

MATERIAL SAFETY DATA SHEET
Part#27503-51

C-P# 27502-63,35802-63

SECTION I: GENERAL INFORMATION

PRODUCT NAME: Silver ISA 5M NaNO₃
MANUFACTURE'S NAME: pHOenix Electrode Company Houston, TX 77081
DISTRIBUTED BY: Cole-Parmer Instrument Company
ADDRESS: 625 E. Bunker Ct. Vernon Hills, IL 60061
PHONE: 888/462-5866 **FAX:** 847/247-2984

CHEMICAL NAME: Sodium Nitrate in Water
CHEMICAL FAMILY: salt solution
DOT SHIPPING INFO: N/A
IATA SHIPPING INFO: N/A

SECTION II: INGREDIENTS

CAS NO.	%	CHEMICAL NAME(S)	LD50 (mg/kg) oral-rat	OSHA/PEL ACGIH
TLV				
7631-99-4	42.5%	Sodium Nitrate	913	none
7732-18-5	57.5%	Water	-	none

SECTION III: PHYSICAL DATA

BOILING POINT: 100°C
SPECIFIC GRAVITY: 1.1
VAPOR PRESSURE: N/A
FREEZING POINT: -4°C
VAPOR DENSITY: N/A
pH: 5.5-7.5
WATER SOLUBILITY: Soluble
APPEARANCE & ODOR: Colorless, odorless liquid

SECTION IV: FIRE & EXPLOSION HAZARD DATA

FLASHPOINT: Not flammable
AUTOIGNITION TEMPERATURE: N/A
EXTINGUISHING MEDIA: Any
SPECIAL FIRE FIGHTING PROCEDURES: N/A
UNUSUAL FIRE & EXPLOSION HAZARDS: Nitrate may render other materials more combustibile if allowed to dry out upon them.

SECTION V: HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE: Dizziness, nausea, weakness if taken internally.

EMERGENCY & FIRST AID: Wash off affected area with water or induce vomiting if ingested.

EYES & SKIN: Wash off with large amounts of water for 15 minutes.

INGESTION/INHALATION: Internal-induce vomiting. Consult physician.

SECTION VI: REACTIVITY DATA

STABLE: yes

CONDITIONS TO AVOID: Storing near heat or incompatible chemicals

INCOMPATIBILITY: Reducing agents, B, BaS, Na acetate, Ti, S, trichloroethylene, charcoal

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of nitrogen upon heating to decomposition

HAZARDOUS POLYMERIZATION: Will not occur

SECTION VII: SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN: Dilute with water, and cover with soda ash, mix and scoop into a beaker of water, neutralize with HCl and wash down drain with excess water.

WASTE DISPOSAL METHOD: Add to a large container of water, stir in slight excess of soda ash. Let stand 24 hours. Neutralize with 6M HCl and wash down drain with excess water. Observe all federal, state, and local laws.

SECTION VIII: SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: N/A

VENTILATION: N/A

PROTECTIVE GLOVES: N/A

EYE PROTECTION: Safety goggles

OTHER PROTECTIVE EQUIPMENT: N/A

SECTION IX: SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING & STORAGE: Store at room temperature and keep cap tightly sealed to protect product integrity.

OTHER PRECAUTIONS: Sodium nitrate is listed in table 172.101 of Title 49 CFR.

ISSUE DATE: _____

NAME: Peter Boyle, R & D Director

SIGNATURE: _____

MATERIAL SAFETY DATA SHEET
Part#27503-09

C-P# 27502-63b

SECTION I: GENERAL INFORMATION

PRODUCT NAME: 1000 ppm Chloride Standard
MANUFACTURE'S NAME: pHoenix Electrode Company Houston, TX 77081
DISTRIBUTED BY: Cole-Parmer Instrument Company
ADDRESS: 625 E. Bunker Ct. Vernon Hills, IL 60061
PHONE: 800/323-4340 **FAX:** 847/247-2929

CHEMICAL NAME: Sodium Chloride in Water
CHEMICAL FAMILY: salt solution
DOT SHIPPING INFO: N/A
IATA SHIPPING INFO: N/A

SECTION II: INGREDIENTS

<u>CAS NO.</u>	<u>%</u>	<u>CHEMICAL NAME(S)</u>	<u>LD50 (mg/kg)</u> <u>oral-rat</u>	<u>OSHA/PEL</u> <u>ACGIH</u>
<u>TLV</u> 7647-14-5	0.2%	Sodium Chloride	8,000	none
7732-18-5	99.8%	Water	-	none

SECTION III: PHYSICAL DATA

BOILING POINT: 100°C
SPECIFIC GRAVITY: 1
VAPOR PRESSURE: N/A
FREEZING POINT: 0°C
VAPOR DENSITY: N/A
pH: 5.5-7.5
WATER SOLUBILITY: Soluble
APPEARANCE & ODOR: Clear, colorless, odorless solution

SECTION IV: FIRE & EXPLOSION HAZARD DATA

FLASHPOINT: Not flammable
AUTOIGNITION TEMPERATURE: N/A
EXTINGUISHING MEDIA: Any
SPECIAL FIRE FIGHTING PROCEDURES: N/A
UNUSUAL FIRE & EXPLOSION HAZARDS: N/A

SECTION V: HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE: Because of this low concentration of salt (less than 1%), this product is not considered to be hazardous.

EMERGENCY & FIRST AID: Wash off skin or eyes with water.

EYES & SKIN: May cause stinging or irritation in an open cut. Flush with water.

INGESTION/INHALATION: None reported.

SECTION VI: REACTIVITY DATA

STABLE: yes

CONDITIONS TO AVOID: none

INCOMPATIBILITY: none

HAZARDOUS DECOMPOSITION PRODUCTS: none

HAZARDOUS POLYMERIZATION: will not occur

SECTION VII: SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN: Clean up and wash down drain.

WASTE DISPOSAL METHOD: Wash down drain. Observe all state, federal, and local laws.

SECTION VIII: SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: N/A

VENTILATION: N/A

PROTECTIVE GLOVES: N/A

EYE PROTECTION: N/A

OTHER PROTECTIVE EQUIPMENT: N/A

SECTION IX: SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING & STORAGE: N/A

OTHER PRECAUTIONS: Keep solution sealed and at room temperature to insure product quality.

ISSUE DATE: _____

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SECTION I: GENERAL INFORMATION

PRODUCT NAME: Reference Fill Solution, 1M KNO₃
MANUFACTURE'S NAME: pHoenix Electrode Company Houston, TX 77081
DISTRIBUTED BY: Cole-Parmer Instrument Company
ADDRESS: 625 E. Bunker Ct. Vernon Hills, IL 60061
PHONE: 888/462-5866 **FAX:** 847/247-2984

CHEMICAL NAME: Potassium Nitrate/Wetting Agent in Water
CHEMICAL FAMILY: salt solution
DOT SHIPPING INFO: Testing by Bureau of Explosives has indicated that this is not an oxidizer.
IATA SHIPPING INFO: Testing by Bureau of Explosives has indicated that this is not an oxidizer.

SECTION II: INGREDIENTS

CAS NO.	%	CHEMICAL NAME(S)	LD50 (mg/kg) oral-rat	OSHA/PEL ACGIH
<u>TLV</u>				
7757-79-1	10%	Potassium Nitrate	100	none
N/A	trace	Wetting Agent	-	none
7732-18-5	90%	Water	-	none

SECTION III: PHYSICAL DATA

BOILING POINT: 100°C
SPECIFIC GRAVITY: 1.06
VAPOR PRESSURE: N/A
FREEZING POINT: -4°C
VAPOR DENSITY: N/A
pH: 5.5-7.5
WATER SOLUBILITY: Soluble
APPEARANCE & ODOR: Odorless liquid

SECTION IV: FIRE & EXPLOSION HAZARD DATA

FLASHPOINT: Not flammable
AUTOIGNITION TEMPERATURE: N/A
EXTINGUISHING MEDIA: Any
SPECIAL FIRE FIGHTING PROCEDURES: N/A
UNUSUAL FIRE & EXPLOSION HAZARDS: Nitrate may render other materials more combustibile if allowed to dry out upon them.

SECTION V: HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE: Dizziness, nausea, weakness.

EMERGENCY & FIRST AID: Wash off contact area with water.

EYES & SKIN: Wash off with large amounts of water for 15 minutes.

INGESTION/INHALATION: Induce vomiting. Consult physician.

SECTION VI: REACTIVITY DATA

STABLE: yes

CONDITIONS TO AVOID: Storing near heat or incompatible chemicals

INCOMPATIBILITY: Reducing agents, B, BaS, Na acetate, Ti, S, trichloroethylene, charcoal.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxidizes of nitrogen upon heating to decomposition.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION VII: SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN: Dilute with water, and cover with soda ash, mix and scoop into a beaker of water, neutralize with HCl and wash down drain with excess water.

WASTE DISPOSAL METHOD: Add to a large container of water stir in slight excess of soda ash. Let stand 24 hours. Neutralize with 6M HCl and wash down drain with excess water. Observe all federal, state, and local laws.

SECTION VIII: SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: N/A

VENTILATION: N/A

PROTECTIVE GLOVES: N/A

EYE PROTECTION: Safety goggles

OTHER PROTECTIVE EQUIPMENT: N/A

SECTION IX: SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING & STORAGE: Store at room temperature and keep cap tightly sealed to protect product integrity.

OTHER PRECAUTIONS: Potassium nitrate is listed in table 172-101 of title 49 CFR.

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