

Ammonium hydroxide solution: sc-214535



The Power to Question

MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Identifiers

Product Name: Ammonium hydroxide solution
Product Number: sc-214535
Supplier: Santa Cruz Biotechnology, Inc.
2145 Delaware Avenue
Santa Cruz, CA 95060
800.457.3801 or 831.457.3800
Emergency: ChemWatch
Within the US & Canada: 877-715-9305
Outside of US & Canada: +800 2436 2255 (1-800-CHEMCALL) or call +613 9573 3112

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, Oral (Category 4), H302
Skin corrosion (Category 1A), H314
Serious eye damage (Category 1), H318
Acute aquatic toxicity (Category 1), H400
Chronic aquatic toxicity (Category 1), H410
For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.
P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
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 or doctor/ physician.
P321 Specific treatment (see supplemental first aid instructions on this label).
P363 Wash contaminated clothing before reuse.

P391 Collect spillage.
P405 Store locked up.
P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - Lachrymator

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Formula : H5NO
Molecular Weight : 35.05
CAS-No. : 1336-21-6

Hazardous components

| Component | | Classification | Concentration |
|---------------------------|--------------|--|---------------|
| Ammonium hydroxide | | | |
| CAS-No. | 1336-21-6 | Acute Tox. 4; Skin Corr. 1A; Eye Dam. 1; Aquatic Acute 1; Aquatic Chronic 1; H302, H314, H410 | 50 - 70 % |
| EC-No. | 215-647-6 | | |
| Index-No. | 007-001-01-2 | | |

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labeling (see section 2.2) and/or in section 11.

4.3 Indication of any immediate medical attention and special treatment needed

no data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Nitrogen oxides (NOx)

5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information

no data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store at room temperature.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

| | | | |
|-----------------------------|--------------------------|------------------------------|---------|
| Form | liquid | Odor | no data |
| Odor Threshold | no data | pH at 20 °C | 11.7 |
| Initial boiling point/range | 38 - 100 °C at 1,013 hPa | Melting/freezing point range | -60 °C |

| | | | |
|---------------------------|--------------------|---------------------------|---------|
| Flash point | no data | Evaporation rate | no data |
| Flammability (solid, gas) | no data | Upper explosive limit | 27% |
| Vapor pressure at 20 °C | 153 hPa | Lower explosive limit | 16% |
| Relative density at 25 °C | 0.9 g/mL | Water solubility | no data |
| Auto-ignition temperature | no data | Decomposition temperature | no data |
| Viscosity | no data | Explosive properties | no data |
| Oxidizing properties | no data | Partition coefficient: | no data |
| Vapor density | 1.21 - (Air = 1.0) | n-octanol/water | |

9.2 Other safety information

Relative vapour density 1.21 - (Air = 1.0)

10. STABILITY AND REACTIVITY

10.1 Reactivity

no data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

no data available

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

Copper, Iron, Zinc

10.6 Hazardous decomposition products

no data available. In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - rat - 350 mg/kg (Ammonium hydroxide)

Remarks: Gastrointestinal:Other changes. Liver:Other changes. Kidney, Ureter, Bladder:Other changes.

Inhalation: no data available

Dermal: no data available (Ammonium hydroxide)

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

Eyes - rabbit (Ammonium hydroxide)

Result: Severe eye irritation

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Additional Information

RTECS: Not available

Burning sensation, Cough, wheezing, laryngitis, Shortness of breath, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish

Mortality NOEC - *Oncorhynchus tshawytscha* - 3.5 mg/l - 3.0 d

Toxicity to daphnia and
other aquatic invertebrates

LC50 - *Daphnia magna* (Water flea) - 32 mg/l - 50 h

12.2 Persistence and degradability

no data available

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

UN number: 2672

Class: 8

Packing group: III

Proper shipping name: Ammonia solution

Reportable Quantity (RQ): 1621 lbs

Marine pollutant: No

Poison Inhalation Hazard: No

IMDG

UN number: 2672

Class: 8

Packing group: III

EMS-No: F-A, S-B

Proper shipping name: AMMONIA SOLUTION

Marine pollutant: No

IATA

UN number: 2672

Class: 8

Packing group: III

Proper shipping name: Ammonia solution

15. REGULATORY INFORMATION

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

Ammonium hydroxide

CAS-No. 1336-21-6

SARA 311/312 Hazards

Acute Health Hazard

Massachusetts Right To Know Components

Ammonium hydroxide

CAS-No. 1336-21-6

Pennsylvania Right To Know Components

Ammonium hydroxide

CAS-No. 1336-21-6

Water

CAS-No. 7732-18-5

New Jersey Right To Know Components

Ammonium hydroxide

CAS-No. 1336-21-6

Water

CAS-No. 7732-18-5

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION**Full text of H-Statements referred to under sections 2 and 3.**

| | |
|-----------------|--|
| Acute Tox. | Acute toxicity |
| Aquatic Acute | Acute aquatic toxicity |
| Aquatic Chronic | Chronic aquatic toxicity |
| Eye Dam. | Serious eye damage |
| H302 | Harmful if swallowed. |
| H314 | Causes severe skin burns and eye damage. |
| H318 | Causes serious eye damage. |

HMIS Rating

Health hazard: 3

Flammability: 0

Physical Hazard 0

NFPA Rating

Health hazard: 3

Fire Hazard: 0

Reactivity Hazard: 0

The above information is believed to be correct but does not purport to be complete and should be used only as a guide. The burden of safe use of this material rests entirely with the user.

9/2/2014