Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS)

SECTION 1: Identification

1.1 Product Identifier

Ammonium chloride solution, 0.1 M

Other Identifying Product Numbers: 35803-00, 35803-71

1.2 Recommended Use and Restrictions on Use

Calibration Solution, Reference Fill Solution for Ion Selective Electrode.

1.3 Details of the Supplier of the Safety Data Sheet

Company: Cole-Parmer Instrument Company
Address: 625 East Bunker Court
Vernon Hills, IL 60061 USA
Telephone: 800-323-4340

1.4 Emergency Telephone Number

Van London Company: 832-456-6641

SECTION 2: Hazard(s) Identification

2.1 Classification of the Substance or Mixture

Classification according to GHS-US

Not classified as a hazardous chemical

2.2 *Hazard and Precautionary Statements*

Hazard Class	Category	Hazard Statement	Precautionary Statements
Acute toxicity (Oral)	Category 4	H302	P270

Hazard Statements:

Hazard Number	Hazard Statement
H302	Harmful if swallowed

Precautionary Statements:

Precautionary Number:	Precautionary Statement:
P270	Do not eat, drink or smoke when using this product.

2.4 Hazards not Otherwise Classified or Covered by GHS

Data not available

OAKTON INSTRUMENTS

Safety Data Sheet

SECTION 3: Composition / Information on Ingredients

3.1 Components of Substance or Mixture

Chemical Name	CAS Number	Weight %
Ammonium chloride	12125-02-9	0.53
Water	7732-18-5	99.47

SECTION 4: First-Aid Measures

4.1 General First Aid Information

Eye Contact: Flush eyes with plenty of water as a precaution.

Inhalation: Move person into fresh air. If not breathing, give artificial respiration.

Skin Contact: Wash off with soap and plenty of water.

Ingestion: Never give anything by mouth to an unconscious person. Rinse mouth with water.

4.2 Most Important Symptoms and Effects, Acute and Delayed

Data not available

4.3 Medical Attention or Special Treatment Needed

Not expected to require special treatment.

SECTION 5: Fire-Fighting Measures

5.1 Extinguishing Media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Specific Hazards Arising from the Substance or Mixture

Ammonia, Hydrogen chloride gas, nitrogen oxides (NOx).

5.3 Special Protective Equipment for Firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

SECTION 6: Accidental Release Measures

6.1 Personal Precautions, Protective Equipment and Emergency Procedures

Avoid breathing vapours, mist or gas. Ensure adequate centilation. Keep unprotected persons away.

6.2 Cleanup and Containment Methods and Materials

Keep in suitable, closed containers for disposal.

SECTION 7: Handling and Storage

7.1 Precautions for Safe Handling and Storage Conditions

Handling: Avoid contact with eyes. Avoid inhalation of vapour or mist. Wash hands 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.

SECTION 8: Exposure Controls / Personal Protection

8.1 Control Parameters

Chemical Name	Limit Type	Country	Exposure Limit	Information Source
Ammonium chloride	ACGIH STEL (mg/m^3)	USA	20 mg/m^3	ACGIH - Threshold Limit Values - Ceilings (TLC-C)

8.2 Exposure Controls

Engineering Controls: Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.

8.3 Personal Protective Equipment

Eye Protection: Safety glasses or goggles.

Respiratory Protection: In case of inadequate ventilation, wear respiratory protection. Normal room ventilation is adequate.

Skin Protection: Chemical resistant gloves

SECTION 9: Physical and Chemical Properties

9.1 Basic Physical and Chemical Properties

Appearance: Clear, colorless liquid

Physical State: Liquid

Odor: None

Odor Threshold: Data not available

pH: 5.4 - 8.0

Melting/Freezing Point: 0°C

Initial Boiling Point/Range: 100°C

Flash Point: Data not available

Evaporation Rate: Data not available

Flammability: Data not available

Flammability/Explosive Limits: Data not available

Vapor Pressure: Data not available

Vapor Density: Data not available

Relative Density: Data not available

Solubility: Miscible

Partition Coefficient: Data not available

Auto-Ignition Temperature: Data not available

Decomposition Temperature: Data not available

Viscosity: Data not available

Explosive Properties: Data not available

Oxidizing Properties: Data not available

SECTION 10: Stability and Reactivity

10.1 Reactivity and Chemical Stability

Stable under normal conditions of use and storage

10.2 Possibility of Hazardous Reactions

Data not available

10.3 Conditions to Avoid and Incompatible Materials

Strong acids., Direct sunlight, extremely high or low temperatures.

10.4 Hazardous Decomposition Products

Gaseous ammonia. Hydrogen chloride.

SECTION 11: Toxicological Information

11.1 Information on Toxicologocal Effects

Ammonium chloride	
LD50 oral rat	1410 mg/kg body weight (Other, Rat, Male/female, Experimental value)
LD50 dermal rat	> 2000 mg/kg body weight (EU Method B.3: Acute toxicity (dermal), 24 h, Rat, Male/female, Experimental value)
ATE US (oral)	1650 mg/kg body weight
Water	
LD50 oral rat	≥ 90000 mg/kg
ATE US (oral)	90000 ,g/kg body weight

Acute Toxicity - Oral Exposure:

Data not available

Acute Toxicity - Dermal Exposure:

Data not available

Acute Toxicity - Inhalation Exposure:

Data not available

Acute Toxicity - Other Information:

Data not available

Skin Corrosion and Irritation:

Data not available

Serious Eye Damage and Irritation:

Data not available

Respiratory Sensitization:

Data not available

Skin Sensitization:

Data not available

Germ Cell Mutagenicity:

Data not available

Carcinogenicity:

Data not available

Reproductive Toxicity:

Data not available

Specific Target Organ Toxicity from Single Exposure:

Data not available

Specific Target Organ Toxicity from Repeated Exposure:

Data not available

Aspiration Hazard:

Data not available

Additional Toxicology Information:

Data not available.

SECTION 12: Ecological Information

12.1 Ecotoxicity

Ammonium chloride	
LC50 fish 1	209 mg/l (96 h, Cyprinus carpio, Semi-static system, Fresh water, Experimental value)
EC50 Daphnia 1	101 mg/l (ASTM E729-80, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)

12.2 Persistence and Degradability

Data not available.

12.3 Bioaccumulative Potential

Data not available.

12.4 Mobility in Soil

Data not available.

12.5 Other Adverse Ecological Effects

Harmful to aquatic life.

SECTION 13: Disposal Considerations

13.1 Waste Treatment Methods

Consult local, state, or national rtegulations to ensure proper disposal.

SECTION 14: Transportation Information

14.1 Transportation by Land-Department of Transportation (DOT, United States of America)

Not regulated according to DOT Regulations.

SECTION 15: Regulatory Information

15.1 Occupational Safety and Health Administration (OSHA) Hazards

Not listed.

15.2 Superfund Amendments and Reauthorization Act (SARA) 302 Extremely Hazardous Substances

Ammonium chloride is listed.

15.3 Superfund Amendments and Reauthorization Act (SARA) 311/312 Hazardous Chemicals

Ammonium chloride is listed.

15.4 Superfund Amendments and Reauthorization Act (SARA) 313 Toxic Release Inventory (TRI)
Ammonium chloride is listed.

15.5 Massachusetts Right-to-Know Substance List
Ammonium chloride is listed.

15.6 Pennsylvania Right-to-Know Hazardous Substances
Ammonium chloride is listed.

15.7 New Jersey Worker and Community Right-to-Know Components
Ammonium chloride is listed.

15.8 California Proposition 65
Not listed.

15.9 Canada Domestic Substances List / Non-Domestic Substances List (DSL/NDSL)
Ammonium chloride. This substance is on the DSL.

15.10 United States of America Toxic Substances Control Act (TSCA) List
Ammonium chloride is listed.

15.11 European Inventory of Existing Commercial Chemical Substances (EINECS), European List of Notified Chemical Substances (ELINCS), and No Longer Polymers (NLP)
Not listed.

SECTION 16: Other Information

16.1 Miscellaneous Hazard Classes

Canadian Carcinogenicity Hazard Class: Not Applicable.
Physical Hazards Nor Otherwise Classified (PHNOC): Not Applicable.
Health Hazards Not Otherwise Classified (HHNOC): Not Applicable.
Biohazardous Infectious Materials Hazard Class: Not Applicable.

16.2 Hazardous Materials Identification System (HMIS) Rating

Chemical Name	
Health	0
Flammability	0
Physical Hazard	0

0 - Minimal Hazard
1 - Slight Hazard
2 - Moderate Hazard
3 - Serious Hazard
4 - Severe Hazard

16.3 Document Revision

Last Revision Date: 05/07/2019

DISCLAIMER

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and COLE-PARMER INSTRUMENT COMPANY assumes no legal responsibility or liability whatsoever resulting from its use.