



Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS 2024)

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation VeriSpec[®] ICP Calibration Standard 19
400 ppm Tl; 200 ppm Bi, In, Pb; 150 ppm Ga, 100 ppm Al; 50 ppm Ag, Ni; 25 ppm Cr; 20 ppm Cd, Co

Product Number RV010709

Other Identifying Product Numbers RV010709-100N

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 1	H314	P260,P264,P280,P301+P330+P331, P303+P361+P353,P363,P304+P340, P310,P321,P305+P351+P338,P405, P501
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
H314	Causes severe skin burns and 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.
P260	Do not breathe fumes or mist.
P264	Wash hands, arms, and face thoroughly after handling.
P280	Wear protective gloves and eye protection.

Response

Precautionary Number	Precautionary Statement
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
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.
P310	Immediately call a poison center or doctor.
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material damage.

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.

2.4. Ingredients of Unknown Acute Toxicity

5.2 percent of this mixture consists of ingredient(s) of unknown acute oral toxicity. 5.4 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	94.55
nitric acid	Nitric Acid	7697-37-2	5.00
aluminum trinitrate	Aluminum Nitrate	13473-90-0	0.14
Gallium(III) nitrate hydrate	Gallium Nitrate Hydrate; Gallium nitrate, hydrate	69365-72-6	< 0.1
indium(3+) trinitrate hydrate	Indium (III) Nitrate Hydrate; Nitric acid, indium(3+) salt, hydrate (2:9)	13465-14-0	< 0.1
thallium(I) nitrate	Thallium (I) Nitrate; thallos nitrate	10102-45-1	< 0.1
bismuth(III) nitrate pentahydrate	Bismuth (III) Nitrate Pentahydrate; bismuth trinitrate pentahydrate	10035-06-0	< 0.1
lead(II) nitrate	Lead Nitrate; lead dinitrate	10099-74-8	< 0.1
nickel (II) nitrate	Nickel (II) Nitrate; Nickel dinitrate; Nickel nitrate; Nickelous nitrate	13138-45-9	< 0.1
chromium(3+) trinitrate	Chromium (III) Nitrate; Chromium(III) nitrate; Chromic nitrate	13548-38-4	< 0.1
boric acid	Boric Acid; orthoboric acid; boracic acid	10043-35-3	< 0.1
silver nitrate	Silver Nitrate; Nitric acid, silver(1+) salt	7761-88-8	< 0.1
iron(III) nitrate	Ferric Nitrate; iron trinitrate	10421-48-4	< 0.1
cobalt(II) nitrate	Cobalt (II) Nitrate; cobaltous nitrate; cobalt dinitrate	10141-05-6	< 0.1
copper dinitrate	Cupric Nitrate	3251-23-8	< 0.1
zinc dinitrate	Zinc Nitrate; Nitric acid, zinc salt	7779-88-6	< 0.1
cadmium nitrate	Cadmium Nitrate; cadmium dinitrate	10325-94-7	< 0.1
manganese(II) nitrate	Manganese Nitrate; manganese dinitrate	10377-66-9	< 0.1
beryllium dinitrate	Beryllium Nitrate; Nitric acid, beryllium salt (2:1)	13597-99-4	< 0.1
barium nitrate	Barium Nitrate	10022-31-8	< 0.1
strontium nitrate	Strontium Nitrate; strontium(II) nitrate; strontium dinitrate	10042-76-9	< 0.1

SECTION 4: First-Aid Measures

4.1. Description of Necessary Measures

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

Ingestion: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

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

Skin Contact: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

4.2. Most Important Symptoms and Effects, Acute and Delayed

Causes severe skin burns and eye damage

4.3. Immediate Medical Attention or Special Treatment Needed

Immediately call a poison center or doctor.

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

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]
Lead Nitrate	10099-74-8	"50 µg/m ³ TWA (as Pb)" As Lead, inorganic compounds [RR-00538-9]
Thallium (I) Nitrate	10102-45-1	"0.1 mg/m ³ TWA (as Tl)" As Thallium, soluble compounds [RR-00048-6]
Nickel (II) Nitrate	13138-45-9	"1 mg/m ³ TWA (as Ni)" As Nickel, soluble compounds [RR-00038-4]
Chromium (III) Nitrate	13548-38-4	"0.5 mg/m ³ TWA (as Cr)" As Chromium(III) compounds [RR-03889-1]
Beryllium Nitrate	13597-99-4	"0.2 µg/m ³ TWA (as Be)" As Beryllium compounds [RR-00557-2]
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
Manganese Nitrate	10377-66-9	"5 mg/m ³ Ceiling (as Mn)" As Manganese compounds [RR-00602-0]
Beryllium Nitrate	13597-99-4	"2 µg/m ³ Ceiling (as Be)" As Beryllium compounds [RR-00557-2]

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/m ³ Action Level (See 29 CFR 1910.1025, as Pb); 50 µg/m ³ TWA (as Pb)" As Lead, inorganic compounds [RR-00538-9]
Cadmium Nitrate	10325-94-7	"5 µg/m ³ TWA (See 29 CFR 1910.1027, as Cd); 2.5 µg/m ³ Action Level (as Cd)" As Cadmium compounds [RR-00559-4]

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

No limits found.

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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

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)
Lead Nitrate	10099-74-8	"0.05 mg/m3 TWA (as Pb)" As Lead inorganic compounds [RR-00538-9]
Thallium (I) Nitrate	10102-45-1	"0.02 mg/m3 TWA (inhalable particulate matter, as Tl)" As Thallium compounds [RR-00575-4]
Cobalt (II) Nitrate	10141-05-6	"0.02 mg/m3 TWA (inhalable particulate matter, as Co)" As Cobalt inorganic compounds [RR-02516-1]
Cadmium Nitrate	10325-94-7	"0.01 mg/m3 TWA (as Cd); 0.002 mg/m3 TWA (respirable particulate matter, as Cd)" As Cadmium compounds [RR-00559-4]
Manganese Nitrate	10377-66-9	"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]
Ferric Nitrate	10421-48-4	"1 mg/m3 TWA (as Fe)" As Iron salts, soluble [RR-00521-0]
Nickel (II) Nitrate	13138-45-9	"0.1 mg/m3 TWA (inhalable particulate matter, as Ni)" As Nickel soluble inorganic compounds [RR-04616-2]
Indium (III) Nitrate Hydrate	13465-14-0	"0.1 mg/m3 TWA (as In)" As Indium compounds [RR-00600-8]
Beryllium Nitrate	13597-99-4	"0.00005 mg/m3 TWA (inhalable particulate matter, as Be)" As Beryllium compounds [RR-00557-2]
Cupric Nitrate	3251-23-8	"1 mg/m3 TWA (dust and mist, as Cu)" As Copper compounds [RR-00595-8]
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]

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.

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Skin Protection: Wear protective gloves and eye protection.

Eye Protection: Wear protective gloves and eye protection.

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

Keep only in original packaging.

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10.4. Hazardous Decomposition Products

None identified.

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)
Bismuth (III) Nitrate Pentahydrate	10035-06-0	Oral LD50 Rat 4042 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)
Cobalt (II) Nitrate	10141-05-6	Oral LD50 Rat 434 mg/kg (Source: Canada_WHMIS)
Cadmium Nitrate	10325-94-7	Oral LD50 Rat 300 mg/kg (Source: NLM_CIP)
Nickel (II) Nitrate	13138-45-9	Oral LD50 1018 mg/kg (Source: Canada_WHMIS)
Chromium (III) Nitrate	13548-38-4	Oral LD50 Rat 3250 mg/kg (Source: NLM_CIP)
Beryllium Nitrate	13597-99-4	Oral LD50 Acute Toxicity Estimate 100 mg/kg (Source: ECHA)
Cupric Nitrate	3251-23-8	Oral LD50 Rat 794 mg/kg (Source: NLM_CIP)
Gallium Nitrate Hydrate	69365-72-6	Oral LD50 Rat 500 mg/kg (Source: ECHA)
Silver Nitrate	7761-88-8	Oral LD50 Rat 1173 mg/kg (Source: NLM_CIP)
Zinc Nitrate	7779-88-6	Oral LD50 Rat 1330 mg/kg (Source: Canada_WHMIS)

Acute Toxicity - Dermal Exposure:

Not acutely toxic.

Chemical Name	CAS Number	Toxicity
Cadmium Nitrate	10325-94-7	Dermal LD50 Acute Toxicity Estimate 1100 mg/kg (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)
Cadmium Nitrate	10325-94-7	Inhalation LC50 Acute Toxicity Estimate 1.5 mg/L 4 h (Source: ECHA)
Nickel (II) Nitrate	13138-45-9	Inhalation LC50 Acute Toxicity Estimate 1.5 mg/L 4 h (Source: ECHA)
Beryllium Nitrate	13597-99-4	Inhalation LC50 Acute Toxicity Estimate 0.05 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/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
Lead Nitrate	10099-74-8	Group 2A (Probably Carcinogenic to Humans) - Monograph 87 [2006]; Supplement 7 [1987]; Monograph 23 [1980]
Cobalt (II) Nitrate	10141-05-6	Group 2A (Probably Carcinogenic to Humans) - Monograph 131 [2023]; Monograph 86 [2006]; Monograph 52 [1991] As Cobalt(II) soluble salts
Cadmium Nitrate	10325-94-7	Group 1 (Carcinogenic to Humans) - Monograph 58 [1993] (listed under Cadmium and cadmium compounds)
Nickel (II) Nitrate	13138-45-9	Group 1 (Carcinogenic to Humans) - Monograph 49 [1990] (listed under Nickel and nickel compounds)
Chromium (III) Nitrate	13548-38-4	Group 3 (Not Classified) - Monograph 49 [1990]; Supplement 7 [1987]; Monograph 23 [1980]; Monograph 2 [1973]
Beryllium Nitrate	13597-99-4	Group 1 (Carcinogenic to Humans) - Monograph 58 [1993] (listed under Beryllium and beryllium compounds)
Nitric Acid	7697-37-2	Group 1 (Carcinogenic to Humans) - Monograph 100F [2012]; Monograph 54 [1992] As Acid mists, strong inorganic

National Toxicology Program (NTP)

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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)
Lead Nitrate	10099-74-8	Reasonably Anticipated To Be A Human Carcinogen (listed under Lead and lead compounds)
Cobalt (II) Nitrate	10141-05-6	Reasonably Anticipated To Be A Human Carcinogen (listed under Cobalt-related exposures)
Cadmium Nitrate	10325-94-7	"Known Human Carcinogen" As Cadmium compounds [RR-00559-4]
Nickel (II) Nitrate	13138-45-9	"Known Human Carcinogen" As Nickel compounds [RR-00800-4]
Beryllium Nitrate	13597-99-4	"Known Human Carcinogen" As Beryllium compounds [RR-00557-2]

U.S. OSHA specifically regulated carcinogens

Chemical Name	CAS Number	Classification
Cadmium Nitrate	10325-94-7	"see 29 CFR 1910.1027" As Cadmium compounds [RR-00559-4]

11.3 Additional Toxicology Information:

Causes severe skin burns and 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] (IUCLID); LC50 5 Days Colinus virginianus >5620 ppm [Diet] (IUCLID)
Strontium Nitrate	10042-76-9	Freshwater Fish	Acute	LC50 96 h Cyprinus carpio >97.45 mg/L [static] (ECHA)
Silver Nitrate	7761-88-8	Freshwater Fish	Acute	LC50 96 h Poecilia reticulata 0.00512 - 0.00787 mg/L [semi-static] (EPA); LC50 96 h Lepomis macrochirus 0.009 - 0.02 mg/L [flow-through] (EPA); LC50 96 h Lepomis macrochirus 0.0242 - 0.0484 mg/L [semi-static] (EPA); LC50 96 h Lepomis macrochirus 0.05 - 0.07 mg/L [static] (EPA); LC50 96 h Oncorhynchus mykiss 0.001339 - 0.001637 mg/L [flow-through] (EPA); LC50 96 h Oncorhynchus mykiss 0.0075 mg/L [semi-static] (EPA); LC50 96 h Oncorhynchus mykiss 0.00839 - 0.1802 mg/L [static] (EPA); LC50 96 h Pimephales promelas 0.00452 - 0.00638 mg/L [flow-through] (EPA); LC50 96 h Pimephales promelas 0.00181 - 0.00214 mg/L [static] (EPA); LC50 96 h Pimephales promelas 0.0064 - 0.0106 mg/L [semi-static] (EPA); LC50 96 h Pimephales promelas 0.009 mg/L (IUCLID); LC50 96 h Cyprinus carpio 0.0027 mg/L [semi-static] (EPA)
Zinc Nitrate	7779-88-6	Freshwater Fish	Acute	LC50 96 h Cyprinus carpio 7.8 mg/L [static] (EPA)
Boric Acid	10043-35-3	Water Flea	Acute	EC50 48 h Daphnia magna 115 - 153 mg/L (EPA)
Silver Nitrate	7761-88-8	Water Flea	Acute	EC50 48 h Daphnia magna 0.0006 mg/L (IUCLID); EC50 48 h Daphnia magna 0.0008 - 0.001 mg/L [Flow through] (EPA); EC50 48 h Daphnia magna 0.0008 - 0.0011 mg/L [Static] (EPA)

12.2. Persistence and Degradability

Data not available.

12.3. Bioaccumulative Potential

Data not available.

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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

UN Number: UN3264

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

Hazard Class: 8

Packing Group: II

Hazard Label(s):



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

Sizes: 100 mL

UN Number: UN3264

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

Hazard Class: 8

Packing Group: II

Hazard Label(s):





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14.3 Transportation of Dangerous Goods (TDG, Canada)

Sizes: 100 mL

UN Number: UN3264

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

Hazard Class: 8

Packing Group: II

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
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 Nitrate	10325-94-7	"5 µg/m3 TWA (See 29 CFR 1910.1027, as Cd); 2.5 µg/m3 Action Level (as Cd)" As Cadmium compounds [RR-00559-4]

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
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
Ferric Nitrate	10421-48-4	1000 lb final RQ; 454 kg final RQ
Nickel (II) Nitrate	13138-45-9	"100 lb final RQ; 45.4 kg final RQ" As Nickel nitrate [14216-75-2]
Beryllium Nitrate	13597-99-4	1 lb final RQ; 0.454 kg final RQ
Cupric Nitrate	3251-23-8	100 lb final RQ; 45.4 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
Zinc Nitrate	7779-88-6	1000 lb final RQ; 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]
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]
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]
Cobalt (II) Nitrate	10141-05-6	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]

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Cadmium Nitrate	10325-94-7	Emission Reporting	"0.1 % de minimis concentration (includes any unique chemical substance that contains Cadmium as part of that chemical's infrastructure, listed under Chemical Category N078)" As Cadmium compounds [RR-00559-4]; "1.0 % de minimis concentration (reportable only when in aqueous solution, listed under Chemical Category N511)" As Nitrate compounds, water dissociable [RR-03804-0]
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]
Ferric Nitrate	10421-48-4	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 (II) Nitrate	13138-45-9	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]
Indium (III) Nitrate Hydrate	13465-14-0	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 (III) Nitrate	13548-38-4	Emission Reporting	"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]
Beryllium Nitrate	13597-99-4	Emission Reporting	"0.1 % de minimis concentration (includes any unique chemical substance that contains Beryllium as part of that chemical's infrastructure, listed under Chemical Category N050)" As Beryllium compounds [RR-00557-2]

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Cupric Nitrate	3251-23-8	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]
Gallium Nitrate Hydrate	69365-72-6	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
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]
Zinc Nitrate	7779-88-6	Emission Reporting	"1.0 % de minimis concentration (includes any unique chemical substance that contains Zinc as part of that chemical's infrastructure, listed under Chemical Category N982)" As Zinc compounds [RR-00578-7]

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15.05. Massachusetts Right-to-Know Substance List

Chemical Name	CAS Number	Regulatory Information
Barium Nitrate	10022-31-8	Present
Strontium Nitrate	10042-76-9	Present
Lead Nitrate	10099-74-8	Present
Thallium (I) Nitrate	10102-45-1	Present
Cobalt (II) Nitrate	10141-05-6	Present
Ferric Nitrate	10421-48-4	Present
Nickel (II) Nitrate	13138-45-9	Present
Beryllium Nitrate	13597-99-4	Present
Cupric Nitrate	3251-23-8	Present
Nitric Acid	7697-37-2	Extraordinarily hazardous
Silver Nitrate	7761-88-8	Present
Zinc Nitrate	7779-88-6	Present

15.06. Pennsylvania Right-to-Know Hazardous Substances

Chemical Name	CAS Number	Regulatory Information
Barium Nitrate	10022-31-8	Environmental hazard
Strontium Nitrate	10042-76-9	Present
Lead Nitrate	10099-74-8	Environmental hazard
Thallium (I) Nitrate	10102-45-1	Environmental hazard
Cobalt (II) Nitrate	10141-05-6	Present
Cadmium Nitrate	10325-94-7	"Environmental hazard" As Cadmium compounds [RR-00559-4]
Manganese Nitrate	10377-66-9	"Environmental hazard" As Manganese compounds [RR-00602-0]
Ferric Nitrate	10421-48-4	Environmental hazard
Nickel (II) Nitrate	13138-45-9	Environmental hazard
Chromium (III) Nitrate	13548-38-4	"Environmental hazard" As Chromium compounds [RR-00634-8]
Beryllium Nitrate	13597-99-4	Environmental hazard
Cupric Nitrate	3251-23-8	Environmental hazard
Nitric Acid	7697-37-2	Environmental hazard
Silver Nitrate	7761-88-8	Environmental hazard
Zinc Nitrate	7779-88-6	Environmental hazard

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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
Bismuth (III) Nitrate Pentahydrate	10035-06-0	"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
Cobalt (II) Nitrate	10141-05-6	"sn 2222" As Cobalt compounds [RR-00107-0]; "sn 3722" As Nitrate compounds [RR-01770-9]
Cadmium Nitrate	10325-94-7	sn 4088
Manganese Nitrate	10377-66-9	"sn 2324" As Manganese compounds [RR-00602-0]; "sn 3722" As Nitrate compounds [RR-01770-9]
Ferric Nitrate	10421-48-4	sn 0924
Nickel (II) Nitrate	13138-45-9	sn 1347
Indium (III) Nitrate Hydrate	13465-14-0	"sn 3722" As Nitrate compounds [RR-01770-9]
Aluminum Nitrate	13473-90-0	sn 0061
Chromium (III) Nitrate	13548-38-4	sn 0435
Beryllium Nitrate	13597-99-4	sn 0225
Cupric Nitrate	3251-23-8	sn 0547
Gallium Nitrate Hydrate	69365-72-6	"sn 3722" As Nitrate compounds [RR-01770-9]
Nitric Acid	7697-37-2	sn 1356
Silver Nitrate	7761-88-8	sn 1672
Zinc Nitrate	7779-88-6	sn 2036

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]
Cadmium Nitrate	10325-94-7	"carcinogen, 10/1/1987" As Cadmium compounds [RR-00559-4]
Nickel (II) Nitrate	13138-45-9	"carcinogen, 5/7/2004" As Nickel compounds [RR-00800-4]
Nickel (II) Nitrate	13138-45-9	"developmental toxicity, 10/26/2018" As Nickel, soluble compounds [RR-00038-4]
Nickel (II) Nitrate	13138-45-9	"male reproductive toxicity, 10/26/18" As Nickel, soluble compounds [RR-00038-4]
Beryllium Nitrate	13597-99-4	"carcinogen, 10/1/1987" As Beryllium compounds [RR-00557-2]

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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
Bismuth (III) Nitrate Pentahydrate	10035-06-0	DSL	"Present" As Nitric acid, bismuth(3+) salt [10361-44-1]
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
Cobalt (II) Nitrate	10141-05-6	DSL	Present
Cadmium Nitrate	10325-94-7	DSL	Present
Manganese Nitrate	10377-66-9	DSL	Present
Ferric Nitrate	10421-48-4	DSL	Present
Nickel (II) Nitrate	13138-45-9	DSL	Present
Indium (III) Nitrate Hydrate	13465-14-0	NDSL	"Present" As Indium nitrate [13770-61-1]
Aluminum Nitrate	13473-90-0	DSL	Present
Chromium (III) Nitrate	13548-38-4	DSL	Present
Beryllium Nitrate	13597-99-4	NDSL	Present
Cupric Nitrate	3251-23-8	DSL	Present
Gallium Nitrate Hydrate	69365-72-6	NDSL	"Present" As Gallium(III) nitrate [13494-90-1]
Nitric Acid	7697-37-2	DSL	Present
Water	7732-18-5	DSL	Present
Silver Nitrate	7761-88-8	DSL	Present
Zinc Nitrate	7779-88-6	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)
Bismuth (III) Nitrate Pentahydrate	10035-06-0	"Present (ACTIVE)" As Nitric acid, bismuth(3+) salt (3:1) [10361-44-1]
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)
Cobalt (II) Nitrate	10141-05-6	Present (ACTIVE)
Cadmium Nitrate	10325-94-7	Present (ACTIVE)
Manganese Nitrate	10377-66-9	Present (ACTIVE)
Ferric Nitrate	10421-48-4	Present (ACTIVE)
Nickel (II) Nitrate	13138-45-9	Present (ACTIVE)
Indium (III) Nitrate Hydrate	13465-14-0	"Present (ACTIVE)" As Nitric acid, indium(3+) salt (3:1) [13770-61-1]
Aluminum Nitrate	13473-90-0	Present (ACTIVE)
Chromium (III) Nitrate	13548-38-4	Present (ACTIVE)
Beryllium Nitrate	13597-99-4	Present (ACTIVE)
Cupric Nitrate	3251-23-8	Present (ACTIVE)
Gallium Nitrate Hydrate	69365-72-6	"Present (ACTIVE)" As Nitric acid, gallium salt (3:1) [13494-90-1]
Nitric Acid	7697-37-2	Present (ACTIVE)
Water	7732-18-5	Present [XU] (ACTIVE)
Silver Nitrate	7761-88-8	Present (ACTIVE)
Zinc Nitrate	7779-88-6	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
Bismuth (III) Nitrate Pentahydrate	10035-06-0	EINECS	"233-791-8" As Bismuth trinitrate [10361-44-1]
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
Cobalt (II) Nitrate	10141-05-6	EINECS	233-402-1
Cadmium Nitrate	10325-94-7	EINECS	233-710-6
Manganese Nitrate	10377-66-9	EINECS	233-828-8
Ferric Nitrate	10421-48-4	EINECS	233-899-5
Nickel (II) Nitrate	13138-45-9	EINECS	236-068-5
Indium (III) Nitrate Hydrate	13465-14-0	EINECS	"237-393-5" As Indium trinitrate [13770-61-1]
Aluminum Nitrate	13473-90-0	EINECS	236-751-8
Chromium (III) Nitrate	13548-38-4	EINECS	236-921-1
Beryllium Nitrate	13597-99-4	EINECS	237-062-5
Cupric Nitrate	3251-23-8	EINECS	221-838-5
Gallium Nitrate Hydrate	69365-72-6	EINECS	"236-815-5" As Gallium trinitrate [13494-90-1]
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
Zinc Nitrate	7779-88-6	EINECS	231-943-8

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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]
Bismuth (III) Nitrate Pentahydrate	10035-06-0	Present [35585]
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]
Cobalt (II) Nitrate	10141-05-6	Present [35594]
Cadmium Nitrate	10325-94-7	Present [35589]
Manganese Nitrate	10377-66-9	Present [35610]
Ferric Nitrate	10421-48-4	Present [35632]
Nickel (II) Nitrate	13138-45-9	Present [35614]
Indium (III) Nitrate Hydrate	13465-14-0	"Present [35647]" As Indium(III) nitrate [13770-61-1]
Aluminum Nitrate	13473-90-0	Present [35607]
Chromium (III) Nitrate	13548-38-4	Present [35591]
Beryllium Nitrate	13597-99-4	Present [35616]
Cupric Nitrate	3251-23-8	Present [35633]
Gallium Nitrate Hydrate	69365-72-6	"Present [35598]" As Nitric acid, gallium salt [13494-90-1]
Nitric Acid	7697-37-2	Present [35578]
Water	7732-18-5	Present [32224]
Silver Nitrate	7761-88-8	Present [35648]
Zinc Nitrate	7779-88-6	Present [35639]

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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]
Bismuth (III) Nitrate Pentahydrate	10035-06-0	Annex 1	"Present [KE-03368]" As Nitric acid, bismuth(3+) salt [10361-44-1]
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]
Cobalt (II) Nitrate	10141-05-6	Annex 1	Present [KE-06102]
Cadmium Nitrate	10325-94-7	Annex 1	Present [KE-04416]
Cadmium Nitrate	10325-94-7	Annex 3	"Present (97-1-250)" As Cadmium compounds [RR-00559-4]
Manganese Nitrate	10377-66-9	Annex 1	Present [KE-23016]
Ferric Nitrate	10421-48-4	Annex 1	Present [KE-21136]
Nickel (II) Nitrate	13138-45-9	Annex 1	Present [KE-25844]
Indium (III) Nitrate Hydrate	13465-14-0	Annex 1	"Present [KE-21006]" As Indium nitrate [13770-61-1]
Aluminum Nitrate	13473-90-0	Annex 1	Present [KE-01007]
Chromium (III) Nitrate	13548-38-4	Annex 1	Present [KE-06019]
Beryllium Nitrate	13597-99-4	Annex 1	Present [KE-25914]
Cupric Nitrate	3251-23-8	Annex 1	Present [KE-08929]
Cupric Nitrate	3251-23-8	Annex 2	"97-3-718 (1997-3-0718)" As Inorganic copper salts [RR-03690-8]
Gallium Nitrate Hydrate	69365-72-6	Annex 1	"Present [KE-17446]" As Gallium(III) nitrate [13494-90-1]
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]
Zinc Nitrate	7779-88-6	Annex 1	Present [KE-35561]
Zinc Nitrate	7779-88-6	Annex 3	"Present (97-1-91)" As Inorganic zinc salts [RR-04199-6]

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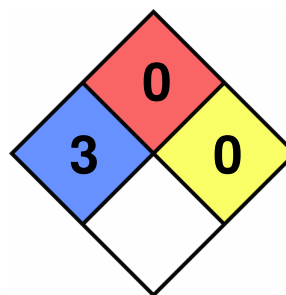
15.14. Japan - Existing and New Chemical Substances Inventory (ENCS)

Chemical Name	CAS Number	MITI No.
Barium Nitrate	10022-31-8	(1)-86
Bismuth (III) Nitrate Pentahydrate	10035-06-0	"(1)-97" As Bismuth trinitrate [10361-44-1]
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
Cobalt (II) Nitrate	10141-05-6	(1)-266
Cadmium Nitrate	10325-94-7	(1)-201
Manganese Nitrate	10377-66-9	(1)-470
Ferric Nitrate	10421-48-4	(1)-355
Nickel (II) Nitrate	13138-45-9	(1)-485
Aluminum Nitrate	13473-90-0	(1)-20
Chromium (III) Nitrate	13548-38-4	(1)-281
Cupric Nitrate	3251-23-8	(1)-296
Nitric Acid	7697-37-2	(1)-394
Water	7732-18-5	- (listed on Japanese Pharmacopoeia 8th Edition)
Silver Nitrate	7761-88-8	(1)-8
Zinc Nitrate	7779-88-6	(1)-491

SECTION 16: Other Information

16.1 National Fire Protection Associate (NFPA) Rating

Health: 3
Flammability: 0
Reactivity: 0
Special Hazard:





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16.2 Document Revision

Last Revision Date:

2026-05-22

DISCLAIMER

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