

MATERIAL SAFETY DATA SHEET

AMMONIA SOLUTION, 2%
CAROLINA BIOLOGICAL SUPPLY COMPANY

Revised: 09/05/00
Replaces: None
Printed: 15/05/00

1. PRODUCT DESCRIPTION

Product Name: Ammonium Solution, 2%
Product Code(s): 97-2157, 97-2101
Size: 250 ml
Chemical Name: Ammonium Hydroxide Solution
CAS Number: 1336-21-6
Formula: NH₄OH
Synonyms: Ammonia Aqueous, Aqua Ammonia
Distributor: Carolina Biological Supply Company
2700 York Road
Burlington, NC 27215
Chemical Information: 800-227-1150 (8am-5pm (ET) M-F)
Chemtrec (Transportation Spill Response 24 hours): 800-424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

Principle Hazardous Components: Ammonium Hydroxide (CAS# 1336-21-6) 2%
TLV and PEL units: As NH₃ ACGIH-TLV 25ppm (TWA) 35ppm
OSHA-PEL 50ppm (TWA)

3. HAZARD IDENTIFICATION

Emergency Overview: Irritant. May cause burns. May be harmful if swallowed.
Potential Health Effects:
Eyes: May cause irritation.
Skin: May cause irritation.
Ingestion: May cause gastrointestinal discomfort.
Inhalation: May cause irritation to respiratory tract.

4. FIRST AID MEASURES

Emergency and First Aid Procedures:
Eyes - Flush with water for at least 15 minutes, raising and lowering eyelids occasionally. Get medical attention if irritation persists.
Skin - Thoroughly wash exposed area for at least 15 minutes. Remove contaminated clothing. Launder contaminated clothing before reuse. Get medical attention if irritation persists.
Ingestion - If swallowed, if conscious, give plenty of water. Immediately call a physician or poison control center. Never give anything by mouth to an unconscious person.
Inhalation - Remove to fresh air. Give oxygen if breathing is difficult; give artificial respiration if breathing has stopped. Keep person warm, quiet, and get medical attention.

5. FIREFIGHTING PROCEDURES

Flash Point (Method Used): Liquid not flammable.
NFPA Rating: Health: 2
Fire: 0
Reactivity: 1

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Extinguisher Media:

Use dry chemical, CO₂, or appropriate foam.

Flammable Limits in Air % by Volume: NH₃ gas: LEL 16% UEL: 25%

Autoignition Temperature: NH₃ gas: 1204F

Special Firefighting Procedures:

Firefighters should wear full protective equipment and NIOSH-approved self-contained breathing apparatus.

Unusual Fire and Explosion Hazards: Dangerous fire hazard; emits irritating fumes and liquid can inflict burns.

6. SPILL OR LEAK PROCEDURES

Steps to be Taken in Case Material is Released or Spilled:

Ventilate area of spill. Eliminate all sources of ignition. Remove all non-essential personnel from area. Clean-up personnel should wear proper protective equipment and clothing. Absorb material with suitable absorbant and containerize for disposal.

7. SPECIAL PRECAUTIONS

Precautions to be Taken in Handling or Storing: Store tightly closed in a well-ventilated area away from sources of ignition and separate from oxidizers and acids.

Other Precautions: Do not breathe vapor.

8. SPECIAL PROTECTION INFORMATION

Respiratory Protection(Specify Type):

A NIOSH/MSHA chemical cartridge respirator should be worn if PEL or TLV is exceeded.

Ventilation:

Local Exhaust: Preferred
Mechanical(General): Acceptable
Special: No
Other: No

Protective Gloves:

Rubber, neoprene, PVC, or equivalent.

Eye Protection:

Splash-proof chemical safety goggles should be worn at all times.

Other Protective Clothing or Equipment:

Lab coat, eye wash, and safety shower.

9. PHYSICAL DATA

Molecular Weight: 35.06

Melting Point: Approximately -77C

Boiling Point: Releases NH₃

Vapor Pressure: 755 at 26.7C(total)

Vapor Density(Air=1): 0.596 NH₃ at 15.6C

Specific Gravity(H₂O=1): 0.897

Percent Volatile by Volume: 100%

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16. ADDITIONAL INFORMATION

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. Any employer must carefully assess the applicability of any information contained herein in regards to the particular use to which the employer puts the material.

Glossary

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