



THATCHER COMPANY MATERIAL SAFETY DATA SHEET
PRODUCT: AMMONIUM HYDROXIDE SOLUTION
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MSDS Date: 4/2/2002 2:31:00 PM
Emergency Contact: 1-800-424-9300

SECTION I

PRODUCT NAME: Ammonium Hydroxide Solution (15 - 25% as NH₃)
CHEMICAL NAME: Ammonium Hydroxide
CHEMICAL FAMILY: Inorganic Base
SYNONYMS: Aqua Ammonia
FORMULA: NH₄OH
DOT SHIPPING INFORMATION: Ammonia Solutions, 8,
UN 2672; PG III
RQ = 1000 lbs

SECTION II - HAZARDOUS INGREDIENTS

This material contains no ingredients which are known by Thatcher Company to be hazardous unless listed below.

HAZARDOUS MATERIAL	CAS NUMBER	w/w %	EXPOSURE LIMITS IN AIR
Ammonium Hydroxide (15 - 25% as NH ₃)	1336-21-6	31 - 52	TLV = 25 ppm (TWA)

The specific identity of some ingredients may be withheld for confidential business purposes. However, all known potential health effects from exposure to these ingredients are being addressed.

Ammonium Hydroxide is subject to the reporting requirements of EPCRA Section 101(14) (CERCLA; Pub. L. 96-510)

SECTION III - HEALTH HAZARD DATA

NFPA HAZARDOUS RATING: Health = 2 Flammability = 1 Reactivity = 0

Carcinogenic Listing:

NTP: No ingredients listed in this section.

IARC MONOGRAPHS: No ingredients listed in this section.

OSHA 29 CFR 1910: No ingredients listed in this section.

ENTRY ROUTES & EFFECTS OF OVEREXPOSURE:

Contact: Can be extremely irritating to eyes, and skin, causing possible burns and serious damage to eyes.

Inhalation: Vapor causes extensive irritation and/or burns to respiratory tract.

Ingestion: Harmful or fatal if swallowed, resulting in severe burns and pain to gastrointestinal system.



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STATEMENT OF PRACTICAL TREATMENT:

- Contact:** Flush exposed area thoroughly with cool water. For eyes, flush for at least 15 minutes. GET PROMPT MEDICAL ATTENTION!
- Inhalation:** Immediately remove to fresh air. If breathing is difficult, administer oxygen. Consult a physician immediately.
- Ingestion:** If conscious, give several glasses of water or milk followed by dilute vinegar or citrus juice. DO NOT induce vomiting. Call a physician or local Poison Control Center at once!

SECTION IV - FIRE AND EXPLOSION DATA

FLASH POINT: nonflammable

FLAMMABLE LIMITS: Lel:N/A Uel: N/A

EXTINGUISHING MEDIA: Use any (Water, Chemical, CO₂, or Foam, etc.)

SPECIAL FIRE-FIGHTING PROCEDURES:

Firefighters should enter heavily-concentrated areas with self-contained breathing apparatus and full safety gear.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Ammonium hydroxide releases toxic ammonia gas when heated; protective gear should be worn. Rapid addition to concentrated mineral acids could create explosive conditions.

SECTION V - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION:

Use a respirator approved for ammonia, if the concentration in the air is above the ceiling limit.

VENTILATION:

Use ventilation to maintain TLV below 25 ppm. Mechanical ventilation is recommended.

EYE PROTECTION: Chemical splash goggles.

SKIN PROTECTION: Rubber gloves, rubber boots.

OTHER PROTECTIVE EQUIPMENT:

As needed to prevent contact with eyes and skin and to minimize exposure to vapor.

SECTION VI - SPECIAL PRECAUTIONS

HANDLING AND STORAGE PRECAUTIONS:

Store in a cool place, away from heat. When opening the container, loosen cap or bung carefully to release any pressure that may have built up. Do not breathe the vapor.



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SECTION VII - PHYSICAL DATA

BOILING POINT: 212 F*
*(loses ammonia gas when heated)

SPECIFIC GRAVITY: 0.90 – 0.94

VAPOR PRESSURE (mm Hg): Unknown

% VOLATILE, BY VOLUME: 100 %

VAPOR DENSITY (air = 1): Unknown

EVAPORATION RATE: N/A

pH: >14 **APPEARANCE AND ODOR:** Clear, water-white liquid with a sharp, pungent ammonia odor.

SECTION VIII - REACTIVITY DATA

STABILITY: Stable

HAZARDOUS POLYMERIZATION: Will not occur

CONDITIONS OR MATERIALS TO AVOID:

Heat causes the release of ammonia gas. Do not mix with mineral acids; a large amount of heat is released through ensuing violent reaction.

HAZARDOUS DECOMPOSITION PRODUCTS:

Ammonia gas.

SECTION IX - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL SPILLS OR LEAKS:

Wear proper safety equipment; ventilate area thoroughly. Small spills can be neutralized with vinegar (dilute acetic acid) and absorbed with diatomaceous earth. Large spills should be diked and pumped into polyethylene drums. Neutralize any residual liquid and absorb into diatomaceous earth. Shovel the diatomaceous earth into polyethylene drums. After the removal of the material is complete, flush the contaminated area thoroughly with water and drain to the sewer, if permitted by local regulation agencies.

WASTE DISPOSAL METHOD:

Waste aqua ammonia is an EPA Characteristic Waste (DOO2, DOO3) due to corrosivity and reactivity. Contact an EPA approved waste disposal establishment or local environmental agency for approved disposal of this material. Comply with all local, state and federal regulations.



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ACGIH = American Conference of Governmental Industrial Hygienists

CL = Ceiling Level

IARC = International Agency for Research on Cancer: Monographs

OSHA = Occupational Safety and Health Administration

N/A = Not Applicable

NTP = National Toxicology Program: Annual Report on Carcinogens

PEL = Permissible Exposure Level (OSHA)

TLV = Threshold Limit Value (ACGIH)

TWA = Time Weighted Average over 8 Hours

This information is, to the best of our knowledge, accurate but may not be complete. THATCHER COMPANY furnishes this information in good faith, but without warranty, representation or guarantee of its accuracy, completeness, or reliability.