



SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

- ## **SECTION 2 - HAZARDS IDENTIFICATION**

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

2.2 GHS Label elements, including Hazard and Precautionary Statement(s) Pictogram



Signal word: Danger

Hazard statement(s)

Prevention, Response, Storage and Disposal Precautionary Statement(s)

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P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P312 + P330	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
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 + P310	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.
P305 + P351 + P338 + P310	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
P363	Wash contaminated clothing before reuse.
P391	Collect spillage.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

SECTION 3- COMPOSITION/INFORMATION ON INGREDIENTS

Composition 500 mM Ammonium Hydroxide, pH > 11.0. Prepared in 18.2 megohms-cm ± 1 water.

Component	CAS Number	Concentration (%)
Ammonium Hydroxide	1336-21-6	1.75%
Water	7732-18-5	rest

SECTION 4 - FIRST-AID MEASURES

4.1 Description of first aid measures

General advice: Consult a doctor and show this safety data sheet.

- i. **If inhaled:** Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor.
- ii. **In case of skin contact:** Immediately wash skin with copious amounts of soap and water for at least 15 minutes. Remove contaminated clothing and shoes and wash before reuse. Consult a doctor.
- iii. **In case of eye contact:** Flush with copious amounts of water for at least 15 minutes. Consult a doctor.
- iv. **If swallowed:** Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Consult a doctor.

4.2 Most important symptoms and effects, both acute and delayed: To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

4.3 Indication of immediate medical attention and special treatment needed: Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.



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SECTION 5 - FIRE FIGHTING 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: No Data Available.

5.3 Precautions for fire-fighters: Wear suitable protective clothing to prevent contact with skin and eyes and self-contained breathing apparatus.

5.4 Further information: No data available

SECTION 6 - ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures: Do not take action without suitable protective clothing - see section 8 of SDS. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing vapors, mist, dust or gas.

6.2 Environmental precautions: Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up: Cover spillage with suitable absorbent material. Using non-spark tools, sweep up material and place in an appropriate container. Decontaminate spill site with 10% caustic solution and ventilate area until after disposal is complete. Hold all material for appropriate disposal as described under section 13 of SDS.

6.4 Reference to other sections: For required PPE see section 8. For disposal see section 13.

SECTION 7 - HANDLING AND STORAGE

7.1 Precautions for safe handling: Use in a chemical fume hood, with air supplied by an independent system. Avoid inhalation, contact with eyes, skin and clothing. Avoid the formation of dust and aerosols. Use in a well-ventilated area. Keep away from sources of ignition. Avoid prolonged or repeated exposure.

7.2 Conditions for safe storage, including any incompatibilities: Store in cool, well-ventilated area. Keep away from direct sunlight. Keep container tightly sealed until ready for use. Keep in a dry place.

7.3 Specific end use(s): Use in a laboratory fume hood where possible

SECTION 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

- i. **Appropriate engineering controls:** Use in a fume hood where applicable. Ensure all engineering measures described under section 7 of SDS are in place. Ensure laboratory is equipped with a safety shower and eye wash station.

8.3 Personal protective equipment

- i. **Eye/face protection:** Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
- ii. **Skin protection:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166
- iii. **Body Protection:** Wear appropriate protective clothing. 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.

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- iv. **Respiratory Protection:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
- v. **Control of environmental exposure:** Do not let product enter drains

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Liquid	Vapor Pressure	No Data Available
Odor	No Data Available	Vapor Density	No Data Available
Odor Threshold	No Data Available	Relative Density	No Data Available
pH	>11.0	Water Solubility	No Data Available
Melting / Freezing Point	No Data Available	Partition Coefficient	No Data Available
Initial Boiling Point Range	No Data Available	Auto-Ignition Temperature	No Data Available
Flash Point	No Data Available	Decomposition Temperature	No Data Available
Evaporation Rate	No Data Available	Viscosity	No Data Available
Flammability (Solid, Gas)	No Data Available	Explosive Properties	No Data Available
Upper / Lower Flammability Or Explosive Limits	No Data Available	Oxidizing Properties	No Data Available

SECTION 10 - STABILITY AND REACTIVITY

Stability: Stable under recommended storage conditions.

Hazardous Decomposition Products/ Hazardous Polymerization: No Data Available.

Incompatibilities: Strong Oxidizing Agents.

SECTION 11 - TOXICOLOGICAL INFORMATION

Acute Toxicity:

LD50 Oral – Rat – 350 mg/kg (Ammonium Hydroxide)

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

Inhalation: No data available (Ammonium hydroxide)

Dermal: No data available (Ammonium hydroxide)

No data available (Ammonium hydroxide)

Skin Corrosion/irritation:

No data available (Ammonium hydroxide)

Serious eye damage/eye irritation:

No data available (Ammonium hydroxide)

Respiratory or skin sensitization:

No data available (Ammonium hydroxide)

Germ cell mutagenicity:

No data available (Ammonium hydroxide)



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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 on OSHA's list of regulated carcinogens.

Reproductive toxicity:

No data available (Ammonium hydroxide)

Specific target organ toxicity – single exposure:

No data available (Ammonium hydroxide)

Specific target organ toxicity – repeated exposure:

No data available.

Aspiration hazard:

No data available (Ammonium hydroxide)

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. (Ammonium hydroxide)

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity:

No data available

Toxicity to daphnia and other aquatic invertebrates	LC50 - Daphnia magna (Water flea) - 25.4 mg/l - 48 h (Ammonium hydroxide)
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Persistence and degradability/ Bioaccumulative potential/ Mobility in soil: No data available

Results of PBT and vPvB assessment:

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

Other adverse effects:

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Very toxic to aquatic life.

No data available

Chronic Toxicity: There are no known carcinogenic chemicals in this product

SECTION 13 - DISPOSAL CONSIDERATIONS

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.



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SECTION 14 - TRANSPORT INFORMATION

DOT	TDG	IATA	IMDG/IMO
UN Number: 2672 Proper Shipping Name: Ammonia solution Class: 8 Packing Group: III Reportable Quantity: 1621 lbs Marine pollutant: Yes Poison Inhalation hazard: No 	Not regulated	UN Number: 2672 Proper Shipping Name: Ammonia solution Class: 8 Packing Group: III 	Not regulated

SECTION 15 - REGULATORY INFORMATION

USA Federal Regulation

SARA 302 Components:

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 HAZARDOUS CATEGORIZATION:

Acute Health Hazard

Clean Water Act/ Clean Air Act: No Data Available

Clean Air Act: Not Applicable

TSCA 12(b)/ OSHA/ CERCLA: Not Applicable

California Proposition 65: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

STATE RIGHT TO KNOW

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Ammonium Hydroxide	Listed	Listed	Listed	-	-

HMIS Rating

Health hazard	Chronic Health Hazard	Flammability	Physical Hazard
3		0	0

NFPA Rating

Health Hazard	Fire Hazard	Reactivity Hazard



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3	0	0
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US DEPARTMENT OF TRANSPORTATION

REPORTABLE QUANTITY (RQ)	DOT MARINE POLLUTANT	DOT SEVER MARINE POLLUTANT
No	No	No

U.S. DEPARTMENT OF HOMELAND SECURITY: This product does not contain any DHS chemicals.

Canada: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR.

This SDS complies with the requirements of Regulation (EC).

SECTION 16 - OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Boston BioProducts, Inc shall not be held liable for any damage resulting from handling or from contact with the above product. This product is sold for laboratory research and development purposes use only.

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