



# SAFETY DATA SHEET

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## SECTION 1 PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: **Ammonium hydroxide**  
PRODUCT NUMBER: 01890  
CAS NUMBER: 1336-21-6  
SYNONYMS: Aqueous ammonia, ammonia solution

### MANUFACTURER:

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## SECTION 2 HAZARDS IDENTIFICATION

### CLASSIFICATION OF SUBSTANCE OR MIXTURE

Pictogram



Signal Word

**Danger**

### Hazard Statements

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H400	Very toxic to aquatic life.

### Precautionary Statements

P273	Avoid release into the environment
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/physician

### HMIS CLASSIFICATION:

Health: 3      Flammability: 0      Reactivity Hazard: 0      Personal: H

### NFPA RATING:

Health: 3      Fire: 0      Reactivity Hazard: 0

## SECTION 2 HAZARDS IDENTIFICATION (Cont.)

**EYE CONTACT:** Causes eye burns

**SKIN CONTACT:** May be harmful if absorbed through skin. Causes skin burns.

**INHALATION:** May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

**INGESTION:** Toxic if swallowed

## SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Formula:  $\text{NH}_4\text{OH}$

Molecular Weight: 35.04

CHEMICAL NAME	CAS#	%
Ammonium hydroxide	1336-21-6	28-30
Water	7732-18-5	Remaining

## SECTION 4 FIRST AID MEASURES

**EYE EXPOSURE:** In case of eye contact, rinse with plenty of water and seek medical attention immediately.

**SKIN EXPOSURE:** Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention immediately.

**INHALATION:** Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.

**INGESTION:** Do NOT induce vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately.

## SECTION 5 FIREFIGHTING MEASURES

**FLASH POINT:** Product is not flammable

**AUTO IGNITION TEMPERATURE:** No data

**EXPLOSION LIMITS:** No data

**EXTINGUISHING MEDIUM:** Use water spray, alcohol-resistant foam, dry chemical, carbon dioxide for adjacent fire. Cool containers with water.

**SPECIAL FIRE FIGHTING PROCEDURES:** Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.

**HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS:** Nitrogen oxides and ammonia.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

**PERSONAL PRECAUTIONS:** Wear appropriate respiratory and protective equipment to avoid all exposure to with the material.

**ENVIRONMENTAL PRECAUTIONS:** Prevent spillage from entering drains. Any release to the environment may be subject to a federal, national, or local reporting requirements.

**METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP:** Wear personal protective equipment. Evacuate and ventilate area. Neutralize spill. Absorbed neutralized spill with vermiculite or other inert absorbent material. Place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination.

## SECTION 7 HANDLING AND STORAGE

**PRECAUTIONS FOR SAFE HANDLING:** Wear approved personal protective equipment. Ensure adequate ventilation. Wash thoroughly after using. Keep container closed when not in use.

**CONDITIONS FOR SAFE STORAGE:** Store in a cool, dry, and well-ventilated area. Keep away from incompatible materials.

## SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

### OCCUPATIONAL EXPOSURE CONTROLS

Component	Exposure Limits		Basis	Entity
Ammonia	25 ppm	17 mg/m <sup>3</sup>	TLV	ACGIH
	35 ppm	24 mg/m <sup>3</sup>	STEL	ACGIH
	50 ppm	35 mg/m <sup>3</sup>	PEL	OSHA
	25 ppm	18 mg/m <sup>3</sup>	REL	NIOSH
	35 ppm	27 mg/m <sup>3</sup>	STEL	NIOSH

TWA: Time Weighted Average over 8 hours of work.

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit during x minutes.

IDLH: Immediately Dangerous to Life or Health

WEEL: Workplace Environmental Exposure Levels

CEIL: Ceiling

**EYE PROTECTION:** Wear chemical safety glasses with a face shield for splash protection.

**SKIN PROTECTION:** Wear neoprene or rubber gloves, apron, and other protective clothing appropriate to the risk of exposure.

**VENTILATION:** Provide local exhaust, preferably mechanical.

**RESPIRATOR:** Approved NIOSH dust respirator.

**ADDITIONAL PROTECTION:** Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling. Have supplies and equipment for neutralization and running water available.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

**COLOR AND FORM:** Colorless liquid

**MOLECULAR WEIGHT:** 35.04

**BOILING POINT:** 38-100° C at 1013 hPa

**MELTING POINT:** -60° C

**SPECIFIC GRAVITY:** 0.9 gm/ml

**ODOR:** Ammonia -like

**VAPOR PRESSURE:** Not available

**SOLUBILITY:** Soluble

## SECTION 10 STABILITY AND REACTIVITY

**STABILITY:** Stable

**HAZARDOUS POLYMERIZATION:** Will not occur

**CONDITIONS TO AVOID:** Incompatible materials

**INCOMPATIBILITY:** Acrylic acid, chlorosulfonic acid, dimethyl sulfate, fluorine, hydrochloric acid, hydrofluoric acid, hydrogen peroxide, iodine, nitric acid, oleum, propiolactone, propylene oxide, silver nitrate, silver oxide, nitromethane, silver permanganate, sulfuric acid, halogens. Forms explosive compounds with many heavy metals (silver, lead, zinc) and halide salts.

**DECOMPOSITION PRODUCTS:** Nitric oxides and ammonia.

## SECTION 11 TOXICOLOGICAL DATA

**ACUTE TOXICITY:** LD50 – rat – 350 mg/kg

**RTECS:** No data

**CARCINOGENIC EFFECTS:** No components of this product present at levels greater than or equal to 0.1% is identified as a confirmed carcinogen.

**MUTAGENIC EFFECTS:** For bacteria/yeast

**TETRATOGENIC EFFECTS:** Not available

To the best of our knowledge the toxicological effects of this compound have not been fully investigated.

## SECTION 12 ECOLOGICAL DATA

**AQUATIC VERTEBRATE:** LC50: 0.1 ppm 24 hours [Rainbow trout]. 8.2 mg/l 96 hours [Fathead minnow]. 0.1 ppm 48 hours [Bluegill]

**AQUATIC INVERTEBRATE:** LC50: 32 mg/l 50 hours [Daphnia magna]

## SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of in according to local, state, and federal regulations.

## SECTION 14 TRANSPORTATION DATA

UN2672

Ammonia Solution

Class 8

PGIII

Marine Pollutant: No

## SECTION 15 REGULATORY INFORMATION

**TSCA:** Listed on the TSCA inventory

**DSCL (EEC):** Listed on the DSCL inventory

**SARA 302/304:** Not listed

**SARA 311/312:** Ammonium Hydroxide

**SARA (TITLE 313):** Ammonium Hydroxide

**CALIFORNIA PROP. 65:** Not listed

## SECTION 16 OTHER INFORMATION

**DISCLAIMER:** The information herein is believed to be accurate and reliable as of the date compiled. However, Prochem, Inc. makes no representation, warranty, or guarantee of any kind with respect to the information in this document or any use of the product based on the information.

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