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

**Effective date** : 10.24.2014

**Total Alkalinity Indicator**

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

**Product name**: Total Alkalinity Indicator

**Manufacturer/Supplier Trade name**:

**Manufacturer/Supplier Article number**: AI6925-A

**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 #: 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 62625-32-5 | Bromcresol Green, Sodium Salt | 0.06 % |
| CAS 7732-18-5 | Deionized Water | >98 % |
| CAS 845-10-3 | Methyl Red, Sodium Salt, ACS | 0.04 % |
| | | Percentages are by weight |

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

**Effective date** : 10.24.2014

**Total Alkalinity Indicator**

## 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 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. Seek medical attention if irritation persists or if concerned. 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. Dilute with water or milk. Seek medical attention immediately.

### 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.

**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, 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. Do not mix with bases.

**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 and physical damage.

## SECTION 8: Exposure controls/personal protection

**Control parameters:**

**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:**<br>**Explosion limit upper:** | 0 Vol %<br>0 Vol % |
| **Odor:** | Odorless | **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:** | Approximately | **Relative density:** | 1 (Water = 1) |

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

**Effective date** : 10.24.2014

**Total Alkalinity Indicator**

| | | | |
|---|---|---|---|
| **Melting/Freezing point**: | 0 °C (32 °F) | **Solubilities**: | Infinite 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 |
| **Flammability (solid, gaseous)**: | Not applicable | **Viscosity**: | a. Kinematic: Not determined<br>b. Dynamic: 0.952 mPas at 20 °C (68 °F) |
| **Density at 20°C**: | 1 g/cm³ (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.

**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**:

**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.

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

**Effective date** : 10.24.2014

**Total Alkalinity Indicator**

## 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.

## 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.

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

**Effective date** : 10.24.2014

**Total Alkalinity Indicator**

**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**: 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** : 12.05.2014

**Alkalinity Titrant, Low**

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

**Product name**: Alkalinity Titrant, Low

**Manufacturer/Supplier Trade name**:

**Manufacturer/Supplier Article number**: KEMSA1555-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**
Corrosive to metals, category 1

**Irritant**
Eye irritation, category 2A
Skin irritation, category 2

Corrosive to metals. 1.
Eye. Irrit 2A.
Skin. Irrit 2.

**Signal word**: Warning

**Hazard statements:**

May be corrosive to metals.
Causes skin irritation.
Causes serious eye irritation.

**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.
Wash skin thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
IF ON SKIN: Wash with soap and water.

Specific treatment (see supplemental first aid instructions on this label).
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash before reuse.
If eye irritation persists get medical advice/attention.
Absorb spillage to prevent material damage.

**Other Non-GHS Classification**: None

## SECTION 3: Composition/information on ingredients

**Ingredients:**

| **Ingredients:** | | |
|---|---|---|
| CAS 7664-93-9 | Sulfuric Acid | <0.64 % |
| CAS 7732-18-5 | water, Purified | >99.36 % |
| | | 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. Provide oxygen if breathing is difficult. Seek medical attention if irritation persists or if concerned.

**After skin contact:**

Rinse/flush exposed area gently using water for at least 30 minutes. Seek immediate medical assistance. Continue rinsing while removing contaminated clothing and shoes.

**After eye contact:**

Protect unexposed eye. Remove contact lens(es) if able to do so during rinsing. Rinse/flush exposed eye(s) gently using water for at least 30 minutes. Seek immediate medical assistance. Rinse under the eyelids during flushing.

**After swallowing:**

Rinse mouth thoroughly. Do not induce vomiting. Have exposed individual drink sips of water. Do not induce vomiting. Seek immediate medical assistance.

### Most important symptoms and effects, both acute and delayed:

Irritation. Nausea. Headache. Shortness of breath. Burning of eyes or skin. Coughing. Strong inorganic acid mists containing sulfuric acid can cause cancer. Lung damage, chronic bronchitis. Damage to teeth and stomach.

### Indication of any immediate medical attention and special treatment needed:

If seeking medical attention, provide SDS document to physician. Use of soap may assist with neutralization on exposed skin in conjunction with flushing.

## 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

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

**Effective date** : 12.05.2014

**Alkalinity Titrant, Low**

**Special hazards arising from the substance or mixture:**

Combustion products may include carbon oxides or other toxic vapors.

**Advice for firefighters:**

**Protective equipment:**

Wear protective eyeware, gloves, and clothing. 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:**

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

**Methods and material for containment and cleaning up:**

Always obey local regulations. Soak up with inert absorbent material and dispose of as hazardous waste. Wear protective eyeware, gloves, and clothing. Refer to Section 8. Evacuate personnel to safe areas. Containerize for disposal. Refer to Section 13. Keep in suitable closed containers for disposal. If necessary, use trained response staff/contractor. Neutralize with lime or soda ash. Decant water to drain with excess water.

**Reference to other sections:** None

## SECTION 7: Handling and storage

**Precautions for safe handling:**

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

**Conditions for safe storage, including any incompatibilities:**

Protect from freezing. Keep container tightly closed. Provide ventilation for containers. Avoid storage near extreme heat, ignition sources or open flame. Store away from foodstuffs. Store in cool, dry conditions in well sealed containers. Do not store near incompatible materials (see Section 10).

## SECTION 8: Exposure controls/personal protection

| | |
|---|---|
| **Control parameters:** | 7664-93-9, Sulfuric Acid, ACS., OSHA PEL: 1mg/m3.<br>7664-93-9, Sulfuric Acid, ACS., ACGIH TLV: 1 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. 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. |

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

**Effective date** : 12.05.2014

**Alkalinity Titrant, Low**

| | |
|---|---|
| **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. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wear protective clothing. |
| **Eye protection:** | Face shield and tight fitting goggles are appropriate eye protection. Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). |
| **General hygienic measures:** | Avoid contact with the eyes and skin. Perform routine housekeeping. Wash hands before breaks and immediately after handling the product. Before re-wearing wash contaminated clothing. |

## SECTION 9: Physical and chemical properties

| | | | |
|---|---|---|---|
| **Appearance (physical state, color)**: | Clear, colorless liquid | **Explosion limit lower**:<br>**Explosion limit upper**: | Not determined<br>Not determined |
| **Odor**: | Odorless | **Vapor pressure at 20°C**: | Not determined |
| **Odor threshold**: | Not determined | **Vapor density**: | Not determined |
| **pH-value**: | <2 | **Relative density**: | Not determined |
| **Melting/Freezing point**: | Approximately 0 °C | **Solubilities**: | Soluble in water. |
| **Boiling point/Boiling range**: | Approximately 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<br>b. Dynamic: Not determined |
| **Density at 20°C**: | Not determined | | |

## SECTION 10: Stability and reactivity

**Reactivity:**

Reacts violently with water with evolution of heat. Corrosive to metals.

**Chemical stability:**

No decomposition if used and stored according to specifications.

**Possible hazardous reactions:**

None under normal processing.

**Conditions to avoid:**

Incompatible materials.

**Incompatible materials:**

Organics. Metals. Strong acids. Strong bases. Alcohols. Chlorine. halogenated compounds. Combustible materials. Chlorates. Alkalines. Carbides. Fulminates. Reducing agents. Nitrates. Acetic acid. Oxidizing agents.

**Hazardous decomposition products:**

Oxides of sulfur.

## SECTION 11: Toxicological information

**Acute Toxicity**: No additional information.
**Chronic Toxicity**: No additional information.
**Skin corrosion/irritation**:

Rabbit - Extremely corrosive and destructive to tissue. 7664-93-9.

**Serious eye damage/irritation**:

Rabbit - Corrosive to eyes. 7664-93-9.

**Respiratory or skin sensitization**: No additional information.
**Carcinogenicity**:

**Strong inorganic acid mists containing sulfuric acid.:** IARC Group 1

**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:**

7664-93-9, EC50 - Daphnia magna (Water flea) - 29 mg/l - 24 h.
7664-93-9, LC50 - Gambusia affinis (Mosquito fish) - 42 mg/l - 96 h.

**Persistence and degradability**:

Not applicable for test method.

**Bioaccumulative potential**:

Not expected to bio accumulate.

**Mobility in soil**:

Aqueous solution has high mobility in soil.

**Other adverse effects**:

Concentrated sulfuric acid has moderate acute and chronic toxicity to aquatic life, which is driven by the pH of the aquatic environment, as a result of the presence of the acid. Small quantities will be neutralized by natural alkalinity.

## 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 soda ash or calcium carbonate. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

## SECTION 14: Transport information

**US DOT**

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

**Effective date** : 12.05.2014

**Alkalinity Titrant, Low**

**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)**:

Acute,Chronic

**SARA Section 313 (Specific toxic chemical listings)**:

7664-93-9 Sulfuric acid.

**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)**:

7664-93-9 sulfuric acid 1000 lb.

### Proposition 65 (California):

**Chemicals known to cause cancer**:

7664-93-9 sulfuric acid.

**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

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

**Effective date** : 12.05.2014

**Alkalinity Titrant, Low**

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.
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** : 01.25.2015

**Hardness Titrant, High**

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

**Product name**: Hardness Titrant, High

**Manufacturer/Supplier Trade name**:

**Manufacturer/Supplier Article number**: ED2070-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 #: 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 | 94 % |
| CAS 6381-92-6 | Disodium EDTA, Dihydrate | 5 % |
| CAS 1310-73-2 | Sodium Hydroxide | 0.8 % |
| CAS 7791-18-6 | Magnesium Chloride, Hexahydrate | 0.1 % |
| | | Percentages are by weight |

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

**Effective date** : 01.25.2015

**Hardness Titrant, High**

## 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. Get medical assistance if cough or other symptoms appear.

**After skin contact:**

Wash hands and exposed skin with soap and plenty of water. Seek medical attention if irritation persists or if concerned.

**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. Never give anything by mouth to an unconscious person. Seek medical attention immediately.

**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 eyeware, gloves, and clothing. 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:**

Absorb with suitable material and treat as normal refuse. Small amounts may be flushed with excess water to sewer. Always obey local regulations.

**Methods and material for containment and cleaning up:**

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

**Reference to other sections:** None

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

**Effective date** : 01.25.2015

**Hardness Titrant, High**

## 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. 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:**

**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):** | Clear colorless liquid | **Explosion limit lower:**<br>**Explosion limit upper:** | Not determined<br>Not determined |
| **Odor:** | Odorless | **Vapor pressure at 20°C:** | Not determined |
| **Odor threshold:** | Not determined | **Vapor density:** | >1 |
| **pH-value:** | 8-10 | **Relative density:** | Not determined |
| **Melting/Freezing point:** | Approx 0°C | **Solubilities:** | Infinite solubility. |
| **Boiling point/Boiling range:** | Approx 100°C | **Partition coefficient (n-octanol/water):** | Not determined |

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

**Effective date** : 01.25.2015

**Hardness Titrant, High**

| | | | |
|---|---|---|---|
| **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<br>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:**

Strong oxidizing agents. Copper. Aluminum.

**Hazardous decomposition products:**

Carbon oxides. Nitrogen 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**:

**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**:

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

**Effective date** : 01.25.2015

**Hardness Titrant, High**

Dilute with water and flush to sewer. 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 — 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)**:

6381-92-6 EDTA Disodium Dihydrate 5000 lbs.
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**:

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

**Effective date** : 01.25.2015

**Hardness Titrant, High**

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.
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** : 02.09.2015

**Trace Hardness Buffer**

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

**Product name**: Trace Hardness Buffer

**Manufacturer/Supplier Trade name**:

**Manufacturer/Supplier Article number**: HA7407-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**:

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 102-71-6 | Triethanolamine | <30 % |
| CAS 7732-18-5 | Deionized Water | >70 % |
| | | Percentages are by weight |

## SECTION 4: First aid measures

**Description of first aid measures**

**After inhalation:**

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

**Effective date** : 02.09.2015

**Trace Hardness Buffer**

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:**

Headache. Nausea. Shortness of breath. Irritating to eyes. May cause skin and respiratory tract irritation. May cause and allergic skin reaction. May cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause adverse liver and kidney effects.

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

**Reference to other sections:** None

## SECTION 7: Handling and storage

**Precautions for safe handling:**

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

**Effective date** : 02.09.2015

**Trace Hardness Buffer**

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, dry, well-ventilated area. Keep under nitrogen. 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. Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy. Segregate from acids and acid forming substances. Suitable materials for containers: carbon steel (iron), Stainless steel 1.4401, Stainless steel 1.4301 (V2), High density polyethylene (HDPE), glass, Low density polyethylene (LDPE).

## SECTION 8: Exposure controls/personal protection

| | |
|---|---|
| **Control parameters:** | 102-71-6, Triethanolamine., ACGIH TLV-TWA: 5 mg/m3 TWA. |
| **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. No eating, drinking, smoking in the work area or when handling this material. |

## SECTION 9: Physical and chemical properties

| | | | |
|---|---|---|---|
| **Appearance (physical state, color):** | Light yellow liquid | **Explosion limit lower:**<br>**Explosion limit upper:** | 1.3 vol %<br>8.5 vol % |
| **Odor:** | Ammonia - like | **Vapor pressure at 20°C:** | <0.01 mmHg @ 20C |
| **Odor threshold:** | Not determined | **Vapor density:** | 5.14 (Air = 1.0) |
| **pH-value:** | 5.14 (Air = 1.0) | **Relative density:** | 1.125 |
| **Melting/Freezing point:** | 360°C / 680°F | **Solubilities:** | miscible with water at 25 °C |

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

**Effective date** : 02.09.2015

**Trace Hardness Buffer**

| | | | |
|---|---|---|---|
| **Boiling point/Boiling range**: | 360°C / 680°F | **Partition coefficient (n-octanol/water)**: | Not determined |
| **Flash point (closed cup)**: | 190°C / 374°F | **Auto/Self-ignition temperature**: | 324 °C |
| **Evaporation rate**: | Not determined | **Decomposition temperature**: | Not determined |
| **Flammability (solid, gaseous)**: | Combustible | **Viscosity**: | a. Kinematic: Not determined<br>b. Dynamic: 600 mPa.s @25C |
| **Density at 20°C**: | 1.124 g/cm3 at 20 °C | | |
| **Additional property:** | Hygroscopic | | |
| **Specific Gravity:** | 1.125 | | |

## 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. Air Exposure to moisture. Light.

**Incompatible materials:**

Acids, Oxidizing agents.

**Hazardous decomposition products:**

Carbon oxides, nitrogen oxides, nitrous gases. Hydrogen cyanide, formaldehyde.

## SECTION 11: Toxicological information

**Acute Toxicity**:

**Dermal**:

LD50 Dermal - Rabbit - > 22.5 g/kg 102 - 71 - 6.

**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**:

**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:**

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

**Effective date** : 02.09.2015

**Trace Hardness Buffer**

102 - 71 - 6, LC50 - Lepomis macrochirus (Bluegill) - 450 - 1,000 mg/l - 96 h.
102 - 71 - 6, EC50 - Daphnia (water flea) - 609.98 mg/l - 48 h.

**Persistence and degradability**:

102-71-6: Result : 96 % - Readily biodegradable.

**Bioaccumulative potential**:

<3.9 Bioconcentration Factor (BCF) method: OECD 305C (Triethanolamine 102-71-6).

**Mobility in soil**:

-2.53.

**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 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.

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

**Effective date** : 02.09.2015

**Trace Hardness Buffer**

**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**: 2-0-0
**HMIS**: 0-0-0
**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).

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

**Effective date** : 02.09.2015

**Trace Hardness Buffer**

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** : 01.27.2015

**Hardness Indicator Powder**

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

**Product name**: Hardness Indicator Powder

**Manufacturer/Supplier Trade name**:

**Manufacturer/Supplier Article number**: HA7475-H

**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**:

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS): Combustible dust.

**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 57-50-1 | Sucrose, ACS | 99.5 % |
| CAS 1787-61-7 | Eriochrome Black T | 0.5 % |
| | | 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. Seek medical advice if discomfort or irritation persists. Move exposed individual to fresh air.

**After skin contact:**

Wash affected area with soap and water. Seek medical attention if irritation persists or if concerned.

**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.

**After swallowing:**

Rinse mouth thoroughly. Do not induce vomiting. Have exposed individual drink sips of water. Seek medical attention immediately.

**Most important symptoms and effects, both acute and delayed:**

Nausea. Headache. Shortness of breath. Irritation.

**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:**

If in laboratory setting, follow laboratory fire suppression procedures. Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition. Use water, dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam.

**Unsuitable extinguishing agents:** None

**Special hazards arising from the substance or mixture:**

May form combustible dust concentrations in air.

**Advice for firefighters:**

**Protective equipment:**

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

**Additional information (precautions):**

Move product containers away from fire or keep cool with water spray as a protective measure, where feasible. Use spark-proof tools and explosion-proof equipment. Ensure adequate ventilation. Avoid contact with skin, eyes, and clothing.

## SECTION 6: Accidental release measures

**Personal precautions, protective equipment and emergency procedures:**

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:**

Always obey local regulations. Sweep up and containerize for disposal. Avoid generating dust. Always obey local regulations.

**Reference to other sections:** None

## SECTION 7: Handling and storage

**Precautions for safe handling:**

Minimize dust generation and accumulation. Do not eat, drink, smoke, or use personal products when handling chemical substances. Use only in well ventilated areas. Avoid contact with eyes, skin, and clothing.

**Conditions for safe storage, including any incompatibilities:**

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

## SECTION 8: Exposure controls/personal protection

| | |
|---|---|
| **Control parameters:** | 57-50-1, Sucrose, ACS, ACGIH: 10 mg/m3 TWA.<br>57-50-1, Sucrose, ACS, NIOSH: 10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable dust). |
| **Appropriate engineering controls:** | Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or 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. 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. Wear protective clothing. |
| **Eye protection:** | Safety glasses with side shields. |
| **General hygienic measures:** | Perform routine housekeeping to prevent dust generation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Before wearing wash contaminated clothing. Wear protective eyewear, gloves, and clothing. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin. |

## SECTION 9: Physical and chemical properties

| | | | |
|---|---|---|---|
| **Appearance (physical state, color)**: | Purplish colored powder | **Explosion limit lower**:<br>**Explosion limit upper**: | Not determined<br>Not determined |
| **Odor**: | Odorless | **Vapor pressure at 20°C**: | Not determined |
| **Odor threshold**: | Not determined | **Vapor density**: | Not determined |
| **pH-value**: | Not determined | **Relative density**: | Approx 2 |
| **Melting/Freezing point**: | Not determined | **Solubilities**: | 12 g/100mL |
| **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 |

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

**Effective date** : 01.27.2015

**Hardness Indicator Powder**

| | | | |
|---|---|---|---|
| **Flammability (solid, gaseous)**: | Not determined | **Viscosity**: | a. Kinematic: Not determined<br>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.

**Possible hazardous reactions:**

None under normal processing.

**Conditions to avoid:**

Incompatible materials.

**Incompatible materials:**

Strong oxidizers.

**Hazardous decomposition products:**

Acrid, irritating, and fumes. Carbon oxides. Sulfur oxides. Nitrogen oxides. Potassium oxides. hydrogen 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**:

**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**:

Not persistent.

**Bioaccumulative potential**:

Readily biodegradable.

**Mobility in soil**:

-3.67 log Pow (sucrose).

**Other adverse effects**: No additional information.

## SECTION 13: Disposal considerations

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

**Effective date** : 01.27.2015

**Hardness Indicator Powder**

**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). 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. Dispose of empty containers as unused product. Contact a licensed professional waste disposal service to dispose of this material.

## 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

## 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.

**NFPA**: 1-0-0
**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.
IMDG International Maritime Code for Dangerous Goods.
PNEC. Predicted No-Effect Concentration (REACH).
CFR Code of Federal Regulations (USA).
IATA International Air Transport Association.
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).
GHS Globally Harmonized System of Classification and Labelling of Chemicals.
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** : 01.27.2015

**Hardness Indicator Powder**

DNEL Derived No-Effect Level (REACH).
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,0.02N**

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

**Product name**: Sodium Hydroxide,0.02N

**Manufacturer/Supplier Trade name**:

**Manufacturer/Supplier Article number**: SH6168-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:**

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 1310-73-2 | Sodium Hydroxide | 0.08 % |
| CAS 7732-18-5 | Deionized Water | 99.92 % |
| | | 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** : 12.14.2014

**Sodium Hydroxide,0.02N**

**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:**

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. Prolonged or repeated skin contact may cause dermatitis.

**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. 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. Ensure adequate ventilation.

**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. 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:**

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

**Effective date** : 12.14.2014

**Sodium Hydroxide,0.02N**

Avoid contact with eyes, skin, and clothing. Wash hands after handling. Follow good hygiene procedures when handling chemical materials. Use only in well ventilated areas.

**Conditions for safe storage, including any incompatibilities:**

Provide ventilation for containers. Store away from foodstuffs. Store away from oxidizing agents. Store in cool, dry conditions in well sealed containers.

## 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.

**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. 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**:<br>**Explosion limit upper**: | Non Explosive<br>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<br>b. Dynamic: Not determined |

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

**Effective date** : 12.14.2014

**Sodium Hydroxide,0.02N**

| | |
|---|---|
| **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.

## SECTION 11: Toxicological information

**Acute Toxicity**:

**Dermal**:

Dermal LD50 Rabbit 1350 mg/kg 1310-73-2.

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

Rabbit: Causes Burns. 1310-73-2.

**Serious eye damage/irritation**:

Rabbit: Corrosive to eyes. 1310-73-2.

**Respiratory or skin sensitization**: No additional information.
**Carcinogenicity**:

**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 (acute 1310-73-2): , 96 Hr LC50 Oncorhynchus mykiss: 45.4 mg/L.

**Persistence and degradability**:

Readily degradable in the environment.

**Bioaccumulative potential**:

Not expected to bio accumulate.

**Mobility in soil**:

Aqueous solution is mobile in soil.

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

**Effective date** : 12.14.2014

**Sodium Hydroxide,0.02N**

**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 — 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 lb.

**Proposition 65 (California)**:

**Chemicals known to cause cancer**:

None of the ingredients are listed.

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

**Effective date** : 12.14.2014

**Sodium Hydroxide,0.02N**

**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.
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** : 09.16.2014

**Phenolphthalein Ind Soln,30mL**

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

**Product name**: Phenolphthalein Ind Soln,30mL

**Manufacturer/Supplier Trade name**:

**Manufacturer/Supplier Article number**: PH1605-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**

**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.

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

**Effective date** : 09.16.2014

**Phenolphthalein Ind Soln,30mL**

May cause drowsiness or dizziness.

**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 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:**

$CO_2$, 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. 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.

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

**Effective date** : 09.16.2014

**Phenolphthalein Ind Soln,30mL**

**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.

**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**:<br>**Explosion limit upper**: | Product does not present Explosion hazard<br>Not determined |
| **Odor**: | Mild alcohol | **Vapor pressure at 20°C**: | 33mmHg @ 20C |
| **Odor threshold**: | Not determined | **Vapor density**: | 2.1 |
| **pH-value**: | 8.1 - 8.3 | **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<br>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

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

**Effective date** : 09.16.2014

**Phenolphthalein Ind Soln,30mL**

**Acute Toxicity**:

**ATE:** 50ppm.

**Oral**:

LD50 rat: 5840 mg/kg (Isopropanol).

**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**:

**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.

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

**Effective date** : 09.16.2014

**Phenolphthalein Ind Soln,30mL**

## 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. 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)**:

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

**Effective date** : 09.16.2014

**Phenolphthalein Ind Soln,30mL**

**Chemicals known to cause cancer**:

77-09-8 Phenolphthalein.

**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**:

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

**Effective date** : 09.16.2014

**Phenolphthalein Ind Soln,30mL**

IMDG International Maritime Code for Dangerous Goods.
DNEL Derived No-Effect Level (REACH).
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** : 12.05.2014

**Reagent C**

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

**Product name**: Reagent C

**Manufacturer/Supplier Trade name**:

**Manufacturer/Supplier Article number**: MB3765-AA

**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**:

**Health hazard**
Carcinogenicity, category 1A

**Corrosive**
Skin corrosion, category 1A
Serious eye damage, category 1
Corrosive to metals, category 1

Acute hazards to the aquatic environment, category 3
Skin Corrosion 1A.
Carcinogenic 1 (Strong inorganic acid mists/aerosols containing sulfuric acid).
Corrosive to metals. 1.
Eye corrosion 1.
Acute aquatic toxicity 3.

**Signal word**: Danger

**Hazard statements:**

May be corrosive to metals.
May cause cancer.
Causes severe skin burns and eye damage.
Causes serious eye damage.
Harmful to aquatic life.

**Precautionary statements:**

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

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

**Effective date** : 12.05.2014

**Reagent C**

Do not handle until all safety precautions have been read and understood.
Use personal protective equipment as required.
Wear protective gloves/protective clothing/eye protection/face protection.
Wash thoroughly after handling.
Do not breathe dust/fume/gas/mist/vapours/spray.
Keep only in original container.
Avoid release to the environment.
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.
Wash contaminated clothing before reuse.
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).
IF exposed or concerned: Get medical advice/attention.
Absorb spillage to prevent material damage.
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 7664-93-9 | Sulfuric Acid | 92 % |
| CAS 7732-18-5 | Deionized Water | 7.9 % |
| CAS 7220-79-3 | Methylene Blue | 0.1 % |
| | | 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. Provide oxygen if breathing is difficult. Seek immediate medical advice.

**After skin contact:**

Rinse thoroughly. Rinse/flush exposed area gently using water for at least 30 minutes. Seek immediate medical assistance. Remove contaminated clothing and discard. Neutralize the soaking solution with sodium hydroxide solution.

**After eye contact:**

Protect unexposed eye. Remove contact lens(es) if able to do so during rinsing. Rinse/flush exposed eye(s) gently using water for at least 30 minutes. Seek immediate medical assistance. Rinse under the eyelids during flushing.

**After swallowing:**

Rinse mouth thoroughly. Do not induce vomiting. Have exposed individual drink sips of water. Do not induce vomiting. Seek immediate medical assistance.

**Most important symptoms and effects, both acute and delayed:**

Irritation. Nausea. Headache. Shortness of breath. Burning of eyes or skin. Coughing. Strong inorganic acid mists containing sulfuric acid can cause cancer. Lung damage, chronic bronchitis. Damage to teeth and stomach.

**Indication of any immediate medical attention and special treatment needed:**

If seeking medical attention, provide SDS document to physician. Use of soap may assist with neutralization on exposed skin in conjunction with flushing.

## 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. Use dry Chemical, foam, or carbon dioxide to extinguish fire.

**Unsuitable extinguishing agents:**

Do not use water directly on sulfuric acid.

**Special hazards arising from the substance or mixture:**

Combustion products may include carbon oxides or other toxic vapors. Poisonous sulfur oxides are combustion products. Aerosols or mist may be produced in a fire. Sulfuric acid may ignite combustibles.

**Advice for firefighters:**

**Protective equipment:**

Use respiratory protective device against the effects of fumes/dust/aerosol. Wear protective equipment for fire and chemical resistance.

**Additional information (precautions):**

Containers may explode.

## SECTION 6: Accidental release measures

**Personal precautions, protective equipment and emergency procedures:**

Wear protective equipment. Neutralize with lime or soda ash. 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. Always obey local regulations. Place into properly labeled containers for recovery or disposal. If necessary, use trained response staff/contractor. Do not use water. Neutralize with lime or soda ash. Add water to form slurry. Decant water to drain with excess water. Dispose of remaining solid as normal refuse.

**Reference to other sections:** None

## SECTION 7: Handling and storage

**Precautions for safe handling:**

Prevent formation of aerosols. Do not mix with bases. Wash hands after handling. Avoid contact with eyes, skin, and clothing. Follow good hygiene procedures when handling chemical materials. Do not eat, drink, smoke, or

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

**Effective date** : 12.05.2014



use personal products when handling chemical substances. Wear protective clothing and equipment. Do not handle with incompatibles (see Section 10). Avoid ingestion and inhalation.

**Conditions for safe storage, including any incompatibilities:**

Protect from freezing. Keep container tightly closed. 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. Do not store near incompatible materials (see Section 10). Store away from reducing agents.

## SECTION 8: Exposure controls/personal protection

**Control parameters:** 7664-93-9, Sulfuric Acid., OSHA PEL: 1mg/m3.
7664-93-9, Sulfuric Acid., ACGIH TLV: 0.2 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 mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above. Use under a fume hood. Ensure eye wash and safety showers are available.

**Respiratory protection:** 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. Use under a fume hood. Respirator with acid gas cartridges.

**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. Wear protective equipment to prevent contact with skin, eyes, or hair.

**Eye protection:** Safety glasses with side shields or goggles. Face shield.

**General hygienic measures:** Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.

## SECTION 9: Physical and chemical properties

| | | | |
|---|---|---|---|
| **Appearance (physical state, color)**: | Clear, colorless liquid | **Explosion limit lower**:<br>**Explosion limit upper**: | Not determined<br>Not determined |
| **Odor**: | Odorless | **Vapor pressure at 20°C**: | Not determined |
| **Odor threshold**: | Not determined | **Vapor density**: | Not determined |
| **pH-value**: | <3 | **Relative density**: | 1.04 - 1.06 |
| **Melting/Freezing point**: | Below 0 | **Solubilities**: | Soluble in water. |
| **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**: | Not determined | **Decomposition temperature**: | Not determined |

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

**Effective date** : 12.05.2014

| **Reagent C** | | | |
|---|---|---|---|
| **Flammability (solid, gaseous)**: | Not determined | **Viscosity**: | a. Kinematic: Not determined<br>b. Dynamic: Not determined |
| **Density at 20°C**: | Not determined | | |

## SECTION 10: Stability and reactivity

**Reactivity:**

None under normal processing.

**Chemical stability:**

No decomposition if used and stored according to specifications.

**Possible hazardous reactions:**

Reacts violently or explosively with incompatibles. Reacts with most metals to produce hydrogen gas, which may form explosive mixtures with air.

**Conditions to avoid:**

Store away from incompatible substances. excess heat.

**Incompatible materials:**

Organics. Metals. Strong acids. Strong bases. Alcohols. Chlorine. halogenated compounds. Combustible materials. Chlorates. Alkalines. Carbides. Fulminates. Reducing agents. Nitrates. Acetic acid. Oxidizing agents.

**Hazardous decomposition products:**

Oxides of sulfur. Carcinogenic mists/aerosols. Oxygen.

## SECTION 11: Toxicological information

**Acute Toxicity**: No additional information.
**Chronic Toxicity**: No additional information.
**Skin corrosion/irritation**:

Rabbit - Extremely corrosive and destructive to tissue. 7664-93-9.

**Serious eye damage/irritation**:

Rabbit - Corrosive to eyes. 7664-93-9.

**Respiratory or skin sensitization**: No additional information.
**Carcinogenicity**:

**Strong inorganic acid mists containing sulfuric acid.:** IARC Group 1

**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:**

7664-93-9, EC50 - Daphnia magna (Water flea) - 29 mg/l - 24 h.
7664-93-9, LC50 - Gambusia affinis (Mosquito fish) - 42 mg/l - 96 h.

**Persistence and degradability**:

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

**Effective date** : 12.05.2014

**Reagent C**

Not applicable for test method.

**Bioaccumulative potential**:

Not expected to bio accumulate.

**Mobility in soil**:

Aqueous solution has high mobility in soil.

**Other adverse effects**:

Concentrated sulfuric acid has moderate acute and chronic toxicity to aquatic life, which is driven by the pH of the aquatic environment, as a result of the presence of the acid. Small quantities will be neutralized by natural alkalinity.

## 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.

## SECTION 14: Transport information

**US DOT**

**UN Number:**
ADR, ADN, DOT, IMDG, IATA 1760

**Limited Quantity Exception:** None

**Bulk:**
**RQ (if applicable):** None
**Proper shipping Name:** Corrosive Liquid, Acidic, Inorganic, N.O.S., (Sulfuric Acid Solution).
**Hazard Class:** 8
**Packing Group:** II.
**Marine Pollutant (if applicable):** No additional information.
**Comments:** None

**Non Bulk:**
**RQ (if applicable):** None
**Proper shipping Name:** Corrosive Liquid, Acidic, Inorganic, N.O.S., (Sulfuric Acid Solution).
**Hazard Class:** 8
**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)**:

Reactive,Acute,Chronic

**SARA Section 313 (Specific toxic chemical listings)**:

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

**Effective date** : 12.05.2014

**Reagent C**

7664-93-9 Sulfuric acid.

**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)**:

7664-93-9 sulfuric acid 1000 lb.

**Proposition 65 (California)**:

**Chemicals known to cause cancer**:

7664-93-9 sulfuric acid.

**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
**HMIS**: 3-0-2
**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.

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

**Effective date** : 12.05.2014

**Reagent C**

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** : 02.19.2015

**Alkaline-Iodide Azide Reagent**

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

**Product name**: Alkaline-Iodide Azide Reagent

**Manufacturer/Supplier Trade name**:

**Manufacturer/Supplier Article number**: AI4205-AA

**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**
Skin corrosion, category 1A
Corrosive to metals, category 1
Serious eye damage, category 1

**Health hazard**
Specific target organ toxicity following repeated exposure, category 1

**Irritant**
Acute toxicity (oral, dermal, inhalation), category 4

STOT RE 1.
AcTox Oral 4.
Corrosive to Metals 1.
Skin corr. 1A.
Eye irrit. cat 1.

**Signal word**: Danger

**Hazard statements:**

May be corrosive to metals.
Causes severe skin burns and eye damage.
Causes serious eye damage.
Harmful if swallowed.
Causes damage to organs through prolonged or repeated exposure.

**Precautionary statements:**

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

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

**Effective date** : 02.19.2015

**Alkaline-Iodide Azide Reagent**

Read label before use.
Keep only in original container.
Wear protective gloves/protective clothing/eye protection/face protection.
Wash skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Do not breathe dust/fume/gas/mist/vapours/spray.
Wear protective gloves/protective clothing/eye protection/face protection.
Wash contaminated clothing before reuse.
Absorb spillage to prevent material damage.
Call a POISON CENTER or doctor/physician if you feel unwell.
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
IF ON SKIN: Wash with soap and water.
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.
Specific treatment (see supplemental first aid instructions on this label).
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
Immediately call a POISON CENTER or doctor/physician.
Store in a well ventilated place. Keep container tightly closed.
Store locked up.
Store in corrosive resistant stainless steel container with a resistant inner liner.
Dispose of contents and container as instructed in Section 13.

**Other Non-GHS Classification**: None

## SECTION 3: Composition/information on ingredients

**Ingredients:**

| **Ingredients:** | | |
|---|---|---|
| CAS 1310-73-2 | Sodium Hydroxide 50% w/w | 28.871 % |
| CAS 7732-18-5 | Water | 55 % |
| CAS 7681-11-0 | Potassium Iodide, ACS | 15 % |
| CAS 26628-22-8 | Sodium Azide, 99% | 1 % |
| | | 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:**

Seek medical attention immediately. Wash affected area with soap and water. Rinse thoroughly. Rinse or flush skin/hair gently with water for at least 30 minutes.

**After eye contact:**

Protect unexposed eye. Remove contact lens(es) if able to do so during rinsing. Seek immediate medical attention (ophthalmologist). Rinse or flush eye gently with water for at least 30 minutes, lifting upper and lower lids.

**After swallowing:**

Seek medical attention immediately. Rinse mouth thoroughly. Do not induce vomiting. Have exposed individual drink sips of water.

**Most important symptoms and effects, both acute and delayed:**

Headache. Shortness of breath. Irritation/burns, all routes of exposure. May cause severe burns, blindness and/or permanent damage. May cause burns, deep penetrating ulcerations of the skin, delayed tissue destruction, redness, pain. Nausea.

**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. If in laboratory setting, follow laboratory fire suppression procedures.

**Unsuitable extinguishing agents:** None

**Special hazards arising from the substance or mixture:**

Thermal decomposition can lead to release of irritating gases and vapors. Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Keep product and empty container away from heat and sources of ignition.

**Advice for firefighters:**

**Protective equipment:**

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

**Additional information (precautions):**

Avoid contact with skin, eyes, and clothing. Move product containers away from fire or keep cool with water spray as a protective measure, where feasible. Use spark-proof tools and explosion-proof equipment.

## SECTION 6: Accidental release measures

**Personal precautions, protective equipment and emergency procedures:**

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

**Environmental precautions:**

Prevent from reaching drains, sewer or waterway. Do not release into environment. Collect contaminated soil for characterization per Section 13.

**Methods and material for containment and cleaning up:**

Collect liquid and dilute with water. 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. Refer to Section 8. Refer to Section 13. Neutralize with dilute acid solutions. Absorb with suitable material. Dispose of remaining solid as normal refuse. Always obey local regulations. Wear protective eyeware, gloves, and clothing. Follow proper disposal methods. If in a laboratory setting, follow Chemical Hygiene Plan procedures.

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

**Effective date** : 02.19.2015

**Alkaline-Iodide Azide Reagent**

**Reference to other sections:** None

## SECTION 7: Handling and storage

**Precautions for safe handling:**

Avoid contact with eyes, skin, and clothing. Do not inhale gases, fumes, dust, mist, vapor, and aerosols. Wear protective eyeware, gloves, and clothing. Do not mix with acids. Do not eat, drink, smoke, or use personal products when handling chemical substances. Wash hands after handling. Follow good hygiene procedures when handling chemical materials. If in a laboratory setting, follow Chemical Hygiene Plan. Use only in well ventilated areas. Refer to Section 8.

**Conditions for safe storage, including any incompatibilities:**

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. Protect from freezing and physical damage. Store locked up. Store only in original container. Keep container tightly closed in a cool, dry, well-ventilated area. Store as a corrosive.

## SECTION 8: Exposure controls/personal protection



| | |
|---|---|
| **Control parameters:** | 26628-22-8, Sodium Azide, 99%., NIOSH REL: C 0.1 ppm (as HN3) skin C 0.3 mg/m3 (as NaN3) skin.<br>1310-73-2, Sodium Hydroxide, OSHA 2 mg/m3.<br>1310-73-2, Sodium Hydroxide, ACGIH NIOSH 10 mg/m3.<br>7681-11-0, Potassium Iodide, ACS, ACGIH NIOSH 0.01 mg/m3.<br>26628-22-8, Sodium Azide,99%,, ACGIH TLV: 0.29 mg/m$^3$ (0.11 ppm) (Ceiling value). |
| **Appropriate engineering controls:** | Use under a fume hood. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment. 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 or dusts (total/respirable) below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above. |
| **Respiratory protection:** | Use under a fume hood. 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:** | Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Wear protective clothing. 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. |

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

**Effective date** : 02.19.2015

**Alkaline-Iodide Azide Reagent**

**General hygienic measures:** Wash hands before breaks and immediately after handling the product. 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. Before wearing again wash contaminated clothing. Perform routine housekeeping. Wash hands and exposed skin with soap and plenty of water.

## SECTION 9: Physical and chemical properties

| | | | |
|---|---|---|---|
| **Appearance (physical state, color)**: | Clear, colorless liquid | **Explosion limit lower**:<br>**Explosion limit upper**: | Not determined<br>Not determined |
| **Odor**: | Odorless | **Vapor pressure at 20°C**: | Not determined |
| **Odor threshold**: | Not determined | **Vapor density**: | Not determined |
| **pH-value**: | >13 | **Relative density**: | Approx 1.55 |
| **Melting/Freezing point**: | Not determined | **Solubilities**: | Infinite 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<br>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. No decomposition if used and stored according to specifications.

**Possible hazardous reactions:** None

**Conditions to avoid:**

Incompatible materials. Excessive heat.

**Incompatible materials:**

Acids. Organic halogen compounds. Metals such as aluminum, tin, and zinc. Strong acids. Strong oxidizers.

**Hazardous decomposition products:**

Sodium oxides. Decomposition by reaction with certain metals releases flammable and explosive hydrogen gas. Carbon oxides (CO, CO2). Hydrogen iodide. Oxides of sodium. Decomposition by reaction with certain metals.

## SECTION 11: Toxicological information

**Acute Toxicity**:

**ATE (oral):** 435 mg/kg bw.

**Chronic Toxicity**: No additional information.

**Skin corrosion/irritation**:

Classified as causing severe skin burns and eye damage. Section 2.

**Serious eye damage/irritation**:

Classified as causing serious eye damage. Section 2.

**Respiratory or skin sensitization**: No additional information.
**Carcinogenicity**:

**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.
EC50 - Daphnia pulex (Water flea) , 4.2 mg/l - 48 h.

**Persistence and degradability**:

Readily degradable in the environment.

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

## SECTION 13: Disposal considerations

**Waste disposal recommendations**:

Consult federal state/ provincial and local regulations regarding the proper disposal of waste material that may incorporate some amount of this product. 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). Neutralize with dilute acid solutions. Comply with all local, state, and federal regulations. Product/containers must not be disposed together with household garbage.

## SECTION 14: Transport information

**US DOT**

**UN Number:**
ADR, ADN, DOT, IMDG, IATA 3266

**Limited Quantity Exception:** None

**Bulk:**
**RQ (if applicable):** None
**Proper shipping Name:** Corrosive Liquid, Basic, Inorganic, N.O.S., (Sodium Hydroxide

**Non Bulk:**
**RQ (if applicable):** None
**Proper shipping Name:** Corrosive Liquid, Basic, Inorganic, N.O.S., (Sodium Hydroxide

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

**Effective date** : 02.19.2015

**Alkaline-Iodide Azide Reagent**

Solution).
**Hazard Class:** 8
**Packing Group:** II.
**Marine Pollutant (if applicable):** No additional information.
**Comments:** None

Solution).
**Hazard Class:** 8
**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)**:

Reactive,Acute,Chronic

**SARA Section 313 (Specific toxic chemical listings)**:

1310-73-2 Sodium Hydroxide.

**RCRA (hazardous waste code)**:

None of the ingredients are listed.

**TSCA (Toxic Substances Control Act)** :

26628-22-8 Sodium Azide, 99% : not listed.

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

1310-73-2 Sodium Hydroxide 50% w/w 2000.
1310-73-2 Sodium Hydroxide 1000 lb.
Sodium Azide 1,000 lbs.

**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)** :

26628-22-8 Sodium Azide, 99%: not 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. 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. 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.

**NFPA**: 3-0-0
**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.
IMDG International Maritime Code for Dangerous Goods.
PNEC. Predicted No-Effect Concentration (REACH).
CFR Code of Federal Regulations (USA).
IATA International Air Transport Association.
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).
GHS Globally Harmonized System of Classification and Labelling of Chemicals.
HMIS Hazardous Materials Identification System (USA).
WHMIS Workplace Hazardous Materials Information System (Canada).
DNEL Derived No-Effect Level (REACH).
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** : 01.31.2015

**Reagent A**

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

**Product name**: Reagent A

**Manufacturer/Supplier Trade name**:

**Manufacturer/Supplier Article number**: MN5175-AA

**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**:

**Health hazard**
Specific target organ toxicity following repeated exposure, category 2

**Environmentally Damaging**
Chronic hazards to the aquatic environment, category 2

STOT RE 2.
Aquatic Acute 2.
Aquatic Chronic 2.

**Signal word**: Warning

**Hazard statements:**

May cause damage to organs through prolonged or repeated exposure.
Toxic to aquatic life with long lasting effects.

**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 breathe dust/fume/gas/mist/vapours/spray.
Avoid release to the environment.
Get Medical advice/attention if you feel unwell.
Collect spillage.
Dispose of contents and container to an approved waste disposal plant.

**Other Non-GHS Classification**: None

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

**Effective date** : 01.31.2015

**Reagent A**

## SECTION 3: Composition/information on ingredients

**Ingredients:**

| **Ingredients:** | | |
|---|---|---|
| CAS 10034-96-5 | Manganese Sulfate, Monohydrate | 36.4 % |
| CAS 7732-18-5 | Deionized Water | 63.6 % |
| | | Percentages are by weight |

## SECTION 4: First aid measures

### Description of first aid measures

**After inhalation:**

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

**After skin contact:**

Wash hands and exposed skin with soap and plenty of water. Seek medical attention if irritation persists or if concerned.

**After eye contact:**

Protect unexposed eye. Flush exposed eye gently using water for 15-20 minutes. Remove contact lenses, if present and easy to do, and continue rinsing. Seek medical attention if irritation persists or concerned.

**After swallowing:**

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

### Most important symptoms and effects, both acute and delayed:

Irritation. Shortness of breath. Headache. Nausea. Dizziness.

### 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 eyeware, gloves, and clothing. 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:

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

**Effective date** : 01.31.2015

**Reagent A**

Ensure adequate ventilation. Ensure that air-handling systems are operational. Avoid contact with eyes, skin, and clothing.

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

**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. 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 sealed. Store away from incompatible materials.

## SECTION 8: Exposure controls/personal protection



| | |
|---|---|
| **Control parameters:** | 10034-96-5, Manganese Sulfate Monohydrate, ACGIH TLV TWA 0.2 mg/m3.<br>10034-96-5, Manganese Sulfate Monohydrate, OSHA REL TWA 1 mg/m3. |
| **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:** | 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 immediately after handling the product. Avoid contact with skin, eyes, and clothing. Before re-wearing wash contaminated clothing. |

## SECTION 9: Physical and chemical properties

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

**Effective date** : 01.31.2015

**Reagent A**

| | | | |
|---|---|---|---|
| **Appearance (physical state, color)**: | Clear, pink liquid | **Explosion limit lower**:<br>**Explosion limit upper**: | Not determined<br>Not determined |
| **Odor**: | Odorless | **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**: | Approximately 0C | **Solubilities**: | Soluble in water. |
| **Boiling point/Boiling range**: | Approximately 100C | **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<br>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:**

Not determined.

**Hazardous decomposition products:**

Manganese/manganese oxides. Sulfur 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**:

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

May cause damage to organs through prolonged or repeated exposure.

**Additional toxicological information:**

No additional information.

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

**Effective date** : 01.31.2015

**Reagent A**

## SECTION 12: Ecological information

**Ecotoxicity:** No additional information.

**Persistence and degradability**:

No information Available.

**Bioaccumulative potential**:

No information Available.

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

**Other adverse effects**:

None identified.

## 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 together 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.

## 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)**:

Acute,Chronic

**SARA Section 313 (Specific toxic chemical listings)**:

10034-96-5 Manganese Sulfate Monohydrate.

**RCRA (hazardous waste code)**:

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

**Effective date** : 01.31.2015

**Reagent A**

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**: 2-0-0
**HMIS**: 2-0-0
**GHS Full Text Phrases**: None

**Abbreviations and Acronyms**: None

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

**Effective date** : 01.06.2015

**Sodium Thio,0.04N,30mL**

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

**Product name**: Sodium Thio,0.04N,30mL

**Manufacturer/Supplier Trade name**:

**Manufacturer/Supplier Article number**: ST2858-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 heath 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 1303-96-4 | Disodium tetraborate decahydrate | 0.01 % |
| CAS 10102-17-7 | Sodium thiosulfate pentahydrate | 1.004 % |
| CAS 7732-18-5 | Deionized Water | 98.986 % |
| | | 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** : 01.06.2015

**Sodium Thio,0.04N,30mL**

**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 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 eyeware, 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 eyeware, 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

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

**Effective date** : 01.06.2015

**Sodium Thio,0.04N,30mL**

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.

## SECTION 8: Exposure controls/personal protection

**Control parameters:**

**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)**: | Clear, colorless liquid | **Explosion limit lower**:<br>**Explosion limit upper**: | Non Explosive<br>Non Explosive |
| **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**: | 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<br>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.

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

**Effective date** : 01.06.2015

**Sodium Thio,0.04N,30mL**

**Conditions to avoid:**

Incompatible Materials.

**Incompatible materials:**

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

**Hazardous decomposition products:**

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

## SECTION 11: Toxicological information

**Acute Toxicity**:

**Dermal**:

LD50 Rabbit: 10,000 mg/kg 1303-96-4.

**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**:

**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 - Carassius auratus (goldfish) - 178 mg/l - 72 h, 1303-96-4.
Invertebrates EC50 - Daphnia magna (Water flea) - 1,085 - 1,402 mg/l - 48 h, 1303-96-4.
Algae IC50 - Desmodesmus subspicatus (green algae) - 158 mg/l - 96 h, 1303-96-4.

**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**

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

**Effective date** : 01.06.2015

**Sodium Thio,0.04N,30mL**

**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

## 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

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

**Effective date** : 01.06.2015

**Sodium Thio,0.04N,30mL**

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.
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).