

# Safety Data Sheet

## Ammonium Hydroxide, 14.5M

### Section 1 Product Description

**Product Name:** Ammonium Hydroxide, 14.5M  
**Recommended Use:** Science education applications  
**Synonyms:** Aqueous Ammonia  
**Supplier:** C2A Sales & Supplies (Barbados) Ltd.  
#3 Canewood Road, Jackson, St. Michael, Barbados BB11005  
1-246-426-1256

### Section 2 Hazard Identification

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



**DANGER**

Harmful if swallowed. Causes severe skin burns and eye damage. Causes serious eye damage. Very toxic to aquatic life. Very 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 1, Hazardous to the aquatic environment - Chronic Category 1, Acute Toxicity - Oral Category 4

### Section 3 Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
Water	7732-18-5	72
Ammonium Hydroxide	1336-21-6	28

### 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: Call a POISON CENTER or doctor/physician if you feel unwell. IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

### 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. Nitrogen oxides, Carbon oxides  
**Hazardous Combustion Products:**

# Safety Data Sheet

## Section 6

## Spill or Leak Procedures

### Steps to Take in

**Released or Spilled:** **Hazardous Material Is** 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.

Ensure clean-up measures are in compliance with OSHA (29 CFR 1910.120). Avoid creating dusts. Cover material with absorbent and moisten and collect for disposal. Collect spillage.

## Section 7

## Handling and Storage

### Handling:

Do not breathe dust/fume/gas/mist/vapors/spray. 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. Do not breathe dust/vapor. Do not get in eyes, on skin, or on clothing. Retained residue may make empty containers hazardous; use caution.

### Storage:

Store locked up. Keep container tightly closed in a cool, well-ventilated place. Store in a secure area suitable for corrosives.

### Storage Code:

White - Corrosive. Separate acids from bases; separate oxidizer acids from organic acids.

## Section 8

## Protection Information

### Chemical Name

No data available

ACGIH  
(TWA) \_\_\_\_\_ (STEL)  
N/A N/A

OSHA PEL  
(TWA) \_\_\_\_\_ (STEL)  
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:

Respiratory protection may be required to avoid overexposure when handling this product. General or local exhaust ventilation is the preferred means of protection. Use a respirator if general room ventilation is not available or sufficient to eliminate symptoms. NIOSH approved air purifying respirator with ammonia cartridge. Air purifying respirators should not be used in oxygen deficient or IDLH atmospheres.

#### Respirator Type(s):

NIOSH approved air purifying respirator with ammonia cartridge. Air purifying respirators should not be used in oxygen deficient or IDLH atmospheres.

#### 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<sub>4</sub> \* OH

**Molecular Weight:** 35.06

**Appearance:** Colorless

**Odor:** Ammonia Ammonia

**Odor Threshold:** No data available

**pH:** No data available

**Melting Point:** No data available

**Boiling Point:** 100 C

**Flash Point:** No data available

**Flammable Limits in Air:** 16% - 25% (Ammonia Gas)

**Vapor Pressure:** 570 mmHg (20 °C)

**Evaporation Rate (BuAc=1):** N/A

**Vapor Density (Air=1):** 0.596 at 15.6°C (Ammonia Gas)

**Specific Gravity:** 0.897

**Solubility in Water:** Soluble

**Log Pow (calculated):** No data available

**Autoignition Temperature:** No data available

**Decomposition Temperature:** No data available

**Viscosity:** No data available

**Percent Volatile by Volume:** N/A

## Safety Data Sheet

<b>Reactivity:</b>	No data available
<b>Chemical Stability:</b>	Stable under normal conditions.
<b>Conditions to Avoid:</b>	None known.
<b>Incompatible Materials:</b>	Water-reactive materials, Copper, Iron Salts, Zinc
<b>Hazardous Decomposition Products:</b>	Carbon oxides, Nitrogen oxides
<b>Hazardous Polymerization:</b>	Will not occur

## Section 11

## Toxicity Data

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

## Acute Toxicity:

Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
Water	7732-18-5	Oral LD50 Rat > 90 mg/kg Oral LD50 Rat 350 mg/kg 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	7732-18-5 1336-21-6	Not listed	Not listed	Not listed

<b>Chronic Effects:</b>	No evidence of a mutagenicity effect.
<b>Mutagenicity:</b>	
<b>Teratogenicity:</b>	No evidence of a teratogenic effect (birth defect).
<b>Sensitization:</b>	No evidence of a sensitization effect.
<b>Reproductive:</b>	No evidence of negative reproductive effects.
<b>Target Organ Effects:</b>	
<b>Acute:</b>	See Section 2
<b>Chronic:</b>	Mutation data cited., Not listed as a carcinogen by IARC, NTP or OSHA.

## Section 12

## Ecological Data

<b>Overview:</b>	This material is not expected to be harmful to the ecology.
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**Mobility:** No data  
**Persistence:** No data  
**Bioaccumulation:** No data  
**Degradability:** No data  
**Other Adverse Effects:** No data

**Chemical Name**  
Water  
Ammonium Hydroxide

**Eco Toxicity**  
No data available  
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

**CAS Number**  
7732-18-5  
1336-21-6

Ammonium Hydroxide, 14.5M

Page 3 of 4

## Safety Data Sheet

### 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:**  
UN2672AMMONIA SOLUTIONS Class 8P.G. III

**Air - IATA Proper Shipping Name:**  
UN2672AMMONIA SOLUTIONS Class 8P.G. III

### 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 No RQ 1000 lb final RQ; 454 kg final RQ		No

**California Prop 65:** No California Proposition 65 ingredients

### Section 16 Additional Information

Revised: 08/21/2018

Replaces: 06/15/2018

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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