

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

Effective date : 01.08.2015

**Hydrochloric Acid, 0.1N****SECTION 1: Identification of the substance/mixture and of the supplier**

**Product name:** Hydrochloric Acid, 0.1N  
**Manufacturer/Supplier Trade name:**  
**Manufacturer/Supplier Article number:** KEMHA6091-A  
**Recommended uses of the product and restrictions on use:** Laboratory chemicals  
**Manufacturer Details:**

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

**Supplier Details:**

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

**Emergency telephone number:**

Emergency Telephone No.: 800-255-3924

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

Corrosive to metals, category 1

Corrosive to metals 1.

**Signal word:** Warning**Hazard statements:**

May be corrosive to metals.

**Precautionary statements:**

Keep only in original container.  
Absorb spillage to prevent material damage.  
Store in corrosive resistant stainless steel container with a resistant inner liner.

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

Ingredients:		
CAS 7647-01-0	Hydrochloric Acid	0.98 %
CAS 7732-18-5	Water	99.02 %
Percentages are by weight		

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

**Effective date :** 01.08.2015

**Hydrochloric Acid, 0.1N**

**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.

**After skin contact:**

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

**After eye contact:**

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

**After swallowing:**

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

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

Inhalation may cause irritation to nose and upper respiratory tract, ulceration, coughing, chest tightness and shortness of breath. Higher concentrations cause tachypnoea, pulmonary oedema and suffocation. Ingestion may cause corrosion of lips, mouth, esophagus and stomach, dysphagia and vomiting. Pain, eye ulceration, conjunctival irritation, cataracts and glaucoma may occur following eye exposure. Erythema and skin irritation, as well as chemical burns to skin and mucous membranes may arise following skin exposure. Potential sequelae following ingestion of hydrochloric acid include perforation, scarring of the oesophagus or stomach and stricture formation causing dysphagia or gastric outlet obstruction. In some cases, RADS may develop. Respiratory symptoms may take up to 36 hours to develop.

**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. Hydrogen chloride gas.

**Advice for firefighters:**

**Protective equipment:** None

**Additional information (precautions):**

Thermal decomposition can produce poisoning chlorine. Hydrochloric acid reacts also with many organic materials with liberation of heat.

**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. Contain spilled material by diking or using inert absorbent. Transfer to a disposal or recovery container.

**Environmental precautions:**

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

**Effective date** : 01.08.2015

**Hydrochloric Acid, 0.1N**

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. Then flush area with water and neutralize washings with lime stone, slaked lime, soda ash or caustic. If permitted, flush neutralized washing to a waste treatment plant. Soak up with inert absorbent material. Dispose of all contaminants according to federal, state and local regulations. Keep in suitable, closed containers for disposal.

**Reference to other sections:** None

**SECTION 7: Handling and storage**

**Precautions for safe handling:**

Prevent formation of aerosols. If opening metal containers, use non-sparking tools because of the possibility of hydrogen gas being present. Wash hands after handling. Avoid contact with eyes, skin, and clothing. If in a laboratory setting, follow Chemical Hygiene Plan. Use only in well ventilated areas. Avoid splashes or spray in enclosed areas. Wear appropriate protective equipment. When handle hydrochloric acid avoid contact with metals and organic matters. Never use hot water and never add water to the acid!

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

Store in a cool location. Keep Protect from freezing and physical damage. Provide ventilation for containers. Avoid storage near extreme heat, ignition sources or open flame. Store away from foodstuffs. Store away from oxidizing agents. Store in cool, dry conditions in well sealed containers. Keep container tightly closed. Store with like hazards. Containers for hydrochloric acid must be made from corrosion resistant materials: glass, polyethylene, polypropylene, and polyvinyl chloride, carbon steel lined with rubber or ebonite.

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



**Control parameters:**

7647-01-0, Hydrochloric Acid, ACGIH: 2 ppm Ceiling.  
7647-01-0, Hydrochloric Acid, NIOSH: 5 ppm Ceiling; 7 mg/m<sup>3</sup> Ceiling.  
7647-01-0, Hydrochloric Acid, OSHA PEL TWA 7 mg/m<sup>3</sup>.

**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.

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

**Effective date :** 01.08.2015

**Hydrochloric Acid, 0.1N**

**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**

<b>Appearance (physical state, color):</b>	Clear, colorless liquid	<b>Explosion limit lower:</b>	Non Explosive
		<b>Explosion limit upper:</b>	Non Explosive
<b>Odor:</b>	Pungent odor	<b>Vapor pressure at 20°C:</b>	Not determined
<b>Odor threshold:</b>	Not determined	<b>Vapor density:</b>	Not determined
<b>pH-value:</b>	0.10 (1N)	<b>Relative density:</b>	Approx 1
<b>Melting/Freezing point:</b>	1.10 C	<b>Solubilities:</b>	Soluble in Water
<b>Boiling point/Boiling range:</b>	Not determined	<b>Partition coefficient (n-octanol/water):</b>	Not determined
<b>Flash point (closed cup):</b>	Not applicable	<b>Auto/Self-ignition temperature:</b>	Not determined
<b>Evaporation rate:</b>	Not determined	<b>Decomposition temperature:</b>	Not determined
<b>Flammability (solid, gaseous):</b>	Non combustible	<b>Viscosity:</b>	a. Kinematic: Not determined b. Dynamic: Not determined
<b>Density at 20°C:</b>	Not determined		
<b>Hydrochloric Acid</b>	MW is 36.46		

**SECTION 10: Stability and reactivity**

**Reactivity:**

Nonreactive under normal conditions.

**Chemical stability:**

No decomposition if used and stored according to specifications.

**Possible hazardous reactions:**

Nonreactive under normal conditions.

**Conditions to avoid:**

Excess heat, incompatible products.

**Incompatible materials:**

Metal oxides. formaldehydes. Strong bases. Most metals. Strong oxidizing agents. Reducing agents. Alkalis. cyanides. sulfides. sulfites.

**Hazardous decomposition products:**

Carbon oxides (CO, CO<sub>2</sub>). Fumes of hydrogen chloride and hydrogen in contact with metals. Oxides of carbon.

**SECTION 11: Toxicological information**

**Acute Toxicity:**

**Dermal:**

LD50 Rabbit: >5010 mg/kg Hydrochloric acid.

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

**Effective date** : 01.08.2015

**Hydrochloric Acid, 0.1N**

**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:**

**IARC::** Group 3: Not classifiable as to its carcinogenicity to humans (Hydrochloric acid)

**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 biodegradable.

**Bioaccumulative potential:**

Not expected to bio accumulate.

**Mobility in soil:**

Aqueous solution has high mobility in soil.

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

**SECTION 13: Disposal considerations**

**Waste disposal recommendations:**

Cover spill with soda ash or calcium carbonate. Mix and add water to form slurry. Decant to drain. Treat the solid residue as normal refuse. All chemical waste generators must determine whether a discarded chemical is classified as hazardous waste. Comply with all local, state, and federal regulations. 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

**Non Bulk:**

**RQ (if applicable):** None

**Proper shipping Name:** Not Regulated.

**Hazard Class:** None

**Packing Group:** Not Regulated.

**Marine Pollutant (if applicable):** No

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

**Effective date** : 01.08.2015

**Hydrochloric Acid, 0.1N**

additional information.

**Comments:** None

additional information.

**Comments:** None

**SECTION 15: Regulatory information**

**United States (USA)**

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

Acute

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

7647-01-0 Hydrochloric Acid.

7647-01-0 Hydrochloric acid – Weight: <2% Threshold: 1.0.

**RCRA (hazardous waste code):**

None of the ingredients are listed.

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

All ingredients are listed.

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

7647-01-0 Hydrochloric Acid 5000.

**Proposition 65 (California):**

**Chemicals known to cause cancer:**

None of the ingredients are listed.

**Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

**Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

**Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

**Canada**

**Canadian Domestic Substances List (DSL) :**

All ingredients are listed.

**SECTION 16: Other information**

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

**NFPA:** 1-0-0

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

**Effective date** : 01.08.2015

**Hydrochloric Acid, 0.1N**

**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 :** 03.20.2016

**Vermiculite**

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

**Product name:** Vermiculite  
**Manufacturer/Supplier Trade name:**  
**Manufacturer/Supplier Article number:** KEMVE-5010-2CUP  
**Recommended uses of the product and restrictions on use:**  
**Manufacturer Details:**

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

**Supplier Details:**

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

**Emergency telephone number:**

Emergency Telephone No.: 800-255-3924

**SECTION 2: Hazards identification**

**Classification of the substance or mixture:**

**Signal word:** None

**Hazard statements:**

None

**Precautionary statements:**

None

**Other Non-GHS Classification:**

Prolonged exposure to respirable crystalline silica (quartz) may cause a progressive, disabling lung disorder (silicosis).  
 Crystalline silica has been listed as a potential human carcinogen by the IARC and as a substance that can be reasonably anticipated to cause cancer in humans by the NTP.

**SECTION 3: Composition/information on ingredients**

**Ingredients:**

CAS / EINECS #	Ingredient Name	Wt. %
14808-60-7	Silica	1
1318-00-9	Vermiculite (Magnesium, Aluminum Iron Silicate)	>98

**SECTION 4: First aid measures**

**Description of first aid measures**

**After inhalation:**

Loosen clothing as necessary and position individual in a comfortable position. Maintain an unobstructed



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

**Effective date :** 03.20.2016

**Vermiculite**

airway.

**After skin contact:**

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

**After eye contact:**

Rinse/flush exposed eye(s) gently using water for 15-20 minutes. If symptoms develop or persist, seek medical attention.

**After swallowing:**

Rinse mouth thoroughly. Seek medical attention if irritation, discomfort, or vomiting persists.

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

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

**SECTION 5: Firefighting measures**

**Extinguishing media**

**Suitable extinguishing agents:**

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

**Unsuitable extinguishing agents:** None

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

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

**Advice for firefighters:**

**Protective equipment:**

Wear protective eye wear, gloves and clothing. Refer to Section 8.

**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 air handling systems are operational. Wear protective eye wear, gloves and clothing.

**Environmental precautions:**

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

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

Wear protective eye wear, gloves and clothing.

**Reference to other sections:** None

**SECTION 7: Handling and storage**

**Precautions for safe handling:**

Do not eat, drink, smoke or use personal products when handling chemical substances. Avoid breathing mist or vapor.

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

Store in a cool, well-ventilated area.

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

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

Effective date : 03.20.2016

**Vermiculite**



<b>Control parameters:</b>	14808-60-7, Quartz, Crystalline silica, ACGIH TLV TWA 0.025 mg/m <sup>3</sup> . 14808-60-7, Quartz, Crystalline silica, OSHA PEL TWA: 30 mg/m <sup>3</sup> / %SiO <sub>2</sub> +2.
<b>Appropriate engineering controls:</b>	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.
<b>Respiratory protection:</b>	When necessary, use NIOSH-approved breathing equipment.
<b>Protection of skin:</b>	Select glove material impermeable and resistant to the substance.
<b>Eye protection:</b>	Safety goggles or glasses, or appropriate eye protection.
<b>General hygienic measures:</b>	Wash hands before breaks and at the end of work. Avoid contact with skin, eyes and clothing.

**SECTION 9: Physical and chemical properties**

<b>Appearance (physical state, color):</b>	Tan flakes, granules or powder	<b>Explosion limit lower:</b>	Not determined
		<b>Explosion limit upper:</b>	Not determined
<b>Odor:</b>	Odorless	<b>Vapor pressure at 20°C:</b>	Not determined
<b>Odor threshold:</b>	Not determined	<b>Vapor density:</b>	Not determined
<b>pH-value:</b>	Not determined	<b>Relative density:</b>	0.66 - 0.96 g/cc
<b>Melting/Freezing point:</b>	Not determined	<b>Solubilities:</b>	<1% in water.
<b>Boiling point/Boiling range:</b>	Not determined	<b>Partition coefficient (n-octanol/water):</b>	Not determined
<b>Flash point (closed cup):</b>	Not determined	<b>Auto/Self-ignition temperature:</b>	Not determined
<b>Evaporation rate:</b>	Not determined	<b>Decomposition temperature:</b>	Not determined
<b>Flammability (solid, gaseous):</b>	Not determined	<b>Viscosity:</b>	a. Kinematic: Not determined b. Dynamic: Not determined
<b>Density at 20°C:</b>	Not determined		

**SECTION 10: Stability and reactivity**

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

**SECTION 11: Toxicological information**

**Acute Toxicity:** None  
**Chronic Toxicity:** No additional information.

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

**Effective date :** 03.20.2016

**Vermiculite**

**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:**

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

**SECTION 14: Transport information**

**US DOT**

**UN Number:**

ADR, ADN, DOT, IMDG, IATA

Not 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

**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

**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):**

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

**Effective date :** 03.20.2016

**Vermiculite**

None of the ingredients are listed.

**RCRA (hazardous waste code):**

None of the ingredients are listed.

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

1318-00-9 Vermiculite (Magnesium, Aluminum Iron Silicate) : listed.

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

None of the ingredients are listed.

**Proposition 65 (California):**

**Chemicals known to cause cancer:**

14808-60-7 Quartz, Crystalline silica.

**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:** None

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

**Effective date :** 12.14.2014

**Sodium Hydroxide, 0.1N**

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

**Product name:** Sodium Hydroxide, 0.1N

**Manufacturer/Supplier Trade name:**

**Manufacturer/Supplier Article number:** KEMSH6200-AA

**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**

Skin irritation, category 2  
Eye irritation, category 2A

Skin Irrit. 2.

Eye Irrit. 2A.

Metal Corr. 1.

**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 thoroughly after handling.

Wear protective gloves/protective clothing/eye protection/face protection.

Absorb spillage to prevent material damage.

IF ON SKIN: Wash with soap and water.

Specific treatment (see supplemental first aid instructions on this label).

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

**Effective date** : 12.14.2014

**Sodium Hydroxide, 0.1N**

If skin irritation occurs: Get medical advice/attention.  
Take off contaminated clothing and wash before reuse.  
If eye irritation persists get medical advice/attention.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do.  
Continue rinsing.  
Store in a corrosive resistant container with a resistant inner liner.

**Other Non-GHS Classification:** None

**SECTION 3: Composition/information on ingredients**

**Ingredients:**

Ingredients:		
CAS 1310-73-2	Sodium Hydroxide	0.4 %
CAS 7732-18-5	Deionized Water	99.6 %
Percentages are by weight		

**SECTION 4: First aid measures**

**Description of first aid measures**

**After inhalation:**

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

**After skin contact:**

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

**After eye contact:**

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

**After swallowing:**

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

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

Irritation. Nausea. Headache. Shortness of breath.

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

If seeking medical attention, provide SDS document to physician.

**SECTION 5: Firefighting measures**

**Extinguishing media**

**Suitable extinguishing agents:**

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

**Unsuitable extinguishing agents:** None

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

Combustion products may include carbon oxides or other toxic vapors. Thermal decomposition can lead to

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

**Effective date :** 12.14.2014

**Sodium Hydroxide, 0.1N**

release of irritating gases and vapors. Sodium oxides.

**Advice for firefighters:**

**Protective equipment:**

Use NIOSH-approved respiratory protection/breathing apparatus.

**Additional information (precautions):**

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

**SECTION 6: Accidental release measures**

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

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

**Environmental precautions:**

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

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

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

**Reference to other sections:** None

**SECTION 7: Handling and storage**

**Precautions for safe handling:**

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

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

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

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



**Control parameters:**

1310-73-2, Sodium Hydroxide, OSHA PEL TWA 2 mg/m<sup>3</sup>.  
1310-73-2, Sodium Hydroxide, ACGIH TLV TWA 2 mg/m<sup>3</sup>.

**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.

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

**Effective date :** 12.14.2014

**Sodium Hydroxide, 0.1N**

<b>Protection of skin:</b>	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.
<b>Eye protection:</b>	Safety glasses with side shields or goggles.
<b>General hygienic measures:</b>	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**

<b>Appearance (physical state, color):</b>	Clear, colorless liquid	<b>Explosion limit lower:</b> <b>Explosion limit upper:</b>	Non Explosive Non Explosive
<b>Odor:</b>	Odorless	<b>Vapor pressure at 20°C:</b>	14mmHg @ 20C
<b>Odor threshold:</b>	Not determined	<b>Vapor density:</b>	>1
<b>pH-value:</b>	>12	<b>Relative density:</b>	Approx 1
<b>Melting/Freezing point:</b>	Approx 0°C	<b>Solubilities:</b>	Soluble in Water
<b>Boiling point/Boiling range:</b>	Approx 100°C	<b>Partition coefficient (n-octanol/water):</b>	Not determined
<b>Flash point (closed cup):</b>	Not determined	<b>Auto/Self-ignition temperature:</b>	Not determined
<b>Evaporation rate:</b>	Not determined	<b>Decomposition temperature:</b>	Not determined
<b>Flammability (solid, gaseous):</b>	Not determined	<b>Viscosity:</b>	a. Kinematic: Not determined b. Dynamic: Not determined
<b>Density at 20°C:</b>	Not determined		

**SECTION 10: Stability and reactivity**

**Reactivity:**

Solution attacks metals such as aluminum, tin, lead and zinc. Also generates heat on exposure to acids.  
Aqueous solutions react violently with acids.

**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:**



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

**Effective date :** 12.14.2014

**Sodium Hydroxide, 0.1N**

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:** No additional information.

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

**SECTION 13: Disposal considerations**

**Waste disposal recommendations:**

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

**SECTION 14: Transport information**

**US DOT**

**UN Number:**

ADR, ADN, DOT, IMDG, IATA

Not Regulated.

**Limited Quantity Exception:**

None

**Bulk:**

**Non Bulk:**

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

**Effective date :** 12.14.2014

**Sodium Hydroxide, 0.1N**

**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

**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.

**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

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

**Effective date** : 12.14.2014

**Sodium Hydroxide, 0.1N**

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 :** 03.19.2016

**Space Salts**

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

**Product name:** Space Salts  
**Manufacturer/Supplier Trade name:**  
**Manufacturer/Supplier Article number:** KEMMG5276-AA  
**Recommended uses of the product and restrictions on use:**

**Manufacturer Details:**

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

**Supplier Details:**

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

**Emergency telephone number:**

Emergency Telephone No.: 800-255-3924

**SECTION 2: Hazards identification**

**Classification of the substance or mixture:**

**Signal word:** None

**Hazard statements:**

None

**Precautionary statements:**

None

**Other Non-GHS Classification:** None

**SECTION 3: Composition/information on ingredients**

**Ingredients:**

CAS / EINECS #	Ingredient Name	Wt. %
7778-77-0	Potassium Phosphate	7-13
7722-76-1	Ammonium Phosphate	7-13
57-13-6	Urea	3-7

**SECTION 4: First aid measures**

**Description of first aid measures**

**After inhalation:**

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

**After skin contact:**

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

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

**Effective date :** 03.19.2016

**Space Salts**

**After eye contact:**

Rinse/flush exposed eye(s) gently using water for 15-20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.

**After swallowing:**

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

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

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

**SECTION 5: Firefighting measures**

**Extinguishing media**

**Suitable extinguishing agents:**

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

**Unsuitable extinguishing agents:** None

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

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

**Advice for firefighters:**

**Protective equipment:**

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

**Additional information (precautions):**

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

**SECTION 6: Accidental release measures**

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

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

**Environmental precautions:**

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

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

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

**Reference to other sections:** None

**SECTION 7: Handling and storage**

**Precautions for safe handling:**

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

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

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

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

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

Effective date : 03.19.2016

**Space Salts**



<b>Control parameters:</b>	57-13-6, Urea, WEEL TWA 10.0 mg/m3.
<b>Appropriate engineering controls:</b>	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.
<b>Respiratory protection:</b>	When necessary, use NIOSH-approved breathing equipment.
<b>Protection of skin:</b>	Select glove material impermeable and resistant to the substance.
<b>Eye protection:</b>	Safety goggles or glasses, or appropriate eye protection.
<b>General hygienic measures:</b>	Wash hands before breaks and at the end of work. Avoid contact with skin, eyes and clothing. Perform routine housekeeping. Wash contaminated clothing before reusing.

**SECTION 9: Physical and chemical properties**

<b>Appearance (physical state, color):</b>	Green liquid	<b>Explosion limit lower:</b>	Not determined
		<b>Explosion limit upper:</b>	Not determined
<b>Odor:</b>	Ammoniacal	<b>Vapor pressure at 20°C:</b>	Not determined
<b>Odor threshold:</b>	Not determined	<b>Vapor density:</b>	Not determined
<b>pH-value:</b>	5.50 - 6.0	<b>Relative density:</b>	Not determined
<b>Melting/Freezing point:</b>	Not determined	<b>Solubilities:</b>	Completely soluble
<b>Boiling point/Boiling range:</b>	212° F	<b>Partition coefficient (n-octanol/water):</b>	Not determined
<b>Flash point (closed cup):</b>	Not determined	<b>Auto/Self-ignition temperature:</b>	Not determined
<b>Evaporation rate:</b>	Not determined	<b>Decomposition temperature:</b>	Not determined
<b>Flammability (solid, gaseous):</b>	Not determined	<b>Viscosity:</b>	a. Kinematic: Not determined b. Dynamic: Not determined
<b>Density at 20°C:</b>	1.1-1.5 g/cc		

**SECTION 10: Stability and reactivity**

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

**SECTION 11: Toxicological information**

**Acute Toxicity:**

**Oral:**

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

**Effective date** : 03.19.2016

**Space Salts**

Urea: LD50: Rat - 8,471 mg/kg.

**Chronic Toxicity:** No additional information.

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

**Serious eye damage/irritation:** No additional information.

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

**Carcinogenicity:**

**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:**

Urea: Fish, *Poecilia reticulata* (guppy) - 17,500 mg/l - 96 h.

Urea: Aquatic invertebrates, *Daphnia magna* (Water Flea) - 3,910 mg/l - 48 h.

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

**Bioaccumulative potential:** No additional information.

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

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

**SECTION 13: Disposal considerations**

**Waste disposal recommendations:**

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

**SECTION 14: Transport information**

**US DOT**

**UN Number:**

ADR, ADN, DOT, IMDG, IATA

Not 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

**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

**Comments:** None

**SECTION 15: Regulatory information**

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

**Effective date :** 03.19.2016

**Space Salts**

**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:** None