



Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS 2024)

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation VeriSpec[®] QC Standard 23
1000 ppm Ag, Al, B, Ba, Bi, Ca, Cd, Co, Cr, Cu, Fe, Ga, In, K, Li, Mg, Mn, Na, Ni, Pb, Sr, Tl, Zn
Product Number RV010823
Other Identifying Product Numbers RV010823-100N

1.2. Recommended Use and Restrictions on Use

Calibration Standard

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 2	H319	P264,P280,P305+P351+P338, P337+P313
Respiratory Sensitization	Category 1	H334	P261,P284,P304+P340,P342+P311, P501
Skin Sensitization	Category 1	H317	P261,P272,P280,P302+P352, P333+P313,P321,P362+P364,P501
Carcinogenicity	Category 1A	H350	P201,P202,P280,P308+P313,P405, P501
Reproductive Toxicity	Category 1A	H360	P201,P202,P280,P308+P313,P405, P501
Specific Target Organ Toxicity - Repeated Exposure	Category 1	H372	P260,P264,P270,P314,P501
Hazardous to the Aquatic Environment, Short-term (Acute)	Acute 2	H401	P273,P501
Hazardous to the Aquatic Environment, Long-term (Chronic)	Chronic 2	H411	P273,P391,P501

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
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H350	May cause cancer
H360	May damage fertility or the unborn child
H372	Causes damage to organs through prolonged or repeated exposure
H411	Toxic to aquatic life with long lasting effects

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Precautionary Statements:

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

Prevention

Precautionary Number	Precautionary Statement
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe fumes or mist.
P264	Wash hands, arms, and face thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P272	Contaminated work clothing must not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves and eye protection.
P284	In case of inadequate ventilation wear respiratory protection.

Response

Precautionary Number	Precautionary Statement
P302+P352	IF ON SKIN: Wash with plenty of water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	If exposed or concerned: Get medical advice or attention.
P337+P313	If eye irritation persists: Get medical advice or attention.
P342+P311	If experiencing respiratory symptoms: Call a poison center or doctor.
P362+P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.

Storage

Precautionary Number	Precautionary Statement
P405	Store locked up.

Disposal

Precautionary Number	Precautionary Statement
P501	Dispose of contents/container to suitable waste stream in accordance with local, state, federal, and international regulations.

2.3. Hazards not Otherwise Classified

No other hazards identified.



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2.4. Ingredients of Unknown Acute Toxicity

4.3 percent of this mixture consists of ingredient(s) of unknown acute oral toxicity. 7.7 percent of this mixture consists of ingredient(s) of unknown acute dermal toxicity. 4.7 percent of this mixture consists of ingredient(s) of unknown acute inhalation 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	90.79
nitric acid	Nitric Acid	7697-37-2	1.96
dilithium carbonate	Lithium Carbonate, 6Li ₂ CO ₃ ; Lithium carbonate	554-13-2	1.06
aluminum trinitrate nonahydrate	Aluminum Nitrate Nonahydrate; Nitric acid, aluminium salt, nonahydrate	7784-27-2	0.79
magnesium dinitrate hexahydrate	Magnesium Nitrate Hexahydrate; Nitric acid, magnesium salt, hexahydrate	13446-18-9	0.61
boric acid	Boric Acid; orthoboric acid; boracic acid	10043-35-3	0.57
chromium(3+) trinitrate nonahydrate	Chromium Nitrate Nonahydrate; Chromium(III) nitrate nonahydrate	7789-02-8	0.46
calcium dinitrate tetrahydrate	Calcium Nitrate Tetrahydrate	13477-34-4	0.41
sodium nitrate	Sodium Nitrate; Nitric acid sodium salt (1:1)	7631-99-4	0.37
manganese(II) nitrate	Manganese Nitrate; manganese dinitrate	10377-66-9	0.33
nickel(2+) dinitrate hexahydrate	Nickel Nitrate Hexahydrate; Nickel(II) nitrate, hexahydrate (1:2:6)	13478-00-7	0.31
cobalt(II) nitrate hexahydrate	Cobalt Nitrate Hexahydrate; cobaltous nitrate hexahydrate	10026-22-9	0.31
copper(II) nitrate trihydrate	Cupric Nitrate Trihydrate; copper dinitrate trihydrate	10031-43-3	0.30
potassium nitrate	Potassium Nitrate; Nitric acid potassium salt (1:1)	7757-79-1	0.26
strontium nitrate	Strontium Nitrate; strontium(II) nitrate; strontium dinitrate	10042-76-9	0.24
barium nitrate	Barium Nitrate	10022-31-8	0.19
lead(II) nitrate	Lead Nitrate; lead dinitrate	10099-74-8	0.16
silver nitrate	Silver Nitrate; Nitric acid, silver(1+) salt	7761-88-8	0.16
thallium(I) nitrate	Thallium (I) Nitrate; thalious nitrate	10102-45-1	0.13
iron	Iron	7439-89-6	0.10
cadmium	Cadmium	7440-43-9	0.10
gallium	Gallium	7440-55-3	0.10
zinc	Zinc	7440-66-6	0.10
bismuth	Bismuth	7440-69-9	0.10
indium	Indium	7440-74-6	0.10

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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.

Ingestion: No action required to be taken. If necessary, dilute with water.

Inhalation: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Skin Contact: IF ON SKIN: Wash with plenty of water.

4.2. Most Important Symptoms and Effects, Acute and Delayed

May damage fertility or the unborn child

4.3. Immediate Medical Attention or Special Treatment Needed

Not expected to require special treatment.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing Media

Not considered to be a fire or explosion hazard.

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

Not considered to be a fire or explosion hazard.

5.3. Special Protective Equipment and Precautions for Firefighters

Wear protective clothing and NIOSH-approved 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

Absorb with suitable material and dispose of in accordance with local regulations.

SECTION 7: Handling and Storage

7.1. Precautions for Safe Handling and Storage Conditions

Store locked up.



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SECTION 8: Exposure Controls / Personal Protection

8.1. Exposure Limits

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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/m3 TWA (regulated under CAS 7440-39-3, as Ba)" As Barium, soluble compounds [RR-00049-7]
Lead Nitrate	10099-74-8	"50 µg/m3 TWA (as Pb)" As Lead, inorganic compounds [RR-00538-9]
Thallium (I) Nitrate	10102-45-1	"0.1 mg/m3 TWA (as Tl)" As Thallium, soluble compounds [RR-00048-6]
Nickel Nitrate Hexahydrate	13478-00-7	"1 mg/m3 TWA (as Ni)" As Nickel, soluble compounds [RR-00038-4]
Cadmium	7440-43-9	5 µg/m3 TWA
Nitric Acid	7697-37-2	2 ppm TWA; 5 mg/m3 TWA
Silver Nitrate	7761-88-8	"0.01 mg/m3 TWA (as Ag)" As Silver soluble compounds [RR-00041-9]
Chromium Nitrate Nonahydrate	7789-02-8	"0.5 mg/m3 TWA (as Cr)" As Chromium(III) compounds [RR-03889-1]

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

Chemical Name	CAS Number	Exposure Limit
Manganese Nitrate	10377-66-9	"5 mg/m3 Ceiling (as Mn)" As Manganese compounds [RR-00602-0]
Cadmium	7440-43-9	0.3 mg/m3 Ceiling (applies to any operations or sectors for which the Cadmium standard is stayed or otherwise not in effect, fume); 0.6 mg/m3 Ceiling (applies to any operations or sectors for which the Cadmium standard is stayed or otherwise not in effect, dust)

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
Lead Nitrate	10099-74-8	"30 µg/m3 Action Level (See 29 CFR 1910.1025, as Pb); 50 µg/m3 TWA (as Pb)" As Lead, inorganic compounds [RR-00538-9]
Cadmium	7440-43-9	5 µg/m3 TWA (See 29 CFR 1910.1027); 2.5 µg/m3 Action Level

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

No limits found.

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)
Nitric Acid	7697-37-2	4 ppm STEL

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

Chemical Name	CAS Number	Exposure Limit
Barium Nitrate	10022-31-8	"0.5 mg/m ³ TWA (as Ba)" As Barium soluble compounds [RR-00049-7]
Cobalt Nitrate Hexahydrate	10026-22-9	"0.02 mg/m ³ TWA (inhalable particulate matter, as Co)" As Cobalt inorganic compounds [RR-02516-1]
Cupric Nitrate Trihydrate	10031-43-3	"1 mg/m ³ TWA (dust and mist, as Cu)" As Copper compounds [RR-00595-8]
Boric Acid	10043-35-3	2 mg/m ³ TWA (inhalable particulate matter, listed under Borate compounds, inorganic)
Lead Nitrate	10099-74-8	"0.05 mg/m ³ TWA (as Pb)" As Lead inorganic compounds [RR-00538-9]
Thallium (I) Nitrate	10102-45-1	"0.02 mg/m ³ TWA (inhalable particulate matter, as Tl)" As Thallium compounds [RR-00575-4]
Manganese Nitrate	10377-66-9	"0.02 mg/m ³ TWA (respirable particulate matter, as Mn); 0.1 mg/m ³ TWA (inhalable particulate matter, as Mn)" As Manganese inorganic compounds [RR-03861-9]
Nickel Nitrate Hexahydrate	13478-00-7	"0.1 mg/m ³ TWA (inhalable particulate matter, as Ni)" As Nickel soluble inorganic compounds [RR-04616-2]
Cadmium	7440-43-9	0.01 mg/m ³ TWA; 0.002 mg/m ³ TWA (respirable particulate matter)
Indium	7440-74-6	0.1 mg/m ³ TWA
Nitric Acid	7697-37-2	2 ppm TWA
Silver Nitrate	7761-88-8	"0.01 mg/m ³ TWA (as Ag)" As Silver soluble compounds [RR-00041-9]

8.2. Engineering Controls

No specific controls are needed.

8.3. Individual Protective Measures and Personal Protective Equipment

Respiratory Protection: Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection.

Skin Protection: Wear protective gloves and eye protection.

Eye Protection: Wear protective gloves and eye protection.



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SECTION 9: Physical and Chemical Properties

9.1. Basic Physical and Chemical Properties

Physical State:	Liquid
Color:	Data not available.
Odor:	Data not available.
Odor Threshold:	Data not available.
Melting/Freezing Point:	Data not available.
Boiling Point/Range:	Data not available.
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:	Data not available.
Vapor Pressure:	Data not available.
Evaporation Rate:	Data not available.
Relative Density:	1.09
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

Protect from freezing and physical damage.

10.4. Hazardous Decomposition Products

None identified.

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SECTION 11: Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity - Oral Exposure:

Oral acute toxicity estimate (ATE): 3223 mg/kg(calculated)

Chemical Name	CAS Number	Toxicity
Barium Nitrate	10022-31-8	Oral LD50 Rat 300 mg/kg (Source: ECHA)
Cobalt Nitrate Hexahydrate	10026-22-9	Oral LD50 Rat 434 mg/kg (Source: Canada_WHMIS)
Cupric Nitrate Trihydrate	10031-43-3	Oral LD50 Rat 940 mg/kg (Source: NLM_CIP)
Strontium Nitrate	10042-76-9	Oral LD50 Rat 2750 mg/kg (Source: NLM_CIP)
Boric Acid	10043-35-3	Oral LD50 Rat 2660 mg/kg (Source: JAPAN_GHS)
Lead Nitrate	10099-74-8	Oral LD50 Acute Toxicity Estimate 500 mg/kg (ECHA)
Thallium (I) Nitrate	10102-45-1	Oral LD50 Acute Toxicity Estimate 5 mg/kg (Source: ECHA)
Magnesium Nitrate Hexahydrate	13446-18-9	Oral LD50 Rat 5440 mg/kg (Source: NLM_CIP)
Nickel Nitrate Hexahydrate	13478-00-7	Oral LD50 Rat 1620 mg/kg (Source: NLM_CIP)
Lithium Carbonate, 6Li ₂ CO ₃	554-13-2	Oral LD50 Rat 525 mg/kg (Source: NLM_CIP)
Cadmium	7440-43-9	Oral LD50 Rat 2300 mg/kg (Source: Canada_WHMIS)
Gallium	7440-55-3	Oral LD50 Rat 500 mg/kg (Source: ECHA)
Potassium Nitrate	7757-79-1	Oral LD50 Rat >2000 mg/kg (no deaths occurred, Source: ECHA)
Silver Nitrate	7761-88-8	Oral LD50 Rat 1173 mg/kg (Source: NLM_CIP)
Chromium Nitrate Nonahydrate	7789-02-8	Oral LD50 Rat 3250 mg/kg (Source: NLM_CIP)

Acute Toxicity - Dermal Exposure:

No information found.

Chemical Name	CAS Number	Toxicity
Lithium Carbonate, 6Li ₂ CO ₃	554-13-2	Dermal LD50 Rabbit >3000 mg/kg (Source: ECHA_API)
Potassium Nitrate	7757-79-1	Dermal LD50 Rat >5000 mg/kg (no deaths occurred, Source: ECHA)
Silver Nitrate	7761-88-8	Dermal LD50 Rat >2000 mg/kg (Source: ECHA_API)

Acute Toxicity - Inhalation Exposure:

Not acutely toxic.

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Chemical Name	CAS Number	Toxicity
Barium Nitrate	10022-31-8	Inhalation LC50 Acute Toxicity Estimate 1.5 mg/L 4 h (Source: ECHA)
Strontium Nitrate	10042-76-9	Inhalation LC50 Rat >4.5 mg/L 4 h (death occurred (1 out of 10 tested animals), aerosol, Source: ECHA)
Lead Nitrate	10099-74-8	Inhalation LC50 Acute Toxicity Estimate 1.5 mg/L 4 h (Source: ECHA)
Thallium (I) Nitrate	10102-45-1	Inhalation LC50 Acute Toxicity Estimate 0.05 mg/L 4 h (Source: ECHA)
Nickel Nitrate Hexahydrate	13478-00-7	Inhalation LC50 Acute Toxicity Estimate 1.5 mg/L 4 h (Source: ECHA)
Lithium Carbonate, 6Li ₂ CO ₃	554-13-2	Inhalation LC50 Rat >2 mg/L 4 h (males; death occurred (2 out of 5 tested animals), dust, Source: ECHA)
Cadmium	7440-43-9	Inhalation LC50 Rat 25 mg/m ³ 30 min (Source: NLM_CIP)
Nitric Acid	7697-37-2	Inhalation LC50 Rat 3.22 mg/L 4 h (Source: WHMIS)
Potassium Nitrate	7757-79-1	Inhalation LC50 Rat >0.527 mg/L 4 h (no deaths occurred, dust, Source: ECHA_API)
Silver Nitrate	7761-88-8	Inhalation LC50 Rat >750 µg/m ³ 4 h (no deaths occurred, aerosol, Source: ECHA_API)

11.2 Carcinogenicity:

International Agency for Research on Cancer (IARC)

Chemical Name	CAS Number	Classification
Cobalt Nitrate Hexahydrate	10026-22-9	Group 2A (Probably Carcinogenic to Humans) - Monograph 131 [2023]; Monograph 86 [2006]; Monograph 52 [1991] As Cobalt(III) soluble salts
Lead Nitrate	10099-74-8	Group 2A (Probably Carcinogenic to Humans) - Monograph 87 [2006]; Supplement 7 [1987]; Monograph 23 [1980]
Nickel Nitrate Hexahydrate	13478-00-7	Group 1 (Carcinogenic to Humans) - Monograph 49 [1990] (listed under Nickel and nickel compounds)
Cadmium	7440-43-9	Group 1 (Carcinogenic to Humans) - Monograph 100C [2012]; Monograph 58 [1993]; Supplement 7 [1987]
Nitric Acid	7697-37-2	Group 1 (Carcinogenic to Humans) - Monograph 100F [2012]; Monograph 54 [1992] As Acid mists, strong inorganic
Chromium Nitrate Nonahydrate	7789-02-8	Group 3 (Not Classified) - Monograph 49 [1990]; Supplement 7 [1987]; Monograph 23 [1980]; Monograph 2 [1973] As Chromic nitrate [13548-38-4]

National Toxicology Program (NTP)

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Chemical Name	CAS Number	Classification
Cobalt Nitrate Hexahydrate	10026-22-9	"Reasonably Anticipated To Be A Human Carcinogen (listed under Cobalt-related exposures)" As Cobalt(II) nitrate [10141-05-6]; "Reasonably Anticipated To Be A Human Carcinogen (that release cobalt ions in vivo)" As Cobalt compounds [RR-00107-0]
Boric Acid	10043-35-3	Male Rat - Not Tested; Female Rat - Not Tested; Male Mice - No Evidence; Female Mice - No Evidence (TR-324)
Lead Nitrate	10099-74-8	Reasonably Anticipated To Be A Human Carcinogen (listed under Lead and lead compounds)
Nickel Nitrate Hexahydrate	13478-00-7	"Known Human Carcinogen" As Nickel compounds [RR-00800-4]
Cadmium	7440-43-9	Known Human Carcinogen

U.S. OSHA specifically regulated carcinogens

Chemical Name	CAS Number	Classification
Cadmium	7440-43-9	see 29 CFR 1910.1027

11.3 Additional Toxicology Information:

Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause cancer. May damage fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure.

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] (IUCLID); LC50 5 Days Colinus virginianus >5620 ppm [Diet] (IUCLID)
Zinc	7440-66-6	Freshwater Algae	Acute	EC50 96 h Pseudokirchneriella subcapitata 0.11 - 0.271 mg/L [static] (EPA); EC50 72 h Pseudokirchneriella subcapitata 0.09 - 0.125 mg/L [static] (EPA)
Strontium Nitrate	10042-76-9	Freshwater Fish	Acute	LC50 96 h Cyprinus carpio >97.45 mg/L [static] (ECHA)
Calcium Nitrate Tetrahydrate	13477-34-4	Freshwater Fish	Acute	"LC50 96 h Lepomis macrochirus 10000 mg/L [static]" As Calcium nitrate [10124-37-5]
Lithium Carbonate, 6Li ₂ CO ₃	554-13-2	Freshwater Fish	Acute	LC50 96 h Oncorhynchus mykiss 30.3 mg/L [static] (ECHA)
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)
Zinc	7440-66-6	Freshwater Fish	Acute	LC50 96 h Pimephales promelas 2.16 - 3.05 mg/L [flow-through] (EPA); LC50 96 h Pimephales promelas 0.211 - 0.269 mg/L [semi-static] (EPA); LC50 96 h Pimephales promelas 2.66 mg/L [static] (EPA); LC50 96 h Cyprinus carpio 30 mg/L (EPA); LC50 96 h Cyprinus carpio 0.45 mg/L [semi-static] (EPA); LC50 96 h Cyprinus carpio 7.8 mg/L [static] (EPA); LC50 96 h Lepomis macrochirus 3.5 mg/L [static] (EPA); LC50 96 h Oncorhynchus mykiss 0.24 mg/L [flow-through] (EPA); LC50 96 h Oncorhynchus mykiss 0.59 mg/L [semi-static] (EPA); LC50 96 h Oncorhynchus mykiss 0.41 mg/L [static] (EPA)
Sodium Nitrate	7631-99-4	Freshwater Fish	Acute	LC50 96 h Lepomis macrochirus 2000 mg/L [static] (EPA); LC50 96 h Oncorhynchus mykiss 994.4 - 1107 mg/L [static] (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)
Boric Acid	10043-35-3	Water Flea	Acute	EC50 48 h <i>Daphnia magna</i> 115 - 153 mg/L (EPA)
Cadmium	7440-43-9	Water Flea	Acute	EC50 48 h <i>Daphnia magna</i> 0.0244 mg/L [Static] (EPA)
Zinc	7440-66-6	Water Flea	Acute	EC50 48 h <i>Daphnia magna</i> 0.139 - 0.908 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)

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

Data not available.

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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)

Not regulated according to DOT regulations.

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

Not regulated according to IATA Dangerous Goods Regulations.



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14.3 Transportation of Dangerous Goods (TDG, Canada)

Not regulated according to TDG regulations.

SECTION 15: Regulatory Information

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15.01. Occupational Safety and Health Administration (OSHA) Hazards

Chemical Name	CAS Number	Regulatory Information
Lead Nitrate	10099-74-8	"30 µg/m3 Action Level (See 29 CFR 1910.1025, as Pb); 50 µg/m3 TWA (See 29 CFR 1910.1025, as Pb)" As Lead, inorganic compounds [RR-00538-9]
Cadmium	7440-43-9	5 µg/m3 TWA (See 29 CFR 1910.1027); 2.5 µg/m3 Action Level

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

Chemical Name	CAS Number	RQ	TPQ
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
Cupric Nitrate Trihydrate	10031-43-3	"100 lb final RQ; 45.4 kg final RQ" As Cupric nitrate [3251-23-8]
Lead Nitrate	10099-74-8	10 lb final RQ; 4.54 kg final RQ
Thallium (I) Nitrate	10102-45-1	100 lb final RQ; 45.4 kg final RQ
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)
Zinc	7440-66-6	454 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); 1000 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)
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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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]
Cobalt Nitrate Hexahydrate	10026-22-9	Emission Reporting	"0.1 % de minimis concentration (includes any unique chemical substance that contains Cobalt as part of that chemical's infrastructure, listed under Chemical Category N096)" As Cobalt, inorganic compounds [RR-02516-1]; "1.0 % de minimis concentration (reportable only when in aqueous solution, listed under Chemical Category N511)" As Nitrate compounds, water dissociable [RR-03804-0]
Cupric Nitrate Trihydrate	10031-43-3	Emission Reporting	"1.0 % de minimis concentration (includes any unique chemical substance that contains Copper as part of that chemical's infrastructure except for CAS numbers 147-14-8, 1328-53-6, or 14302-13-7, or copper phthalocyanine compounds that are substituted with only Hydrogen and/or Bromine and/or Chlorine that meet the molecular structure specified within the regulation, listed under Chemical Category N100)" As Copper compounds [RR-00595-8]; "1.0 % de minimis concentration (reportable only when in aqueous solution, listed under Chemical Category N511)" As Nitrate compounds, water dissociable [RR-03804-0]
Strontium Nitrate	10042-76-9	Emission Reporting	"1.0 % de minimis concentration (reportable only when in aqueous solution, listed under Chemical Category N511)" As Nitrate compounds, water dissociable [RR-03804-0]

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Lead Nitrate	10099-74-8	Emission Reporting	"not eligible for the de minimis exemption, listed under Chemical Category N420" As Inorganic lead compounds [RR-00538-9]; "not eligible for the de minimis exemption" As Lead compounds [RR-00630-4]; "1.0 % de minimis concentration (reportable only when in aqueous solution, listed under Chemical Category N511)" As Nitrate compounds, water dissociable [RR-03804-0]
Lead Nitrate	10099-74-8	Chemicals of Special Concern	"100 lb RT" As Lead compounds [RR-00630-4]
Thallium (I) Nitrate	10102-45-1	Emission Reporting	"1.0 % de minimis concentration (includes any unique chemical substance that contains Thallium as part of that chemical's infrastructure, listed under Chemical Category N760)" As Thallium compounds [RR-00575-4]
Manganese Nitrate	10377-66-9	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]
Magnesium Nitrate Hexahydrate	13446-18-9	Emission Reporting	"1.0 % de minimis concentration (reportable only when in aqueous solution, listed under Chemical Category N511)" As Nitrate compounds, water dissociable [RR-03804-0]
Calcium Nitrate Tetrahydrate	13477-34-4	Emission Reporting	"1.0 % de minimis concentration (reportable only when in aqueous solution, listed under Chemical Category N511)" As Nitrate compounds, water dissociable [RR-03804-0]
Nickel Nitrate Hexahydrate	13478-00-7	Emission Reporting	"0.1 % de minimis concentration (includes any unique chemical substance that contains Nickel as part of that chemical's infrastructure, listed under Chemical Category N495)" As Nickel compounds [RR-00800-4]; "1.0 % de minimis concentration (reportable only when in aqueous solution, listed under Chemical Category N511)" As Nitrate compounds, water dissociable [RR-03804-0]
Lithium Carbonate, 6Li ₂ CO ₃	554-13-2	Emission Reporting	1.0 % de minimis concentration
Cadmium	7440-43-9	Emission Reporting	0.1 % de minimis concentration
Zinc	7440-66-6	Emission Reporting	1.0 % de minimis concentration (dust or fume only)

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Sodium Nitrate	7631-99-4	Emission Reporting	"1.0 % de minimis concentration (reportable only when in aqueous solution, listed under Chemical Category N511)" As Nitrate compounds, water dissociable [RR-03804-0]
Nitric Acid	7697-37-2	Emission Reporting	1.0 % de minimis concentration
Potassium Nitrate	7757-79-1	Emission Reporting	"1.0 % de minimis concentration (reportable only when in aqueous solution, listed under Chemical Category N511)" As Nitrate compounds, water dissociable [RR-03804-0]
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]
Aluminum Nitrate Nonahydrate	7784-27-2	Emission Reporting	"1.0 % de minimis concentration (reportable only when in aqueous solution, listed under Chemical Category N511)" As Nitrate compounds, water dissociable [RR-03804-0]
Chromium Nitrate Nonahydrate	7789-02-8	Emission Reporting	"1.0 % de minimis concentration (reportable only when in aqueous solution, listed under Chemical Category N511)" As Nitrate compounds, water dissociable [RR-03804-0]; "1.0 % de minimis concentration (includes any unique chemical substance that contains Chromium as part of that chemical's infrastructure except for Chromite ore mined in the Transvaal Region of South Africa and the unreacted ore component of the Chromite ore processing residue (COPR), no de minimis concentration has been assigned to this chemical category, listed under Chemical Category N090)" As Chromium(III) compounds [RR-03889-1]

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15.05. Massachusetts Right-to-Know Substance List

Chemical Name	CAS Number	Regulatory Information
Barium Nitrate	10022-31-8	Present
Cobalt Nitrate Hexahydrate	10026-22-9	"Present" As Cobaltous nitrate [10141-05-6]
Cupric Nitrate Trihydrate	10031-43-3	"Present" As Cupric nitrate [3251-23-8]
Strontium Nitrate	10042-76-9	Present
Lead Nitrate	10099-74-8	Present
Thallium (I) Nitrate	10102-45-1	Present
Magnesium Nitrate Hexahydrate	13446-18-9	"Present" As Magnesium nitrate [10377-60-3]
Nickel Nitrate Hexahydrate	13478-00-7	"Present" As Nickel(II) nitrate [13138-45-9]
Lithium Carbonate, 6Li ₂ CO ₃	554-13-2	Teratogen
Cadmium	7440-43-9	Carcinogen; Extraordinarily hazardous
Zinc	7440-66-6	Present
Indium	7440-74-6	Present
Sodium Nitrate	7631-99-4	Present
Nitric Acid	7697-37-2	Extraordinarily hazardous
Potassium Nitrate	7757-79-1	Present
Silver Nitrate	7761-88-8	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
Cobalt Nitrate Hexahydrate	10026-22-9	"Present" As Nitric acid, cobalt(2+) salt [10141-05-6]; "Environmental hazard" As Cobalt compounds [RR-00107-0]
Cupric Nitrate Trihydrate	10031-43-3	"Environmental hazard" As Nitric acid, copper(2+) salt [3251-23-8]; "Environmental hazard" As Copper compounds [RR-00595-8]
Strontium Nitrate	10042-76-9	Present
Lead Nitrate	10099-74-8	Environmental hazard
Thallium (I) Nitrate	10102-45-1	Environmental hazard
Manganese Nitrate	10377-66-9	"Environmental hazard" As Manganese compounds [RR-00602-0]
Magnesium Nitrate Hexahydrate	13446-18-9	"Present" As Nitric acid, magnesium salt [10377-60-3]
Nickel Nitrate Hexahydrate	13478-00-7	"Environmental hazard" As Nitric acid, nickel(2+) salt [13138-45-9]; "Environmental hazard" As Nickel compounds [RR-00800-4]
Cadmium	7440-43-9	Environmental hazard (dust; fume; metal; powder); Special hazardous substance (metal; powder)
Zinc	7440-66-6	Environmental hazard
Indium	7440-74-6	Present
Sodium Nitrate	7631-99-4	Present
Nitric Acid	7697-37-2	Environmental hazard
Potassium Nitrate	7757-79-1	Present
Silver Nitrate	7761-88-8	Environmental hazard
Aluminum Nitrate Nonahydrate	7784-27-2	"Present" As Aluminum soluble salts [RR-00021-5]
Chromium Nitrate Nonahydrate	7789-02-8	"Environmental hazard" As Chromium compounds [RR-00634-8]

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

Chemical Name	CAS Number	Regulatory Information
Barium Nitrate	10022-31-8	sn 0186
Cobalt Nitrate Hexahydrate	10026-22-9	"sn 2222" As Cobalt compounds [RR-00107-0]; "sn 3722" As Nitrate compounds [RR-01770-9]
Cupric Nitrate Trihydrate	10031-43-3	"sn 0547" As Cupric nitrate [3251-23-8]; "sn 2215" As Copper compounds [RR-00595-8]; "sn 3722" As Nitrate compounds [RR-01770-9]
Strontium Nitrate	10042-76-9	sn 1743
Boric Acid	10043-35-3	"sn 0241" As Borate compounds, inorganic [RR-33876-1]
Lead Nitrate	10099-74-8	sn 1108
Thallium (I) Nitrate	10102-45-1	sn 1841
Manganese Nitrate	10377-66-9	"sn 2324" As Manganese compounds [RR-00602-0]; "sn 3722" As Nitrate compounds [RR-01770-9]
Magnesium Nitrate Hexahydrate	13446-18-9	"sn 1143" As Magnesium nitrate [10377-60-3]; "sn 3722" As Nitrate compounds [RR-01770-9]
Calcium Nitrate Tetrahydrate	13477-34-4	"sn 0324" As Calcium nitrate [10124-37-5]; "sn 3722" As Nitrate compounds [RR-01770-9]
Nickel Nitrate Hexahydrate	13478-00-7	sn 4059
Lithium Carbonate, 6Li ₂ CO ₃	554-13-2	sn 1124
Cadmium	7440-43-9	sn 0305
Gallium	7440-55-3	sn 0956
Zinc	7440-66-6	sn 2021
Indium	7440-74-6	sn 1025
Sodium Nitrate	7631-99-4	"sn 3722" As Nitrate compounds [RR-01770-9]
Nitric Acid	7697-37-2	sn 1356
Potassium Nitrate	7757-79-1	sn 1574
Silver Nitrate	7761-88-8	sn 1672
Aluminum Nitrate Nonahydrate	7784-27-2	"sn 0061" As Aluminum nitrate [13473-90-0]; "sn 3722" As Nitrate compounds [RR-01770-9]
Chromium Nitrate Nonahydrate	7789-02-8	"sn 0435" As Chromium nitrate [13548-38-4]; "sn 2245" As Chromium compounds [RR-00634-8]; "sn 3722" As Nitrate compounds [RR-01770-9]; "sn 2870" As Chromium(III) compounds [RR-03889-1]



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15.08. California Proposition 65

Chemical Name	CAS Number	Regulatory Information
Lead Nitrate	10099-74-8	"carcinogen, 10/1/1992" As Lead compounds [RR-00630-4]
Nickel Nitrate Hexahydrate	13478-00-7	"carcinogen, 5/7/2004" As Nickel compounds [RR-00800-4]
Nickel Nitrate Hexahydrate	13478-00-7	"developmental toxicity, 10/26/2018" As Nickel, soluble compounds [RR-00038-4]
Nickel Nitrate Hexahydrate	13478-00-7	"male reproductive toxicity, 10/26/18" As Nickel, soluble compounds [RR-00038-4]
Lithium Carbonate, 6Li ₂ CO ₃	554-13-2	developmental toxicity, 1/1/1991
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)

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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
Cobalt Nitrate Hexahydrate	10026-22-9	DSL	"Present" As Cobalt(II) nitrate [10141-05-6]
Cupric Nitrate Trihydrate	10031-43-3	DSL	"Present" As Cupric nitrate [3251-23-8]
Strontium Nitrate	10042-76-9	DSL	Present
Boric Acid	10043-35-3	DSL	Present
Lead Nitrate	10099-74-8	DSL	Present
Thallium (I) Nitrate	10102-45-1	NDSL	Present
Manganese Nitrate	10377-66-9	DSL	Present
Magnesium Nitrate Hexahydrate	13446-18-9	DSL	"Present" As Magnesium nitrate [10377-60-3]
Calcium Nitrate Tetrahydrate	13477-34-4	DSL	"Present" As Calcium nitrate [10124-37-5]
Nickel Nitrate Hexahydrate	13478-00-7	DSL	"Present" As Nickel(II) nitrate [13138-45-9]
Lithium Carbonate, 6Li ₂ CO ₃	554-13-2	DSL	Present
Iron	7439-89-6	DSL	Present
Cadmium	7440-43-9	DSL	Present
Gallium	7440-55-3	DSL	Present
Zinc	7440-66-6	DSL	Present
Bismuth	7440-69-9	DSL	Present
Indium	7440-74-6	DSL	Present
Sodium Nitrate	7631-99-4	DSL	Present
Nitric Acid	7697-37-2	DSL	Present
Water	7732-18-5	DSL	Present
Potassium Nitrate	7757-79-1	DSL	Present
Silver Nitrate	7761-88-8	DSL	Present
Aluminum Nitrate Nonahydrate	7784-27-2	DSL	"Present" As Aluminum nitrate [13473-90-0]
Chromium Nitrate Nonahydrate	7789-02-8	DSL	"Present" As Chromium nitrate [13548-38-4]

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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)
Cobalt Nitrate Hexahydrate	10026-22-9	"Present (ACTIVE)" As Nitric acid, cobalt(2+) salt (2:1) [10141-05-6]
Cupric Nitrate Trihydrate	10031-43-3	"Present (ACTIVE)" As Nitric acid, copper(2+) salt (2:1) [3251-23-8]
Strontium Nitrate	10042-76-9	Present (ACTIVE)
Boric Acid	10043-35-3	Present (ACTIVE)
Lead Nitrate	10099-74-8	Present (ACTIVE)
Thallium (I) Nitrate	10102-45-1	Present (ACTIVE)
Manganese Nitrate	10377-66-9	Present (ACTIVE)
Magnesium Nitrate Hexahydrate	13446-18-9	"Present (ACTIVE)" As Nitric acid, magnesium salt (2:1) [10377-60-3]
Calcium Nitrate Tetrahydrate	13477-34-4	"Present (ACTIVE)" As Nitric acid, calcium salt (2:1) [10124-37-5]
Nickel Nitrate Hexahydrate	13478-00-7	"Present (ACTIVE)" As Nitric acid, nickel(2+) salt (2:1) [13138-45-9]
Lithium Carbonate, 6Li ₂ CO ₃	554-13-2	Present (ACTIVE)
Iron	7439-89-6	Present (ACTIVE)
Cadmium	7440-43-9	Present (ACTIVE)
Gallium	7440-55-3	Present (ACTIVE)
Zinc	7440-66-6	Present (ACTIVE)
Bismuth	7440-69-9	Present (ACTIVE)
Indium	7440-74-6	Present (ACTIVE)
Sodium Nitrate	7631-99-4	Present (ACTIVE)
Nitric Acid	7697-37-2	Present (ACTIVE)
Water	7732-18-5	Present [XU] (ACTIVE)
Potassium Nitrate	7757-79-1	Present (ACTIVE)
Silver Nitrate	7761-88-8	Present (ACTIVE)
Aluminum Nitrate Nonahydrate	7784-27-2	"Present (ACTIVE)" As Nitric acid, aluminum salt (3:1) [13473-90-0]
Chromium Nitrate Nonahydrate	7789-02-8	"Present (ACTIVE)" As Nitric acid, chromium(3+) salt (3:1) [13548-38-4]

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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
Cobalt Nitrate Hexahydrate	10026-22-9	EINECS	"233-402-1" As Cobalt dinitrate [10141-05-6]
Cupric Nitrate Trihydrate	10031-43-3	EINECS	"221-838-5" As Copper dinitrate [3251-23-8]
Strontium Nitrate	10042-76-9	EINECS	233-131-9
Boric Acid	10043-35-3	EINECS	233-139-2
Lead Nitrate	10099-74-8	EINECS	233-245-9
Thallium (I) Nitrate	10102-45-1	EINECS	233-273-1
Manganese Nitrate	10377-66-9	EINECS	233-828-8
Magnesium Nitrate Hexahydrate	13446-18-9	EINECS	"233-826-7" As Magnesium nitrate [10377-60-3]
Calcium Nitrate Tetrahydrate	13477-34-4	EINECS	"233-332-1" As Calcium nitrate [10124-37-5]
Nickel Nitrate Hexahydrate	13478-00-7	EINECS	"236-068-5" As Nickel dinitrate [13138-45-9]
Lithium Carbonate, 6Li ₂ CO ₃	554-13-2	EINECS	209-062-5
Iron	7439-89-6	EINECS	231-096-4
Cadmium	7440-43-9	EINECS	231-152-8
Gallium	7440-55-3	EINECS	231-163-8
Zinc	7440-66-6	EINECS	231-175-3
Bismuth	7440-69-9	EINECS	231-177-4
Indium	7440-74-6	EINECS	231-180-0
Sodium Nitrate	7631-99-4	EINECS	231-554-3
Nitric Acid	7697-37-2	EINECS	231-714-2
Water	7732-18-5	EINECS	231-791-2
Potassium Nitrate	7757-79-1	EINECS	231-818-8
Silver Nitrate	7761-88-8	EINECS	231-853-9
Aluminum Nitrate Nonahydrate	7784-27-2	EINECS	"236-751-8" As Aluminium nitrate [13473-90-0]
Chromium Nitrate Nonahydrate	7789-02-8	EINECS	"236-921-1" As Chromium trinitrate [13548-38-4]

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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]
Cobalt Nitrate Hexahydrate	10026-22-9	Present [23518]
Cupric Nitrate Trihydrate	10031-43-3	Present [29621, 35634]
Strontium Nitrate	10042-76-9	Present [35630]
Boric Acid	10043-35-3	Present [25550]
Lead Nitrate	10099-74-8	Present [35618]
Thallium (I) Nitrate	10102-45-1	Present [35642]
Manganese Nitrate	10377-66-9	Present [35610]
Magnesium Nitrate Hexahydrate	13446-18-9	Present [23519]
Calcium Nitrate Tetrahydrate	13477-34-4	Present [33070]
Nickel Nitrate Hexahydrate	13478-00-7	Present [23521]
Lithium Carbonate, 6Li ₂ CO ₃	554-13-2	Present [34121]
Iron	7439-89-6	Present [34355]
Cadmium	7440-43-9	Present [13601]
Gallium	7440-55-3	Present [16671]
Zinc	7440-66-6	Present [35873]
Bismuth	7440-69-9	Present [02992]
Indium	7440-74-6	Present [40860]
Sodium Nitrate	7631-99-4	Present [35612]
Nitric Acid	7697-37-2	Present [35578]
Water	7732-18-5	Present [32224]
Potassium Nitrate	7757-79-1	Present [35600]
Silver Nitrate	7761-88-8	Present [35648]
Aluminum Nitrate Nonahydrate	7784-27-2	Present [21185]
Chromium Nitrate Nonahydrate	7789-02-8	Present [21184]

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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]
Cobalt Nitrate Hexahydrate	10026-22-9	Annex 1	"Present [KE-06102]" As Cobalt(II) nitrate [10141-05-6]
Cupric Nitrate Trihydrate	10031-43-3	Annex 1	"Present [KE-08929]" As Cupric nitrate [3251-23-8]
Cupric Nitrate Trihydrate	10031-43-3	Annex 2	"97-3-718 (1997-3-0718)" As Inorganic copper salts [RR-03690-8]
Strontium Nitrate	10042-76-9	Annex 1	Present [KE-32235]
Boric Acid	10043-35-3	Annex 1	Present [KE-03499]
Lead Nitrate	10099-74-8	Annex 1	Present [KE-21907]
Lead Nitrate	10099-74-8	Annex 3	"Present (97-1-9)" As Lead compounds [RR-00630-4]
Thallium (I) Nitrate	10102-45-1	Annex 1	Present [KE-33727]
Manganese Nitrate	10377-66-9	Annex 1	Present [KE-23016]
Magnesium Nitrate Hexahydrate	13446-18-9	Annex 1	"Present [KE-22725]" As Magnesium nitrate [10377-60-3]
Calcium Nitrate Tetrahydrate	13477-34-4	Annex 1	"Present [KE-04582]" As Calcium nitrate [10124-37-5]
Nickel Nitrate Hexahydrate	13478-00-7	Annex 1	"Present [KE-25844]" As Nickel dinitrate [13138-45-9]
Lithium Carbonate, 6Li ₂ CO ₃	554-13-2	Annex 1	Present [KE-22550]
Iron	7439-89-6	Annex 1	Present [KE-21059]
Cadmium	7440-43-9	Annex 1	Present [KE-04397]
Gallium	7440-55-3	Annex 1	Present [KE-17424]
Zinc	7440-66-6	Annex 1	Present [KE-35518]
Bismuth	7440-69-9	Annex 1	Present [KE-03313]
Indium	7440-74-6	Annex 1	Present [KE-20985]
Sodium Nitrate	7631-99-4	Annex 1	Present [KE-31545]
Nitric Acid	7697-37-2	Annex 1	Present [KE-25911]
Water	7732-18-5	Annex 1	Present [KE-35400]
Potassium Nitrate	7757-79-1	Annex 1	Present [KE-29163]
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]
Aluminum Nitrate Nonahydrate	7784-27-2	Annex 1	"Present [KE-01007]" As Aluminum nitrate [13473-90-0]
Chromium Nitrate Nonahydrate	7789-02-8	Annex 1	"Present [KE-06019]" As Chromium nitrate [13548-38-4]

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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
Cobalt Nitrate Hexahydrate	10026-22-9	(1)-266
Cupric Nitrate Trihydrate	10031-43-3	(1)-296
Strontium Nitrate	10042-76-9	(1)-490
Boric Acid	10043-35-3	(1)-63
Lead Nitrate	10099-74-8	(1)-488
Thallium (I) Nitrate	10102-45-1	(1)-1170
Manganese Nitrate	10377-66-9	(1)-470
Magnesium Nitrate Hexahydrate	13446-18-9	(1)-464 (not considered as a new chemical substance)
Calcium Nitrate Tetrahydrate	13477-34-4	(1)-188 (not considered as a new chemical substance)
Nickel Nitrate Hexahydrate	13478-00-7	(1)-485
Lithium Carbonate, 6Li ₂ CO ₃	554-13-2	(1)-154
Iron	7439-89-6	- (exempt)
Cadmium	7440-43-9	- (exempt)
Gallium	7440-55-3	- (exempt)
Zinc	7440-66-6	- (exempt)
Bismuth	7440-69-9	- (exempt)
Indium	7440-74-6	- (exempt)
Sodium Nitrate	7631-99-4	(1)-484
Nitric Acid	7697-37-2	(1)-394
Water	7732-18-5	- (listed on Japanese Pharmacopoeia 8th Edition)
Potassium Nitrate	7757-79-1	(1)-449
Silver Nitrate	7761-88-8	(1)-8
Aluminum Nitrate Nonahydrate	7784-27-2	(1)-20 (not considered as a new chemical substance)
Chromium Nitrate Nonahydrate	7789-02-8	(1)-281

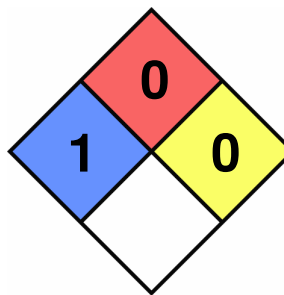
SECTION 16: Other Information

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16.1 National Fire Protection Associate (NFPA) Rating

Health: 1
Flammability: 0
Reactivity 0
Special Hazard:



16.2 Document Revision

Last Revision Date:
2026-05-24

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.