

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Identifier

Product Name Ammonia Electrode Filling Solution
Product Number(s) 951209
Pure substance/mixture Mixture

Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Use as laboratory reagent
Uses advised against No Information available

Manufacturer/Supplier

Thermo Fisher Scientific©
Water and Lab Products
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1-978-232-6000

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Made in USA

Emergency Telephone 24 Hour Emergency Phone Number
CHEMTREC®
Within USA and Canada: 1-800-424-9300
Outside USA and Canada: 1-703-527-3887
(collect calls accepted)

2. HAZARDS IDENTIFICATION

Classification


OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Carcinogenicity	Category 1B
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Label Elements

Emergency Overview

Danger		
Hazard Statements May cause cancer		
		
Appearance Clear	Physical State Liquid	Odor None

Safety data sheet available on request

Precautionary Statements

Do not handle until all safety information has been read and understood.

Prevention

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required

Response

IF exposed or concerned: Get medical attention/advice

Storage

Store locked up

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

No information available

Other Information

Very toxic to aquatic life with long lasting effects
Very toxic to aquatic organisms

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %	Trade Secret
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Ammonium Chloride	12125-02-9	0 - 10%	*
Silver Nitrate	7761-88-8	0 - 10%	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First aid measures

General Advice	Use first aid treatment according to the nature of the injury. Get medical attention immediately if symptoms occur. Show this safety data sheet to the doctor in attendance.
Eye Contact	Rinse thoroughly with plenty of water, also under the eyelids. Obtain medical attention.
Skin Contact	Wash off immediately with soap and plenty of water for at least 15 minutes while removing all contaminated clothing and shoes. If skin reactions occur, contact a physician.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. If symptoms persist, obtain medical attention.
Ingestion	Clean mouth with water and drink afterwards plenty of water. Do not induce vomiting. Call a physician or Poison Control Center immediately.
Protection of First-aiders	Use personal protective equipment. See Section 8 for more detail. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Most important symptoms and effects, both acute and delayed

Most important symptoms/effects No information available

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media

No information available

Specific Hazards Arising from the Chemical

No information available

Explosion Data

Sensitivity to Mechanical Impact None

Sensitivity to Static Discharge None

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. Refer to Section 8. Evacuate personnel to safe areas.

Environmental Precautions

Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Methods and Material for Containment and Cleaning Up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Handling To avoid risks to human health and the environment, comply with the instructions for use
 Wear personal protective equipment
 Avoid breathing dust/fume/gas/mist/vapours/spray
 Ensure adequate ventilation, especially in confined areas

Conditions for Safe Storage, Including any Incompatibilities

Storage Keep container tightly closed in a dry and well-ventilated place
 Store at room temperature in the original container
 Keep away from direct sunlight

Incompatible Products No information available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ammonium Chloride 12125-02-9	TWA: 10 mg/m ³ STEL: 20 mg/m ³	(Vacated) TWA: 10 mg/m ³ (Vacated) STEL: 20 mg/m ³	TWA: 10 mg/m ³ STEL: 20 mg/m ³
Silver Nitrate 7761-88-8	TWA: 0.01 mg/m ³	(Vacated) TWA: 0.01 mg/m ³	IDLH: 10 mg/m ³ TWA: 0.01 mg/m ³

Appropriate engineering controls

Engineering Measures Showers
 Eyewash stations
 Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face Protection Wear chemical splash goggles. If splashes are likely to occur, wear: Face-shield.

Skin and Body Protection Wear protective gloves/clothing.

Respiratory Protection None required under normal usage. In case of inadequate ventilation wear respiratory protection.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State Liquid
Appearance Clear
Odor None
Odor Threshold No information available
pH Range 5.0 - 8.0

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Melting point/freezing point	No information available	
Boiling Point/Range	~ 100 °C / 212 °F	
Flash Point (High in °C)	N/A	
Evaporation Rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor Density	No information available	
Specific Gravity	No information available	
Water Solubility	Soluble in water	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition Temperature		
Decomposition Temperature	No information available	
Kinematic Viscosity	No information available	
Dynamic viscosity	No information available	
Explosive Properties	No information available	
Oxidizing Properties	No information available	

Other Information

Softening Point	No information available
Molecular Weight	No information available
VOC Content(%)	No information available
Density	No Information available
Bulk Density	No information available

10. STABILITY AND REACTIVITY

Reactivity

No Information available

Chemical Stability

Stable under normal conditions

Possibility of Hazardous Reactions

None under normal processing

Conditions to Avoid

Extremes of temperature and direct sunlight

Incompatible Materials

No information available

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating gases and vapors

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation	No information available
Eye Contact	No information available
Skin Contact	No information available
Ingestion	No information available

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ammonium Chloride 12125-02-9	= 1650 mg/kg (Rat)	-	-
Silver Nitrate 7761-88-8	= 1173 mg/kg (Rat)	-	-

Information on Toxicological Effects

Symptoms No information available

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

Sensitization No information available

Mutagenic Effects No information available

Carcinogenicity No information available.

Reproductive Effects No information available

STOT - single exposure No information available

STOT - repeated exposure No information available

Aspiration hazard No information available

Numerical measures of toxicity - Product Information

12. ECOLOGICAL INFORMATION

Ecotoxicity

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Component	Freshwater Algae	Freshwater Fish	Water Flea
Ammonium Chloride 12125-02-9	-	725: 24 h Lepomis macrochirus mg/L LC50 209: 96 h Cyprinus carpio mg/L LC50 static	202: 24 h Daphnia magna mg/L LC50
Silver Nitrate 7761-88-8	-	0.00512 - 0.00787: 96 h Poecilia reticulata mg/L LC50 semi-static 0.009 - 0.02: 96 h Lepomis macrochirus mg/L LC50 flow-through 0.0242 - 0.0484: 96 h Lepomis macrochirus mg/L LC50 semi-static 0.05 - 0.07: 96 h Lepomis macrochirus mg/L LC50 static 0.001339 - 0.001637: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 0.0027: 96 h Cyprinus carpio mg/L LC50 semi-static 0.00839 - 0.1802: 96 h Oncorhynchus mykiss mg/L LC50 static 0.00452 - 0.00638: 96 h Pimephales promelas mg/L LC50 flow-through 0.00181 - 0.00214: 96 h Pimephales promelas mg/L LC50 static 0.0064 - 0.0106: 96 h Pimephales promelas mg/L LC50 semi-static 0.009: 96 h Pimephales promelas mg/L LC50 0.0075: 96 h Oncorhynchus mykiss mg/L LC50 semi-static	0.0006: 48 h Daphnia magna mg/L EC50 0.0008 - 0.0011: 48 h Daphnia magna mg/L EC50 Static 0.0008 - 0.001: 48 h Daphnia magna mg/L EC50 Flow through

Persistence and Degradability

No information available

Bioaccumulation/ Accumulation

No information available

Mobility

No information available.

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste Disposal Methods Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging Improper disposal or reuse of this container may be dangerous and illegal.

Component	CAWAST
Silver Nitrate 7761-88-8	Toxic

14. TRANSPORT INFORMATION

DOT Not regulated

TDG Not regulated

MEX Not regulated

ICAO Not regulated

IATA Not regulated

IMDG/IMO Not regulated

RID Not regulated

ADR Not regulated

ADN Not regulated

15. REGULATORY INFORMATION

International Inventories

USINV	Complies
CANINV	Complies
EINECS/ELINCS	Complies
ENCS	Does not Comply
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

USINV/ TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

CANINV/ DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

ENCS - Japanese Existing and New Chemical Substances

IECSC - Chinese 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

U.S. Federal Regulations

SARA 313

Component	SARA 313 - Threshold Values %
Ammonium Chloride - 12125-02-9	1.0
Silver Nitrate - 7761-88-8	1.0

SARA 311/312 Hazardous Categorization

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

Component	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Ammonium Chloride 12125-02-9	5000 lb	-	-	X
Silver Nitrate 7761-88-8	1 lb	X	-	X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Component	Hazardous Substances RQs	CERCLA EHS RQs	RQ
Ammonium Chloride 12125-02-9	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ
Silver Nitrate 7761-88-8	1 lb	-	RQ 1 lb final RQ RQ 0.454 kg final RQ

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

State Right-to-Know

Component	New Jersey	Massachusetts	Pennsylvania
Ammonium Chloride 12125-02-9	X	X	X
Silver Nitrate 7761-88-8	X	X	X

U.S. EPA Label Information

No information available

16. OTHER INFORMATION

Prepared By Environmental, Health and Safety

Prepared For Thermo Fisher Scientific Inc.©

Issue Date No information available

Revision Date 18-May-2015

Expiration Date SDS is valid 3 years from revision date. Contact wai.techservbev@thermofisher.com for the latest revision.

Reason for revision Update to CLP Format

Disclaimer

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End of Safety Data Sheet