

# Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.13.2015

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## 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:** ANDHA7405-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:**

Anderson Chemical Company  
325 South David Avenue, Litchfield, MN 55355  
(320) 693-2477

**Emergency telephone number:**

Anderson Chemical Company 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

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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 ...

### Combustible Dust Hazard: :

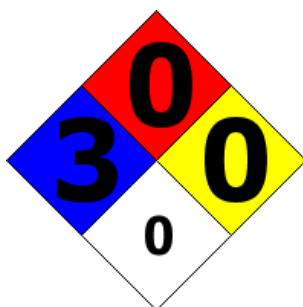
May form combustible dust concentrations in air (during processing).

### Other Non-GHS Classification:

#### WHMIS



#### NFPA/HMIS



NFPA SCALE (0-4)

Health	3
Flammability	0
Physical Hazard	0
Personal Protection	X

HMIS RATINGS (0-4)

## SECTION 3 : Composition/information on ingredients

Ingredients:		
CAS 1336-21-6	Ammonium Hydroxide, ACS	50.34 %
CAS 12125-02-9	Ammonium Chloride	6.76 %

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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.

**For safety reasons unsuitable extinguishing agents:**

#### 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 eyewear, 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:

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If necessary use trained response staff or contractor. If necessary use trained response staff or contractor. Wear protective eyewear, 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 eyewear, 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:

## 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 eyewear, 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/m<sup>3</sup>  
1336-21-6, Ammonium Hydroxide, OSHA PEL: 35 mg/m<sup>3</sup>  
1336-21-6, Ammonium Hydroxide, OSHA TWA 25 ppm (18 mg/m<sup>3</sup>) ST 35 ppm (27 mg/m<sup>3</sup>)  
12125-02-9, Ammonium Chloride, ACGIH TLV: 10mg/m<sup>3</sup>

### 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.

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**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

<b>Appearance (physical state,color):</b>	Clear, colorless liquid.	<b>Explosion limit lower: Explosion limit upper:</b>	Not Determined Not Determined
<b>Odor:</b>	Ammonia-like	<b>Vapor pressure:</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>	Approx 1
<b>Melting/Freezing point:</b>	Not Determined	<b>Solubilities:</b>	Infinite solubility 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:</b> 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 bromine pentafluoride, ammonium compounds, nitrates, and iodine heptafluoride. Hazardous decomposition products formed under fire conditions.

**Conditions to avoid:**

**Incompatible materials:** Strong acids. Strong bases. Silver salts. Strong oxidizers.

**Hazardous decomposition products:** Ammonia. Hydrogen chloride. Magnesium oxide. Carbon oxides (CO, CO<sub>2</sub>). Nitrogen oxides (NO<sub>x</sub>), sodium oxides.

### SECTION 11 : Toxicological information

<b>Acute Toxicity:</b>		
<b>Oral:</b>	LD50: 350 mg/kg (rat)	Ammonium Hydroxide (1336-21-6)
<b>Oral:</b>	LD50: 1650 mg/kg (rat)	Ammonium Chloride (12125-02-9)
<b>Oral:</b>	LD50: 2000 mg/kg (rat)	Disodium Anhydrous (6381-92-6)
<b>Chronic Toxicity:</b> No additional information.		

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<b>Corrosion Irritation:</b> No additional information.	
<b>Sensitization:</b>	No additional information.
<b>Single Target Organ (STOT):</b>	No additional information.
<b>Numerical Measures:</b>	No additional information.
<b>Carcinogenicity:</b>	No additional information.
<b>Mutagenicity:</b>	No additional information.
<b>Reproductive Toxicity:</b>	No additional information.

## SECTION 12 : Ecological information

**Ecotoxicity Persistence and degradability:** Not persistent.

**Bioaccumulative potential:** No information available. Not readily biodegradable.

**Mobility in soil:**

**Other adverse effects:**

## 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

### UN-Number

2672

### UN proper shipping name

Ammonia Solution,

### Transport hazard class(es)



**Class:**

8 Corrosive substances

**Packing group:** III

**Environmental hazard:**

**Transport in bulk:**

**Special precautions for user:**

## SECTION 15 : Regulatory information

### United States (USA)

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

None of the ingredients is listed

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

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None of the ingredients is listed

**RCRA (hazardous waste code):**

None of the ingredients is 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 is listed

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

None of the ingredients is listed

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

None of the ingredients is listed

**Chemicals known to cause developmental toxicity:**

None of the ingredients is listed

**Canada**

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

12125-02-9 Not Regulated.

29932-54-5 Not Regulated.

**Canadian NPRI Ingredient Disclosure list (limit 0.1%):**

None of the ingredients is listed

**Canadian NPRI Ingredient Disclosure list (limit 1%):**

None of the ingredients is 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.

**GHS Full Text Phrases:**

**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)

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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)  
PNEC: Predicted No-Effect Concentration (REACH)  
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)  
CFR: Code of Federal Regulations (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)  
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)  
SARA: Superfund Amendments and Reauthorization Act (USA)  
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)  
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

**Effective date** : 01.13.2015

**Last updated** : 06.02.2015