

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Ammonium Hydroxide, ACS
SYNONYMS: Ammonium Hydroxide, Water Solution
PRODUCT CODES: ES17407-2.5L, ES17407-500ml

MANUFACTURER: Azer Scientific, Inc.
ADDRESS: 701 Hemlock Rd, Morgantown, PA 19543

CHEMTREC PHONE: 800-424-9300
SUPPORT: 610-524-5810
FAX: 610-901-3046

PRODUCT USE: Laboratory reagent

SECTION 1 NOTES:

SECTION 2: HAZARDS IDENTIFICATION

GHS CLASSIFICATION: Skin Corrosion/Irritation Category 1B; Specific Target Organ Toxicity - (Single Exposure) Category 3; Hazardous to aquatic environment Category 1



Signal Word: Danger!

Hazard Phrases	
H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.

Precautionary Phrases	
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P260	Do not breathe mist, spray, vapors.
P264	Wash hands thoroughly after handling.
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P301+P330+P331	IF SWALLOWED: Rinse mouth. DO NOT induce vomiting.
P310	Immediately call a POISON CENTER or doctor/physician.
P273	Avoid release to the environment.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.

SECTION 2 NOTES:

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT:	CAS NO.	% WT
Water	7732-18-5	70-72%
Ammonia hydroxide (as Ammonia)	1336-21-6	28-30%

SECTION 3 NOTES:

SECTION 4: FIRST AID MEASURES

EYES: Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

SKIN: In case of contact, flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

INGESTION: Call medical doctor or poison control center immediately. Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately

SECTION 4 NOTES:

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABILITY OF THE PRODUCT:

FLASH POINT: Not available

AUTOIGNITION TEMPERATURE: Not available

NFPA HAZARD CLASSIFICATION

HEALTH:3 FLAMMABILITY: 0 REACTIVITY: 0
OTHER:

HMIS HAZARD CLASSIFICATION

HEALTH:3 FLAMMABILITY: 0 REACTIVITY: 0
PROTECTION:

EXTINGUISHING MEDIA: Use suitable media for the surrounding materials.

NOT SUITABLE: Do not use water jet.

SPECIAL FIRE FIGHTING PROCEDURES: Avoid contact with metal, hydrogen chloride gas can react with aluminum, tin, lead, zinc.

HAZARDOUS DECOMPOSITION PRODUCTS: Hydrogen gas can form in fire situation which is flammable.

SECTION 5 NOTES:

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES:

Small spill and leak: Neutralize with dilute acetic acid. Use water spray to reduce vapors if contained. Dilute with water and mop up absorb with an inert dry material and place in an appropriate waste disposal container.

Large spill and leak: Stop leak if without risk. Use appropriate safety equipment. Isolate the spill and dilute with dilute acetic acid to neutralize. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Contaminated absorbent material may pose the same hazard as the spilled product.

SECTION 6 NOTES:

SECTION 7: HANDLING AND STORAGE

HANDLING: Do not get in eyes, on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate.

STORAGE: Store in accordance with local regulations. Store in a segregated and approved area. Store in original container, protected from direct sunlight. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

SECTION 7 NOTES:

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

ENGINEERING CONTROLS: General mechanical ventilation or laboratory fume hood. Ensure that eyewash stations and quick drench showers are close to the workstation.

RESPIRATORY PROTECTION: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

EYE PROTECTION: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. Recommended: splash goggles

SKIN PROTECTION: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: lab coat

HANDS: Chemical-resistant, impervious gloves complying with an approved standard should be worn always when handling chemical products if a risk assessment indicates this is necessary. Recommended: Neoprene

ENVIRONMENTAL EXPOSURE CONTROLS: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

WORK HYGIENIC PRACTICES: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.

EXPOSURE GUIDELINES:

Component	Source	Type	Value	Note
Ammonia CAS#7664-41-7	OSHA PEL	TWA	50 ppm (35 mg/m ³)	
	ACGIH	STEL	40 ppm (24 mg/m ³)	
	ACGIH	TWA	25 ppm (17 mg/m ³)	

SECTION 8 NOTES:

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Clear

ODOR: Strong, pungent odor

PHYSICAL STATE: liquid

pH AS SUPPLIED: Basic

BOILING POINT: 36°C (97°F)

MELTING POINT/FREEZING POINT: -77°C (-106°F)

VAPOR PRESSURE (mm Hg): 115mm at 20°C

VAPOR DENSITY (AIR = 1): 0.6-1.2

EVAPORATION RATE (Water =1): 1

SOLUBILITY IN WATER: Soluble in water

MOLECULAR WEIGHT: Mixture

VISCOSITY: Not established

SECTION 9 NOTES:

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Product is stable under normal conditions of use.

CONDITIONS TO AVOID (STABILITY): Excessive heat.

INCOMPATIBILITY (MATERIAL TO AVOID): Acids, strong oxidizers, organics

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Under normal conditions of storage and use, hazardous decomposition products should not occur. Gaseous ammonia may form if decomposition occurs.

HAZARDOUS POLYMERIZATION: No hazardous polymerization

CONDITIONS TO AVOID (POLYMERIZATION): N/A

SECTION 10 NOTES:

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Oral LD50: 350 mg/kg rat

Inhalation LC50: No data available

Dermal LD50: No data available

Other information on acute toxicity: No data available

Skin corrosion/irritation: Corrosive to skin

Serious eye damage/eye irritation: Corrosive to eyes

Respiratory or skin sensitization: no data available

Germ cell mutagenicity: no data available

Carcinogenicity: (NTP, IARC, OSHA): Not listed as a carcinogen.

Specific target organ toxicity - single exposure (Globally Harmonized System): Eyes, Skin, mucous membranes

Aspiration hazard: Will burn mouth, throat, and respiratory tract.

Potential health effects

Inhalation: Toxic if inhaled. Causes respiratory tract irritation, coughing, choking, shortness of breath.

Ingestion: Corrosive. Harmful if swallowed. Causes abdominal pain, sore throat, vomiting.

Skin: Corrosive. Causes skin burns, blisters.

Eyes: Causes eye burns.

CHRONIC HEALTH HAZARDS: Lungs may be affected by repeated or long term exposure.

ROUTES OF ENTRY: Skin/eye contact, inhalation, and ingestion.

TARGET ORGANS: Eyes, Skin, Mucous membranes

SECTION 11 NOTES:

SECTION 12: ECOLOGICAL INFORMATION

TOXICITY:

Toxicity to Daphnia and other invertebrates;

LC50: Daphnia Magna (water flea) 0.66 mg/L 48 hours

Toxicity to fish:

LC50: Lepomis macrochirus (bluegill) 0.024-0.093 mg/L 48 hours

PERSISTENCE AND DEGRADABILITY: Short term degradation products not likely, long term degradation products may arise but are less toxic than the product itself.

BIOACCUMULATIVE POTENTIAL: Bioaccumulation is unlikely.

MOBILITY IN SOIL: No data available

PBT and vPvB ASSESSMENT: Not required.

SECTION 12 NOTES:

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Unused product: dispose as a regulated hazardous waste. Spent product or spill clean up-follow all provincial, local, state, and federal regulations.

RCRA HAZARD CLASS: Not classified

SECTION 13 NOTES:

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION

UN No.	UN2672
Proper Shipping Name	Ammonia solution
Hazard Class	8
Packing Group	III
Label Statement	Corrosive

(1 Liter or less can be shipped as Ltd Qty as per DOT)

TDG

UN No.	UN2672
Proper Shipping Name	Ammonia solution
Hazard Class	8
Packing Group	III
Marine Pollutant:	Yes

IATA

UN No.	UN2672
Proper Shipping Name	Ammonia solution
Hazard Class	8
Packing Group	III

IMDG/IMP

UN No.	UN2672
Proper Shipping Name	Ammonia solution
Hazard Class	8
Packing Group	III
EMS-No:	F-E, S-E

SECTION 15: REGULATORY INFORMATION

United States

HCS Classification: Highly toxic material, Corrosive material, Irritating material

U.S. Federal regulations:

United States inventory (TSCA 8b): Listed on inventory.

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/311/312/313 hazardous chemicals: Ammonium Hydroxide 500lbs.

SARA 311/312 MSDS distribution - chemical inventory - hazard identification:

Ammonium Hydroxide CAS 7664-41-7 Acute Health hazard

CERCLA (RQ): Ammonium Hydroxide CAS 7664-41-7 1000 lbs. (454 kg.)

DEA List I & II Chemicals

(Precursor Chemicals): Not Listed

RTK STATES: Ammonium Hydroxide CAS 7664-41-7 CA, NJ, MN, PA, RI, MA

California Prop. 65

This product does not contain a chemical known to the State of California to cause birth defects or other reproductive harm.

CANADA

WHMIS (Canada): Class D1B Material causing immediate and serious toxic effects.
Class E Corrosive liquid

Canadian lists:

CEPA Toxic substances: None of the components are listed.

Canadian ARET: None of the components are listed.

Canadian NPRI: None of the components are listed.

CEPA DSL / CEPA NDSL:

All components are listed or exempted.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

International regulations

International lists:

Australia inventory (AICS): All components are listed or exempted.

China inventory (IECSC): All components are listed or exempted.

Japan inventory: All components are listed or exempted.

Korea inventory: All components are listed or exempted.

New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.

Philippines inventory (PICCS): All components are listed or exempted.

SECTION 16: OTHER INFORMATION

National Fire Protection Association (U.S.A.)



DISCLAIMER: This Safety Data Sheet has been prepared in accordance with the Globally Harmonized System for the Classification and Labelling of Chemicals (GHS). To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries makes any warranty of merchantability or any other warranty, expressed or implied, which respect to such information, and we assume no liability resulting from its use. In no event shall Azer Scientific be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages resulting from use of or reliance upon this information.

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