Van London Co.
"When Accuracy Matters"

SAFETY DATA SHEET

1. Product and Company Identification

Product Name	Ammonium chloride / Ammonium hydroxide solution
Product Number	NA0IS01
Product Use	Calibration Solution, Ionic Strength Adjustor for Ion Selective Electrode
Manufacturer	Van London Company
Address	10540 Rockley Road, Houston, Texas 77099
Telephone	832-456-6641
Emergency Phone	832-456-6641

2. Hazards Identification

Signal word	Danger
Hazard Statement(s)	
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H400	Very toxic to aquatic life.
Precautionary statement(s)	
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P312 + P330	If swallowed: call a poison center or doctor if you feel unwell. Rinse mouth.
P301 + P330 + P331	If swallowed: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	If on skin (or hair): Remove immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 + P310	If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a Poison Center or doctor.
P305 + P351 + P338 + P310	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.
P363	Wash contaminated clothing before reuse.
P391	Collect spillage.
P405	Store locked up.
P501	Dispose of contents/container to an approed waste disposal plant.

Emergency Overview

OSHA Hazards

Causes Severe Skin Burns and Eye Damage

HMIS Classification

Health Hazard:	3
Flammability:	1
Physical Hazards:	0

NFPA Rating

Health Hazard:	3
Fire:	1
Reactivity Hazard:	0

Potential Health Effects

Inhalation:	No data available
Skin:	No data available
Eyes:	No data available
Ingestion:	No data available

3. Composition/Information on Ingredients

Component	CAS Number	Weight %
Ammonium hydroxide	1336-21-6	< 10
Ammonium chloride	12125-02-9	< 21
Deionized water	7732-18-5	> 69

4. First Aid Measures

Eye	Flush eyes with plenty of water for 15 minutes minimum. Consult a physician.
Skin	Wash off with soap and plenty of water. Remove contaminated clothing.
Inhalation	Move person into fresh air. If not breathing, give artificial respiration.
Ingestion	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Give victim water to drink (several liters if necessary) to dilute the product. Consult a physician immediately.

5. Fire Fighting Measures

Suitable extinguishing media	Use water spray, carbon dioxide, or dry chemicals.
Hazardous combustion products	Nitrogen oxides (NOx)
Special protective equipment for firefighters	Wear self contained breathing apparatus for fire fighting if necessary.

6. Accidental Release Measures

Personal precautions

Avoid breathing vapours, mist or gas. Ensure adequate centilation.

Environmental precautions

Do not allow to enter sewage system.

Methods and materials for containment and cleaning up

Soak up with inert absorbent material (such as sand or vermiculite) and collect for disposal.

7. Handling and Storage

Handling	Avoid contact with eyes. Avoid inhalation of vapour or mist. Wash thoroughly after handling.
Storage	Keep container tightly closed and upright in a dry and well-ventilated place. Store at ambient or lower temperature. Protect against physical damage.

8. Exposure Controls and Personal Protection

Exposure Limits	Contains no substances with occupational exposure limit values	
Engineering Controls	Maintain general industrial hygiene practices when using this product.	
Personal Protective Equipment	**Respiratory Protection**	Work under hood. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
	Hand Protection	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Wash and dry hands after handling.
	Eye Protection	Goggles or face mask.
	Skin and body protection	Impervious clothing.
	Hygiene measures	General industrial hygiene practice.

9. Physical and Chemical Properties

Appearance	Clear, colorless liquid
Odor	Ammonia odor (Pungent)
Odor Threshold	No data available
pH	9.1 - 11.5
Freezing Point	-10°C
Boiling Point	100°C
Flash Point	No data available
Evaporation rate	No data available
Flammability	No data available
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapor pressure	No data available
Solubility	Soluble in water
Vapor density	No data available
Relative density	No data available
Partition coefficient: n-octanol/water	No data available
Auto-Ignition temperature	No data available
Decomposition temperature	No data available
Density	No data available
Viscosity	No data available

10. Stability and Reactivity

Chemical Stability	Stable under recommended storage conditions.
Possibility of Hazardous reactions	No data available
Conditions to avoid	Heating
Materials to avoid	Strong oxidizing agents, strong alkalis, hydrochloric acid
Hazardous decomposition products	Nitrogen oxides

11. Toxicological Information

Signs and Symptoms of Overexposure		To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
Acute Effects	**Eye Contact**	No data available
	Skin Contact	No data available
	Inhalation	No data available
	Ingestion	No data available
	Germ Cell Mutagenicity	No data available
Target Organ Effects		No data available
Chronic Effects		No data available
Medical Conditions Aggravated by Exposure		No data available
Acute Toxicity Values	**Oral LD50**	Ammonium chloride: 1650 mg/kg rat; Ammonium hydroxide: 350 mg/kg rat
	Inhalation LC50	No data available
	Dermal LD50	No data available
Carcinogenicity	IARC	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
	ACGIH	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potentil carcinogen by ACGIH.
	NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated arcinogen by NTP.
	OSHA	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potentil carcinogen by OSHA.
Reproductive Toxicity		No data available
Teratogenicity		No data available
Specific target organ toxicity - single exposure		No data available
Specific target organ toxicity - repeated exposure		No data available
Aspiration Hazard		No data available
Potential Health Effects	**Inhalation**	No data available
	Ingestion	No data available
	Skin	No data available
	Eyes	No data available

12. Ecological Information

Toxicity	No data available
Persistence & degradability	No data available
Bioaccumulative potential	No data available
Mobility in soil	No data available
Other adverse effects	No data available

13. Disposal Considerations

Disposal method	Offer surplus and non-recyclable solutions to a licensed disposal company.
Contaminated packaging	Dispose of as unused product.

14. Transport Information

DOT (US)	Not Dangerous Goods
IATA	Not Dangerous Goods

15. Regulatory Information

OSHA Hazards No known OSHA hazards

SARA 302 Components No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components Ammonium hydroxide

SARA 311/312 Hazards Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

	CAS-No.	Revision Date
Ammonium hydroxide	1336-21-6	2007-03-01
Ammonium chloride	12125-02-9	1994-04-01

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Water	7732-18-5	
Ammonium hydroxide	1336-21-6	2007-03-01
Ammonium chloride	12125-02-9	1994-04-01

New Jersey Right To Know Components

	CAS-No.	Revision Date
Water	7732-18-5	
Ammonium hydroxide	1336-21-6	2007-03-01
Ammonium chloride	12125-02-9	1994-04-01

California Prop. 65 Components

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

16. Other Information

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Disclaimer The information contained herein is accurate to the best of our knowledge, but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Van London pHoenix Company makes no warranty of any kind, expressed, or implied, concerning the safe use of this material in your process or in combination with other substances. Van London pHoenix Company shall not be held liable for any damage resulting from handling or from contact with the above product.