



Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS 2024)

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation Mixed Calibration Standard 1A, ICP

Product Number RMXCL1A

Other Identifying Product Numbers RMXCL1A-100, RMXCL1A-500

1.2. Recommended Use and Restrictions on Use

General Laboratory Reagent

1.3. Details of the Supplier of the Safety Data Sheet

Company Ricca Chemical Company

Address 412 West Fork Drive

Arlington, TX 76012 USA

Telephone 888-467-4222

1.4. Emergency Telephone Number (24 hours)

CHEMTREC (USA) 800-424-9300

CHEMTREC (International) 1+ 703-527-3887

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SECTION 2: Hazard(s) Identification

2.1. Classification of the Substance or Mixture

Hazard Class	Category	Hazard Statements	Precautionary Statements
Skin Corrosion / Irritation	Category 2	H315	P264,P280,P302+P352,P321,P332+P313,P362+P364
Serious Eye Damage / Eye Irritation	Category 1	H318	P280,P305+P351+P338,P310
Corrosive to Metals	Category 1	H290	P234,P390,P406

2.2. GHS Label Elements

Pictograms:



Signal Word: Danger

Hazard Statements:

NOTE: Hazard statements may be combined on labels to improve clarity and readability.

Hazard Number	Hazard Statement
H290	May be corrosive to metals
H315	Causes skin irritation
H318	Causes serious eye damage

Precautionary Statements:

NOTE: Precautionary statements may be combined or consolidated on labels to improve clarity and readability.

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Prevention

Precautionary Number	Precautionary Statement
P234	Keep only in original packaging.
P264	Wash hands, arms, and face thoroughly after handling.
P280	Wear protective gloves and eye protection.

Response

Precautionary Number	Precautionary Statement
P302+P352	IF ON SKIN: Wash with plenty of water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a poison center or doctor.
P332+P313	If skin irritation occurs: Get medical advice or attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P390	Absorb spillage to prevent material damage.

2.3. Hazards not Otherwise Classified

No other hazards identified.

2.4. Ingredients of Unknown Acute Toxicity

4.8 percent of this mixture consists of ingredient(s) of unknown acute oral toxicity. 4.9 percent of this mixture consists of ingredient(s) of unknown acute dermal toxicity.

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SECTION 3: Composition / Information on Ingredients

3.1. Components of Mixture

Chemical Name (IUPAC)	Common Name and Synonyms	CAS Number	Weight%
water	Water	7732-18-5	95.11
nitric acid	Nitric Acid	7697-37-2	4.81
calcium carbonate	Calcium Carbonate; Carbonic acid, calcium salt	471-34-1	< 0.1
boric acid	Boric Acid; orthoboric acid; boracic acid	10043-35-3	< 0.1
arsenic (III) oxide	Arsenic Trioxide; Diarsenic trioxide; White arsenic	1327-53-3	< 0.1
manganese(2+) dinitrate hydrate	Manganous Nitrate Tetrahydrate; Nitric acid, manganese(2+) salt, hydrate; Manganese(II) nitrate hydrate	15710-66-4	< 0.1
(2R,3R)-2,3-dihydroxybutanedioic acid	Tartaric Acid; (+)-Tartaric acid; L-Tartaric acid	87-69-4	< 0.1
antimony	Antimony	7440-36-0	< 0.1
selenium	Selenium	7782-49-2	< 0.1
cadmium	Cadmium	7440-43-9	< 0.1
copper	Copper	7440-50-8	< 0.1
barium nitrate	Barium Nitrate	10022-31-8	< 0.1
silver nitrate	Silver Nitrate; Nitric acid, silver(1+) salt	7761-88-8	< 0.1
ammonium hydroxide	Ammonium Hydroxide; Aqueous ammonia	1336-21-6	< 0.1
chlorane	Hydrochloric Acid; Muriatic acid	7647-01-0	< 0.1

SECTION 4: First-Aid Measures

4.1. Description of Necessary Measures

Eye Contact: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. May cause irritation, redness, pain, and tearing.

Ingestion: Dilute with water or milk. Do not induce vomiting. Call a physician if necessary.

Inhalation: Not expected to require first aid. If necessary, remove to fresh air.

Skin Contact: IF ON SKIN: Wash with plenty of water. May cause irritation, redness and pain. Contact will discolor skin yellow-brown depending on exposure which will wear off after a period of time.

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4.2. Most Important Symptoms and Effects, Acute and Delayed

Causes skin irritation Contains low levels of known carcinogens. Corrosive Liquid. Avoid contact with skin, eyes, and clothing. Avoid breathing vapor. If swallowed, do not induce vomiting. Dilute with water and call a physician. Wash areas of contact with plenty of water. EYE CONTACT: May cause irritation, redness, pain, and tearing. SKIN CONTACT: May cause irritation, redness and pain. Contact will discolor skin yellow-brown depending on exposure which will wear off after a period of time.

4.3. Immediate Medical Attention or Special Treatment Needed

Immediately call a poison center or doctor. Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops. Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen. Flush with plenty of water for at least 15 minutes. Call a physician if irritation develops. Dilute with water or milk. Do not induce vomiting. Call a physician if necessary.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing Media

Use water or water spray.

5.2. Specific Hazards Arising from the Substance or Mixture in a Fire

Not combustible, but substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition. Can react with metals to release flammable hydrogen gas.

5.3. Special Protective Equipment and Precautions for Firefighters

Use protective clothing and breathing equipment appropriate for the surrounding fire.

SECTION 6: Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Wear protective gloves and eye protection.

6.2. Cleanup and Containment Methods and Materials

Do not flush to sewer. Absorb with suitable material. Containerize for disposal with a hazardous waste disposal facility. Dispose of in accordance with local regulations.

SECTION 7: Handling and Storage

7.1. Precautions for Safe Handling and Storage Conditions

As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage.

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SECTION 8: Exposure Controls / Personal Protection

8.1. Exposure Limits

U.S. OSHA - Permissible Exposure Limits (PEL) - Time Weighted Averages (TWA)

Chemical Name	CAS Number	Exposure Limit
Barium Nitrate	10022-31-8	"0.5 mg/m ³ TWA (regulated under CAS 7440-39-3, as Ba)" As Barium, soluble compounds [RR-00049-7]
Arsenic Trioxide	1327-53-3	"10 µg/m ³ TWA (as As)" As Arsenic, inorganic compounds [RR-00065-7]
Ammonium Hydroxide	1336-21-6	"50 ppm TWA; 35 mg/m ³ TWA" As Ammonia [7664-41-7]
Calcium Carbonate	471-34-1	"15 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable fraction)" As Calcium carbonate [1317-65-3]
Antimony	7440-36-0	0.5 mg/m ³ TWA
Cadmium	7440-43-9	5 µg/m ³ TWA
Copper	7440-50-8	0.1 mg/m ³ TWA (fume); 1 mg/m ³ TWA (dust and mist)
Nitric Acid	7697-37-2	2 ppm TWA; 5 mg/m ³ TWA
Silver Nitrate	7761-88-8	"0.01 mg/m ³ TWA (as Ag)" As Silver soluble compounds [RR-00041-9]

U.S. OSHA - Permissible Exposure Limits (PEL) - Ceiling Limits

Chemical Name	CAS Number	Exposure Limit
Manganous Nitrate Tetrahydrate	15710-66-4	"5 mg/m ³ Ceiling (as Mn)" As Manganese compounds [RR-00602-0]
Cadmium	7440-43-9	0.3 mg/m ³ Ceiling (applies to any operations or sectors for which the Cadmium standard is stayed or otherwise not in effect, fume); 0.6 mg/m ³ Ceiling (applies to any operations or sectors for which the Cadmium standard is stayed or otherwise not in effect, dust)
Hydrochloric Acid	7647-01-0	5 ppm Ceiling; 7 mg/m ³ Ceiling

U.S. OSHA - Permissible Exposure Limits (PEL) - Short Term Exposure Limits (STEL)

No limits found.

U.S. OSHA - Specifically Regulated Chemicals

Chemical Name	CAS Number	Exposure Limit
Arsenic Trioxide	1327-53-3	"10 µg/m ³ TWA (See 29 CFR 1910.1018; except Arsine, as As); 5 µg/m ³ Action Level (as As)" As Inorganic arsenic compounds [RR-00065-7]
Cadmium	7440-43-9	5 µg/m ³ TWA (See 29 CFR 1910.1027); 2.5 µg/m ³ Action Level

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ACGIH - Threshold Limit Values - Ceilings (TLV-C)

Chemical Name	CAS Number	Exposure Limit
Hydrochloric Acid	7647-01-0	2 ppm Ceiling

ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)

Chemical Name	CAS Number	Exposure Limit
Boric Acid	10043-35-3	6 mg/m3 STEL (inhalable particulate matter, listed under Borate compounds, inorganic)
Ammonium Hydroxide	1336-21-6	"35 ppm STEL" As Ammonia [7664-41-7]
Nitric Acid	7697-37-2	4 ppm STEL

ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

Chemical Name	CAS Number	Exposure Limit
Barium Nitrate	10022-31-8	"0.5 mg/m3 TWA (as Ba)" As Barium soluble compounds [RR-00049-7]
Boric Acid	10043-35-3	2 mg/m3 TWA (inhalable particulate matter, listed under Borate compounds, inorganic)
Arsenic Trioxide	1327-53-3	"0.01 mg/m3 TWA (as As)" As Arsenic inorganic compounds [RR-00065-7]
Ammonium Hydroxide	1336-21-6	"25 ppm TWA" As Ammonia [7664-41-7]
Manganous Nitrate Tetrahydrate	15710-66-4	"0.02 mg/m3 TWA (respirable particulate matter, as Mn); 0.1 mg/m3 TWA (inhalable particulate matter, as Mn)" As Manganese inorganic compounds [RR-03861-9]
Antimony	7440-36-0	0.5 mg/m3 TWA
Cadmium	7440-43-9	0.01 mg/m3 TWA; 0.002 mg/m3 TWA (respirable particulate matter)
Copper	7440-50-8	0.2 mg/m3 TWA (fume)
Nitric Acid	7697-37-2	2 ppm TWA
Silver Nitrate	7761-88-8	"0.01 mg/m3 TWA (as Ag)" As Silver soluble compounds [RR-00041-9]
Selenium	7782-49-2	0.2 mg/m3 TWA

8.2. Engineering Controls

No specific controls are needed. Normal room ventilation is adequate.

8.3. Individual Protective Measures and Personal Protective Equipment

Respiratory Protection: Normal room ventilation is adequate.

Skin Protection: Chemical resistant gloves.

Eye Protection: Safety glasses or goggles.

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SECTION 9: Physical and Chemical Properties

9.1. Basic Physical and Chemical Properties

Physical State:	liquid
Color:	Colorless
Odor:	Data not available.
Odor Threshold:	Data not available.
Melting/Freezing Point:	Approximately 0°C
Boiling Point/Range:	Approximately 100°C
Flammability:	Data not available.
Flammability/Explosive Limits:	Data not available.
Flash Point:	Not flammable
Auto-Ignition Temperature:	Data not available.
Decomposition Temperature:	Data not available.
pH:	Data not available.
Kinematic Viscosity:	Data not available.
Solubility:	miscible
Vapor Pressure:	Data not available.
Evaporation Rate:	Data not available.
Relative Density:	1.03
Relative Vapor Density:	Data not available.
Particle Characteristics:	Data not available.
Partition Coefficient n-octanol/water, log	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

Keep only in original packaging. Strong bases, metallic powders.

10.4. Hazardous Decomposition Products

Will not occur.

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SECTION 11: Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity - Oral Exposure:

Not acutely toxic.

Chemical Name	CAS Number	Toxicity
Barium Nitrate	10022-31-8	Oral LD50 Rat 300 mg/kg (Source: ECHA)
Boric Acid	10043-35-3	Oral LD50 Rat 2660 mg/kg (Source: JAPAN_GHS)
Arsenic Trioxide	1327-53-3	Oral LD50 Acute Toxicity Estimate 5 mg/kg (Source: ECHA)
Calcium Carbonate	471-34-1	Oral LD50 Rat 6450 mg/kg (Source: NLM_CIP)
Cadmium	7440-43-9	Oral LD50 Rat 2300 mg/kg (Source: Canada_WHMIS)
Copper	7440-50-8	Oral LD50 Mouse 413 mg/kg (Source: Canada_WHMIS)
Hydrochloric Acid	7647-01-0	Oral LD50 Rat 700 mg/kg (Source: Canada_WHMIS)
Silver Nitrate	7761-88-8	Oral LD50 Rat 1173 mg/kg (Source: NLM_CIP)
Selenium	7782-49-2	Oral LD50 Acute Toxicity Estimate 100 mg/kg (Source: ECHA)

Acute Toxicity - Dermal Exposure:

No information found.

Chemical Name	CAS Number	Toxicity
Calcium Carbonate	471-34-1	Dermal LD50 Rat >2000 mg/kg (Source: ECHA_API)
Hydrochloric Acid	7647-01-0	Dermal LD50 Rabbit >5010 mg/kg (Source: JAPAN_GHS)
Silver Nitrate	7761-88-8	Dermal LD50 Rat >2000 mg/kg (Source: ECHA_API)
Tartaric Acid	87-69-4	Dermal LD50 Rat >2000 mg/kg (Source: ECHA_API)

Acute Toxicity - Inhalation Exposure:

Not acutely toxic.

Chemical Name	CAS Number	Toxicity
Barium Nitrate	10022-31-8	Inhalation LC50 Acute Toxicity Estimate 1.5 mg/L 4 h (Source: ECHA)
Arsenic Trioxide	1327-53-3	Inhalation LC50 Acute Toxicity Estimate 0.5 mg/L 4 h (Source: ECHA)
Ammonium Hydroxide	1336-21-6	Inhalation LC50 Acute Toxicity Estimate 3 mg/L 4 h (Source: ECHA)
Calcium Carbonate	471-34-1	Inhalation LC50 Rat >3 mg/L 4 h (no deaths occurred, aerosol, Source: ECHA_API)
Cadmium	7440-43-9	Inhalation LC50 Rat 25 mg/m3 30 min (Source: NLM_CIP)
Copper	7440-50-8	Inhalation LC50 Rat >5.11 mg/L 4 h (no deaths occurred, dust, Source: ECHA)
Hydrochloric Acid	7647-01-0	Inhalation LC50 Acute Toxicity Estimate 0.5 mg/L 4 h (Source: ECHA)
Nitric Acid	7697-37-2	Inhalation LC50 Rat 3.22 mg/L 4 h (Source: WHMIS)
Silver Nitrate	7761-88-8	Inhalation LC50 Rat >750 µg/m3 4 h (no deaths occurred, aerosol, Source: ECHA_API)
Selenium	7782-49-2	Inhalation LC50 Acute Toxicity Estimate 0.5 mg/L 4 h (Source: ECHA)

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11.2 Carcinogenicity:

International Agency for Research on Cancer (IARC)

Chemical Name	CAS Number	Classification
Arsenic Trioxide	1327-53-3	Group 1 (Carcinogenic to Humans) - Supplement 7 [1987] (listed under Arsenic and arsenic compounds)
Cadmium	7440-43-9	Group 1 (Carcinogenic to Humans) - Monograph 100C [2012]; Monograph 58 [1993]; Supplement 7 [1987]
Hydrochloric Acid	7647-01-0	Group 1 (Carcinogenic to Humans) - Monograph 100F [2012]; Monograph 54 [1992] As Acid mists, strong inorganic
Nitric Acid	7697-37-2	Group 1 (Carcinogenic to Humans) - Monograph 100F [2012]; Monograph 54 [1992] As Acid mists, strong inorganic
Selenium	7782-49-2	Group 3 (Not Classified) - Supplement 7 [1987]; Monograph 9 [1975]

National Toxicology Program (NTP)

Chemical Name	CAS Number	Classification
Boric Acid	10043-35-3	Male Rat - Not Tested; Female Rat - Not Tested; Male Mice - No Evidence; Female Mice - No Evidence (TR-324)
Arsenic Trioxide	1327-53-3	"Known Human Carcinogen" As Arsenic, inorganic compounds [RR-00065-7]
Cadmium	7440-43-9	Known Human Carcinogen

U.S. OSHA specifically regulated carcinogens

Chemical Name	CAS Number	Classification
Arsenic Trioxide	1327-53-3	"see 29 CFR 1910.1018 (except Arsine)" As Inorganic arsenic compounds [RR-00065-7]
Cadmium	7440-43-9	see 29 CFR 1910.1027

11.3 Additional Toxicology Information:

Causes skin irritation. Causes serious eye damage.

SECTION 12: Ecological Information

12.1. Ecotoxicity

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Chemical Name	CAS Number	Species	Exposure	Toxicity
Boric Acid	10043-35-3	Avian	Dietary	LC50 5 Days Anas platyrhynchos >5620 ppm [Diet] (IUCILID); LC50 5 Days Colinus virginianus >5620 ppm [Diet] (IUCILID)
Copper	7440-50-8	Freshwater Algae	Acute	EC50 72 h Pseudokirchneriella subcapitata 0.0426 - 0.0535 mg/L [static] (EPA); EC50 96 h Pseudokirchneriella subcapitata 0.031 - 0.054 mg/L [static] (EPA)
Arsenic Trioxide	1327-53-3	Freshwater Fish	Acute	LC50 96 h Pimephales promelas 135 mg/L (IUCILID); LC50 96 h Oncorhynchus mykiss 18.8 - 21.4 mg/L [flow-through] (EPA); LC50 96 h Oncorhynchus mykiss >1000 mg/L [static] (EPA)
Ammonium Hydroxide	1336-21-6	Freshwater Fish	Acute	LC50 96 h Pimephales promelas 8.2 mg/L
Cadmium	7440-43-9	Freshwater Fish	Acute	LC50 96 h Oncorhynchus mykiss 0.003 mg/L [flow-through] (EPA); LC50 96 h Oncorhynchus mykiss 0.006 mg/L [static] (EPA); LC50 96 h Cyprinus carpio 0.002 mg/L (EPA); LC50 96 h Cyprinus carpio 4.26 mg/L [semi-static] (EPA); LC50 96 h Cyprinus carpio 0.24 mg/L [static] (EPA); LC50 96 h Lepomis macrochirus 21.1 mg/L [flow-through] (EPA); LC50 96 h Oryzias latipes 0.016 mg/L (EPA); LC50 96 h Pimephales promelas 0.0004 - 0.003 mg/L (EPA)
Copper	7440-50-8	Freshwater Fish	Acute	LC50 96 h Pimephales promelas 0.0068 - 0.0156 mg/L (EPA); LC50 96 h Pimephales promelas <0.3 mg/L [static] (EPA); LC50 96 h Pimephales promelas 0.2 mg/L [flow-through] (EPA); LC50 96 h Oncorhynchus mykiss 0.052 mg/L [flow-through] (EPA); LC50 96 h Lepomis macrochirus 1.25 mg/L [static] (EPA); LC50 96 h Cyprinus carpio 0.3 mg/L [semi-static] (EPA); LC50 96 h Cyprinus carpio 0.8 mg/L [static] (EPA); LC50 96 h Poecilia reticulata 0.112 mg/L [flow-through] (EPA)

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Silver Nitrate	7761-88-8	Freshwater Fish	Acute	LC50 96 h <i>Poecilia reticulata</i> 0.00512 - 0.00787 mg/L [semi-static] (EPA); LC50 96 h <i>Lepomis macrochirus</i> 0.009 - 0.02 mg/L [flow-through] (EPA); LC50 96 h <i>Lepomis macrochirus</i> 0.0242 - 0.0484 mg/L [semi-static] (EPA); LC50 96 h <i>Lepomis macrochirus</i> 0.05 - 0.07 mg/L [static] (EPA); LC50 96 h <i>Oncorhynchus mykiss</i> 0.001339 - 0.001637 mg/L [flow-through] (EPA); LC50 96 h <i>Oncorhynchus mykiss</i> 0.0075 mg/L [semi-static] (EPA); LC50 96 h <i>Oncorhynchus mykiss</i> 0.00839 - 0.1802 mg/L [static] (EPA); LC50 96 h <i>Pimephales promelas</i> 0.00452 - 0.00638 mg/L [flow-through] (EPA); LC50 96 h <i>Pimephales promelas</i> 0.00181 - 0.00214 mg/L [static] (EPA); LC50 96 h <i>Pimephales promelas</i> 0.0064 - 0.0106 mg/L [semi-static] (EPA); LC50 96 h <i>Pimephales promelas</i> 0.009 mg/L (IUCLID); LC50 96 h <i>Cyprinus carpio</i> 0.0027 mg/L [semi-static] (EPA)
Selenium	7782-49-2	Freshwater Fish	Acute	LC50 96 h <i>Oncorhynchus mykiss</i> >100 mg/L [semi-static] (ECHA)
Tartaric Acid	87-69-4	Freshwater Fish	Acute	LC50 96 h <i>Danio rerio</i> >100 mg/L [static] (ECHA)
Boric Acid	10043-35-3	Water Flea	Acute	EC50 48 h <i>Daphnia magna</i> 115 - 153 mg/L (EPA)
Ammonium Hydroxide	1336-21-6	Water Flea	Acute	EC50 48 h water flea 0.66 mg/L; EC50 48 h <i>Daphnia pulex</i> 0.66 mg/L
Cadmium	7440-43-9	Water Flea	Acute	EC50 48 h <i>Daphnia magna</i> 0.0244 mg/L [Static] (EPA)
Copper	7440-50-8	Water Flea	Acute	EC50 48 h <i>Daphnia magna</i> 0.03 mg/L [Static] (EPA)
Silver Nitrate	7761-88-8	Water Flea	Acute	EC50 48 h <i>Daphnia magna</i> 0.0006 mg/L (IUCLID); EC50 48 h <i>Daphnia magna</i> 0.0008 - 0.001 mg/L [Flow through] (EPA); EC50 48 h <i>Daphnia magna</i> 0.0008 - 0.0011 mg/L [Static] (EPA)
Antimony	7440-36-0	Water Flea	Chronic	NOEC 21 d <i>Daphnia magna</i> 1.74 mg/L [semi-static] (reproduction, ECHA_API)
Selenium	7782-49-2	Water Flea	Chronic	NOEC 21 d <i>Daphnia magna</i> >=3.42 µg/L [semi-static] (reproduction, ECHA_API)

12.2. Persistence and Degradability

Data not available.



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12.3. Bioaccumulative Potential

Data not available.

12.4. Mobility in soil

Data not available.

12.5. Other Adverse Ecological Effects

Data not available.

SECTION 13: Disposal Considerations

13.1. Waste Treatment Methods

Data not available.

SECTION 14: Transportation Information

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

Sizes: 100 mL, 500 mL

UN Number: UN3264

Proper Shipping Name: Corrosive Liquid, Acidic, Inorganic, n.o.s. (Nitric Acid)

Hazard Class: 8

Packing Group: III

Hazard Label(s):



14.2 Transportation by Air - International Air Transport Association (IATA)

Sizes: 100 mL, 500 mL

UN Number: UN3264

Proper Shipping Name: Corrosive Liquid, Acidic, Inorganic, n.o.s. (Nitric Acid)

Hazard Class: 8

Packing Group: III

Hazard Label(s):





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14.3 Transportation of Dangerous Goods (TDG, Canada)

Sizes: 100 mL, 500 mL

UN Number: UN3264

Proper Shipping Name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (nitric acid)

Hazard Class: 8

Packing Group: III

Hazard Label(s):



SECTION 15: Regulatory Information

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15.01. Occupational Safety and Health Administration (OSHA) Hazards

Chemical Name	CAS Number	Regulatory Information
Arsenic Trioxide	1327-53-3	"10 µg/m ³ TWA (See 29 CFR 1910.1018, except Arsine, as As); 5 µg/m ³ Action Level (See 29 CFR 1910.1018, except Arsine, as As)" As Inorganic arsenic compounds [RR-00065-7]
Cadmium	7440-43-9	5 µg/m ³ TWA (See 29 CFR 1910.1027); 2.5 µg/m ³ Action Level

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

Chemical Name	CAS Number	RQ	TPQ
Arsenic Trioxide	1327-53-3	100 lb lower TPQ; 10000 lb upper TPQ	1 lb EPCRA RQ
Ammonium Hydroxide	1336-21-6	"500 lb TPQ" As Ammonia [7664-41-7]	"100 lb EPCRA RQ" As Ammonia [7664-41-7]
Hydrochloric Acid	7647-01-0	500 lb TPQ (gas only)	5000 lb EPCRA RQ (gas only)
Nitric Acid	7697-37-2	1000 lb TPQ	1000 lb EPCRA RQ

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

Chemical Name	CAS Number	Regulatory Information
Arsenic Trioxide	1327-53-3	1 lb final RQ; 0.454 kg final RQ
Ammonium Hydroxide	1336-21-6	1000 lb final RQ; 454 kg final RQ
Antimony	7440-36-0	5000 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm); 2270 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm)
Cadmium	7440-43-9	10 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm); 4.54 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm)
Copper	7440-50-8	5000 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm); 2270 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm)
Hydrochloric Acid	7647-01-0	5000 lb final RQ; 2270 kg final RQ
Nitric Acid	7697-37-2	1000 lb final RQ; 454 kg final RQ
Silver Nitrate	7761-88-8	1 lb final RQ; 0.454 kg final RQ



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Selenium	7782-49-2	100 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is $>100\text{ }\mu\text{m}$); 45.4 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is $>100\text{ }\mu\text{m}$)
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15.04. Superfund Amendments and Reauthorization Act (SARA) 313 Toxics Release Inventory (TRI)

Chemical Name	CAS Number	List	Regulatory Information
Barium Nitrate	10022-31-8	Emission Reporting	"1.0 % de minimis concentration (includes any unique chemical substance that contains Barium as part of that chemical's infrastructure except for Barium sulfate CAS 7727-43-7, listed under Chemical Category N040)" As Barium compounds [RR-00555-0]; "1.0 % de minimis concentration (reportable only when in aqueous solution, listed under Chemical Category N511)" As Nitrate compounds, water dissociable [RR-03804-0]
Arsenic Trioxide	1327-53-3	Emission Reporting	"0.1 % de minimis concentration (includes any unique chemical substance that contains Arsenic as part of that chemical's infrastructure, listed under Chemical Category N020)" As Arsenic, inorganic compounds [RR-00065-7]
Ammonium Hydroxide	1336-21-6	Emission Reporting	"1.0 % de minimis concentration (includes anhydrous Ammonia and aqueous Ammonia from water dissociable Ammonium salts and other sources, 10% of total aqueous Ammonia is reportable under this listing)" As Ammonia [7664-41-7]; "1.0 % de minimis concentration (10% of total aqueous Ammonia is reportable under this listing)" As Aqueous ammonia from water dissociable ammonium salts and other sources [RR-47925-4]
Manganous Nitrate Tetrahydrate	15710-66-4	Emission Reporting	"1.0 % de minimis concentration (includes any unique chemical substance that contains Manganese as part of that chemical's infrastructure, listed under Chemical Category N450)" As Manganese compounds [RR-00602-0]; "1.0 % de minimis concentration (reportable only when in aqueous solution, listed under Chemical Category N511)" As Nitrate compounds, water dissociable [RR-03804-0]
Antimony	7440-36-0	Emission Reporting	1.0 % de minimis concentration
Cadmium	7440-43-9	Emission Reporting	0.1 % de minimis concentration
Copper	7440-50-8	Emission Reporting	1.0 % de minimis concentration
Hydrochloric Acid	7647-01-0	Emission Reporting	1.0 % de minimis concentration (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)
Nitric Acid	7697-37-2	Emission Reporting	1.0 % de minimis concentration

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Silver Nitrate	7761-88-8	Emission Reporting	"1.0 % de minimis concentration (includes any unique chemical substance that includes Silver as part of that chemical's infrastructure, listed under Chemical Category N740)" As Silver compounds [RR-00574-3]; "1.0 % de minimis concentration (reportable only when in aqueous solution, listed under Chemical Category N511)" As Nitrate compounds, water dissociable [RR-03804-0]
Selenium	7782-49-2	Emission Reporting	1.0 % de minimis concentration

15.05. Massachusetts Right-to-Know Substance List

Chemical Name	CAS Number	Regulatory Information
Barium Nitrate	10022-31-8	Present
Arsenic Trioxide	1327-53-3	Extraordinarily hazardous
Ammonium Hydroxide	1336-21-6	Present
Calcium Carbonate	471-34-1	"Present (including dust)" As Calcium carbonate [1317-65-3]
Antimony	7440-36-0	Present
Cadmium	7440-43-9	Carcinogen; Extraordinarily hazardous
Copper	7440-50-8	Present
Hydrochloric Acid	7647-01-0	Extraordinarily hazardous
Nitric Acid	7697-37-2	Extraordinarily hazardous
Silver Nitrate	7761-88-8	Present
Selenium	7782-49-2	Present

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15.06. Pennsylvania Right-to-Know Hazardous Substances

Chemical Name	CAS Number	Regulatory Information
Barium Nitrate	10022-31-8	Environmental hazard
Arsenic Trioxide	1327-53-3	Environmental hazard; Special hazardous substance
Ammonium Hydroxide	1336-21-6	Environmental hazard
Manganous Nitrate Tetrahydrate	15710-66-4	"Environmental hazard" As Manganese compounds [RR-00602-0]
Calcium Carbonate	471-34-1	"Present" As Limestone [1317-65-3]
Antimony	7440-36-0	Environmental hazard
Cadmium	7440-43-9	Environmental hazard (dust; fume; metal; powder); Special hazardous substance (metal; powder)
Copper	7440-50-8	Environmental hazard (dust; fume; metal)
Hydrochloric Acid	7647-01-0	Environmental hazard
Nitric Acid	7697-37-2	Environmental hazard
Silver Nitrate	7761-88-8	Environmental hazard
Selenium	7782-49-2	Environmental hazard

15.07. New Jersey Worker and Community Right-to-Know Components

Chemical Name	CAS Number	Regulatory Information
Barium Nitrate	10022-31-8	sn 0186
Boric Acid	10043-35-3	"sn 0241" As Borate compounds, inorganic [RR-33876-1]
Arsenic Trioxide	1327-53-3	sn 0161
Ammonium Hydroxide	1336-21-6	sn 0103
Manganous Nitrate Tetrahydrate	15710-66-4	"sn 2324" As Manganese compounds [RR-00602-0]; "sn 3722" As Nitrate compounds [RR-01770-9]
Calcium Carbonate	471-34-1	"sn 4001" As Calcium carbonate [1317-65-3]
Antimony	7440-36-0	sn 0141
Cadmium	7440-43-9	sn 0305
Copper	7440-50-8	sn 0528
Hydrochloric Acid	7647-01-0	sn 1012
Nitric Acid	7697-37-2	sn 1356
Silver Nitrate	7761-88-8	sn 1672
Selenium	7782-49-2	sn 1648

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15.08. California Proposition 65

Chemical Name	CAS Number	Regulatory Information
Arsenic Trioxide	1327-53-3	"carcinogen, 2/27/1987" As Arsenic, inorganic compounds [RR-00065-7]
Arsenic Trioxide	1327-53-3	"developmental toxicity, 5/1/1997" As Arsenic inorganic oxides [RR-03689-5]
Arsenic Trioxide	1327-53-3	"0.06 µg/day NSRL (inhalation, listed under Arsenic); 10 µg/day NSRL (except inhalation, listed under Arsenic)" As Arsenic, inorganic compounds [RR-00065-7]
Cadmium	7440-43-9	carcinogen, 10/1/1987
Cadmium	7440-43-9	developmental toxicity, 5/1/1997
Cadmium	7440-43-9	male reproductive toxicity, 5/1/97
Cadmium	7440-43-9	0.05 µg/day NSRL (inhalation)

15.09. Canada Domestic Substances List / Non-Domestic Substances List (DSL/NDSL)

Chemical Name	CAS Number	List	Status
Barium Nitrate	10022-31-8	DSL	Present
Boric Acid	10043-35-3	DSL	Present
Arsenic Trioxide	1327-53-3	DSL	Present
Ammonium Hydroxide	1336-21-6	DSL	Present
Manganous Nitrate Tetrahydrate	15710-66-4	DSL	"Present" As Manganese nitrate [10377-66-9]
Calcium Carbonate	471-34-1	DSL	Present
Calcium Carbonate	471-34-1	NDSL	"Present" As Calcium carbonate [1317-65-3]
Antimony	7440-36-0	DSL	Present
Cadmium	7440-43-9	DSL	Present
Copper	7440-50-8	DSL	Present
Hydrochloric Acid	7647-01-0	DSL	Present
Nitric Acid	7697-37-2	DSL	Present
Water	7732-18-5	DSL	Present
Silver Nitrate	7761-88-8	DSL	Present
Selenium	7782-49-2	DSL	Present
Tartaric Acid	87-69-4	DSL	Present

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15.10. United States of America Toxic Substances Control Act (TSCA) List

Chemical Name	CAS Number	Status
Barium Nitrate	10022-31-8	Present (ACTIVE)
Boric Acid	10043-35-3	Present (ACTIVE)
Arsenic Trioxide	1327-53-3	Present (ACTIVE)
Ammonium Hydroxide	1336-21-6	Present (ACTIVE)
Manganous Nitrate Tetrahydrate	15710-66-4	"Present (ACTIVE)" As Nitric acid, manganese(2+) salt (2:1) [10377-66-9]
Calcium Carbonate	471-34-1	Present (ACTIVE)
Antimony	7440-36-0	Present (ACTIVE)
Cadmium	7440-43-9	Present (ACTIVE)
Copper	7440-50-8	Present (ACTIVE)
Hydrochloric Acid	7647-01-0	Present (ACTIVE)
Nitric Acid	7697-37-2	Present (ACTIVE)
Water	7732-18-5	Present [XU] (ACTIVE)
Silver Nitrate	7761-88-8	Present (ACTIVE)
Selenium	7782-49-2	Present (ACTIVE)
Tartaric Acid	87-69-4	Present (ACTIVE)

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15.11. European Inventory of Existing Commercial Chemical Substances (EINECS), European List of Notified Chemical Substances (ELINCS), and No Longer Polymers (NLP)

Chemical Name	CAS Number	List	Number
Barium Nitrate	10022-31-8	EINECS	233-020-5
Boric Acid	10043-35-3	EINECS	233-139-2
Arsenic Trioxide	1327-53-3	EINECS	215-481-4
Ammonium Hydroxide	1336-21-6	EINECS	215-647-6
Manganous Nitrate Tetrahydrate	15710-66-4	EINECS	"233-828-8" As Manganese dinitrate [10377-66-9]
Calcium Carbonate	471-34-1	EINECS	207-439-9
Antimony	7440-36-0	EINECS	231-146-5
Cadmium	7440-43-9	EINECS	231-152-8
Copper	7440-50-8	EINECS	231-159-6
Hydrochloric Acid	7647-01-0	EINECS	231-595-7
Nitric Acid	7697-37-2	EINECS	231-714-2
Water	7732-18-5	EINECS	231-791-2
Silver Nitrate	7761-88-8	EINECS	231-853-9
Selenium	7782-49-2	EINECS	231-957-4
Tartaric Acid	87-69-4	EINECS	201-766-0

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15.12. China - Inventory of Existing chemical Substances (IECSC)

Chemical Name	CAS Number	Status
Barium Nitrate	10022-31-8	Present [35583]
Boric Acid	10043-35-3	Present [25550]
Arsenic Trioxide	1327-53-3	Present [29706]
Ammonium Hydroxide	1336-21-6	Present [27662]
Manganous Nitrate Tetrahydrate	15710-66-4	"Present [35610]" As Manganese(II) nitrate [10377-66-9]
Calcium Carbonate	471-34-1	Present [34102]
Antimony	7440-36-0	Present [34285]
Cadmium	7440-43-9	Present [13601]
Copper	7440-50-8	Present [34399]
Hydrochloric Acid	7647-01-0	Present [37053]
Nitric Acid	7697-37-2	Present [35578]
Water	7732-18-5	Present [32224]
Silver Nitrate	7761-88-8	Present [35648]
Selenium	7782-49-2	Present [35336]
Tartaric Acid	87-69-4	Present [21192] (listed under D-Tartaric acid)

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15.13. Korea - Existing Chemicals Inventory (KECI/KECL)

Chemical Name	CAS Number	List	Status
Barium Nitrate	10022-31-8	Annex 1	Present [KE-02070]
Barium Nitrate	10022-31-8	Annex 2	"97-3-693 (1997-3-0693)" As Barium compounds [RR-00555-0]
Boric Acid	10043-35-3	Annex 1	Present [KE-03499]
Arsenic Trioxide	1327-53-3	Annex 1	Present [KE-09858]
Arsenic Trioxide	1327-53-3	Annex 3	"Present (97-1-119)" As Arsenic compounds [RR-00625-7]
Ammonium Hydroxide	1336-21-6	Annex 1	Present [KE-01688]
Manganous Nitrate Tetrahydrate	15710-66-4	Annex 1	"Present [KE-23016]" As Manganese nitrate [10377-66-9]
Calcium Carbonate	471-34-1	Annex 1	Present [KE-04487]
Antimony	7440-36-0	Annex 1	Present [KE-01834]
Antimony	7440-36-0	Annex 3	"Present (97-1-176)" As Inorganic antimony compounds [RR-00554-9]
Cadmium	7440-43-9	Annex 1	Present [KE-04397]
Copper	7440-50-8	Annex 1	Present [KE-08896]
Hydrochloric Acid	7647-01-0	Annex 1	Present [KE-20189]
Nitric Acid	7697-37-2	Annex 1	Present [KE-25911]
Water	7732-18-5	Annex 1	Present [KE-35400]
Silver Nitrate	7761-88-8	Annex 1	Present [KE-31281]
Silver Nitrate	7761-88-8	Annex 3	"Present (97-1-92)" As Inorganic silver, salts [RR-04200-2]
Selenium	7782-49-2	Annex 1	Present [KE-30924]
Tartaric Acid	87-69-4	Annex 1	Present [KE-10801]

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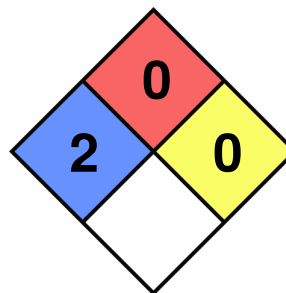
15.14. Japan - Existing and New Chemical Substances Inventory (ENCS)

Chemical Name	CAS Number	MITI No.
Barium Nitrate	10022-31-8	(1)-86
Boric Acid	10043-35-3	(1)-63
Arsenic Trioxide	1327-53-3	(1)-35, (9)-2400
Ammonium Hydroxide	1336-21-6	(1)-314
Manganous Nitrate Tetrahydrate	15710-66-4	(1)-470
Calcium Carbonate	471-34-1	(1)-122
Antimony	7440-36-0	- (exempt)
Cadmium	7440-43-9	- (exempt)
Copper	7440-50-8	- (exempt)
Hydrochloric Acid	7647-01-0	(1)-215
Nitric Acid	7697-37-2	(1)-394
Water	7732-18-5	- (listed on Japanese Pharmacopoeia 8th Edition)
Silver Nitrate	7761-88-8	(1)-8
Selenium	7782-49-2	- (exempt)
Tartaric Acid	87-69-4	(2)-1456

SECTION 16: Other Information

16.1 National Fire Protection Associate (NFPA) Rating

Health: 2
Flammability: 0
Reactivity: 0
Special Hazard:



16.2 Document Revision

Last Revision Date:
 2026-05-05

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 RICCA CHEMICAL COMPANY assumes no legal responsibility or liability whatsoever resulting from its use.