

MATERIAL SAFETY DATA SHEET

Product: **Ammonium Hydroxide, 26° Bé Solution**

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Material Identity

Product Name: Ammonium Hydroxide, 26° Bé Solution, Technical

Product Code: CH-1336216A

Chemical Formula: Not available.

General or Generic ID: Ammonium Hydroxide, 26 deg. Be, Technical Grade; Aqueous Ammonia; Strong Ammonia Solution; Stronger Ammonia Water

Company

ArtChemicals.com

2250 Davis Street

San Leandro, CA 94577-2204

510-639-4670

Emergency Telephone Number

1-800-451-8346

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>CAS No.</u>	<u>Chemical Identity</u>	<u>Common Name</u>	<u>%</u>
7664-41-7	N/A	Ammonia, anhydrous	27-31
7732-18-5	N/A	Water	69-73

3. HAZARDS IDENTIFICATION

Potential Health Effects

Eye:

Very hazardous in case of eye contact (irritant). Symptoms include stinging, tearing, redness and impairment of vision. The degree of injury will depend on the amount of material that gets into the eye and the speed and thoroughness of the first aid treatment. Eye contact can result in corneal damage or blindness.

Skin:

Very hazardous in case of skin contact (irritant/corrosive/permeator). The degree of injury will depend on the amount of material that gets on the skin and the speed and thoroughness of the first aid treatment. Skin contact can produce inflammation and blistering.

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Ingestion:

Very hazardous in case of ingestion. Will produce irritation to gastro-intestinal or respiratory tract, characterized by burning, sneezing and coughing. Severe over-exposure can produce lung damage, choking, unconsciousness or death.

Inhalation:

Very hazardous in case of inhalation. Inhalation of dust will produce irritation to gastro-intestinal or respiratory tract, characterized by burning, sneezing and coughing.

Symptoms of Exposure:

Not available.

Development Information:

Not available.

The substance is toxic to upper respiratory tract, skin, eyes.

Repeated or prolonged exposure to the substance can produce target organs damage.

Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Cancer Information:

Not available.

Primary Route(s) of Entry:

Inhalation, skin and eyes.

4. FIRST AID MEASURES

Inhalation:

If affected, promptly remove individual to fresh air. Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation.

WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek medical attention.

Ingestion:

Do NOT induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. Call physician immediately.

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Eyes:

Remove contact lenses if worn. In case of contact, immediately flush with water for at least 15 minutes. Cold water may be used. Do not use eye ointment. Get medical attention. Finish by rinsing thoroughly with running water to avoid a possible infection.

Skin:

Immediately remove contaminated clothing and thoroughly flush skin with plenty of water (15 minutes). Wash thoroughly with disinfectant soap and water. Cold water may be used. Cover the irritated skin with an emollient. Launder clothing before reuse. Get medical attention.

Note to Physicians:

Not available.

5. FIRE FIGHTING MEASURES

Flash Point: Non-flammable. Not applicable.

Explosive Limit: Not applicable.

Auto-ignition Temperature: Not applicable.

Hazardous Products of Combustion: Hazardous decomposition include Nitric oxide, and ammonia fumes.

Extinguishing Media: Not available.

SPECIAL FIRE-FIGHTING PROCEDURES: Forms explosive compounds with many heavy metals such as silver, lead, zinc and their halide salts. It can form shock sensitive compounds with halogens, mercury oxide, and silver oxide.

NFPA CODES: Health = 3 Flammability = 0 Reactivity = 0

6. PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken In Case Material Is Released Or Spilled:

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Small Spill:

Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. If necessary: **Neutralize the residue with a dilute solution of acetic acid.**

Large Spill:

Corrosive liquid. Poisonous liquid.

Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray curtain to divert vapor drift. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. **Neutralize the residue with a dilute solution of acetic acid.** Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

7. PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep locked up.. Keep container dry. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as metals, acids. Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 25 °C (77 °F).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory Protection:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Be sure to use an approved/certified respirator or equivalent.

Skin Protection:

Wear resistant gloves. To prevent repeated or prolonged skin contact, wear impervious clothing and boots or lab coat.

Eye Protection:

Chemical splash goggles in compliance with OSHA regulations are advised. Face shield.

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Ensure that eyewash stations and safety showers are proximal to the work-station location.

Other Protective Clothing or Equipment:

Provide sufficient mechanical ventilation to maintain exposure below level of overexposure.
Boots. Full suit. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling product.

TWA: 25 (ppm) from ACGIH (TLV) [United States]

TWA: 50 STEL: 35 (ppm) from OSHA (PEL) [United States]

TWA: 25 STEL: 35 from NIOSH

Consult local authorities for acceptable exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: Colorless liquid. (Strong ammonia-like odor.)

Molecular Weight: 35.05 g/mole

pH: 11.6 [Basic]. This is the actual pH in a 1N solution.

Boiling Point: Not available.

Melting Point: -69.2°C (-92.6°F)

Specific Gravity: 0.898 (Water=1)

Vapor Pressure: 287.9kPa (@ 20°C).

Evaporation Rate: Not available.

Solubility in Water: Easily soluble in cold water.

10. STABILITY AND REACTIVITY

Incompatibility: Reactive with metals, acids and excess heat.

Stability: Stable.

Hazardous Decomposition: N/A

Hazardous Polymerization: Will not occur.

Special Remarks on Reactivity: Incompatible with the following: Organic acids, amides, organic anhydrides, isocyanates, vinyl acetate, epichlorhydrin, aldehydes, Acrolein, Acrylic acid, chlorosulfonic acid, dimethyl sulfate, fluorine, gold + aqua regia, hydrochloric acid, hydrofluoric acid, hydrogen peroxide, iodine, nitric acid, olelum, propiolactone, propylene oxide,

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silver nitrate, silver oxide, silver oxide + ethyl alcohol, nitromethane, silver permanganate, sulfuric acid, halogens. Forms explosive compounds with many heavy metals (silver, lead, zinc) and halide salts.

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity (LD50): 350 mg/kg [Rat].

Acute Potential Health Effects:

Skin: Causes severe irritation. Causes skin burns. May cause deep, penetrating ulcers of the skin. Contact with skin may cause staining, inflammation, and thickening of the skin.

Eye: Contact with liquid or vapor causes severe burns and possible irreversible eye damage including corneal injury and cataracts.

Inhalation: Causes severe irritation of the upper respiratory tract with coughing, burns, breathing difficulty. May cause acute pulmonary edema, pneumoconiosis, fibrosis, and even coma. It is a respiratory stimulant when inhaled at lower concentrations. It may also affect behavior/central nervous system (convulsions, seizures, ataxia, tremor), cardiovascular system (increase in blood pressure and pulse rate).

Ingestion: Harmful if swallowed. Affects the Gastrointestinal tract (burns, throat constriction, vomiting, convulsions, shock, and may cause severe and permanent damage), liver, and urinary system (kidneys) May affect behavior (convulsions, seizures, ataxia, excitement).

Chronic Potential Health Effects:

Ingestion: May cause effects similar to those of acute ingestion.

Inhalation: Repeated exposure to low concentrations may cause bronchitis with cough, phlegm, and/or shortness of breath. May also cause liver and kidney damage, and affect the brain, and blood.

Eye: May cause corneal damage and the development of cataracts and glaucoma.

Skin: Repeated skin contact to low concentrations may cause dryness, itching, and redness (dermatitis).

12. ECOLOGICAL INFORMATION

Ecotoxicity in water (LC50): 0.1 ppm 24 hours [Rainbow trout]. 8.2mg/l 96 hours [Fathead minnow]. 0.1 ppm 48 hours [Bluegill].

Possibly hazardous short-term degradation products are not likely. However, long-term degradation products may arise. The products of degradation are less toxic than the product itself.

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13. DISPOSAL CONSIDERATION

Waste Disposal Method:

Dispose of in accordance with all applicable local, state and federal regulations.

14. DOT SHIPPING NAME & IDENTIFICATION:

Ammonia Solution. Class 8: Corrosive material. UNNA: 2672, PG: III

15. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be, whether originating with the company or not. Recipients are advised to confirm in advance of need that information is current, applicable, and suitable to their circumstances.