



IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
Immediately call a poison center or doctor/physician  
IF ON SKIN: Wash with plenty of soap and water  
Take off contaminated clothing and wash it before reuse  
If skin irritation occurs: Get medical advice/attention

**Other Hazards**

Toxic to aquatic life with long lasting effects

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Ammonium hydroxide	1336-21-6	1-10

\*\*If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.\*\*

### 4. FIRST-AID MEASURES

**First Aid Measures**

<b>Eye Contact</b>	Wash eyes thoroughly and immediately with water for at least 15 minutes. A 5% boric acid solution may be used in place of water. Speed is essential. Get medical attention promptly.
<b>Skin Contact</b>	Wash skin thoroughly and immediately with water. Take off contaminated clothing and wash it before reuse. Do not apply salves or ointments or cover burns with dressing. Injured areas should be covered with clean cloth prior to medical care. Do not attempt to neutralize the ammonium hydroxide. If skin irritation occurs: Get medical advice/ attention.
<b>Inhalation</b>	Take exposed person to fresh air. If unconscious, apply artificial respiration and oxygen as necessary. Get medical attention.
<b>Ingestion</b>	Not generally possible; however, if ingestion occurs drink large quantities of water followed by neutralizing agents such as dilute vinegar, lemon juice, orange juice, grapefruit juice or lime juice. Do not induce vomiting. Get medical attention.

**Most important symptoms and effects**

<b>Symptoms</b>	Causes skin irritation. Causes serious eye damage.
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**Indication of any immediate medical attention and special treatment needed**

<b>Notes to Physician</b>	Treat symptomatically.
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### 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media**

Carbon dioxide (CO<sub>2</sub>). Dry chemical. Water spray (fog).

**Unsuitable Extinguishing Media** Not determined.

**Specific Hazards Arising from the Chemical**

Not considered to be a fire hazard. Not considered to be an explosion hazard.

**Hazardous Combustion Products** Mixing with household bleach will cause a dangerous production of chlorine gas and oxygen.

**Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment and emergency procedures**

**Personal Precautions** Use personal protective equipment as required.

**Methods and material for containment and cleaning up**

**Methods for Containment** Contain spill to minimize ammonia vaporization.

**Methods for Clean-Up** Dilute with water and flush to local sewer system, if permitted. Solid waste must be disposed of in a permitted waste management facility. Ensure compliance with local, state and federal regulations.

**7. HANDLING AND STORAGE**

**Precautions for safe handling**

**Advice on Safe Handling** Handle in accordance with good industrial hygiene and safety practice. Wash face, hands, and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing and eye/face protection.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Store in cool, dry, ventilated area. Protect against physical damage. Keep separate from incompatibles.

**Incompatible Materials** Bleach. Silver. Mercury. Copper. Zinc.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Exposure Guidelines** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

**Appropriate engineering controls**

**Engineering Controls** Necessary to meet OSHA TLV.

**Individual protection measures, such as personal protective equipment**

**Eye/Face Protection** Safety glasses.

**Skin and Body Protection** Plastic gloves.

**Respiratory Protection** Ensure adequate ventilation, especially in confined areas.

**General Hygiene Considerations** Take all practical measures necessary to avoid contact.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Information on basic physical and chemical properties**

<b>Physical State</b>	Liquid	<b>Odor</b>	Pungent
<b>Appearance</b>	Clear liquid	<b>Odor Threshold</b>	Not determined
<b>Color</b>	Colorless		

<b><u>Property</u></b>	<b><u>Values</u></b>	<b><u>Remarks • Method</u></b>
<b>pH</b>	11.2-11.8	
<b>Melting Point/Freezing Point</b>	Not determined	
<b>Boiling Point/Boiling Range</b>	27 °C / 80.6 °F	
<b>Flash Point</b>	Not determined	
<b>Evaporation Rate</b>	Not available	
<b>Flammability (Solid, Gas)</b>	Liquid-Not applicable	
<b>Upper Flammability Limits</b>	Not determined	
<b>Lower Flammability Limit</b>	Not determined	
<b>Vapor Pressure</b>	590	at 37.8°C (100°F)
<b>Vapor Density</b>	0.59	at 0°C (32°F)
<b>Specific Gravity</b>	0.9825	
<b>Water Solubility</b>	Completely soluble	
<b>Solubility in other solvents</b>	Not determined	
<b>Partition Coefficient</b>	Not determined	
<b>Auto-ignition Temperature</b>	Not determined	
<b>Decomposition Temperature</b>	Not determined	
<b>Kinematic Viscosity</b>	Not determined	
<b>Dynamic Viscosity</b>	Not determined	
<b>Explosive Properties</b>	Not determined	
<b>Oxidizing Properties</b>	Not determined	

**10. STABILITY AND REACTIVITY**

**Reactivity**

Not reactive under normal conditions.

**Chemical Stability**

Stable under recommended storage conditions.

**Possibility of Hazardous Reactions**

None under normal processing.

**Hazardous Polymerization**      This substance does not polymerize.

**Conditions to Avoid**

Incompatible Materials.

**Incompatible Materials**

Bleach. Silver. Mercury. Copper. Zinc.

**Hazardous Decomposition Products**

Mixing with household bleach will cause a dangerous production of chlorine gas and oxygen.

**11. TOXICOLOGICAL INFORMATION**

**Information on likely routes of exposure**

**Product Information**

**Eye Contact**      Causes serious eye damage.

<b>Skin Contact</b>	Causes skin irritation.
<b>Inhalation</b>	Do not inhale.
<b>Ingestion</b>	Do not ingest.

**Component Information**

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Ammonium hydroxide 1336-21-6	= 350 mg/kg ( Rat )	-	-

**Information on physical, chemical and toxicological effects**

**Symptoms** Please see section 4 of this SDS for symptoms.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Carcinogenicity** This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

**Numerical measures of toxicity**

Not determined

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

Toxic to aquatic life with long lasting effects.

**Component Information**

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Ammonium hydroxide 1336-21-6		8.2: 96 h Pimephales promelas mg/L LC50		0.66: 48 h water flea mg/L EC50 0.66: 48 h Daphnia pulex mg/L EC50

**Persistence/Degradability**

Not determined.

**Bioaccumulation**

Not determined.

**Mobility**

Not determined

**Other Adverse Effects**

Not determined

## 13. DISPOSAL CONSIDERATIONS

**Waste Treatment Methods**

<b>Disposal of Wastes</b>	Disposal should be in accordance with applicable regional, national and local laws and regulations.
<b>Contaminated Packaging</b>	Disposal should be in accordance with applicable regional, national and local laws and regulations.

**California Hazardous Waste Status**

Chemical Name	California Hazardous Waste Status
Ammonium hydroxide 1336-21-6	Toxic Corrosive

**14. TRANSPORT INFORMATION**

**Note** Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

**DOT** Not regulated

**IATA** Not regulated

**IMDG**  
**Marine Pollutant** This material may meet the definition of a marine pollutant

**15. REGULATORY INFORMATION**

**International Inventories**

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Ammonium hydroxide	Present	X		Present		Present	X	Present	X	X

**Legend:**

- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
- EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- ENCS - Japan Existing and New Chemical Substances
- IECSC - China Inventory of Existing Chemical Substances
- KECL - Korean Existing and Evaluated Chemical Substances
- PICCS - Philippines Inventory of Chemicals and Chemical Substances
- AICS - Australian Inventory of Chemical Substances

**US Federal Regulations**

**CERCLA**

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Ammonium hydroxide 1336-21-6	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ

**SARA 313**

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Ammonium hydroxide - 1336-21-6	1336-21-6	4	1.0

**CWA (Clean Water Act)**

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Ammonium hydroxide	1000 lb			X

**US State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Ammonium hydroxide 1336-21-6	X	X	X

**16. OTHER INFORMATION**

<b>NFPA</b>	<b>Health Hazards</b>	<b>Flammability</b>	<b>Instability</b>	<b>Special Hazards</b>
	1	0	1	Not determined
<b>HMIS</b>	<b>Health Hazards</b>	<b>Flammability</b>	<b>Physical Hazards</b>	<b>Personal Protection</b>
	1	0	1	Not determined

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**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**