

Safety Data Sheet

acc. to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Printing date: March 01, 2019

Revision: February 28, 2019

1 Identification

- **Product identifier**
- **Trade name:** Ammonium Hydroxide/Chloride Buffer
- **Product code:** AH1200SS
- **Recommended use and restriction on use**
- **Recommended use:** Laboratory chemicals
- **Restrictions on use:** No relevant information available.
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
AquaPhoenix Scientific, Inc.
860 Gitts Run Road
Hanover, PA 17331
Phone: (717)632-1291
Toll-Free: (866)632-1291
info@aquaphoenixsci.com
- **Emergency telephone number:**
ChemTel Inc.
(800)255-3924 (North America)
+1 (813)248-0585 (International)

2 Hazard(s) identification

- **Classification of the substance or mixture**
Skin Corr. 1C H314 Causes severe skin burns and eye damage.
Eye Dam. 1 H318 Causes serious eye damage.
STOT SE 3 H335 May cause respiratory irritation.
- **Label elements**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms:**



GHS05 GHS07

- **Signal word:** Danger
- **Hazard statements:**
H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.
- **Precautionary statements:**
P260 Do not breathe mist/vapors/spray.
P264 Wash thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection.
P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 Immediately call a poison center/doctor.
 P363 Wash contaminated clothing before reuse.
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

• **Other hazards** There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

• **Chemical characterization: Mixtures**

• **Components:**

1336-21-6	Ammonia, aqueous solution  Skin Corr. 1B, H314; Eye Dam. 1, H318  STOT SE 3, H335	35.02%
12125-02-9	ammonium chloride  Acute Tox. 4, H302; Eye Irrit. 2A, H319	6.61%
7732-18-5	Water	58.37%

• **Additional information:**

For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret.

For the wording of the listed Hazard Statements, refer to section 16.

4 First-aid measures

• **Description of first aid measures**

• **After inhalation:** Supply fresh air; consult doctor in case of complaints.

• **After skin contact:**

Immediately rinse with water.

If skin irritation continues, consult a doctor.

Seek immediate help for blistering or open wounds.

• **After eye contact:**

Protect unharmed eye.

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. Then consult a doctor.

• **After swallowing:**

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; immediately call for medical help.

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

Coughing

Dizziness

Caustic effect on skin and mucous membranes.

Danger of severe eye injury.

May cause respiratory irritation.

Gastric or intestinal disorders when ingested.

• **Danger:**

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Danger of gastric perforation.

Causes serious eye damage.

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

Medical supervision for at least 48 hours.

If necessary oxygen respiration treatment.

If medical advice is needed, have product container or label at hand.

5 Fire-fighting measures

· Extinguishing media**· Suitable extinguishing agents:** Use fire fighting measures that suit the environment.**· For safety reasons unsuitable extinguishing agents:** No relevant information available.**· Special hazards arising from the substance or mixture**

During heating or in case of fire poisonous gases are produced.

· Advice for firefighters**· Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Isolate area and prevent access.

Ensure adequate ventilation.

Wear protective equipment. Keep unprotected persons away.

For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.

· Environmental precautions

Do not allow to enter sewers/ 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

Wipe up small spills with paper towel and discard.

For larger spills, add sawdust, chalk or other inert binding material, then sweep up and discard.

Send for recovery or disposal in suitable receptacles.

· 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.

7 Handling and storage

· Handling**· Precautions for safe handling:**

Use only in well ventilated areas.

Prevent formation of aerosols.

Avoid splashes or spray in enclosed areas.

· Information about protection against explosions and fires: No special measures required.

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- **Conditions for safe storage, including any incompatibilities**
- **Requirements to be met by storerooms and receptacles:**
Store only in the original receptacle.
Unsuitable material for receptacle: aluminium.
Unsuitable material for receptacle: steel.
- **Information about storage in one common storage facility:**
Store away from foodstuffs.
Do not store together with acids.
Store away from metals.
- **Specific end use(s)** No relevant information available.

8 Exposure controls/personal protection

· Control parameters

· Components with limit values that require monitoring at the workplace:

12125-02-9 ammonium chloride

REL (USA)	Short-term value: 20 mg/m ³ Long-term value: 10 mg/m ³
TLV (USA)	Short-term value: 20 mg/m ³ Long-term value: 10 mg/m ³
EL (Canada)	Short-term value: 20 mg/m ³ Long-term value: 10 mg/m ³ fume
EV (Canada)	Short-term value: 20 mg/m ³ Long-term value: 10 mg/m ³ fume
LMPE (Mexico)	Short-term value: 20 mg/m ³ Long-term value: 10 mg/m ³

· Exposure controls

· General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.

· Engineering controls:

Provide adequate ventilation.

· Breathing equipment:

Suitable respiratory protective device recommended.

· Protection of hands:



Protective gloves

· Material of gloves

Nitrile rubber, NBR
Neoprene gloves
Butyl rubber, BR

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Fluorocarbon rubber (Viton)

Natural rubber, NR

Sensibilization by the components in the glove materials is possible.

· **Not suitable are gloves made of the following materials:** PVA gloves

· **Eye protection:**



Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

· **Body protection:** Alkaline resistant protective clothing

· **Limitation and supervision of exposure into the environment**

No relevant information available.

9 Physical and chemical properties

· Information on basic physical and chemical properties

· Appearance:

Form:

Liquid

Color:

Colorless

· Odor:

Ammonia-like

· Odor threshold:

Not determined.

· pH-value at 20 °C (68 °F):

>11.0

· Melting point/Melting range:

Not determined.

· Boiling point/Boiling range:

>100 °C (>212 °F)

· Flash point:

The product is not flammable.

· Flammability (solid, gaseous):

Not applicable.

· Auto-ignition temperature:

Not determined.

· Decomposition temperature:

Not determined.

· Danger of explosion:

Product does not present an explosion hazard.

· Explosion limits

Lower:

Not determined.

Upper:

Not determined.

· Oxidizing properties:

Non-oxidizing.

· Vapor pressure:

Not determined.

· Density at 20 °C (68 °F):

1.02-1.04 g/cm³ (8.51-8.68 lbs/gal)

· Relative density:

Not determined.

· Vapor density:

Not determined.

· Evaporation rate:

Not determined.

· Solubility in / Miscibility with

Water:

Not miscible or difficult to mix.

· Partition coefficient (n-octanol/water): Not determined.

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- **Viscosity**
 - Dynamic:** Not determined.
 - Kinematic:** Not determined.
- **Other information** No relevant information available.

10 Stability and reactivity

- **Reactivity:** No relevant information available.
- **Chemical stability:** Stable under normal temperatures and pressures.
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions**
Strong exothermic reaction with acids.
Reacts with strong oxidizing agents.
Reacts with certain metals.
Hazardous gases may be released if heated above the decomposition point.
- **Conditions to avoid** No relevant information available.
- **Incompatible materials**
Acids.
Oxidizers
Metals.
- **Hazardous decomposition products**
Ammonia
Under fire conditions only:
Nitrogen oxides
Chlorine compounds

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:** Based on available data, the classification criteria are not met.

· LD/LC50 values that are relevant for classification:

12125-02-9 ammonium chloride

Oral LD50 1650 mg/kg (rat)

- **Primary irritant effect:**
- **On the skin:** Caustic effect on skin and mucous membranes.
- **On the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitization:** Based on available data, the classification criteria are not met.

· IARC (International Agency for Research on Cancer):

None of the ingredients are listed.

· NTP (National Toxicology Program):

None of the ingredients are listed.

· OSHA-Ca (Occupational Safety & Health Administration):

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None of the ingredients are listed.

· **Probable route(s) of exposure:**

Ingestion.
Inhalation.
Eye contact.
Skin contact.

· **Acute effects (acute toxicity, irritation and corrosivity):**

Causes severe skin burns and eye damage.
Irritating to respiratory system.

· **Repeated dose toxicity:** No relevant information available.

· **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.

· **Carcinogenicity:** Based on available data, the classification criteria are not met.

· **Reproductive toxicity:** Based on available data, the classification criteria are not met.

· **STOT-single exposure:** May cause respiratory irritation.

· **STOT-repeated exposure:** Based on available data, the classification criteria are not met.

· **Aspiration hazard:** Based on available data, the classification criteria are not met.

12 Ecological information

· **Toxicity**

· **Aquatic toxicity** Toxic for aquatic organisms

· **Persistence and degradability** No relevant information available.

· **Bioaccumulative potential:** No relevant information available.

· **Mobility in soil:** No relevant information available.

· **Ecotoxical effects:**

· **Remark:** Very toxic for fish

· **Additional ecological information**

· **General notes:**

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

Very toxic for aquatic organisms

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No relevant information available.

13 Disposal considerations

· **Uncleaned packagings**

· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **UN-Number**

· **DOT, ADR/RID/ADN, IMDG, IATA**

UN2672

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- **UN proper shipping name**

- **DOT**

- **ADR/RID/ADN**

Ammonia solution

AMMONIA SOLUTION, ENVIRONMENTALLY
HAZARDOUS

- **IMDG**

AMMONIA SOLUTION, MARINE POLLUTANT

- **IATA**

AMMONIA SOLUTION

- **Transport hazard class(es)**

- **DOT**



- **Class**

8

- **Label**

8

- **ADR/RID/ADN**



- **Class**

8 (C5)

- **Label**

8

- **IMDG**



- **Class**

8

- **Label**

8

- **IATA**



- **Class**

8

- **Label**

8

- **Packing group**

- **DOT, ADR/RID/ADN, IMDG, IATA**

III

- **Environmental hazards**

- **Marine pollutant:**

Symbol (fish and tree)

- **Special precautions for user**

Warning: Corrosive substances

- **Danger code (Kemler):**

80

- **EMS Number:**

F-A,S-B

- **Segregation groups**

Alkalis

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- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
- **Transport/Additional information:**
 - DOT
 - **Quantity limitations** On passenger aircraft/rail: 5 L
On cargo aircraft only: 60 L

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **United States (USA)**
- **SARA**

- **Section 302 (extremely hazardous substances):**

None of the ingredients are listed.

- **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

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

1336-21-6 Ammonia, aqueous solution

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

All ingredients are listed.

- **Proposition 65 (California)**

- **Chemicals known to cause cancer:**

None of the ingredients are listed.

- **Chemicals known to cause developmental toxicity for females:**

None of the ingredients are listed.

- **Chemicals known to cause developmental toxicity for males:**

None of the ingredients are listed.

- **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

- **EPA (Environmental Protection Agency):**

None of the ingredients are listed.

- **IARC (International Agency for Research on Cancer):**

None of the ingredients are listed.

- **Canadian Domestic Substances List (DSL) (Substances not listed.):**

All ingredients are listed.

16 Other information

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This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

• **Abbreviations and acronyms:**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bio-accumulable, Toxic

vPvB: very Persistent and very Bioaccumulative

OSHA: Occupational Safety & Health Administration

Acute Tox. 4: Acute toxicity – Category 4

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Skin Corr. 1C: Skin corrosion/irritation – Category 1C

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

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

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

• **Sources**

Website, European Chemicals Agency (echa.europa.eu)

Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/overview/home.do)

Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)

Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6

Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaassen, Curtis D., ed., ISBN: 978-0-07-176923-5.

Safety Data Sheets, Individual Manufacturers

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