



# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

<b>Product Name</b>	<b>Aqua Ammonia 24-30%</b>
<b>CAS #</b>	Mixture
<b>Product use</b>	Manufacturing of fertilizers, pharmaceuticals, lubricants, household cleaners.
<b>Manufacturer</b>	SODROX Chemicals Ltd. 7040 Wellington Road 124, R.R. #6 Guelph, ON N1H 6J3 CA Business Phone: 519-837-2330 Fax: 519-837-3300 Emergency Phone: 1-800-363-6824

## 2. Hazards Identification

<b>Emergency overview</b>	DANGER TOXIC. CAUSES EYE BURNS. CAUSES SKIN BURNS.
<b>Potential short term health effects</b>	
<b>Routes of exposure</b>	Eye, Skin contact, Inhalation, Ingestion.
<b>Eyes</b>	Causes chemical burns. May cause blindness.
<b>Skin</b>	Causes chemical burns.
<b>Inhalation</b>	Harmful if inhaled. May cause respiratory tract irritation or chemical burns. Inhaled corrosive substances can lead to a toxic oedema of the lungs.
<b>Ingestion</b>	Harmful if swallowed. May cause chemical burns to mouth, throat and stomach.
<b>Target organs</b>	Eyes. Skin. Mucous membranes.
<b>Chronic effects</b>	Prolonged or repeated exposure to dilutions can cause drying, defatting and dermatitis.
<b>Signs and symptoms</b>	Harmful contact may not cause immediate pain. The product causes burns of eyes, skin and mucous membranes.
<b>OSHA Regulatory Status</b>	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
<b>Potential environmental effects</b>	See section 12.

## 3. Composition / Information on Ingredients

<b>Ingredient(s)</b>	<b>CAS #</b>	<b>Percent</b>
Ammonium hydroxide	1336-21-6	15 - 40

## 4. First Aid Measures

<b>First aid procedures</b>	
<b>Eye contact</b>	Immediately flush the contaminated eye(s) with lukewarm gently flowing water for at least 60 minutes, while holding the eyelid(s) open. Take care not to rinse contaminated water into the unaffected eye (or face). Get medical attention.
<b>Skin contact</b>	Under running water, remove contaminated clothing, shoes and leather goods. Continuously flush the contaminated area with lukewarm gently flowing water for at least 60 minutes. Obtain medical advice immediately.
<b>Inhalation</b>	If symptoms develop, move victim to fresh air. If symptoms persist, obtain medical attention. If breathing has stopped, trained personnel should administer CPR immediately. Symptoms of pulmonary edema can be delayed up to 48 hours after exposure.
<b>Ingestion</b>	Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.
<b>Notes to physician</b>	Symptoms may be delayed.

**General advice**

Avoid contact with eyes and skin. Keep out of reach of children. Immediate medical attention is required. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

## 5. Fire Fighting Measures

<b>Flammable properties</b>	Not flammable by WHMIS/OSHA criteria.
<b>Extinguishing media</b>	
<b>Suitable extinguishing media</b>	Treat for surrounding material.
<b>Unsuitable extinguishing media</b>	Not available
<b>Protection of firefighters</b>	
<b>Specific hazards arising from the chemical</b>	Not available
<b>Protective equipment for firefighters</b>	Firefighters should wear full protective clothing including self contained breathing apparatus.
<b>Hazardous combustion products</b>	May include and are not limited to: Oxides of nitrogen. Ammonia.
<b>Explosion data</b>	
<b>Sensitivity to mechanical impact</b>	Not available
<b>Sensitivity to static discharge</b>	Not available

## 6. Accidental Release Measures

<b>Personal precautions</b>	Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.
<b>Environmental precautions</b>	Prevent entry into waterways, sewers, basements or confined areas.
<b>Methods for containment</b>	Stop leak if you can do so without risk.
<b>Methods for cleaning up</b>	Before attempting clean up, refer to hazard data given above. Small spills may be absorbed with non-reactive absorbent and placed in suitable, covered, labelled containers. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice. Never return spills to original containers for re-use.

## 7. Handling and Storage

<b>Handling</b>	<p><b>DANGER -- CORROSIVE</b></p> <p>Use good industrial hygiene practices in handling this material.          Do not get in eyes, on skin or on clothing.          Avoid breathing mists or vapors.          Use only with adequate ventilation.          Wash thoroughly after handling.</p>
<b>Storage</b>	Keep out of the reach of children. Store in a cool, dry, well-ventilated place away from incompatible materials. Keep away from heat, open flames or other sources of ignition.

## 8. Exposure Controls / Personal Protection

<b>Exposure limits</b>	
<b>Ingredient(s)</b>	<b>Exposure Limits</b>
Ammonium hydroxide	<p><b>ACGIH-TLV</b> Not established</p> <p><b>OSHA-PEL</b> Not established</p>
<b>Engineering controls</b>	Local exhaust recommended.
<b>Personal protective equipment</b>	
<b>Eye / face protection</b>	Wear chemical goggles.
<b>Hand protection</b>	Chemical resistant (butyl, nitrile, viton rubber) Gloves. Confirm with a reputable supplier first.
<b>Skin and body protection</b>	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

**Respiratory protection**

A NIOSH- approved air purifying respirator.

**General hygiene considerations**

Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. Wash hands before breaks and immediately after handling the product.

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## 9. Physical and Chemical Properties

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<b>Appearance</b>	Clear
<b>Color</b>	Colourless
<b>Form</b>	Liquid
<b>Odor</b>	Irritating / Pungent
<b>Odor threshold</b>	Not available
<b>Physical state</b>	Liquid
<b>pH</b>	12 (neat)
<b>Melting point</b>	Not available
<b>Freezing point</b>	-103.00 °F (-75 °C)
<b>Boiling point</b>	80.60 °F (27 °C)
<b>Pour point</b>	Not available
<b>Evaporation rate</b>	Not available
<b>Flash point</b>	Not available
<b>Auto-ignition temperature</b>	Not available
<b>Flammability limits in air, lower, % by volume</b>	Not available
<b>Flammability limits in air, upper, % by volume</b>	Not available
<b>Vapor pressure</b>	475 MmHg @ 15.5°C
<b>Vapor density</b>	0.6 For Ammonia (air=1)
<b>Specific gravity</b>	Not available
<b>Octanol/water coefficient</b>	Not available
<b>Solubility (H2O)</b>	Complete
<b>Percent volatile</b>	Not available

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## 10. Stability and Reactivity

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<b>Reactivity</b>	Reacts violently with acids. This product may react with oxidizing agents.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Conditions to avoid</b>	Do not mix with other chemicals.
<b>Incompatible materials</b>	Acids. Oxidizing agents. Heavy metals Halogenated compounds.
<b>Hazardous decomposition products</b>	May include and are not limited to: Oxides of nitrogen. Ammonia.

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## 11. Toxicological Information

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### Component analysis - LC50

Ingredient(s)	LC50
Ammonium hydroxide	Not available

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### Component analysis - Oral LD50

Ingredient(s)	LD50
Ammonium hydroxide	350 mg/kg rat

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### Effects of acute exposure

<b>Eye</b>	Causes chemical burns. May cause blindness.
<b>Skin</b>	Causes chemical burns.
<b>Inhalation</b>	Harmful if inhaled. May cause respiratory tract irritation or chemical burns. Inhaled corrosive substances can lead to a toxic oedema of the lungs.
<b>Ingestion</b>	Harmful if swallowed. May cause chemical burns to mouth, throat and stomach.
<b>Sensitization</b>	Non-hazardous by WHMIS/OSHA criteria.

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<b>Chronic effects</b>	Non-hazardous by WHMIS/OSHA criteria.
<b>Carcinogenicity</b>	Non-hazardous by WHMIS/OSHA criteria.
<b>Mutagenicity</b>	Non-hazardous by WHMIS/OSHA criteria.
<b>Reproductive effects</b>	Non-hazardous by WHMIS/OSHA criteria.
<b>Teratogenicity</b>	Non-hazardous by WHMIS/OSHA criteria.
<b>Name of Toxicologically Synergistic Products</b>	Not available

## 12. Ecological Information

<b>Ecotoxicity</b>	Components of this product have been identified as having potential environmental concerns.	
<b>Ecotoxicity - Freshwater Fish - Acute Toxicity Data</b>		
Ammonium hydroxide	1336-21-6	96 Hr LC50 Pimephales promelas: 8.2 mg/L
<b>Ecotoxicity - Water Flea - Acute Toxicity Data</b>		
Ammonium hydroxide	1336-21-6	48 Hr EC50 water flea: 0.66 mg/L; 48 Hr EC50 Daphnia pulex: 0.66 mg/L
<b>Persistence / degradability</b>	Not available	
<b>Bioaccumulation / accumulation</b>	Not available	
<b>Mobility in environmental media</b>	Not available	
<b>Environmental effects</b>	Not available	
<b>Aquatic toxicity</b>	This product is toxic to fish and aquatic organisms.	
<b>Partition coefficient</b>	Not available	
<b>Chemical fate information</b>	Not available	
<b>Other adverse effects</b>	Not available	

## 13. Disposal Considerations

<b>Disposal instructions</b>	Review federal, state/provincial, and local government requirements prior to disposal.
<b>Waste from residues / unused products</b>	Not available
<b>Contaminated packaging</b>	Not available

## 14. Transport Information

### U.S. Department of Transportation (DOT)

**Basic shipping requirements:**

<b>Proper shipping name</b>	Ammonia solutions
<b>Hazard class</b>	8
<b>UN number</b>	UN2672
<b>Packing group</b>	III
<b>Additional information:</b>	
<b>Special provisions</b>	IB3, IP8, T7, TP1
<b>Packaging exceptions</b>	154
<b>ERG number</b>	154



## Transportation of Dangerous Goods (TDG - Canada)

### Basic shipping requirements:

Proper shipping name	AMMONIA SOLUTION, relative density between 0.880 and 0.957 at 15 °C in water, with more than 10 per cent but not more than 35 per cent ammonia
Hazard class	8
UN number	UN2672
Packing group	III



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## 15. Regulatory Information

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**Canadian federal regulations** 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.

### Canada - WHMIS - Ingredient Disclosure List

Ammonium hydroxide	1336-21-6	1 %
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**WHMIS status** Controlled

**WHMIS classification** Class D - Division 1B, Class E - Corrosive Material

### WHMIS labeling



### Occupational Safety and Health Administration (OSHA)

**29 CFR 1910.1200 hazardous chemical** Yes

**US Federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

### U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

Ammonium hydroxide	1336-21-6	1000 Lb final RQ; 454 kg final RQ
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### U.S. - CWA (Clean Water Act) - Hazardous Substances

Ammonium hydroxide	1336-21-6	Present
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### CERCLA (Superfund) reportable quantity

Ammonium hydroxide: 1000.0000

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

**Hazard categories** Immediate Hazard - Yes  
Delayed Hazard - No  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

**Section 302 extremely hazardous substance** No

**Section 311 hazardous chemical** Yes

**Clean Air Act (CAA)** Not available

**Clean Water Act (CWA)** Hazardous substance

**State regulations**

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

**U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances**

Ammonium hydroxide 1336-21-6 Present (refers to solutions >=4%)

**U.S. - Louisiana - Reportable Quantity List for Pollutants**

Ammonium hydroxide 1336-21-6 1000 Lb final RQ; 454 kg final RQ

**U.S. - Massachusetts - Right To Know List**

Ammonium hydroxide 1336-21-6 Present

**U.S. - New Jersey - Right to Know Hazardous Substance List**

Ammonium hydroxide 1336-21-6 sn 0103

**U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances**

Ammonium hydroxide 1336-21-6 1000 Lb RQ (air); 100 lb RQ (land/water)

**U.S. - Pennsylvania - RTK (Right to Know) List**

Ammonium hydroxide 1336-21-6 Environmental hazard

**Inventory name**

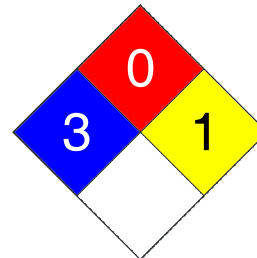
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

**16. Other Information**

LEGEND HMIS/NFPA	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

Health	/ 3
Flammability	0
Physical Hazard	1
Personal Protection	X

**Disclaimer**

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

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**Prepared by**

Dell Tech Laboratories Ltd. (519) 858-5021

## Other information

For an updated MSDS, please contact the supplier/manufacturer listed on the first page of the document.

This MSDS conforms to the ANSI Z400.1/Z129.1-2010 Standard.

Note: The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations.

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