

Safety Data Sheet

Ammonium Hydroxide 8M

CAROLINA[®]
www.carolina.com

Section 1 Product Description

Product Name: Ammonium Hydroxide 8M
Recommended Use: Science education applications
Synonyms: N/A
Distributor: Carolina Biological Supply Company
2700 York Road, Burlington, NC 27215
1-800-227-1150
Chemical Information: 800-227-1150 (8am-5pm (ET) M-F)
Chemtrec: 800-424-9300 (Transportation Spill Response 24 hours)

Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

DANGER



Harmful if swallowed. Causes serious eye damage. Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

GHS Classification:

Serious Eye Damage/Eye Irritation Category 1, Hazardous to the aquatic environment - Acute Category 1, Hazardous to the aquatic environment - Chronic Category 2, Acute Toxicity - Oral Category 4

Acute Toxicity Dermal Contains

15.5 % of the mixture consists of ingredient(s) of unknown toxicity

Section 3 Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
Water	7732-18-5	84.5
Ammonium Hydroxide	1336-21-6	15.5

Section 4 First Aid Measures

Emergency and First Aid Procedures

Inhalation: In case of accident by inhalation: remove casualty to fresh air and keep at rest.
Eyes: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Ingestion: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

Section 5 Firefighting Procedures

Extinguishing Media: Use dry chemical, CO2 or appropriate foam.
Fire Fighting Methods and Protection: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire and/or Explosion Hazards: Dangerous fire hazard; emits irritating fumes and liquid can inflict burns. Ammonia hydroxide is non-combustible and non explosive, but ammonia vapors released from solution can form an explosive mixture in air.
Hazardous Combustion Products: Nitrogen oxides

Section 6 Spill or Leak Procedures

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Steps to Take in Case Material Is Released or Spilled:

Exposure to the spilled material may be severely irritating or toxic. Follow personal protective equipment recommendations found in Section 8 of this SDS. Personal protective equipment needs must be evaluated based on information provided on this sheet and the special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred, and the expertise of employees in the area responding to the spill. Never exceed any occupational exposure limits. Wear a self-contained breathing apparatus and appropriate Personal protection. (See Section 8.) Ventilate the contaminated area. Persons not wearing appropriate protective equipment should be excluded from area of spill until clean-up has been completed.

Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation. Avoid creating dusts. Cover material with absorbent and moisten and collect for disposal. Collect spillage.

Section 7 Handling and Storage

Handling: Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. Avoid contact with skin and eyes. Do not breathe gas/fumes/vapor/spray.

Storage: Keep container tightly closed in a cool, well-ventilated place.

Storage Code: Green - general chemical storage

Section 8 Protection Information

<u>Chemical Name</u>	<u>ACGIH</u>	<u>OSHA PEL</u>		
	<u>(TWA)</u>	<u>(STEL)</u>	<u>(TWA)</u>	<u>(STEL)</u>
No data available	N/A	N/A	N/A	N/A

Control Parameters

Engineering Measures: No exposure limits exist for the constituents of this product. General room ventilation might be required to maintain operator comfort under normal conditions of use.

Personal Protective Equipment (PPE): Lab coat, apron, eye wash, safety shower.

Respiratory Protection: No respiratory protection required under normal conditions of use.

Eye Protection: Wear chemical splash goggles when handling this product. Have an eye wash station available.

Skin Protection: Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

Gloves: Butyl rubber, Impervious rubber, Natural latex,, Natural rubber, Nitrile - Extra Thick (8 mm)

Section 9 Physical Data

Formula: NH ₄ OH * H ₂ O	Vapor Pressure: Approx. 14 mmHg
Molecular Weight: 35.04 g/mol	Evaporation Rate (BuAc=1): > 1
Appearance: Colorless Liquid	Vapor Density (Air=1): 0.7
Odor: Strong Ammonia	Specific Gravity: Approx. 1.0
Odor Threshold: No data available	Solubility in Water: Soluble
pH: 11.7 at 20 °C	Log Pow (calculated): No data available
Melting Point: No data available 0 °C	Autoignition Temperature: No data available 651 °C
Boiling Point: 100 °C	Decomposition Temperature: No data available
Flash Point: No data available	Viscosity: No data available
Flammable Limits in Air: (NH ₃) LEL: 16% UEL: 27%	Percent Volatile by Volume: 100%

Section 10 Reactivity Data

Reactivity: No data available

Chemical Stability: Stable under normal conditions.

Conditions to Avoid: None known.

Incompatible Materials: Water-reactive materials, Copper, Iron Salts, Zinc

Hazardous Decomposition Products: Nitrogen oxides

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Hazardous Polymerization:

Will not occur

Section 11

Toxicity Data

Routes of Entry Inhalation.
Symptoms (Acute): Respiratory disorders
Delayed Effects: No data available

Acute Toxicity:

Chemical Name

CAS Number

Oral LD50

Dermal LD50

Inhalation LC50

Water

7732-18-5

Oral LD50 Rat

90000 mg/kg

Ammonium Hydroxide

1336-21-6

Oral LD50 Rat =

350 mg/kg

INHALATION
LC50 Mouse 4500
ppm
INHALATION
LC50 Rat 9500
ppm

Carcinogenicity:

Chemical Name

CAS Number

IARC

NTP

OSHA

No data available

Not listed

Not listed

Not listed

Chronic Effects:

Mutagenicity:

No evidence of a mutagenic effect.

Teratogenicity:

No evidence of a teratogenic effect (birth defect).

Sensitization:

No evidence of a sensitization effect.

Reproductive:

No evidence of negative reproductive effects.

Target Organ Effects:

Acute:

See Section 2

Chronic:

Mutation data cited., Not listed as a carcinogen by IARC, NTP or OSHA.

Section 12

Ecological Data

Overview: Severe ecological hazard. This product may be toxic to plants and/or wildlife. Keep out of waterways.

Mobility: No data

Persistence: No data

Bioaccumulation: No data

Degradability: No data

Other Adverse Effects: No data

Chemical Name

CAS Number

Eco Toxicity

Water

7732-18-5

No data available

Ammonium Hydroxide

1336-21-6

96 HR LC50 PIMEPHALES PROMELAS 8.2 MG/L

48 HR EC50 DAPHNIA PULEX 0.66 MG/L

48 HR EC50 WATER FLEA 0.66 MG/L

Section 13

Disposal Information

Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.

Waste Disposal Code(s): Not Determined

Section 14

Transport Information

Ground - DOT Proper Shipping Name:

UN2672, Ammonia Solutions, 8, III; Exception of 5 L limited quantity

Air - IATA Proper Shipping Name:

UN number: 2672 Class: 8 Packing group: III Proper shipping name: Ammonia solution

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Section 15

Regulatory Information

TSCA Status:

All components in this product are on the TSCA Inventory.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
Ammonium Hydroxide	1336-21-6	No	1000 lb RQ	1000 lb final RQ; 454 kg final RQ	No	No

Section 16

Additional Information

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Replaces: 09/03/2014

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The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

Glossary

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
CAS	Chemical Abstract Service Number	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
DOT	U.S. Department of Transportation	ppm	Parts per million
IARC	International Agency for Research on Cancer	RCRA	Resource Conservation and Recovery Act
N/A	Not Available	SARA	Superfund Amendments and Reauthorization Act
		TLV	Threshold Limit Value
		TSCA	Toxic Substances Control Act
		IDLH	Immediately dangerous to life and health