

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name	Ammonium Hydroxide 50% Solution
CAS number	See section 3
Synonyms	N/A

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Laboratory Chemicals
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1.3 Details of the supplier of the safety data sheet

Company	Lab Alley, LLC 12501 Pauls Valley Road Austin, Texas 78737 U.S.A.
Telephone	512-668-9918
Fax	512-886-4008

1.4 Emergency telephone

Emergency Phone #	US & Canada: 1-800-535-5053	INFOTRAC
	International 1-352-323-3500	INFOTRAC

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Skin Corrosion / Irritation Category 1A
Eye Damage / Irritation Category 1
Specific Target Organs/Systemic Toxicity Following Single Exposure Category 2
Specific Target Organs/Systemic Toxicity Following Repeated Exposure Category 2
Corrosive to Metals Category 1
Hazardous to the Aquatic Environment (Acute) Category 2
Hazardous to the Aquatic Environment (Chronic) Category 2

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word

Danger

Hazard statements

H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H371 May cause damage to organs.
H373 May cause damage to organs through prolonged or repeated exposure.
H401 Toxic to aquatic life.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P234 Keep only in original container.
P260 Do not breathe fumes, mist, vapors, or spray.
P264 Wash arms, hands and face thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P280 Wear protective gloves and 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.
P304+P340 IF INHALED: Remove person to fresh air and keep 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.
P308+P311 IF exposed or concerned: Call a POISON CENTER or physician.
P310 Immediately call a POISON CENTER or physician.
P314 Get medical attention if you feel unwell.
P321 Specific treatment (Wash areas of contact with water).
P363 Wash contaminated clothing before reuse.
P390 Absorb spillage to prevent material damage.
P391 Collect spillage.
P405 Store locked up.
P406 Store in corrosive resistant container with a resistant inner liner.
P501 Dispose of contents in accordance with local, state, federal and international regulations.

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

None identified.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Water	-	7732-18-5	50%

Ammonium Hydroxide	-	1336-21-6	50%
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SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice	Show this sheet to a doctor if medical advice is needed.
If inhaled	Remove person to fresh air and keep comfortable for breathing.
In case of skin contact	Take off immediately all contaminated clothing. Rinse skin with water. May cause serious damage to the skin. Effects may include redness, pain, skin burns.
In case of eye contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. May cause severe irritation with possible permanent damage.
If swallowed	rinse mouth. Do NOT induce vomiting. Dilute with water or milk. Do not induce vomiting. Call a physician if necessary.

4.2 Most important symptoms and effects, both acute and delayed

Causes severe skin burns and eye damage. Causes serious eye damage. May cause damage to organs. May cause damage to organs through prolonged or repeated exposure. This item is corrosive. May be fatal if swallowed or inhaled. Mist and vapor cause burns to every area of contact. Use with adequate ventilation. Avoid contact with skin, eyes or clothing. Wash areas of contact with plenty of water immediately. For eyes, get medical attention. EYE CONTACT: May cause severe irritation with possible permanent damage. SKIN CONTACT: May cause serious damage to the skin. Effects may include redness, pain, skin burns.

4.3 Indication of any immediate medical attention and special treatment needed

Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water).

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media Use any means suitable for extinguishing surrounding fire. Use water spray to blanket fire, cool fire exposed containers, and to flush non-ignited spills or vapors away from fire.

Unsuitable extinguishing media None identified.

5.2 Specific hazards arising from the substance or mixture

Flammable vapors may accumulate in confined spaces.

5.3 Special protective equipment and precautions for firefighters

Wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

5.4 Further information

Flash Point Information not available.

Autoignition Temperature Information not available.

Explosion limits

Upper Information not available.

Lower Information not available.

Sensitivity to Mechanical Impact Information not available.

Sensitivity to Static Discharge Information not available.

NFPA

Health	Flammability	Instability	Physical hazards
2	0	0	N/A

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective gloves and eye protection.

6.2 Environmental precautions

Do not release into drains or ground/surface water.

6.3 Methods and materials for containment and cleaning up

Ventilate area of leak or spill. Cover spill with a 1:1:1 mixture by weight of Sodium Carbonate or Calcium Carbonate, clay and sand. Scoop mixture into a plastic container and, in the fume hood, add to a pail of cold water. Neutralize this mixture with 5% Hydrochloric Acid, let stand overnight, then pour the liquid into the drain while flushing with water. Dispose of any solid with normal refuse. Wash the area of the spill with plenty of water.

6.4 Reference to other sections

See section 8 for personal protective equipment and section 13 for proper disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Store in corrosive resistant container with a resistant inner liner. Store below 25°C. Empty containers may be hazardous since they retain product residues.

Incompatibilities

Strong oxidizers, acids, Calcium Hypochlorite bleaches, gold, mercury, silver, halogens.

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Component	Type	Value
Ammonia	TWA	25 ppm (ST) 35 ppm

US. ACGIH Threshold Limit Values

Component	Type	Value
Ammonia	TWA	25 ppm (ST) 35 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value
Ammonia	TWA	25 ppm (ST) 35 ppm

Biological occupational exposure limits

8.2 Exposure controls

Appropriate engineering controls

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limit.

Personal protective equipment

Eye/face protection

Wear protective gloves and eye protection. Safety glasses or goggles.

Skin protection

Wear protective gloves and eye protection. Chemical resistant gloves.

Body Protection

Wear proper protective work clothing.

Respiratory protection

If the TLV is exceeded, a half-mask organic vapor respirator may be worn for up to 10 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full facepiece organic vapor respirator may be worn for up to 50 times the exposure limit, or the maximum use concentration specified by the respirator supplier, whichever is lowest.

Control of environmental exposure

Do not release into the environment. Maintain a clean workspace.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Colorless
Odor	Data not available
Odor Threshold	Data not available
pH	> 11.5
Melting Point/Range	Approximately 0°C
Boiling Point/Range	Approximately 36°C
Evaporation Rate	Data not available
Flammability (solid)	Data not available
Flammability or explosive limit	
Upper	Data not available
Lower	Data not available
Vapor Pressure	Data not available
Vapor Density	Data not available
Density	0.95
Solubility	Miscible in water
Partition coefficient; n-octanol/water	Data not available
Autoignition Temp	Data not available
Decomposition Temp	Data not available
Viscosity	Data not available
Molecular Formula	Data not available
Molecular Weight	Data not available
VOC Content(%)	Data not available
Oxidizing properties	Data not available

9.2 Other safety information

No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under normal conditions of use and storage.

10.2 Chemical stability

Stable under normal conditions of use and storage.

10.3 Possibility of hazardous reactions

Data not available.

10.4 Conditions to avoid

Keep only in original container.

10.5 Incompatible materials

Strong oxidizers, acids, Calcium Hypochlorite bleaches, gold, mercury, silver, halogens.

10.6 Hazardous decomposition products

Will not occur.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ammonium hydroxide	Rat: 350 mg/kg Human: 43 mg/kg	-	Human: 5000 ppm

Skin corrosion/irritation

Causes severe skin burns and eye damage. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection.

Serious eye damage/eye irritation

Causes serious eye damage. Wear protective gloves and eye protection.

Respiratory or skin sensitization

No information available.

Germ cell mutagenicity

No information available.

Carcinogenicity

No information available.

Specific target organ toxicity - single exposure

May cause damage to organs. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product.

Specific target organ toxicity - repeated exposure

May cause damage to organs through prolonged or repeated exposure. Do not breathe fumes, mist, vapors, or spray. Get medical attention if you feel unwell.

Reproductive toxicity

No information available.

Chronic effects

No information available.

11.2 Additional Information

No information available.

SECTION 12: Ecological information**12.1 Toxicity**

Toxic to aquatic life. Avoid release to the environment. Dispose of contents in accordance with local, state, federal and international regulations. Toxic to aquatic life with long lasting effects. Avoid release to the environment. Collect spillage. Dispose of contents in accordance with local, state, federal and international regulations.

12.2 Persistence and degradability

No information available.

12.3 Bio accumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Endocrine disrupting properties

No information available.

12.7 Other adverse effects

No information available.

SECTION 13: Disposal considerations**13.1 Waste Disposal Methods**

Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste products or residues.

SECTION 14: Transport information**DOT (US)**

UN Number UN2672
Proper Shipping name AMMONIA SOLUTIONS
Hazard Class 8
Packaging Group III

IMDG

UN Number UN2672
Proper Shipping name AMMONIA SOLUTIONS
Hazard Class 8
Packaging Group III

IATA

UN Number UN2672
Proper Shipping name AMMONIA SOLUTIONS
Hazard Class 8
Packaging Group III

SECTION 15: Regulatory information

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Ammonia Hydroxide: 1,000 lb HS RQ.

SARA 304 Emergency release notification

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous

Ammonium Hydroxide (CAS # 1336-21-6): 1000 lb final RQ; 454 kg final RQ

SARA 313 (TRI reporting)

Ammonium Hydroxide (CAS # 1336-21-6): 1.0 % de minimis concentration (10% of total aqueous Ammonia is reportable under this listing)

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not listed.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not listed.

Safe Drinking Water Act
Ammonia Hydroxide: 1,000,000 lb HS RQ.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace
Not listed.

US state regulations

US. Massachusetts RTK - Substance List
Ammonium Hydroxide (CAS # 1336-21-6): Present.

US. New Jersey Worker and Community Right-to-Know Act
Ammonium Hydroxide (CAS # 1336-21-6): Present.

US. Pennsylvania Worker and Community Right-to-Know Law
Ammonium Hydroxide (CAS # 1336-21-6): Present.
Water (CAS # 7732-18-5): Present.

California Proposition 65
Not listed.

SECTION 16: Other information

Date of Issue: 6/6/2025

SECTION 17: Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.