Hardness Buffer Solution

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

Product name: Hardness Buffer Solution

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: CLRHA7405-A

Recommended uses of the product and restrictions on use:

Manufacturer Details:

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

Supplier Details:

Clear Water Technologies, LLC
2220 Otay Lakes Road, #502-107, Chula Vista, CA 91915
(844) 429-8324

Emergency telephone number:

Clear Water Technologies, LLC
Emergency Telephone No.: 800-255-3924

SECTION 2: Hazards identification

Classification of the substance or mixture:

Corrosive
Skin corrosion, category 1B

Environmentally Damaging
Acute hazards to the aquatic environment, category 1

Irritant
Eye irritation, category 2A
Acute toxicity (oral, dermal, inhalation), category 4
Specific target organ toxicity following single exposure, category 3

Acute Tox. 4.
Eye Irrit. 2.
STOT SE 3.
AcAq Tox 1.
Skin Corr. 1B.

Signal word: Danger

Hazard statements:

Causes severe skin burns and eye damage.
May cause respiratory irritation.
Harmful if swallowed.
Causes serious eye irritation.
Very toxic 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.
Do not breathe dust/fume/gas/mist/vapours/spray.
Wash … thoroughly after handling.
Avoid release to the environment.
Use personal protective equipment as required.
Wear protective gloves/protective clothing/eye protection/face protection.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Rinse mouth.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
If eye irritation persists get medical advice/attention.
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
Immediately call a POISON CENTER or doctor/physician.
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.
Collect spillage.
Specific treatment (see supplemental first aid instructions on this label).
Wash contaminated clothing before reuse.
Store locked up.
Store in a dry place.
Store in a well ventilated place. Keep container tightly closed.
Dispose of contents/container to ….

Other Non-GHS Classification: None

SECTION 3: Composition/information on ingredients

Ingredients:		
CAS 1336-21-6	Ammonium Hydroxide, ACS	50.34 %
CAS 12125-02-9	Ammonium Chloride	6.76 %
CAS 29932-54-5	Disodium Magnesium EDTA	0.59 %
CAS 6381-92-6	Dihydrogen Magnesium EDTA	0.5 %
		Percentages are by weight

SECTION 4: First aid measures

Description of first aid measures

After inhalation:

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

After skin contact:

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

After eye contact:

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

After swallowing:

Rinse mouth thoroughly. Have exposed individual drink sips of water. Dilute mouth with water or milk after rinsing. Get medical assistance. 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:

Shortness of breath. Nausea. Headache. Irritation.

Indication of any immediate medical attention and special treatment needed:

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

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing agents:

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:

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

Advice for firefighters:

Protective equipment:

Wear protective eyeware, gloves, and clothing.

Additional information (precautions):

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

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation. When necessary use NIOSH approved breathing equipment.

Environmental precautions:

Prevent from reaching drains, sewer or waterway. Do not let product enter drains.

Methods and material for containment and cleaning up:

If necessary use trained response staff or contractor. If necessary use trained response staff or contractor. Wear protective eyeware, gloves, and clothing. Refer to Section 8. Clean up spills immediately observing precautions. Sweep up and containerize for disposal. Always obey local regulations. Dispose of empty containers as unused product. Refer to Section 13. Absorb with suitable material. Follow good hygiene procedures when handling chemical materials. Refer to Section 8. Wear protective eyeware, gloves, and clothing. Refer to Section 8. Always obey local regulations. For disposal instructions refer to Section 13. If necessary use trained response staff or contractor. Sweep up and shovel. Keep in suitable closed containers for disposal.

Reference to other sections: None

SECTION 7: Handling and storage

Precautions for safe handling:

Wash hands after handling. Use only in well ventilated areas. Avoid contact with eyes, skin, and clothing. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Do not eat, drink, smoke, or use personal products when handling chemical substances. Minimize dust generation and accumulation. Wash hands after handling. Wear protective eyeware, gloves, and clothing. Refer to Section 8. Do not eat, drink, smoke, or use personal products when handling chemical substances.

Conditions for safe storage, including any incompatibilities:

Store with like hazards. Store away from incompatible materials. Refer to Section 5. Protect from freezing and physical damage. Store in a cool location. Provide ventilation for containers. Store away from oxidizing agents. Keep container tightly sealed. Store in a cool location. Provide ventilation for containers. Keep container tightly sealed.

SECTION 8: Exposure controls/personal protection

Control Parameters:

1336-21-6, Ammonium Hydroxide, ACGIH TLV: 17 mg/m3.
1336-21-6 , Ammonium Hydroxide , OSHA PEL: 35 mg/m3.
1336-21-6, Ammonium Hydroxide, OSHA TWA 25 ppm (18 mg/m3) ST 35 ppm (27 mg/m3).
12125-02-9, Ammonium Chloride , ACGIH TLV: 10mg/m3.

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. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. 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 refer to Section 6. 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 or goggles.

General hygienic measures:

Wash hands before breaks and at the end of work. Keep away from food, beverages and feed sources. Immediately remove all soiled and contaminated clothing. 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 to prevent dust generation.

SECTION 9: Physical and chemical properties

Appearance (physical state, color):	Clear, colorless liquid.	**Explosion limit lower**: **Explosion limit upper**:	Not Determined Not Determined
Odor:	Ammonia-like	**Vapor pressure at 20°C**:	Not Determined

Odor threshold:	Not Determined	**Vapor density**:	Not Determined
pH-value:	Not Determined	**Relative density**:	Approx 1
Melting/Freezing point:	Not Determined	**Solubilities**:	Infinite solubility in water.
Boiling point/Boiling range:	Not Determined	**Partition coefficient (n-octanol/water)**:	Not Determined
Flash point (closed cup):	Not Determined	**Auto/Self-ignition temperature**:	Not Determined
Evaporation rate:	Not Determined	**Decomposition temperature**:	Not Determined
Flammability (solid, gaseous):	Not Determined	**Viscosity**:	a. Kinematic: Not Determined b. Dynamic: Not Determined
Density at 20°C:	Not Determined		

SECTION 10: Stability and reactivity

Reactivity:

None under normal processing.

Chemical stability:

Stable under normal conditions.

Possible hazardous reactions:

Reacts explosively with potassium chlorate or bromine trifluoride. Reacts violently with bromide pentafluoride, ammonium compounds, nitrates, and iodine heptafluoride. Hazardous decomposition products formed under fire conditions.

Conditions to avoid: None

Incompatible materials:

Strong acids. Strong bases. Silver salts. Strong oxidizers.

Hazardous decomposition products:

Ammonia. Hydrogen chloride. Magnesium oxide. Carbon oxides (CO, CO2). Nitrogen oxides (NOx), sodium oxides.

SECTION 11: Toxicological information

Acute Toxicity:

Oral:

LD50: 350 mg/kg (rat) Ammonium Hydroxide (1336-21-6)

LD50:1650 mg/kg (rat) Ammonium Chloride (12125-02-9)

LD50: 2000 mg/kg (rat) Disodium Anhydrous (6381-92-6)

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: See section 15.
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 persistant.

Bioaccumulative potential:

No information available. Not readily biodegradable.

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. 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. Do not allow product to reach sewage system or open water. Offer surplus and non-recyclable solutions to a licensed disposal company. Dispose of empty containers as unused product. 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 2672

Limited Quantity Exception: None

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

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

SECTION 15: Regulatory information

United States (USA)

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

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):

29932-54-5 Not Regulated.

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

1336-21-6 Ammonium Hydroxide 1000 lbs.
12125-02-9 Ammonium Chloride 5000 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):

12125-02-9 Not Regulated.
29932-54-5 Not Regulated.

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: 3-0-0
HMIS: 3-0-0
GHS Full Text Phrases: None

Abbreviations and Acronyms:

IMDG International Maritime Code for Dangerous Goods.
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).
IMDG International Maritime Code for Dangerous Goods.
PNEC Predicted No-Effect Concentration (REACH).

CFR Code of Federal Regulations (USA).
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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.
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