulated.

Limited Quantity Exception:

None

Bulk:**RQ (if applicable):** None**Proper shipping Name:** Not Regulated.**Hazard Class:** None**Packing Group:** Not Regulated.**Marine Pollutant (if applicable):** No additional information.**Comments:** None**Non Bulk:****RQ (if applicable):** None**Proper shipping Name:** Not Regulated.**Hazard Class:** None**Packing Group:** Not Regulated.**Marine Pollutant (if applicable):** No additional information.**Comments:** None

SECTION 15: Regulatory information

United States (USA)**SARA Section 311/312 (Specific toxic chemical listings):**

None of the ingredients are listed.

SARA Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act) :

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

None of the ingredients are listed.

Proposition 65 (California):**Chemicals known to cause cancer:**

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 10.24.2014

Bromthymol Blue Indicator Solution, 0.04% w/v

None of the ingredients are listed.

Canada

Canadian Domestic Substances List (DSL) :

All ingredients are listed.

SECTION 16: Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

NFPA: 1-0-0

HMIS: 1-0-0

GHS Full Text Phrases: None

Abbreviations and Acronyms:

IMDG International Maritime Code for Dangerous Goods.
IATA International Air Transport Association.
GHS Globally Harmonized System of Classification and Labelling of Chemicals.
ACGIH American Conference of Governmental Industrial Hygienists.
CAS Chemical Abstracts Service (division of the American Chemical Society).
NFPA National Fire Protection Association (USA).
HMIS Hazardous Materials Identification System (USA).
WHMIS Workplace Hazardous Materials Information System (Canada).
DNEL Derived No-Effect Level (REACH).
PNEC. Predicted No-Effect Concentration (REACH).
CFR Code of Federal Regulations (USA).
SARA Superfund Amendments and Reauthorization Act (USA).
RCRA. Resource Conservation and Recovery Act (USA).
TSCA. Toxic Substances Control Act (USA).
NPRI National Pollutant Release Inventory (Canada).
DOT US Department of Transportation.

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.27.2016

Dish Detergent

SECTION 1: Identification of the substance/mixture and of the supplier

Product name: Dish Detergent

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: KEMDT5024-B

Recommended uses of the product and restrictions on use:

Manufacturer Details:

AquaPhoenix Scientific
9 Barnhart Drive, Hanover, PA 17331
(717) 632-1291

Supplier Details:

AquaPhoenix Scientific Inc.
9 Barnhart Drive, Hanover PA 17331
(717) 632-1291

Emergency telephone number:

Emergency Telephone No.: 800-255-3924

SECTION 2: Hazards Identification

Classification of the substance or mixture:

Signal word: None

Hazard statements: None

Precautionary statements: None

Other Non-GHS Classification: None

SECTION 3: Composition/information on ingredients

Ingredients:

CAS / EINECS #	Ingredient Name	Wt. %
64-17-5	Ethanol Ethyl alcohol	0.5-1
7732-18-5	Water	95

SECTION 4: First aid measures

Description of first aid measures

After inhalation:

Maintain an unobstructed airway. Get medical advice/attention if you feel unwell. Loosen clothing as necessary and position individual in a comfortable position.

After skin contact:

Rinse affected area with soap and water. If symptoms develop or persist, seek medical attention.

After eye contact:

Get medical advice/attention. Continue rinsing. Remove contact lenses, if present and easy to do. Rinse/flush

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.27.2016

Dish Detergent

exposed eye(s) gently using water for 15-20 minutes.

After swallowing:

Rinse mouth and then drink plenty of water. Do not induce vomiting. Get medical advice/attention if you feel unwell.

Most important symptoms and effects, both acute and delayed: None

Indication of any immediate medical attention and special treatment needed: None

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing agents:

Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition.

Unsuitable extinguishing agents: None

Special hazards arising from the substance or mixture:

Thermal decomposition can lead to release of irritating gases and vapors.

Advice for firefighters:

Protective equipment:

Wear protective eye wear, gloves and clothing. Refer to Section 8. Use typical firefighting equipment, self-contained breathing apparatus, special tightly sealed suit.

Additional information (precautions):

Heating causes a rise in pressure, risk of bursting and combustion. Shut off sources of ignition. Carbon monoxide and carbon dioxide may form upon combustion.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation. Ensure air handling systems are operational. Wear protective eye wear, gloves and clothing.

Environmental precautions:

Should not be released into the environment. Prevent from reaching drains, sewer or waterway.

Methods and material for containment and cleaning up:

Absorb with non-combustible liquid-binding material (sand, diatomaceous earth (clay) , acid binders, universal binders). Dispose of contents / container in accordance with local regulations.

Reference to other sections: None

SECTION 7: Handling and storage

Precautions for safe handling:

Use only with adequate ventilation. Avoid breathing mist or vapor. Do not eat, drink, smoke or use personal products when handling chemical substances.

Conditions for safe storage, including any incompatibilities:

Store away from foodstuffs. Store in a cool, well-ventilated area.

SECTION 8: Exposure controls/personal protection



Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.27.2016

Dish Detergent

Control parameters:	64-17-5, Ethyl alcohol, OSHA PEL (TWA): 1,000.0 ppm. 64-17-5, Ethyl alcohol, OSHA PEL (STEL): 1,000.0 ppm. 64-17-5, Ethanol Ethyl alcohol, ACGIH TWA 1,000.0 ppm.
Appropriate engineering controls:	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.
Respiratory protection:	When necessary, use NIOSH-approved breathing equipment.
Protection of skin:	Select glove material based on rates of diffusion and degradation. Select glove material impermeable and resistant to the substance.
Eye protection:	Safety goggles or glasses, or appropriate eye protection.
General hygienic measures:	Wash contaminated clothing before reusing. Perform routine housekeeping. Wash hands before breaks and at the end of work. Avoid contact with skin, eyes and clothing.

SECTION 9: Physical and chemical properties

Appearance (physical state, color):	Light yellow liquid	Explosion limit lower:	Not determined
		Explosion limit upper:	Not determined
Odor:	Perfumed	Vapor pressure at 20°C:	Not determined
Odor threshold:	Not determined	Vapor density:	Not determined
pH-value:	Not determined	Relative density:	Not determined
Melting/Freezing point:	Not determined	Solubilities:	Soluble in water.
Boiling point/Boiling range:	Not determined	Partition coefficient (n-octanol/water):	Not determined
Flash point (closed cup):	Not determined	Auto/Self-ignition temperature:	Not determined
Evaporation rate:	Not determined	Decomposition temperature:	Not determined
Flammability (solid, gaseous):	Not determined	Viscosity:	a. Kinematic: Not determined b. Dynamic: Not determined
Density at 20°C:	Not determined		

SECTION 10: Stability and reactivity

Reactivity: None
Chemical stability: None
Possible hazardous reactions: None
Conditions to avoid: None
Incompatible materials: None
Hazardous decomposition products: None

SECTION 11: Toxicological information

Acute Toxicity:

Oral:

Ethyl alcohol: LD50: Rat - 10,470 mg/kg.

Dermal:

P133/SP1077 : LD50: Rabbit - 15,800 mg/kg.

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.27.2016

Dish Detergent

Inhalation:

Ethyl alcohol: LC50: Rat - 4 h - 30,000 mg/l.

Chronic Toxicity: No additional information.**Skin corrosion/irritation:** No additional information.**Serious eye damage/irritation:**

Ethanol Ethyl alcohol: Rabbit moderate eye irritation.

Respiratory or skin sensitization:

Ethyl alcohol: Moderate eye irritation.

Carcinogenicity:

: Mouse - Oral, Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Liver: Tumors. Blood: Lymphomas including Hodgkin's disease.

Germ cell mutagenicity: No additional information.**Reproductive Toxicity:** No additional information.**STOT-single and repeated exposure:** No additional information.**Additional toxicological information:** No additional information.

SECTION 12: Ecological information

Ecotoxicity:

Ethyl alcohol: Fish, Pimephales promelas (fathead minnow) - 14,200 mg/l - 96 h.

Ethyl alcohol: Aquatic invertebrates, Ceriodaphnia dubia (water flea) - 5,012 mg/l - 48 h.

Ethyl alcohol: Aquatic Plants, Chlorella vulgaris (Fresh water algae) - 275 mg/l - 72 h.

Persistence and degradability: No additional information.**Bioaccumulative potential:** No additional information.**Mobility in soil:** No additional information.**Other adverse effects:** No additional information.

SECTION 13: Disposal considerations

Waste disposal recommendations:

(US 40CFR262.11). It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities.

SECTION 14: Transport information

US DOT**UN Number:**

ADR, ADN, DOT, IMDG, IATA

Not regulated

Limited Quantity Exception:

None

Bulk:**RQ (if applicable):** None**Proper shipping Name:** Not regulated.**Non Bulk:****RQ (if applicable):** None**Proper shipping Name:** Not regulated.

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.27.2016

Dish Detergent

Hazard Class: None
Packing Group: Not regulated.
Marine Pollutant (if applicable): No
Comments: None

Hazard Class: None
Packing Group: Not regulated.
Marine Pollutant (if applicable): No
Comments: None

SECTION 15: Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

None of the ingredients are listed.

SARA Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act) :

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

None of the ingredients are listed.

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Canada

Canadian Domestic Substances List (DSL) :

All ingredients are listed.

SECTION 16: Other information

The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The responsibility to provide a safe workplace remains with the user. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material. This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

NFPA: 0-0-0

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.27.2016

HMIS: 0-0-0

GHS Full Text Phrases: None

Abbreviations and Acronyms: None

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.12.2015

Hydrochloric Acid,0.5N**SECTION 1: Identification of the substance/mixture and of the supplier**

Product name: Hydrochloric Acid,0.5N
Manufacturer/Supplier Trade name:
Manufacturer/Supplier Article number: KEMHA6115-B
Recommended uses of the product and restrictions on use: Laboratory chemicals

Manufacturer Details:

AquaPhoenix Scientific
9 Barnhart Drive, Hanover, PA 17331
(717) 632-1291

Supplier Details:

AquaPhoenix Scientific Inc.
9 Barnhart Drive, Hanover PA 17331
(717) 632-1291

Emergency telephone number:

Emergency Telephone No.: 800-255-3924

SECTION 2: Hazards identification**Classification of the substance or mixture:****Corrosive**

Corrosive to metals, category 1
Skin corrosion, category 1B
Serious eye damage, category 1

**Irritant**

Specific target organ toxicity following single exposure, category 3

Corr Metals. 1.
Skin Corr. 1B.
Eye Damage. 1.
Stot SE. 3.

Signal word: Danger**Hazard statements:**

May be corrosive to metals.
Causes severe skin burns and eye damage.
May cause respiratory irritation.
Causes serious eye damage.

Precautionary statements:

If medical advice is needed have product container or label at hand.
Keep out of reach of children.
Read label before use.
Keep only in original container.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.12.2015

Hydrochloric Acid,0.5N

Wear protective gloves/protective clothing/eye protection/face protection.
 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do.
 Continue rinsing.
 Immediately call a POISON CENTER or doctor/physician.
 Specific treatment (see supplemental first aid instructions on this label).
 Wash contaminated clothing before reuse.
 Absorb spillage to prevent material damage.
 Store in a well ventilated place. Keep container tightly closed.
 Store locked up.
 Store in a corrosive resistant container with a resistant inner liner.
 Dispose of contents/container.

Other Non-GHS Classification: None

SECTION 3: Composition/Information on Ingredients

Ingredients:

Ingredients:		
CAS 7647-01-0	Hydrochloric Acid, ACS	4.84 %
CAS 7732-18-5	Deionized Water	92.16 %
Percentages are by weight		

SECTION 4: First aid measures

Description of first aid measures

After inhalation:

Loosen clothing as necessary and position individual in a comfortable position. Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen. Consult a physician.

After skin contact:

Rinse hands with water for 20 minutes. Enter emergency shower rinsing while removing contaminated clothing and shoes. Immediately seek medical attention.

After eye contact:

Protect unexposed eye. Remove contact lenses, if present and easy to do, and continue rinsing. Continue rinsing eyes during transport to hospital. Immediately seek medical attention.

After swallowing:

Rinse mouth thoroughly. Do not induce vomiting. Never give anything by mouth to an unconscious person. Consult a physician.

Most important symptoms and effects, both acute and delayed:

Headache. Nausea. Shortness of breath. Irritation/burns, all routes of exposure. Spasm, inflammation and edema of the larynx. Inflammation and edema of the bronchi, pneumonitis, pulmonary edema. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. (Hydrochloric acid).

Indication of any immediate medical attention and special treatment needed:

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.12.2015

Hydrochloric Acid,0.5N

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing agents:

Use water, dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam.

Unsuitable extinguishing agents: None

Special hazards arising from the substance or mixture:

Hydrogen chloride gas may be released.

Advice for firefighters:

Protective equipment:

Wear protective eyewear, gloves, and clothing. Poisonous gas may be produced in fire. Refer to Section 8.

Additional information (precautions):

Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols. Avoid contact with skin, eyes, and clothing. Dust deposits should not be allowed to accumulate on surfaces.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation. Ensure that air-handling systems are operational.

Environmental precautions:

Should not be released into environment. Prevent from reaching drains, sewer, or waterway.

Methods and material for containment and cleaning up:

Wear protective eyewear, gloves, and clothing. Follow advice and precautions. If necessary use trained response staff or contractor. Absorb with suitable absorbent material such as sand or earth and containerize for disposal. Refer to Section 13. Sweep up and containerize for disposal. Avoid generating dust. Refer to Section 8. Refer to Section 5.

Reference to other sections: None

SECTION 7: Handling and storage

Precautions for safe handling:

Avoid contact with skin, eyes, and clothing. Follow good hygiene procedures when handling chemical materials. Refer to Section 8. Follow proper disposal methods. Wash hands after handling. Avoid contact with skin and eyes. Handle in accordance with good industrial hygiene and safety practice. Wear protective equipment. See Section 8. Refer to Section 13.

Conditions for safe storage, including any incompatibilities:

Store in a cool location. Store with like hazards. Keep away from open flames, hot surfaces, and sources of ignition. Keep away from food and beverages. Protect from freezing and physical damage. Provide ventilation for containers. Keep container tightly closed. Store away from incompatible materials.

SECTION 8: Exposure controls/personal protection



Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.12.2015

Hydrochloric Acid,0.5N

Control parameters:	7647-01-0, Hydrochloric Acid, C 2 ppm USA. ACGIH. 7647-01-0, Hydrochloric Acid, C 5 ppm 7 mg/m3 USA. NIOSH. 7647-01-0, Hydrochloric Acid, C 5 ppm 7 mg/m3 USA. OSHA.
Appropriate engineering controls:	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Use under fume hood designed for hazardous chemicals with an average face velocity of 100 feet per minute or greater. Ensure that evacuation/ventilation systems are designed to prevent the escape of dust/mist/aerosols into the work area.
Respiratory protection:	Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment.
Protection of skin:	Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves. Wear protective clothing. Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Eye protection:	Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Wear tightly fitting safety goggles and a faceshield (8-inch minimum).
General hygienic measures:	Wash hands before breaks and at the end of work. Perform routine housekeeping to prevent dust generation. Avoid contact with skin, eyes, and clothing. Before wearing wash contaminated clothing.

SECTION 9: Physical and chemical properties

Appearance (physical state, color):	Clear colorless liquid	Explosion limit lower: Explosion limit upper:	Not determined Not determined
Odor:	Odorless	Vapor pressure at 20°C:	Not determined
Odor threshold:	Not determined	Vapor density:	Not determined
pH-value:	< 1	Relative density:	Not determined
Melting/Freezing point:	Not determined	Solubilities:	Soluble in water.
Boiling point/Boiling range:	Not determined	Partition coefficient (n-octanol/water):	Not determined
Flash point (closed cup):	Not determined	Auto/Self-ignition temperature:	Not determined
Evaporation rate:	> 1	Decomposition temperature:	Not determined
Flammability (solid, gaseous):	Not determined	Viscosity:	a. Kinematic: Not determined b. Dynamic: Not determined
Density at 20°C:	Not determined		

SECTION 10: Stability and reactivity

Reactivity:

Nonreactive under normal conditions.

Chemical stability:

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.12.2015

Hydrochloric Acid,0.5N

Stable under normal conditions.

Possible hazardous reactions: None

Conditions to avoid:

Incompatible materials. Excess heat.

Incompatible materials:

Most metals, alkalis, cyanides, sulfides, sulfites, metal oxides, formaldehydes.

Hazardous decomposition products:

Fumes of hydrogen chloride and hydrogen in contact with metals. Chloride gas from oxidizers.

SECTION 11: Toxicological information

Acute Toxicity: No additional information.

Chronic Toxicity: No additional information.

Skin corrosion/irritation:

Skin - rabbit Result: Causes burns. 7647-01-0.

Serious eye damage/irritation:

Eyes - rabbit (Hydrochloric acid) Result: Corrosive to eyes 7647-01-0.

Respiratory or skin sensitization: No additional information.

Carcinogenicity: No additional information.

Germ cell mutagenicity: No additional information.

Reproductive Toxicity: No additional information.

STOT-single and repeated exposure:

7647-01-0: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation. (Hydrochloric acid)

Additional toxicological information: No additional information.

SECTION 12: Ecological information

Ecotoxicity:

Toxicity to fish LC50 - Gambusia affinis (Mosquito fish) - 282 mg/l - 96 h (Hydrochloric acid), 7647-01-0.

Persistence and degradability: No additional information.

Bioaccumulative potential: No additional information.

Mobility in soil: No additional information.

Other adverse effects: No additional information.

SECTION 13: Disposal considerations

Waste disposal recommendations:

Treat the solid residue as normal refuse. Contact a licensed professional waste disposal service to dispose of this material. Dispose of empty containers as unused product. Product or containers must not be disposed with household garbage. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification. Cover

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according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.12.2015

Hydrochloric Acid,0.5N

spill with soda ash or calcium carbonate. Mix and add water to form slurry. Decant to drain.

SECTION 14: Transport information

US DOT**UN Number:**

ADR, ADN, DOT, IMDG, IATA 1789

Limited Quantity Exception:

None

Bulk:**RQ (if applicable):** None**Proper shipping Name:** Hydrochloric acid.**Hazard Class:** 8**Packing Group:** III.**Marine Pollutant (if applicable):** No additional information.**Comments:** None**Non Bulk:****RQ (if applicable):** None**Proper shipping Name:** Hydrochloric acid.**Hazard Class:** 8**Packing Group:** III.**Marine Pollutant (if applicable):** No additional information.**Comments:** None

SECTION 15: Regulatory information

United States (USA)**SARA Section 311/312 (Specific toxic chemical listings):**

Acute

SARA Section 313 (Specific toxic chemical listings):

7647-01-0 Hydrogen Chloride - Weight: <2% Threshold 1.0.

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act) :

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

7647-01-0 Hydrochloric acid 5000 lb.

Proposition 65 (California):**Chemicals known to cause cancer:**

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.12.2015

Hydrochloric Acid,0.5N**Canada****Canadian Domestic Substances List (DSL) :**

All ingredients are listed.

SECTION 16: Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

NFPA: 1-0-0**HMIS:** 3-0-0**GHS Full Text Phrases:** None**Abbreviations and Acronyms:**

IMDG International Maritime Code for Dangerous Goods.
PNEC. Predicted No-Effect Concentration (REACH).
CFR Code of Federal Regulations (USA).
SARA Superfund Amendments and Reauthorization Act (USA).
RCRA. Resource Conservation and Recovery Act (USA).
TSCA. Toxic Substances Control Act (USA).
NPRI National Pollutant Release Inventory (Canada).
DOT US Department of Transportation.
IATA International Air Transport Association.
GHS Globally Harmonized System of Classification and Labelling of Chemicals.
ACGIH American Conference of Governmental Industrial Hygienists.
CAS Chemical Abstracts Service (division of the American Chemical Society).
NFPA National Fire Protection Association (USA).
HMIS Hazardous Materials Identification System (USA).
WHMIS Workplace Hazardous Materials Information System (Canada).
DNEL Derived No-Effect Level (REACH).

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.08.2015

Isopropanol,**SECTION 1: Identification of the substance/mixture and of the supplier**

Product name: Isopropanol,
Manufacturer/Supplier Trade name:
Manufacturer/Supplier Article number: KEMIP1005-A
Recommended uses of the product and restrictions on use: Laboratory Chemicals

Manufacturer Details:

AquaPhoenix Scientific
9 Barnhart Drive, Hanover, PA 17331
(717) 632-1291

Supplier Details:

AquaPhoenix Scientific Inc.
9 Barnhart Drive, Hanover PA 17331
(717) 632-1291

Emergency telephone number:

Emergency Telephone No.: 800-255-3924

SECTION 2: Hazards identification**Classification of the substance or mixture:****Flammable**

Flammable liquids, category 2

**Irritant**

Eye irritation, category 2A

Specific target organ toxicity following single exposure, category 3

Flammable liq. 2.

Eye Irrit. 2.

Stot SE. 3.

Signal word: Danger**Hazard statements:**

Highly flammable liquid and vapour.
Causes serious eye irritation.
May cause drowsiness or dizziness.

Precautionary statements:

If medical advice is needed have product container or label at hand.
Keep out of reach of children.
Read label before use.
Keep container tightly closed.
Wash thoroughly after handling.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/light/.../equipment.
Use only non-sparking tools.

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.08.2015

Isopropanol,

Take precautionary measures against static discharge.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
Avoid breathing dust/fume/gas/mist/vapours/spray.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do.
Continue rinsing.
If eye irritation persists get medical advice/attention.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
Call a POISON CENTER or doctor/physician if you feel unwell.
In case of fire: Use ... for extinction.
Store in a well ventilated place. Keep container tightly closed.
Store in a well ventilated place. Keep cool.
Store locked up.
Dispose of contents/container.

Other Non-GHS Classification: None

SECTION 3: Composition/Information on Ingredients

Ingredients:

Ingredients:		
CAS 67-63-0	Isopropanol	100 %
Percentages are by weight		

SECTION 4: First aid measures

Description of first aid measures

After inhalation:

Move exposed individual to fresh air. Loosen clothing as necessary and position individual in a comfortable position. Seek medical advice if discomfort or irritation persists. Give artificial respiration if necessary. If breathing is difficult, give oxygen.

After skin contact:

Wash affected area with soap and water. Rinse/flush exposed skin gently using water for 15-20 minutes. Seek medical attention if irritation persists or if concerned.

After eye contact:

Protect unexposed eye. Immediately flush eyes with water for at least 15 minutes. Immediately get medical assistance.

After swallowing:

Induce vomiting. Dilute mouth with water or milk after rinsing. Immediately get medical assistance.

Most important symptoms and effects, both acute and delayed:

Shortness of breath. Irritation. Nausea. Headache.

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention, provide SDS document to physician. Physician should treat symptomatically.

SECTION 5: Firefighting measures

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.08.2015

Isopropanol,

Extinguishing media

Suitable extinguishing agents:

Use water, dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam. Water spray can be used to dilute spills to nonflammable mixtures.

Unsuitable extinguishing agents: None

Special hazards arising from the substance or mixture: None

Advice for firefighters:

Protective equipment:

Wear protective eyewear, gloves, and clothing. Refer to Section 8.

Additional information (precautions):

Ensure adequate ventilation. Avoid contact with skin, eyes, and clothing. Do not inhale gases, fumes, dust, mist, vapor, and aerosols.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Avoid contact with skin, eyes, and clothing. Keep away from ignition sources. Protect from heat. Ensure that dust-handling systems (exhaust ducts, dust collectors, vessels, and processing equipment) are designed to prevent the escape of dust into the work area. Use personal protective equipment. Ensure adequate ventilation.

Environmental precautions:

Prevent from reaching drains, sewer or waterway. Should not be released into environment.

Methods and material for containment and cleaning up:

Use spark-proof tools and explosion-proof equipment. Have fire extinguishing agent available in case of fire. Always obey local regulations. Refer to Section 13. Collect liquids using vacuum or by use of absorbents. Place into properly labeled containers for recovery or disposal. Remove all sources of ignition. Contain spill then collect. Do not flush to sewer. Absorb with a noncombustible absorbent material such as sand or earth and containerize for disposal. Ventilate area of spill.

Reference to other sections: None

SECTION 7: Handling and storage

Precautions for safe handling:

Do not eat, drink, smoke, or use personal products when handling chemical substances. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes, and clothing. Empty containers retain product residue and can be dangerous.

Conditions for safe storage, including any incompatibilities:

Store in a cool location. Store securely in flammable storage area away from sources of ignition. Provide ventilation for containers. Avoid storage near extreme heat, ignition sources or open flame. Keep container tightly closed. Protect from freezing and physical damage. Store away from incompatible materials.

SECTION 8: Exposure controls/personal protection



Control parameters:

67-63-0, Isopropanol, ACGIH: 400 ppm STEL; 200 ppm TWA.
67-63-0, Isopropanol, NIOSH: 500 ppm STEL; 1225 mg/m3 STEL.
67-63-0, Isopropanol, NIOSH: 400 ppm TWA; 980 mg/m3 TWA.

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.08.2015

Isopropanol,

- Appropriate engineering controls:** Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.
- Respiratory protection:** Not required under normal conditions of use. Use suitable respiratory protective device when high concentrations are present.
- Protection of skin:** Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation.
- Eye protection:** Safety glasses with side shields or goggles.
- General hygienic measures:** Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin. Perform routine housekeeping. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.

SECTION 9: Physical and chemical properties

Appearance (physical state, color):	Clear colorless liquid	Explosion limit lower: Explosion limit upper:	2% 12.7%
Odor:	Alcohol	Vapor pressure at 20°C:	Approx 33 at 20°C
Odor threshold:	Not available	Vapor density:	Not available
pH-value:	Not available	Relative density:	0.785 g/mL at 25°C
Melting/Freezing point:	Below -88°C	Solubilities:	Infinite solubility.
Boiling point/Boiling range:	Approx 82°C	Partition coefficient (n-octanol/water):	log pow: 0.05
Flash point (closed cup):	12.0°C	Auto/Self-ignition temperature:	425.0°C
Evaporation rate:	3.0	Decomposition temperature:	Not available
Flammability (solid, gaseous):	Flammable	Viscosity:	a. Kinematic: Not available b. Dynamic: Not available
Density at 20°C:	Not available		

SECTION 10: Stability and reactivity

Reactivity:

None under normal processing.

Chemical stability:

No decomposition if used and stored according to specifications. Stable under normal conditions.

Possible hazardous reactions:

None under normal processing.

Conditions to avoid:

Incompatible materials.

Incompatible materials:

Strong oxidizers, heat, sparks, open flames. Will attack some forms of rubber, plastics and coatings. May react with metallic aluminum and generate hydrogen gas.

Hazardous decomposition products:

Toxic oxides of carbon, acrid and irritating fumes.

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.08.2015

Isopropanol,

SECTION 11: Toxicological information

Acute Toxicity:

Dermal:

LD50 Dermal-rabbit: 15800 mg/kg.

Chronic Toxicity: No additional information.

Skin corrosion/irritation: No additional information.

Serious eye damage/irritation: No additional information.

Respiratory or skin sensitization: No additional information.

Carcinogenicity: No additional information.

Germ cell mutagenicity: No additional information.

Reproductive Toxicity: No additional information.

STOT-single and repeated exposure: No additional information.

Additional toxicological information: No additional information.

SECTION 12: Ecological information

Ecotoxicity:

Water Flea., 48 Hr EC50 Daphnia magna: 13299 mg/L.

Algae, 96 Hr EC50 Desmodesmus subspicatus: >1000 mg/L.

Algae, 72 Hr EC50 Desmodesmus subspicatus: >1000 mg/L.

Fish., 96 Hr LC50 Pimephales promelas: 9640 mg/L.

Fish., 96 Hr LC50 Pimephales promelas: 11130 mg/L.

Fish., 96 Hr LC50 Lepomis macrochirus: >1400000 µg/L.

Persistence and degradability: No additional information.

Bioaccumulative potential: No additional information.

Mobility in soil:

Aqueous solution has high mobility in soil.

Other adverse effects: No additional information.

SECTION 13: Disposal considerations

Waste disposal recommendations:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Remove all sources of ignition. Do not flush to sewer. Have fire extinguishing agent available in case of fire. Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification.

SECTION 14: Transport information

US DOT

UN Number:

ADR, ADN, DOT, IMDG, IATA

UN1219

Limited Quantity Exception:

None

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.08.2015

Isopropanol,

Bulk:
RQ (if applicable): None
Proper shipping Name: Isopropanol.
Hazard Class: 3
Packing Group: II.
Marine Pollutant (if applicable): No additional information.
Comments: None

Non Bulk:
RQ (if applicable): None
Proper shipping Name: Isopropanol.
Hazard Class: 3
Packing Group: II.
Marine Pollutant (if applicable): No additional information.
Comments: None



SECTION 15: Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

Acute,Chronic,Fire

SARA Section 313 (Specific toxic chemical listings):

67-63-0 Isopropanol.

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act) :

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

None of the ingredients are listed.

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Canada

Canadian Domestic Substances List (DSL) :

All ingredients are listed.

SECTION 16: Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety

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according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.08.2015

Isopropanol,

information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

NFPA: 2-0-0

HMIS: 2-0-0

GHS Full Text Phrases: None

Abbreviations and Acronyms:

IMDG International Maritime Code for Dangerous Goods.
PNEC. Predicted No-Effect Concentration (REACH).
CFR Code of Federal Regulations (USA).
SARA Superfund Amendments and Reauthorization Act (USA).
RCRA. Resource Conservation and Recovery Act (USA).
TSCA. Toxic Substances Control Act (USA).
NPRI National Pollutant Release Inventory (Canada).
DOT US Department of Transportation.
IATA International Air Transport Association.
GHS Globally Harmonized System of Classification and Labelling of Chemicals.
ACGIH American Conference of Governmental Industrial Hygienists.
CAS Chemical Abstracts Service (division of the American Chemical Society).
NFPA National Fire Protection Association (USA).
HMIS Hazardous Materials Identification System (USA).
WHMIS Workplace Hazardous Materials Information System (Canada).
DNEL Derived No-Effect Level (REACH).

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.26.2015

Methyl Orange Indicator**SECTION 1: Identification of the substance/mixture and of the supplier****Product name:** Methyl Orange Indicator**Manufacturer/Supplier Trade name:****Manufacturer/Supplier Article number:** KEMMO3319-A**Recommended uses of the product and restrictions on use:** Laboratory**Manufacturer Details:**

AquaPhoenix Scientific
9 Barnhart Drive, Hanover, PA 17331
(717) 632-1291

Supplier Details:

AquaPhoenix Scientific Inc.
9 Barnhart Drive, Hanover PA 17331
(717) 632-1291

Emergency telephone number:

Emergency Telephone No.: 800-255-3924

SECTION 2: Hazards identification**Classification of the substance or mixture:** Not classified for physical or health hazards under GHS.**Signal word:** None**Hazard statements:**

Toxic if swallowed.

Precautionary statements:

If medical advice is needed have product container or label at hand.
Keep out of reach of children.
Read label before use.
If medical advice is needed have product container or label at hand.
Keep out of reach of children.
Read label before use.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
Specific treatment (see ... on this label).
Rinse mouth.
Store locked up.
Dispose of contents/container.

Other Non-GHS Classification: None**SECTION 3: Composition/information on ingredients****Ingredients:****Ingredients:**

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according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.26.2015

Methyl Orange Indicator

CAS 547-58-0	Methyl Orange, ACS	0.05 %
CAS 7732-18-5	Water	99.95 %
Percentages are by weight		

SECTION 4: First aid measures

Description of first aid measures

After inhalation:

Move exposed individual to fresh air. Loosen clothing as necessary and position individual in a comfortable position. Seek medical advice if discomfort or irritation persists. If breathing difficult, give oxygen.

After skin contact:

Wash hands and exposed skin with soap and plenty of water for 15-20 minutes. Seek medical attention if irritation persists or if concerned.

After eye contact:

Protect unexposed eye. Immediately flush eyes with water for at least 15 minutes. Remove contact lenses, if present and easy to do, and continue rinsing. Seek medical attention if irritation persists or if concerned.

After swallowing:

Do not induce vomiting. Dilute mouth with water or milk after rinsing. Rinse mouth thoroughly. Seek medical attention if irritation, discomfort, or vomiting persists.

Most important symptoms and effects, both acute and delayed:

Nausea. Shortness of breath. Irritation. Nausea.

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically. If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing agents:

Use water, dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam.

Unsuitable extinguishing agents: None

Special hazards arising from the substance or mixture:

Thermal decomposition can lead to release of irritating gases and vapors. Toxic gas may be produced in fire.

Advice for firefighters:

Protective equipment:

Wear protective eyewear, gloves, and clothing. Refer to Section 8.

Additional information (precautions):

Avoid contact with skin, eyes, and clothing. Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation. Ensure that air-handling systems are operational.

Environmental precautions:

Should not be released into environment. Prevent from reaching drains, sewer, or waterway.

Methods and material for containment and cleaning up:

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.26.2015

Methyl Orange Indicator

If necessary use trained response staff or contractor. Keep in suitable closed containers for disposal. Soak up with inert absorbent material. Refer to Section 8. Refer to Section 13. Wear protective eyewear, gloves, and clothing. Follow proper disposal methods. Always obey local regulations.

Reference to other sections: None

SECTION 7: Handling and storage

Precautions for safe handling:

Wash hands after handling. Follow good hygiene procedures when handling chemical materials. Refer to Section 8. Avoid contact with skin, eyes, and clothing. Do not eat, drink, smoke, or use personal products when handling chemical substances. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.

Conditions for safe storage, including any incompatibilities:

Store in a cool location. Keep away from food and beverages. Protect from freezing and physical damage. Provide ventilation for containers. Keep container tightly closed. Store away from incompatible materials. Provide ventilation for containers. Store away from foodstuffs. Keep container tightly closed. Protect from freezing and physical damage. Store in a cool location.

SECTION 8: Exposure controls/personal protection



Control parameters:

, , OSHA PEL TWA (Total Dust) 15 mg/m³ (50 mppcf*).
, , ACGIH TLV TWA (inhalable particles) 10 mg/m³.

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Ensure adequate ventilation. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Respiratory protection:

Not required under normal conditions of use. Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment.

Protection of skin:

Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves. Wear protective clothing.

Eye protection:

Safety glasses with side shields or goggles. Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses or goggles are appropriate eye protection.

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according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.26.2015

Methyl Orange Indicator

General hygienic measures:

Avoid contact with skin, eyes, and clothing. Before wearing wash contaminated clothing. Wash hands before breaks and at the end of work. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Perform routine housekeeping to prevent dust generation. Before wearing wash contaminated clothing. Perform routine housekeeping. Wash hands before breaks and at the end of work.

SECTION 9: Physical and chemical properties

Appearance (physical state, color):	Clear, orange liquid	Explosion limit lower:	Not determined
		Explosion limit upper:	Not determined
Odor:	Odorless	Vapor pressure at 20°C:	14mmHg @ 20C
Odor threshold:	Not determined	Vapor density:	Not determined
pH-value:	5.0 - 6.5	Relative density:	Approx 1
Melting/Freezing point:	Approx 0C	Solubilities:	Material is water soluble.
Boiling point/Boiling range:	Approx 100C	Partition coefficient (n-octanol/water):	Not determined
Flash point (closed cup):	Not determined	Auto/Self-ignition temperature:	Not determined
Evaporation rate:	> 1	Decomposition temperature:	Not determined
Flammability (solid, gaseous):	Not determined	Viscosity:	a. Kinematic: Not determined b. Dynamic: Not determined
Density at 20°C:	Not determined		

SECTION 10: Stability and reactivity

Reactivity:

Nonreactive under normal conditions.

Chemical stability:

No decomposition if used and stored according to specifications. Stable under normal conditions.

Possible hazardous reactions:

None under normal processing.

Conditions to avoid:

Store away from oxidizing agents, strong acids or bases. Incompatible materials. Excess heat.

Incompatible materials:

Strong acids. Strong bases. Strong oxidizers.

Hazardous decomposition products:

Carbon oxides. Nitrogen oxides. Sulphur oxides. Sodium oxides.

SECTION 11: Toxicological information

Acute Toxicity: No additional information.

Chronic Toxicity: No additional information.

Skin corrosion/irritation: No additional information.

Serious eye damage/irritation: No additional information.

Respiratory or skin sensitization: No additional information.

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according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.26.2015

Methyl Orange Indicator

Carcinogenicity: No additional information.

Germ cell mutagenicity: No additional information.

Reproductive Toxicity: No additional information.

STOT-single and repeated exposure: No additional information.

Additional toxicological information: No additional information.

SECTION 12: Ecological information

Ecotoxicity: No additional information.

Persistence and degradability:

Material is persistent.

Bioaccumulative potential:

Not expected to bio accumulate.

Mobility in soil: No additional information.

Other adverse effects: No additional information.

SECTION 13: Disposal considerations

Waste disposal recommendations:

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification. Contact a licensed professional waste disposal service to dispose of this material. Dispose of empty containers as unused product. Product or containers must not be disposed with household garbage. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11).

SECTION 14: Transport information

US DOT

UN Number:

ADR, ADN, DOT, IMDG, IATA

Not Dangerous Goods

Limited Quantity Exception:

None

Bulk:

RQ (if applicable): None

Proper shipping Name: Not Dangerous Goods.

Hazard Class: None

Packing Group: Not Dangerous Goods.

Marine Pollutant (if applicable): No additional information.

Comments: None

Non Bulk:

RQ (if applicable): None

Proper shipping Name: Not Dangerous Goods.

Hazard Class: None

Packing Group: Not Dangerous Goods.

Marine Pollutant (if applicable): No additional information.

Comments: None

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.26.2015

Methyl Orange Indicator

SECTION 15: Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

None of the ingredients are listed.

SARA Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act) :

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

None of the ingredients are listed.

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Canada

Canadian Domestic Substances List (DSL) :

All ingredients are listed.

SECTION 16: Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material. This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

NFPA: 1-0-0

HMIS: 1-0-0

GHS Full Text Phrases: None

Abbreviations and Acronyms:

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according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.26.2015

Methyl Orange Indicator

IMDG International Maritime Code for Dangerous Goods.
PNEC. Predicted No-Effect Concentration (REACH).
CFR Code of Federal Regulations (USA).
SARA Superfund Amendments and Reauthorization Act (USA).
RCRA. Resource Conservation and Recovery Act (USA).
TSCA. Toxic Substances Control Act (USA).
NPRI National Pollutant Release Inventory (Canada).
DOT US Department of Transportation.
IMDG International Maritime Code for Dangerous Goods.
IATA International Air Transport Association.
GHS Globally Harmonized System of Classification and Labelling of Chemicals.
IATA International Air Transport Association.
ACGIH American Conference of Governmental Industrial Hygienists.
CAS Chemical Abstracts Service (division of the American Chemical Society).
NFPA National Fire Protection Association (USA).
HMIS Hazardous Materials Identification System (USA).
WHMIS Workplace Hazardous Materials Information System (Canada).
DNEL Derived No-Effect Level (REACH).
PNEC. Predicted No-Effect Concentration (REACH).
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SARA Superfund Amendments and Reauthorization Act (USA).
RCRA. Resource Conservation and Recovery Act (USA).
GHS Globally Harmonized System of Classification and Labelling of Chemicals.
TSCA. Toxic Substances Control Act (USA).
NPRI National Pollutant Release Inventory (Canada).
DOT US Department of Transportation.
ACGIH American Conference of Governmental Industrial Hygienists.
CAS Chemical Abstracts Service (division of the American Chemical Society).
NFPA National Fire Protection Association (USA).
HMIS Hazardous Materials Identification System (USA).
WHMIS Workplace Hazardous Materials Information System (Canada).
DNEL Derived No-Effect Level (REACH).

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 09.16.2014

Phenolphthalein Indicator Solution,**SECTION 1: Identification of the substance/mixture and of the supplier**

Product name: Phenolphthalein Indicator Solution,
Manufacturer/Supplier Trade name: Phenolphthalein Indicator
Manufacturer/Supplier Article number: KEMPH1605-A
Recommended uses of the product and restrictions on use: Laboratory chemicals

Manufacturer Details:

AquaPhoenix Scientific
9 Barnhart Drive, Hanover, PA 17331
(717) 632-1291

Supplier Details:

AquaPhoenix Scientific Inc.
9 Barnhart Drive, Hanover PA 17331
(717) 632-1291

Emergency telephone number:

Emergency Telephone No.: 800-255-3924

SECTION 2: Hazards identification**Classification of the substance or mixture:****Flammable****Irritant****Health hazard**

Acute toxicity (inhalation), category 4
Flammable liquids, category 3

Eye irritation, category 2A
Specific target organ toxicity - single exposure, category 1
Specific target organ toxicity - single exposure, category 3, central nervous system
Acute toxicity (oral), category 4
Acute toxicity (dermal), category 4

Signal word: Danger**Hazard statements:**

Highly flammable liquid and vapor.
Harmful if swallowed.
Harmful in contact with skin.
Harmful if inhaled.
Causes serious eye irritation.
Causes damage to organs.
May cause drowsiness or dizziness.

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 09.16.2014

Phenolphthalein Indicator Solution,

Precautionary statements:

Wear protective gloves/protective clothing/eye protection/face protection.
 Use only non-sparking tools.
 Take precautionary measures against static discharge.
 Do not breathe dust/fume/gas/mist/vapors/spray.
 Do not eat, drink or smoke when using this product.
 Use only outdoors or in a well-ventilated area.
 Wash skin thoroughly after handling.
 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
 Keep container tightly closed.
 Ground/bond container and receiving equipment.
 Use explosion-proof electrical/ventilating/light/equipment.
 If exposed: Call a poison center or doctor/physician.
 Wash contaminated clothing before reuse.
 If on skin (or hair): Immediately remove/take off all contaminated clothing. Rinse skin with water/shower.
 In case of fire: Use agents recommended in section 5 for extinction.
 If swallowed: Call a poison center or doctor/physician if you feel unwell.
 Rinse mouth.
 If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.
 Specific treatment (see supplemental first aid instructions on this label).
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
 If eye irritation persists get medical advice/attention.
 Store in a well ventilated place. Keep container tightly closed.
 Store in a well ventilated place. Keep cool.
 Store locked up.
 Dispose of contents and container as instructed in Section 13.

Other Non-GHS Classification: None

SECTION 3: Composition/information on ingredients

Ingredients:

Ingredients:		
CAS 67-56-1	Methanol	12.5 %
CAS 64-17-5	Ethanol	12.5 %
CAS 67-63-0	Isopropanol	25 %
CAS 77-09-8	Phenolphthalein	0.5 %
CAS 7732-18-5	Water (DI)	50 %
Percentages are by weight		

SECTION 4: First aid measures

Description of first aid measures**After inhalation:**

Take affected persons out into the fresh air. Seek immediate medical advice. Provide oxygen treatment if affected person has difficulty breathing. In case of irregular breathing or respiratory arrest provide artificial

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according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 09.16.2014

Phenolphthalein Indicator Solution,

respiration.

After skin contact:

Immediately remove any clothing soiled by the product. Flush with water for 15 minutes. Seek immediate medical attention or advice.

After eye contact:

Protect unharmed eye. Flush with water for 15 minutes. Seek immediate medical attention or advice.

After swallowing:

Do not induce vomiting; call for medical help immediately. Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident. Have exposed individual drink sips of water or milk.

Most important symptoms and effects, both acute and delayed:

Headache. Acidosis. Disorientation. Unconsciousness. Coughing. Breathing difficulty. Dizziness. Gastric or intestinal disorders when ingested. Nausea in case of ingestion. Slight irritant effect on skin and mucous membranes. Irritant to eyes. Blindness.

Indication of any immediate medical attention and special treatment needed:

Contains methanol. Consult literature for specific antidotes. Medical supervision for at least 48 hours. Monitor circulation, possible shock treatment. If necessary oxygen respiration treatment. Note to physician: Treat symptomatically.

SECTION 5: Firefighting measures**Extinguishing media****Suitable extinguishing agents:**

CO₂, powder or water spray. Fight larger fires with water spray.

Unsuitable extinguishing agents:

None.

Special hazards arising from the substance or mixture:

Formation of toxic gases is possible during heating or in case of fire.

Advice for firefighters:**Protective equipment:**

Wear self-contained respiratory protective device. Wear fully protective suit.

Additional information (precautions):

Eliminate all ignition sources if safe to do so. Use large quantities of foam as it is partially destroyed by the product.

SECTION 6: Accidental release measures**Personal precautions, protective equipment and emergency procedures:**

Wear protective equipment. Use respiratory protective device against the effects of fumes/dust/aerosol. Keep unprotected persons away. Ensure adequate ventilation. Keep away from ignition sources. Protect from heat. Avoid contact with skin and eyes, and clothing.

Environmental precautions:

Do not allow to enter sewers. Do not allow to enter surface or ground water. Inform respective authorities in case of seepage into water course or sewage system.

Methods and material for containment and cleaning up:

Absorb with non-combustible liquid-binding material (sand, diatomite, acid binders, universal binders). Send for recovery or disposal in suitable receptacles. Dispose contaminated material as waste according to section 13.

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Phenolphthalein Indicator Solution,

Used rags or other cleaning materials should be soaked with water and placed in a sealed container. Clean up spills immediately, observing precautions in Section 8. Always obey local regulations. Wash hands after handling. Avoid contact with skin and eyes.

Reference to other sections:

See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

SECTION 7: Handling and storage

Precautions for safe handling:

Prevent formation of aerosols. Avoid splashes or spray in enclosed areas. Use only in well ventilated areas. Rags, metal wools / cuttings / shavings and waste papers soaked with product must be placed in a sealed metal container rated for flammable waste. Keep ignition sources away - Do not smoke. Flammable gas-air mixtures may form in empty receptacles. Protect against electrostatic charges. Fumes can combine with air to form an explosive mixture.

Conditions for safe storage, including any incompatibilities:

Store in a cool location. Provide ventilation for receptacles. Avoid storage near extreme heat, ignition sources or open flame. Store away from foodstuffs. Store away from oxidizing agents. Store in cool, dry conditions in well sealed receptacles. Keep container tightly sealed. Store away from combustible materials. Protect from freezing and physical damage.

SECTION 8: Exposure controls/personal protection



Control parameters:

67-63-0, :Isopropanol, ACGIH TLV: 983mg/m3.
67-63-0, :Isopropanol, OSHA PEL: 980mg/m3.
64-17-5, Ethanol, OSHA PEL: 1900mg/m3.
64-17-5, Ethanol, ACGIH TLV: 1880mg/m3.
67-56-1, Methanol, OSHA PEL: 200ppm.
67-56-1, Methanol., ACGIH TLV: 200ppm.

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or mists below the applicable workplace exposure limits indicated above. All electrical equipment should comply with the National Electric Code. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof equipment. Take precautionary measures against static discharges. Ensure all national/local regulations are observed. Gas detectors should be used when flammable gases/vapors may be released.

Respiratory protection:

Not required under normal conditions of use. Use suitable respiratory protective device when high concentrations are present. Use suitable respiratory protective device when aerosol or mist is formed. For spills, respiratory protection may be advisable.

Protection of skin:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Eye protection:

Safety glasses.

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Phenolphthalein Indicator Solution,

General hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals. Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Do not inhale gases / fumes / aerosols. Avoid contact with the eyes and skin.

SECTION 9: Physical and chemical properties

Appearance (physical state, color):	Slight pink liquid	Explosion limit lower: Explosion limit upper:	Product does not present Explosion hazard Not determined
Odor:	Mild alcohol	Vapor pressure at 20°C:	33mmHg @ 20C
Odor threshold:	Not determined	Vapor density:	2.1
pH-value:	Slightly Acidic	Relative density:	Not determined
Melting/Freezing point:	- 88C	Solubilities:	Soluble in water
Boiling point/Boiling range:	Approx 82C	Partition coefficient (n-octanol/water):	Not determined
Flash point (closed cup):	Not determined	Auto/Self-ignition temperature:	Product is not self-igniting
Evaporation rate:	2.88	Decomposition temperature:	Not determined
Flammability (solid, gaseous):	Not determined	Viscosity:	a. Kinematic: Not determined b. Dynamic: Not determined
Density at 20°C:	slightly heavier than water		

SECTION 10: Stability and reactivity

Reactivity:

Not determined.

Chemical stability:

No decomposition if used and stored according to specifications.

Possible hazardous reactions:

Flammable. Toxic fumes may be released if heated above the decomposition point. Reacts violently with oxidizing agents.

Conditions to avoid:

Keep ignition sources away - Do not smoke. Store away from oxidizing agents. Excess heat.

Incompatible materials:

Strong acids. Strong bases. Oxidizers, aldehydes, heat, sparks, open flame, metallic oxides.

Hazardous decomposition products:

Carbon oxides (CO, CO₂). Acrid and irritating fumes, including toxic oxides of carbon will heat to combustion.

SECTION 11: Toxicological information

Acute Toxicity:

ATE: 50ppm.

Oral:

LD50 rat: 5840 mg/kg (Isopropanol).

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Phenolphthalein Indicator Solution,

Inhalation:

LC50 rat 83.2 mg/L (Methanol).

Chronic Toxicity:

Oral:

No testing available.

Dermal:

No testing available.

Inhalation:

No testing available.

Skin corrosion/irritation:

No testing available.

Serious eye damage/irritation:

No testing available.

Respiratory or skin sensitization:

Not classified

Carcinogenicity: No additional information.

Germ cell mutagenicity: No additional information.

Reproductive Toxicity: No additional information.

STOT-single and repeated exposure:

Not classified

Additional toxicological information: No additional information.

SECTION 12: Ecological information

Ecotoxicity:

Toxicity to fish , Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 31 mg/l - 96 h.

Persistence and degradability:

biodegradable.

Bioaccumulative potential:

No further relevant information available.

Mobility in soil:

No further relevant information available.

Other adverse effects:

No further relevant information available.

SECTION 13: Disposal considerations

Waste disposal recommendations:

Product/containers must not be disposed together with household garbage. Do not allow product to reach

Safety Data Sheet
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Effective date : 09.16.2014

Phenolphthalein Indicator Solution,

sewage system or open water. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Consult federal state/ provincial and local regulations regarding the proper disposal of waste material that may incorporate some amount of this product. Handle empty containers with care because residual vapors are flammable. Avoid release to the environment. Absorb and containerize for disposal.

SECTION 14: Transport information

US DOT

UN Number:

ADR, ADN, DOT, IMDG, IATA

UN1993

Limited Quantity Exception:

9 CFR 173.150 - Exceptions for Class 3
(flammable and combustible liquids).

Bulk:

RQ (if applicable): None

Proper shipping Name: Flammable Liquids,
N.O.S., (Methanol, Ethanol, Isopropanol), 3.

Hazard Class: 3

Packing Group: II.

Marine Pollutant (if applicable): No
additional information.

Comments: None

Non Bulk:

RQ (if applicable): None

Proper shipping Name: Flammable Liquids,
N.O.S., (Methanol, Ethanol, Isopropanol), 3.

Hazard Class: 3

Packing Group: II.

Marine Pollutant (if applicable): No
additional information.

Comments: None



SECTION 15: Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

Acute,Chronic,Fire

SARA Section 313 (Specific toxic chemical listings):

67-56-1 Methanol.

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act) :

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

None of the ingredients are listed.

Proposition 65 (California):

Chemicals known to cause cancer:

77-09-8 Phenolphthalein.

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according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 09.16.2014

Phenolphthalein Indicator Solution,

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

64-17-5 Ethanol.

67-56-1 Methanol.

Canada

Canadian Domestic Substances List (DSL) :

All ingredients are listed.

SECTION 16: Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations of this material.

NFPA: 1-2-0

HMIS: 1-2-0

GHS Full Text Phrases:

Acute Tox. 4 (Oral) Acute toxicity (oral) Category 4.

H226 Flammable liquid and vapor.

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H336 May cause drowsiness or dizziness.

H341 Suspected of causing genetic defects.

H350 May cause cancer.

H361 Suspected of damaging fertility or the unborn child.

Carc. 1B Carcinogenicity Category 1B.

Eye Irrit. 2A Serious eye damage/eye irritation Category 2A.

Eye Irrit. 2B Serious eye damage/eye irritation Category 2B.

Flam. Liq. 3 Flammable liquids Category 3.

Muta. 2 Germ cell mutagenicity Category 2.

Repr. 2 Reproductive toxicity Category 2.

Skin Irrit. 2 skin corrosion/irritation Category 2.

STOT SE 3 Specific target organ toxicity (single exposure) Category 3.

Abbreviations and Acronyms:

IMDG International Maritime Code for Dangerous Goods.

DNEL Derived No-Effect Level (REACH).

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according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 09.16.2014

Phenolphthalein Indicator Solution,

PNEC Predicted No-Effect Concentration (REACH).
DOT US Department of Transportation.
IATA International Air Transportation Association.
GHS Globally Harmonized System of Classification and Labelling of Chemicals.
ACGIH American Conference of Governmental Industrial Hygienists.
CAS Chemical Abstracts Service (division of the American Chemical Society).
NFPA National Fire Protection Association (USA).
HMIS Hazardous Materials Identification System (USA).
WHMIS Workplace Hazardous Materials Information System (Canada).

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 10.24.2014

Phenol Red Indicator Solution, 0.04% w/v

SECTION 1: Identification of the substance/mixture and of the supplier**Product name:** Phenol Red Indicator Solution, 0.04% w/v**Manufacturer/Supplier Trade name:****Manufacturer/Supplier Article number:** KEMPH2510-A**Recommended uses of the product and restrictions on use:****Manufacturer Details:**

AquaPhoenix Scientific, Inc.
9 Barnhart Drive
Hanover, PA 17331
1-717-632-1291

Supplier Details:

AquaPhoenix Scientific Inc.
9 Barnhart Drive, Hanover PA 17331
(717) 632-1291

Emergency telephone number:

ChemTel: (24-hour) (US and Canada)
1-(800)-255-3924

SECTION 2: Hazards Identification**Classification of the substance or mixture:** Not classified for physical or health hazards under GHS.**Signal word:** None**Hazard statements:** None**Precautionary statements:**

If medical advice is needed have product container or label at hand.
Keep out of reach of children.
Read label before use.

Other Non-GHS Classification: None**SECTION 3: Composition/Information on Ingredients****Ingredients:**

Ingredients:		
CAS 7732-18-5	Deionized water	98 %
CAS 143-74-8	Phenol Red Na Salt	0.1 %
CAS 1310-73-2	Sodium Hydroxide	0.1 %
Percentages are by weight		

SECTION 4: First aid measures**Description of first aid measures**

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 10.24.2014

Phenol Red Indicator Solution, 0.04% w/v**After inhalation:**

Loosen clothing as necessary and position individual in a comfortable position. Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen. Get medical assistance if cough or other symptoms appear.

After skin contact:

Rinse/flush exposed skin gently using soap and water for 15-20 minutes. Seek medical advice if discomfort or irritation persists.

After eye contact:

Protect unexposed eye. Rinse/flush exposed eye(s) gently using water for 15-20 minutes. Remove contact lens(es) if able to do so during rinsing. Seek medical attention if irritation persists or if concerned.

After swallowing:

Rinse mouth thoroughly. Do not induce vomiting. Seek medical attention if irritation, discomfort, or vomiting persists. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed:

Irritation. Headache. Nausea. Shortness of breath.

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

SECTION 5: Firefighting measures**Extinguishing media****Suitable extinguishing agents:**

Use water, dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam.

Unsuitable extinguishing agents: None**Special hazards arising from the substance or mixture:**

Thermal decomposition can lead to release of irritating gases and vapors.

Advice for firefighters:**Protective equipment:**

Wear protective eyewear, gloves, and clothing. Use NIOSH-approved respiratory protection/breathing apparatus. Refer to Section 8.

Additional information (precautions):

Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols. Avoid contact with skin, eyes, and clothing.

SECTION 6: Accidental release measures**Personal precautions, protective equipment and emergency procedures:**

Ensure adequate ventilation. Ensure that air-handling systems are operational.

Environmental precautions:

Should not be released into environment. Prevent from reaching drains, sewer, or waterway.

Methods and material for containment and cleaning up:

Wear protective eyewear, gloves, and clothing. Always obey local regulations. Containerize for disposal. Refer to Section 13. Refer to Section 8. If necessary use trained response staff or contractor. Evacuate personnel to safe areas. Keep in suitable closed containers for disposal.

Reference to other sections: None**SECTION 7: Handling and storage****Precautions for safe handling:**

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Effective date : 10.24.2014

Phenol Red Indicator Solution, 0.04% w/v

Avoid contact with skin, eyes, and clothing. Follow good hygiene procedures when handling chemical materials. Refer to Section 8. Follow proper disposal methods. Do not eat, drink, smoke, or use personal products when handling chemical substances. Refer to Section 13.

Conditions for safe storage, including any incompatibilities:

Store in a cool location. Keep away from food and beverages. Protect from freezing and physical damage. Provide ventilation for containers. Keep container tightly closed. Store away from incompatible materials.

SECTION 8: Exposure controls/personal protection



Control parameters:

No applicable occupational exposure limits.

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Respiratory protection:

Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment.

Protection of skin:

Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves. Wear protective clothing.

Eye protection:

Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses or goggles are appropriate eye protection.

General hygienic measures:

Perform routine housekeeping. Wash hands before breaks and at the end of work. Avoid contact with skin, eyes, and clothing. Before wearing wash contaminated clothing.

SECTION 9: Physical and chemical properties

Appearance (physical state, color):	Red liquid	Explosion limit lower:	Not determined
		Explosion limit upper:	Not determined
Odor:	Odorless	Vapor pressure at 20°C:	<17 mm Hg @ 20C
Odor threshold:	Not determined	Vapor density:	Not determined
pH-value:	Approx 8	Relative density:	Not determined
Melting/Freezing point:	Not determined	Solubilities:	soluble
Boiling point/Boiling range:	Approx 100C	Partition coefficient (n-octanol/water):	Not determined
Flash point (closed cup):	Not determined	Auto/Self-ignition temperature:	Not determined

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Effective date : 10.24.2014

Phenol Red Indicator Solution, 0.04% w/v

Evaporation rate:	Not determined	Decomposition temperature:	Not determined
Flammability (solid, gaseous):	Not determined	Viscosity:	a. Kinematic: Not determined b. Dynamic: Not determined
Density at 20°C:	Not determined		

SECTION 10: Stability and reactivity

Reactivity:

Nonreactive under normal conditions.

Chemical stability:

Stable under normal conditions.

Possible hazardous reactions:

None under normal processing.

Conditions to avoid:

Incompatible materials.

Incompatible materials: None

Hazardous decomposition products: None

SECTION 11: Toxicological information

Acute Toxicity: None

Chronic Toxicity: No additional information.

Skin corrosion/irritation: No additional information.

Serious eye damage/irritation: No additional information.

Respiratory or skin sensitization: No additional information.

Carcinogenicity: No additional information.

Germ cell mutagenicity: No additional information.

Reproductive Toxicity: No additional information.

STOT-single and repeated exposure: No additional information.

Additional toxicological information: No additional information.

SECTION 12: Ecological information

Ecotoxicity: No additional information.

Persistence and degradability: No additional information.

Bioaccumulative potential: No additional information.

Mobility in soil: No additional information.

Other adverse effects: No additional information.

SECTION 13: Disposal considerations

Waste disposal recommendations:

Contact a licensed professional waste disposal service to dispose of this material. Dispose of empty containers as unused product. Product or containers must not be disposed with household garbage. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Chemical waste generators must determine whether a discarded chemical is classified as a

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Phenol Red Indicator Solution, 0.04% w/v

hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification.

SECTION 14: Transport information

US DOT

UN Number:

ADR, ADN, DOT, IMDG, IATA

Not Regulated.

Limited Quantity Exception:

None

Bulk:

RQ (if applicable): None

Proper shipping Name: Not Regulated.

Hazard Class: None

Packing Group: Not Regulated.

Marine Pollutant (if applicable): No additional information.

Comments: None

Non Bulk:

RQ (if applicable): None

Proper shipping Name: Not Regulated.

Hazard Class: None

Packing Group: Not Regulated.

Marine Pollutant (if applicable): No additional information.

Comments: None

SECTION 15: Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

None of the ingredients are listed.

SARA Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act) :

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

1310-73-2 Sodium hydroxide 1000.

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

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according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 10.24.2014

Phenol Red Indicator Solution, 0.04% w/v

Canada

Canadian Domestic Substances List (DSL) :

All ingredients are listed.

SECTION 16: Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

NFPA: 0-0-0

HMIS: 0-0-0

GHS Full Text Phrases: None

Abbreviations and Acronyms:

IMDG International Maritime Code for Dangerous Goods.
IATA International Air Transport Association.
GHS Globally Harmonized System of Classification and Labelling of Chemicals.
ACGIH American Conference of Governmental Industrial Hygienists.
CAS Chemical Abstracts Service (division of the American Chemical Society).
NFPA National Fire Protection Association (USA).
HMIS Hazardous Materials Identification System (USA).
WHMIS Workplace Hazardous Materials Information System (Canada).
DNEL Derived No-Effect Level (REACH).
PNEC. Predicted No-Effect Concentration (REACH).
CFR Code of Federal Regulations (USA).
SARA Superfund Amendments and Reauthorization Act (USA).
RCRA. Resource Conservation and Recovery Act (USA).
TSCA. Toxic Substances Control Act (USA).
NPRI National Pollutant Release Inventory (Canada).
DOT US Department of Transportation.

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.06.2015

Sodium Bicarbonate 0.1M

SECTION 1: Identification of the substance/mixture and of the supplier

Product name: Sodium Bicarbonate 0.1M

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: KEMSB6151-B

Recommended uses of the product and restrictions on use:

Manufacturer Details:

AquaPhoenix Scientific, Inc.
9 Barnhart Drive
Hanover, PA 17331
1-717-632-1291

Supplier Details:

AquaPhoenix Scientific Inc.
9 Barnhart Drive, Hanover PA 17331
(717) 632-1291

Emergency telephone number:

ChemTel: (24-hour) (US and Canada)
1-(800)-255-3924

SECTION 2: Hazards identification

Classification of the substance or mixture: Not classified for physical or health hazards under GHS.

Signal word: None

Hazard statements: None

Precautionary statements: None

Other Non-GHS Classification: None

SECTION 3: Composition/information on ingredients

Ingredients:

Ingredients:		
CAS 7732-18-5	Deionized Water	99.16 %
CAS 144-55-8	Sodium Bicarbonate	0.84 %
Percentages are by weight		

SECTION 4: First aid measures

Description of first aid measures

After inhalation:

Move exposed individual to fresh air. Loosen clothing as necessary and position individual in a comfortable position. Seek medical advice if discomfort or irritation persists. If breathing difficult, give oxygen.

After skin contact:

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according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.06.2015

Sodium Bicarbonate 0.1M

Wash affected area with soap and water. Seek medical advice if discomfort or irritation persists. Flush skin with plenty of soap and water for at least 15 minutes.

After eye contact:

Protect unexposed eye. Rinse or flush exposed eye gently using water for 15-20 minutes. Remove contact lenses, if present and easy to do, and continue rinsing. Immediately get medical assistance.

After swallowing:

Rinse mouth thoroughly. Do not induce vomiting. Have exposed individual drink sips of water. Seek medical attention if irritation, discomfort or vomiting persists.

Most important symptoms and effects, both acute and delayed:

Shortness of breath. Irritation. Nausea. Headache.

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

SECTION 5: Firefighting measures**Extinguishing media****Suitable extinguishing agents:**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water, dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam.

Unsuitable extinguishing agents: None

Special hazards arising from the substance or mixture:

Irritating and toxic gases may be generated by thermal decomposition and combustion.

Advice for firefighters:**Protective equipment:**

Wear protective eyewear, gloves, and clothing. Refer to Section 8.

Additional information (precautions):

Avoid contact with skin, eyes, and clothing.

SECTION 6: Accidental release measures**Personal precautions, protective equipment and emergency procedures:**

Normal ventilation is adequate.

Environmental precautions:

Prevent from reaching drains, sewer or waterway. Collect contaminated soil for characterization per Section 13.

Methods and material for containment and cleaning up:

Refer to Section 8. Wear protective eyewear, gloves, and clothing. Always obey local regulations. Dispose of empty containers as unused product. Refer to Section 13. Small amounts may be flushed with excess water to sewer. Absorb with suitable material and treat as normal refuse.

Reference to other sections: None

SECTION 7: Handling and storage**Precautions for safe handling:**

Wash hands after handling. Avoid contact with skin, eyes, and clothing. Do not eat, drink, smoke, or use personal products when handling chemical substances.

Conditions for safe storage, including any incompatibilities:

Keep container tightly closed in a cool, dry, well-ventilated area. Protect from freezing and physical damage.

Safety Data Sheet
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Effective date : 01.06.2015

Sodium Bicarbonate 0.1M

SECTION 8: Exposure controls/personal protection



Control parameters:	No applicable occupational exposure limits.
Appropriate engineering controls:	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Normal ventilation is adequate.
Respiratory protection:	Not required under normal conditions of use.
Protection of skin:	Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation.
Eye protection:	Safety glasses with side shields or goggles.
General hygienic measures:	Wash hands before breaks and immediately after handling the product. Perform routine housekeeping to prevent dust generation. Before wearing again wash contaminated clothing.

SECTION 9: Physical and chemical properties

Appearance (physical state, color):		Explosion limit lower:	Not determined
		Explosion limit upper:	Not determined
Odor:	Odorless	Vapor pressure at 20°C:	Not determined
Odor threshold:	Not determined	Vapor density:	Approx 1
pH-value:	Not determined	Relative density:	Not determined
Melting/Freezing point:	270C	Solubilities:	Soluble in Water
Boiling point/Boiling range:	Approx 100°C	Partition coefficient (n-octanol/water):	Not determined
Flash point (closed cup):	Not determined	Auto/Self-ignition temperature:	Not determined
Evaporation rate:	Not determined	Decomposition temperature:	Not determined
Flammability (solid, gaseous):	Not determined	Viscosity:	a. Kinematic: Not determined b. Dynamic: Not determined
Density at 20°C:	Not determined		

SECTION 10: Stability and reactivity

Reactivity:

None under normal processing.

Chemical stability:

Stable under normal conditions. Light sensitive.

Possible hazardous reactions:

Not Determined.

Conditions to avoid:

Incompatible Materials.

Incompatible materials:

Strong oxidizing agents. Strong reducing agents. Metal nitrates, lead, mercury, silver salts, acids, iodine,

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according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.06.2015

Sodium Bicarbonate 0.1M

sodium nitrate.

Hazardous decomposition products:

Borane oxides. Boron oxides. Sodium oxides. Sulphur oxides.

SECTION 11: Toxicological information

Acute Toxicity: No additional information.

Chronic Toxicity: No additional information.

Skin corrosion/irritation: No additional information.

Serious eye damage/irritation: No additional information.

Respiratory or skin sensitization: No additional information.

Carcinogenicity: No additional information.

Germ cell mutagenicity: No additional information.

Reproductive Toxicity: No additional information.

STOT-single and repeated exposure: No additional information.

Additional toxicological information: No additional information.

SECTION 12: Ecological information

Ecotoxicity:

Fish LC50 - Lepomis macrochirus (Bluegill) , 300 mg/l - 96 h.

Daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea), 265 mg/l - 48 h.

Persistence and degradability:

Readily biodegradable.

Bioaccumulative potential:

Not expected to bio accumulate.

Mobility in soil: No additional information.

Other adverse effects: No additional information.

SECTION 13: Disposal considerations

Waste disposal recommendations:

Dilute with water and flush to sewer. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.

SECTION 14: Transport information

US DOT

UN Number:

ADR, ADN, DOT, IMDG, IATA

Not Regulated

Limited Quantity Exception:

None

Bulk:

RQ (if applicable): None

Proper shipping Name: Not Regulated.

Hazard Class: None

Non Bulk:

RQ (if applicable): None

Proper shipping Name: Not Regulated.

Hazard Class: None

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Packing Group: Not Regulated.
Marine Pollutant (if applicable): No additional information.
Comments: None

Packing Group: Not Regulated.
Marine Pollutant (if applicable): No additional information.
Comments: None

SECTION 15: Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

None of the ingredients are listed.

SARA Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act) :

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

None of the ingredients are listed.

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Canada

Canadian Domestic Substances List (DSL) :

All ingredients are listed.

SECTION 16: Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

NFPA: 1-0-0

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according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.06.2015

Sodium Bicarbonate 0.1M

HMIS: 1-0-0

GHS Full Text Phrases: None

Abbreviations and Acronyms:

IMDG International Maritime Code for Dangerous Goods.
PNEC. Predicted No-Effect Concentration (REACH).
CFR Code of Federal Regulations (USA).
SARA Superfund Amendments and Reauthorization Act (USA).
RCRA. Resource Conservation and Recovery Act (USA).
TSCA. Toxic Substances Control Act (USA).
NPRI National Pollutant Release Inventory (Canada).
DOT US Department of Transportation.
IATA International Air Transport Association.
GHS Globally Harmonized System of Classification and Labelling of Chemicals.
ACGIH American Conference of Governmental Industrial Hygienists.
CAS Chemical Abstracts Service (division of the American Chemical Society).
NFPA National Fire Protection Association (USA).
HMIS Hazardous Materials Identification System (USA).
WHMIS Workplace Hazardous Materials Information System (Canada).
DNEL Derived No-Effect Level (REACH).

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.14.2014

Sodium Hydroxide,0.5N**SECTION 1: Identification of the substance/mixture and of the supplier****Product name:** Sodium Hydroxide,0.5N**Manufacturer/Supplier Trade name:****Manufacturer/Supplier Article number:** KEMSH6232-B**Recommended uses of the product and restrictions on use:****Manufacturer Details:**

AquaPhoenix Scientific, Inc.
9 Barnhart Drive
Hanover, PA 17331
1-717-632-1291

Supplier Details:

AquaPhoenix Scientific Inc.
9 Barnhart Drive, Hanover PA 17331
(717) 632-1291

Emergency telephone number:

ChemTel: (24-hour) (US and Canada)
1-(800)-255-3924

SECTION 2: Hazards identification**Classification of the substance or mixture:****Corrosive**

Serious eye damage, category 1
Corrosive to metals, category 1
Skin corrosion, category 1B

Skin Corr. 1B.

Eye corr. 1.

Metal Corr. 1.

Signal word: Danger**Hazard statements:**

May be corrosive to metals.
Causes severe skin burns and eye damage.
Causes serious eye damage.

Precautionary statements:

If medical advice is needed have product container or label at hand.
Keep out of reach of children.
Read label before use.
Keep only in original container.
Do not breathe dust/fume/gas/mist/vapours/spray.
Wash thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
Absorb spillage to prevent material damage.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do.
Continue rinsing.

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according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.14.2014

Sodium Hydroxide,0,5N

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
Wash contaminated clothing before reuse.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Immediately call a POISON CENTER or doctor/physician.
Store in a corrosive resistant container with a resistant inner liner.
Store locked up.
Dispose of contents/container.

Other Non-GHS Classification: None

SECTION 3: Composition/information on ingredients

Ingredients:

Ingredients:		
CAS 1310-73-2	Sodium Hydroxide	2 %
CAS 7732-18-5	Deionized Water	98 %
Percentages are by weight		

SECTION 4: First aid measures

Description of first aid measures**After inhalation:**

Move exposed individual to fresh air. Loosen clothing as necessary and position individual in a comfortable position. Seek medical advice if discomfort or irritation persists. If breathing difficult, give oxygen. Give artificial respiration if necessary.

After skin contact:

Take off contaminated clothing and shoes immediately. Wash affected area with soap and water. Seek medical attention if irritation, discomfort persist.

After eye contact:

Protect unexposed eye. Rinse/flush exposed eye(s) gently using water for 15-20 minutes. Remove contact lens(es) if able to do so during rinsing. Immediately get medical assistance.

After swallowing:

Rinse mouth thoroughly. Do not induce vomiting. Have exposed individual drink sips of water. Seek medical attention if irritation, discomfort or vomiting persists.

Most important symptoms and effects, both acute and delayed:

Irritation. Nausea. Headache. Shortness of breath.

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention, provide SDS document to physician.

SECTION 5: Firefighting measures

Extinguishing media**Suitable extinguishing agents:**

If in laboratory setting, follow laboratory fire suppression procedures. Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition.

Unsuitable extinguishing agents: None

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according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.14.2014

Sodium Hydroxide,0.5N

Special hazards arising from the substance or mixture:

Combustion products may include carbon oxides or other toxic vapors. Thermal decomposition can lead to release of irritating gases and vapors. Sodium oxides.

Advice for firefighters:

Protective equipment:

Use NIOSH-approved respiratory protection/breathing apparatus.

Additional information (precautions):

Move product containers away from fire or keep cool with water spray as a protective measure, where feasible.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Wear protective equipment. Transfer to a disposal or recovery container. Use respiratory protective device against the effects of fumes/dust/aerosol. Keep unprotected persons away. Ensure adequate ventilation. Keep away from ignition sources. Protect from heat.

Environmental precautions:

Prevent from reaching drains, sewer or waterway. Collect contaminated soil for characterization per Section 13.

Methods and material for containment and cleaning up:

If in a laboratory setting, follow Chemical Hygiene Plan procedures. Place into properly labeled containers for recovery or disposal. If necessary, use trained response staff/contractor. Collect liquid and dilute with water. Neutralize with dilute acid solutions. Decant water to drain with excess water. Absorb with suitable material. Dispose of remaining solid as normal refuse. Always obey local regulations.

Reference to other sections: None

SECTION 7: Handling and storage

Precautions for safe handling:

Absorb spillage to prevent material damage due to corrosiveness to metal. Avoid contact with eyes, skin, and clothing. Wash hands after handling. Do not mix with acids. Follow good hygiene procedures when handling chemical materials. Use only in well ventilated areas.

Conditions for safe storage, including any incompatibilities:

Protect from freezing and physical damage. Protect from freezing and physical damage. Provide ventilation for containers. Avoid storage near extreme heat, ignition sources or open flame. Store away from foodstuffs. Store away from oxidizing agents. Store in cool, dry conditions in well sealed containers. Store with Corrosives.

SECTION 8: Exposure controls/personal protection



Control parameters:

1310-73-2, Sodium Hydroxide, OSHA PEL TWA 2 mg/m3.
1310-73-2, Sodium Hydroxide, ACGIH TLV TWA 2 mg/m3.

Appropriate engineering controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use/handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or dusts (total/respirable) below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.14.2014

Sodium Hydroxide,0.5N

Respiratory protection:	Not required under normal conditions of use. Use suitable respiratory protective device when high concentrations are present. Use suitable respiratory protective device when aerosol or mist is formed. For spills, respiratory protection may be advisable.
Protection of skin:	The glove material has to be impermeable and resistant to the product/ the substance/ the preparation being used/handled. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.
Eye protection:	Safety glasses with side shields or goggles.
General hygienic measures:	The usual precautionary measures are to be adhered to when handling chemicals. Keep away from food, beverages and feed sources. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Do not inhale gases/fumes/dust/mist/vapor/aerosols. Avoid contact with the eyes and skin.

SECTION 9: Physical and chemical properties

Appearance (physical state, color):	Clear, colorless liquid	Explosion limit lower:	Non Explosive
		Explosion limit upper:	Non Explosive
Odor:	Odorless	Vapor pressure at 20°C:	14mmHg @ 20C
Odor threshold:	Not determined	Vapor density:	>1
pH-value:	Alkaline	Relative density:	Approx 1
Melting/Freezing point:	Approx 0°C	Solubilities:	Soluble in Water
Boiling point/Boiling range:	Approx 100°C	Partition coefficient (n-octanol/water):	Not determined
Flash point (closed cup):	Not determined	Auto/Self-ignition temperature:	Not determined
Evaporation rate:	Not determined	Decomposition temperature:	Not determined
Flammability (solid, gaseous):	Not determined	Viscosity:	a. Kinematic: Not determined b. Dynamic: Not determined
Density at 20°C:	Not determined		

SECTION 10: Stability and reactivity

Reactivity: None**Chemical stability:**

No decomposition if used and stored according to specifications.

Possible hazardous reactions: None**Conditions to avoid:**

Incompatible materials, excess heat.

Incompatible materials:

acids, Organic materials, Chlorinated solvents, Aluminum, Phosphorus, Tin/tin oxides, Zinc.

Hazardous decomposition products:sodium oxides, hydrogen. Carbon oxides (CO, CO₂).

SECTION 11: Toxicological information

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.14.2014

Sodium Hydroxide,0.5N

Acute Toxicity: None
Chronic Toxicity: No additional information.
Skin corrosion/irritation: No additional information.
Serious eye damage/irritation: No additional information.
Respiratory or skin sensitization: No additional information.
Carcinogenicity: No additional information.

Germ cell mutagenicity: No additional information.
Reproductive Toxicity: No additional information.
STOT-single and repeated exposure: No additional information.
Additional toxicological information: No additional information.

SECTION 12: Ecological information

Ecotoxicity:

Toxicity to aquatic life, Sodium hydroxide has high acute and chronic toxicity to aquatic life, influenced by hardness and alkalinity of the receiving water. Do not empty into drains.

Persistence and degradability:

Readily degradable in the environment.

Bioaccumulative potential:

Not expected to bio accumulate.

Mobility in soil: No additional information.

Other adverse effects: No additional information.

SECTION 13: Disposal considerations

Waste disposal recommendations:

Product/containers must not be disposed together with household garbage. Do not allow product to reach sewage system or open water. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Consult federal state/ provincial and local regulations regarding the proper disposal of waste material that may incorporate some amount of this product. Neutralize with dilute acid solutions.

SECTION 14: Transport information

US DOT

UN Number:

ADR, ADN, DOT, IMDG, IATA 1824

Limited Quantity Exception:

None

Bulk:

RQ (if applicable): None

Proper shipping Name: Sodium hydroxide solution.

Hazard Class: 8

Packing Group: II.

Marine Pollutant (if applicable): No additional information.

Non Bulk:

RQ (if applicable): None

Proper shipping Name: Sodium hydroxide solution.

Hazard Class: 8

Packing Group: II.

Marine Pollutant (if applicable): No additional information.

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.14.2014

Sodium Hydroxide,0.5N

Comments: None

Comments: None



SECTION 15: Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

None of the ingredients are listed.

SARA Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act) :

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

1310-73-2 Sodium Hydroxide 1000 lb.

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Canada

Canadian Domestic Substances List (DSL) :

All ingredients are listed.

SECTION 16: Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. **Note.** The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

NFPA: 3-0-0

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.14.2014

Sodium Hydroxide,0.5N

HMIS: 3-0-0

GHS Full Text Phrases: None

Abbreviations and Acronyms:

IMDG International Maritime Code for Dangerous Goods.
PNEC. Predicted No-Effect Concentration (REACH).
CFR Code of Federal Regulations (USA).
SARA Superfund Amendments and Reauthorization Act (USA).
RCRA. Resource Conservation and Recovery Act (USA).
TSCA. Toxic Substances Control Act (USA).
NPRI National Pollutant Release Inventory (Canada).
DOT US Department of Transportation.
IATA International Air Transport Association.
GHS Globally Harmonized System of Classification and Labelling of Chemicals.
ACGIH American Conference of Governmental Industrial Hygienists.
CAS Chemical Abstracts Service (division of the American Chemical Society).
NFPA National Fire Protection Association (USA).
HMIS Hazardous Materials Identification System (USA).
WHMIS Workplace Hazardous Materials Information System (Canada).
DNEL Derived No-Effect Level (REACH).

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.06.2015

Universal Indicator**SECTION 1: Identification of the substance/mixture and of the supplier****Product name:** Universal Indicator**Manufacturer/Supplier Trade name:****Manufacturer/Supplier Article number:** KEMUN1000-A**Recommended uses of the product and restrictions on use:****Manufacturer Details:**

AquaPhoenix Scientific, Inc.
9 Barnhart Drive
Hanover, PA 17331
1-717-632-1291

Supplier Details:

AquaPhoenix Scientific Inc.
9 Barnhart Drive, Hanover PA 17331
(717) 632-1291

Emergency telephone number:

ChemTel: (24-hour) (US and Canada)
1-(800)-255-3924

SECTION 2: Hazards identification**Classification of the substance or mixture:****Flammable**

Flammable solids, category 2

Flammable liq. 2.

Signal word: Danger**Hazard statements:**

Highly flammable liquid and vapour.

Precautionary statements:

If medical advice is needed have product container or label at hand.
Keep out of reach of children.
Read label before use.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/light/.../equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
In case of fire: Use ... for extinction.
Store in a well ventilated place. Keep cool.
Dispose of contents/container.

Other Non-GHS Classification: None

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.06.2015

Universal Indicator

SECTION 3: Composition/Information on ingredients

Ingredients:

Ingredients:		
CAS 64-17-5	Ethanol	47.34 %
CAS 34722-90-2	Bromothymol Blue, Sodium Salt	0.05 %
CAS 7732-18-5	Deionized Water	52.45 %
CAS 547-58-0	Methyl Orange	0.02 %
CAS 845-10-3	Methyl Red, Sodium Salt	0.015 %
CAS 518-51-4	Phenolphthalein, Disodium Salt	0.035 %
Percentages are by weight		

SECTION 4: First aid measures

Description of first aid measures**After inhalation:**

Move exposed individual to fresh air. Loosen clothing as necessary and position individual in a comfortable position. If breathing is difficult give oxygen. Immediately get medical assistance.

After skin contact:

Wash affected area with soap and water. Rinse/flush exposed skin gently using water for 15-20 minutes. Seek medical attention if irritation persists or if concerned.

After eye contact:

Protect unexposed eye. Remove contact lens(es) if able to do so during rinsing. Rinse or flush exposed eye gently using water for 15-20 minutes. Immediately get medical assistance.

After swallowing:

Rinse mouth thoroughly. Do not induce vomiting. Dilute mouth with water or milk after rinsing. Immediately get medical assistance.

Most important symptoms and effects, both acute and delayed:

Irritation. Nausea. Headache. Shortness of breath.

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention, provide SDS document to physician. Physician should treat symptomatically.

SECTION 5: Firefighting measures

Extinguishing media**Suitable extinguishing agents:**

Use water, dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam. Water spray can keep containers cool.

Unsuitable extinguishing agents: None

Special hazards arising from the substance or mixture:

Moderate explosion hazard. Dangerous fire hazard when exposed to heat, sparks, and open flames.

Advice for firefighters:

Protective equipment:

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.06.2015

Universal Indicator

Wear protective eyewear, gloves, and clothing. Refer to Section 8.

Additional information (precautions):

Ensure adequate ventilation. Avoid contact with skin, eyes, and clothing.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above. Ensure adequate ventilation.

Environmental precautions:

Prevent from reaching drains, sewer or waterway. Ethanol has a slight acute and chronic toxicity to aquatic life.

Methods and material for containment and cleaning up:

If necessary use trained response staff or contractor. Refer to Section 8. Wear protective eyewear, gloves, and clothing. Remove all sources of ignition. Contain spill. Absorb with suitable material and place in chemical waste container. Ventilate area of spill. Use non-sparking equipment. Dispose of empty containers as unused product. Refer to Section 13.

Reference to other sections: None

SECTION 7: Handling and storage

Precautions for safe handling:

Wear protective eyewear, gloves, and clothing. Do not eat, drink, smoke, or use personal products when handling chemical substances. Avoid contact with skin, eyes, and clothing. Empty containers can still be hazardous since they retain product residue. Refer to Section 8.

Conditions for safe storage, including any incompatibilities:

Store in a cool location. Store in a secure flammable storage area away from sources of ignition. Provide ventilation for containers. Avoid storage near extreme heat, ignition sources or open flame. Keep container tightly closed. Store with like hazards. Protect from freezing and physical damage.

SECTION 8: Exposure controls/personal protection



Control parameters:

64-17-5, Ethanol, Denatured , ACGIH TLV: 1880mg/m3.
64-17-5, Ethanol, Denatured , OSHA PEL: 1900mg/m3.

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use/handling. Ensure that dust-handling systems (exhaust ducts, dust collectors, vessels, and processing equipment) are designed to prevent the escape of dust into the work area.

Respiratory protection:

Not required under normal conditions of use. Use suitable respiratory protective device when high concentrations are present. If exposure limit is exceeded, a full-face respirator with organic cartridge may be worn.

Protection of skin:

Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation.

Eye protection:

Safety glasses with side shields or goggles.

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.06.2015

Universal Indicator

General hygienic measures:

Wash hands before breaks and at the end of work. Perform routine housekeeping to prevent dust generation. Before wearing wash contaminated clothing. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.

SECTION 9: Physical and chemical properties

Appearance (physical state, color):	Clear green liquid	Explosion limit lower:	3.3
		Explosion limit upper:	18.0
Odor:	Alcohol	Vapor pressure at 20°C:	48 mm Hg
Odor threshold:	Not determined	Vapor density:	1.5
pH-value:	Not determined	Relative density:	0.93
Melting/Freezing point:	Not determined	Solubilities:	Infinite solubility.
Boiling point/Boiling range:	80C	Partition coefficient (n-octanol/water):	Not determined
Flash point (closed cup):	15.5°C	Auto/Self-ignition temperature:	Not determined
Evaporation rate:	3.6	Decomposition temperature:	Not determined
Flammability (solid, gaseous):	Not determined	Viscosity:	a. Kinematic: Not determined b. Dynamic: Not determined
Density at 20°C:	Not determined		

SECTION 10: Stability and reactivity

Reactivity: None**Chemical stability:**

Stable under normal conditions.

Possible hazardous reactions:

Vapours may form explosive mixture with air.

Conditions to avoid:

Excessive heat. Incompatible materials. Ignition sources.

Incompatible materials:

Strong oxidizers, heat, sparks, open flames, platinum, sodium, bromine pentafluoride, potassium dioxide, acetyl bromide, and acetyl chloride.

Hazardous decomposition products:Carbon oxides (CO, CO₂). Acrid and irritating fumes.

SECTION 11: Toxicological information

Acute Toxicity:**Dermal:**

LD-50 15800 mg/kg (rabbit).

Chronic Toxicity: No additional information.**Skin corrosion/irritation:** No additional information.**Serious eye damage/irritation:** No additional information.**Respiratory or skin sensitization:** No additional information.

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.06.2015

Universal Indicator

Carcinogenicity: No additional information.

Germ cell mutagenicity: No additional information.

Reproductive Toxicity: No additional information.

STOT-single and repeated exposure: No additional information.

Additional toxicological information: No additional information.

SECTION 12: Ecological information

Ecotoxicity:

Aquatic Tox., Ethanol has a slight acute and chronic toxicity to aquatic life.

Persistence and degradability: No additional information.

Bioaccumulative potential: No additional information.

Mobility in soil:

Aqueous solution has high mobility in soil.

Other adverse effects: No additional information.

SECTION 13: Disposal considerations

Waste disposal recommendations:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Absorb with suitable absorbent material such as sand or earth and containerize for disposal. Ventilate area of leak or spill. Have fire extinguishing agent available in case of fire. Eliminate all sources of ignition. Use spark-proof tools and explosion-proof equipment. Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification.

SECTION 14: Transport information

US DOT

UN Number:

ADR, ADN, DOT, IMDG, IATA

UN1170

Limited Quantity Exception:

None

Bulk:

RQ (if applicable): None

Proper shipping Name: Ethanol.

Hazard Class: None

Packing Group: II.

Marine Pollutant (if applicable): No additional information.

Comments: None

Non Bulk:

RQ (if applicable): None

Proper shipping Name: Ethanol.

Hazard Class: None

Packing Group: II.

Marine Pollutant (if applicable): No additional information.

Comments: None

SECTION 15: Regulatory information

United States (USA)

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.06.2015

Universal Indicator

SARA Section 311/312 (Specific toxic chemical listings):

Acute,Chronic,Fire

SARA Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act) :

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

None of the ingredients are listed.

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

64-17-5 Ethanol.

Canada

Canadian Domestic Substances List (DSL) :

All ingredients are listed.

SECTION 16: Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

NFPA: 2-0-0

HMIS: 2-0-0

GHS Full Text Phrases: None

Abbreviations and Acronyms:

IMDG International Maritime Code for Dangerous Goods.

PNEC. Predicted No-Effect Concentration (REACH).

CFR Code of Federal Regulations (USA).

SARA Superfund Amendments and Reauthorization Act (USA).

Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.06.2015

Universal Indicator

RCRA. Resource Conservation and Recovery Act (USA).
TSCA. Toxic Substances Control Act (USA).
NPRI National Pollutant Release Inventory (Canada).
DOT US Department of Transportation.
IATA International Air Transport Association.
GHS Globally Harmonized System of Classification and Labelling of Chemicals.
ACGIH American Conference of Governmental Industrial Hygienists.
CAS Chemical Abstracts Service (division of the American Chemical Society).
NFPA National Fire Protection Association (USA).
HMIS Hazardous Materials Identification System (USA).
WHMIS Workplace Hazardous Materials Information System (Canada).
DNEL Derived No-Effect Level (REACH).