

# Safety Data Sheet

## Ammonium Hydroxide Solution, 3M

**CAROLINA**<sup>®</sup>  
www.carolina.com

### Section 1

### Product Description

**Product Name:** Ammonium Hydroxide Solution, 3M  
**Recommended Use:** Science education applications  
**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**



Causes severe skin burns and eye damage. Causes serious eye damage. May cause respiratory irritation. Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

#### GHS Classification:

Skin Corrosion/Irritation Category 1A, Serious Eye Damage/Eye Irritation Category 1, Hazardous to the aquatic environment - Acute Category 2, Hazardous to the aquatic environment - Chronic Category 2, Specific Target Organ Systemic Toxicity (STOT) - Single Exposure Category 3

### Section 3

### Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
Water	7732-18-5	89
Ammonium Hydroxide	1336-21-6	11

### Section 4

### First Aid Measures

#### Emergency and First Aid Procedures

**Inhalation:** IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
**Eyes:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
**Skin Contact:** IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.  
**Ingestion:** IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

### Section 5

### Firefighting Procedures

**Extinguishing Media:** Use media suitable to extinguish surrounding fire.  
**Fire Fighting Methods and Protection:** Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.  
**Fire and/or Explosion Hazards:** Fire or excessive heat may produce hazardous decomposition products.  
**Hazardous Combustion Products:** Nitrogen containing gases

# Safety Data Sheet

## Section 6 Spill or Leak Procedures

### 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. 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. Use an inert absorbent such as sand or vermiculite. Place in properly labeled closed container. Collect spillage.

## Section 7 Handling and Storage

**Handling:** Do not breathe dust/fume/gas/mist/vapors/spray. Avoid breathing dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

**Storage:** Store in a well-ventilated place. Keep container tightly closed. Store locked up. Keep container tightly closed in a cool, well-ventilated place.

**Storage Code:** Green - general chemical storage

## Section 8 Protection Information

Chemical Name	ACGIH		OSHA PEL	
	(TWA)	(STEL)	(TWA)	(STEL)
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

<b>Formula:</b> NH <sub>4</sub> <sup>+</sup> + H <sub>2</sub> O	<b>Vapor Pressure:</b> No data available
<b>Molecular Weight:</b>	<b>Evaporation Rate (BuAc=1):</b> No data available
<b>Appearance:</b> Colorless Liquid	<b>Vapor Density (Air=1):</b> No data available
<b>Odor:</b> Strong Ammonia	<b>Specific Gravity:</b> 5-50 ppm as ammonia
<b>Odor Threshold:</b> 5-50 ppm as ammonia	<b>Solubility in Water:</b> No data available
<b>pH:</b> No data available	<b>Log Pow (calculated):</b> No data available
<b>Melting Point:</b> No data available	<b>Autoignition Temperature:</b> No data available
<b>Boiling Point:</b> 100 C	<b>Decomposition Temperature:</b> No data available
<b>Flash Point:</b> No data available	<b>Viscosity:</b> 10
<b>Flammable Limits in Air:</b> No data available	<b>Percent Volatile by Volume:</b> No data available

## Section 10 Reactivity Data

# Safety Data Sheet

**Reactivity:** No data available  
**Chemical Stability:** Stable under normal conditions.  
**Conditions to Avoid:** None known.  
**Incompatible Materials:** Water-reactive materials, Copper, Iron Salts, Zinc, Acids, Aluminum alloys  
**Hazardous Decomposition Products:** Nitrogen containing gases  
**Hazardous Polymerization:** Will not occur

## Section 11 Toxicity Data

**Symptoms (Acute):** No data available  
**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 Mouse 21430 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:** No data available  
**Chronic:** No data available

## Section 12 Ecological Data

**Overview:** Moderate ecological hazard. This product may be dangerous to plants and/or wildlife.  
**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

# Safety Data Sheet

## Section 14

## Transport Information

**Ground - DOT Proper Shipping Name:**

Ammonia Solutions. Hazard class: 8, Corrosive. UN number: UN2672

**Air - IATA Proper Shipping Name:**

Ammonia Solutions. Hazard class: 8, Corrosive. UN number: UN2672

## 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

Revised: 02/09/2015

Replaces: None

Printed: 04-22-2015

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